A World Bank Group Report

OCTOBER 2024

Commodity Markets Outlook

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1818 H Street NW, Washington, DC 20433

Telephone: 202-473-1000; Internet: www.worldbank.org

The cutoff date for the data used in this report was October 21, 2024.

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The World Bank's *Commodity Markets Outlook* is published twice a year, in April and October. The report provides detailed market analysis for major commodity groups, including energy, agriculture, fertilizers, metals, and precious metals. Price forecasts for 46 commodities are presented. Commodity price data updates are published separately at the beginning of each month. The data cutoff date of this report is October 21, 2024.

The report and data can be accessed at:
www.worldbank.org/commodities

For inquiries and correspondence, email:
commodities@worldbank.org

Executive Summary

Commodity prices are expected to decrease by 5 percent in 2025 and 2 percent in 2026, after softening 3 percent this year. This would lead aggregate commodity prices to their lowest levels since 2020. The projected declines are led by oil prices but tempered by price increases for natural gas and a stable outlook for metals and agricultural raw materials. The Brent crude oil price is projected to average $80/bbl in 2024, before slipping to $73/bbl in 2025 and $72/bbl in 2026. Thus, from their 2022 high, annual average oil prices are expected to decline for four consecutive years through to 2026, settling just slightly above their 2021 level. The possibility of escalating conflict in the Middle East represents a substantial near-term upside risk to energy prices, with potential knock-on consequences for other commodities. However, over the forecast horizon, longer-term dynamics—including decelerating global oil demand, notably in China; diversifying oil production; and ample oil supply capacity held by OPEC+—suggest sizable downside risks to oil prices, especially if OPEC+ unwinds its latest production cuts. There are also two-sided risks to industrial commodity demand stemming from economic activity. On the one hand, concerted stimulus in China and above-trend growth in the United States could push commodity prices higher. On the other, weaker-than-anticipated global industrial activity could dampen them.

The state of commodity markets

The early 2020s were characterized by large global shocks—the COVID-19 pandemic recession and subsequent rebound, a sharp runup in inflation, and Russia's invasion of Ukraine—accompanied by highly correlated swings in commodity prices (figure 1.A and 1.B). Over the last year, the economic effects of those outsized shocks have substantially abated, with global economic growth steadying and inflation moving toward targets. Correspondingly, commodity markets appear to be departing from a period of tight synchronization (figure 1.C). Over the last year, commodity prices have been buffeted by a wide range of developments, including shifting expectations about supply management, surges in conflict-related risk, trade restrictions, and weather-related supply shocks.

In energy markets, geopolitical tensions have remained a critical driver of short-term price movements. Oil markets have responded to geopolitical flare-ups, with prices surpassing $90/bbl in October 2023 and April 2024. Anticipated oil price volatility approached its highest levels since Russia's invasion of Ukraine in early October 2024, as oil prices surged by 10 percent in just three days (figure 1.D). Prices have tended to subsequently fall back, however, reflecting a confluence of underlying longer-term factors. First, global oil consumption is decelerating, continuing the secular decline in the oil intensity of global GDP. Second, global oil supply continues to diversify, with the market share of non-OPEC+ producers gradually increasing. Third, following successive rounds of output cuts, OPEC+ holds spare oil capacity equivalent to slightly more than 7 percent of current global production (figure 1.E). This amounts to about double the average spare capacity in 2017-19, when the Brent oil price averaged $63/bbl.

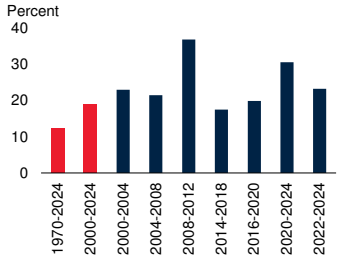
Against this backdrop, the price of Brent oil dipped to a three-year low in September due to concerns that OPEC+ might soon increase oil exports, despite an already well-supplied market. A subsequent price spike, while sudden, saw prices peak below average 2024Q2 levels. Contrasting with oil, European natural gas prices have been sharply higher since the middle of the year, reflecting concerns about the availability of gas imports from Russia and increasing global competition for liquefied natural gas supply (figure 1.F).

In metals markets, prices climbed in late September after the announcement of economic stimulus measures in China. The rally lost momentum in October amid ambiguity about the likely scale of China's future policy support. However, in a context of generally tight supply conditions, prices

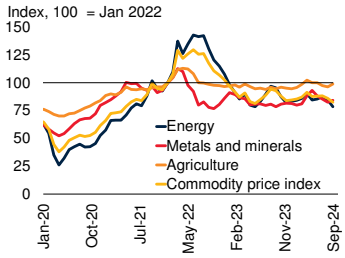
FIGURE 1 Commodity market developments

Commodity price movements were highly synchronized in the early 2020s, but a greater prevalence of idiosyncratic commodity-specific shocks has seen synchronization fade in the last two years. Geopolitical risk remains a critical driver of oil price volatility, with prices and volatility spiking in early October. However, recent conflict-driven price surges have been short-lived amid ample potential oil supply, notably substantial spare capacity held off the market by OPEC+. In natural gas markets, increased competition for U.S. liquefied natural gas (LNG) exports has seen the share shipped to Europe decline significantly.

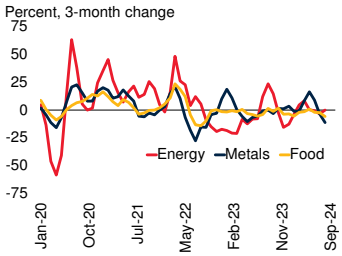
A. Estimated commodity price variation due to a global commodity factor during selected periods



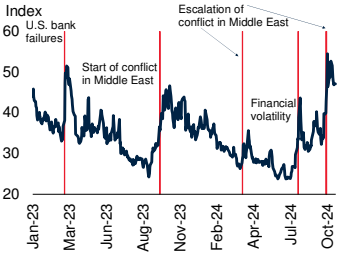
B. Commodity price indexes, monthly



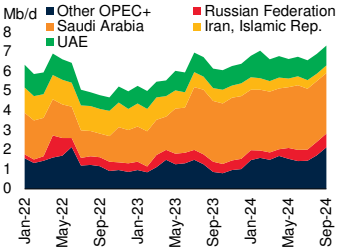
C. Commodity price changes



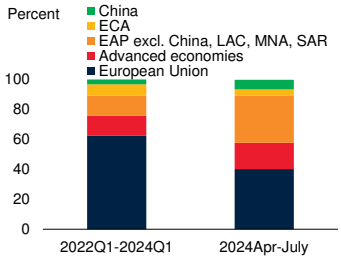
D. Oil price volatility



E. OPEC+ spare capacity



F. Destinations of U.S. LNG exports



Sources: Bloomberg; International Energy Agency (IEA); U.S. Energy Information Administration (EIA); World Bank.

Note: EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; Mb/d = million barrels per day; MNA = Middle East and North Africa; SAR = South Asia; UAE = United Arab Emirates.

A. Share of variation in month-on-month changes in 35 commodity prices—3 energy commodities, 6 metal and mineral commodities, 3 precious metals, 4 fertilizers, and 19 agricultural commodities—accounted for by a global factor derived from a one-factor dynamic factor model. Bars show consumption-weighted averages. See Special Focus chapter for more detail.

B. Monthly in U.S. dollar terms. Last observation is September 2024.

C. Rolling 3-month percent change in commodity indexes. Last observation is September 2024.

D. Crude oil volatility index measures market-based expectations of the 30-day volatility of crude oil prices, based on options spanning a wide range of strike prices. Last observation is October 21, 2024.

E. Spare capacity for OPEC+ members from monthly IEA Oil Market Reports. Other OPEC + includes Algeria, Azerbaijan, Bahrain, Brunei, Congo, Equatorial Guinea, Gabon, Iraq, Kazakhstan, Kuwait, Libya, Malaysia, Mexico, Nigeria, Oman, South Sudan, Sudan, and República Bolivariana de Venezuela. Values for Islamic Republic of Iran, Libya, Russian Federation, and República Bolivariana de Venezuela are computed from data on sustainable capacity and actual supply. Data from IEA *Oil Market Reports*.

F. Averages using monthly data of U.S. LNG shipments. Last observation is July 2024.

for base metals—notably aluminum and copper—have remained responsive to shifts in the outlook for global industrial activity and well-supported over the longer term by a sustained demand tailwind from the energy transition. Thus, the World Bank base metals price index was up 10 percent year-to-date in September. In contrast, iron ore prices have sharply underperformed the broader index, reflecting elevated exposure to the persistent weakness in China's construction sector and ample supply prospects. Gold prices, which are particularly sensitive to geopolitical tensions, have marched higher all year, standing 27 percent above their December 2023 level in September.

In agricultural commodity markets, prices for many staple crops—including maize, soybeans, and wheat—have trended lower overall this year, owing to solid harvests and favorable growing conditions. In all, the World Bank's index of food commodity prices was down 4 percent year-to-date in September. However, weather- and disease-related shocks and trade restrictions have seen prices for cocoa, coffee, and rice reach historic highs this year, underscoring sources of supply volatility that could prove endemic to an era of climate change and trade fragmentation.

Outlook

After softening by 3 percent in 2024 (y/y), the World Bank commodity price index is projected to retreat by a further 5 percent in 2025 and 2 percent in 2026 (figure 2.A).[1] This would lead aggregate commodity prices to their lowest level since 2020, albeit still nearly 30 percent above the 2015-19 average.[2] While price projections across individual commodities are mixed, a major factor underlying the overall decline is improving supply conditions. This, coupled with expectations of

[1] Throughout this document "(y/y)" refers to the change in quantity or average price in one year, compared to the previous year, or compared to the same specified period in the previous year; "(q/q)" refers to the change in quantity or average price in one quarter, compared to the previous quarter.

[2] Arteta, C., P. Kenworthy, and M. A. Kose. 2024. "Why Global Growth is Tepid, but Commodity Prices Remain High." *Voices* (blog). July 01, 2024. https://blogs.worldbank.org/en/voices/why-global-growth-is-tepid-but-commodity-prices-remain-high

moderate global economic growth, gives rise to generally modest expected price movements, except where individual markets are responding to commodity-specific developments.

Energy prices

The energy price index is projected to fall by 6 percent in 2024 (y/y), followed by further declines of 6 percent in 2025 and 2 percent in 2026. The forecast assumes that there is no prolonged additional escalation of ongoing armed conflicts, global economic growth remains stable, and oil supply from non-OPEC+ producers steadily expands. In addition, it is premised on OPEC+ countries maintaining elevated spare capacity and delaying the reversal of 2.2 mb/d of voluntary supply cuts. The Brent crude oil price is projected to hover around $75/bbl for the remainder of 2024, averaging $80/bbl for the year overall, before declining to an average of $73/bbl in 2025 and $72/bbl in 2026. Thus, from a high reached in 2022, annual average oil prices are set to decline for four consecutive years through to 2026, settling just slightly above 2021 levels.

Global oil supply is expected to reach approximately 105 mb/d in 2025, up by 2 mb/d from 2024. Most of this increase is anticipated to occur in Brazil, Canada, Guyana, and the United States, with OPEC+ production only edging up. Global oil consumption is forecast to rise by about 1 mb/d per year in 2024-25—an annual growth rate below 1 percent. This would represent a marked slowdown from an increase of 2 mb/d in 2023, continuing a longer-term global deceleration; the growth of global oil consumption averaged 1.4 percent over 2015-19 (figure 2.B). Under these conditions, global oil supply is expected to exceed demand by an average of 1.2 mb/d next year—a degree of oversupply surpassed only during COVID 19-related shutdowns in 2020 and the 1998 oil price collapse. Demand growth in China and India comprises nearly half of the envisioned increase in 2025, while consumption in advanced economies is set to decline marginally. In 2026, growth in global oil consumption is expected to be broadly unchanged from the previous two years.

Despite its recent rise, the European natural gas benchmark is projected to be 18 percent lower, on average, in 2024 than 2023, as gas markets continue to adapt to a reconfiguration of supply following Russia's invasion of Ukraine. After several years of dramatic swings, European gas prices are expected to increase by a moderate 7 percent in 2025 (y/y), before declining by a slightly larger magnitude in 2026 as supply increases. In contrast, the U.S. natural gas price is expected to decline in 2024, reflecting elevated production and large inventories. However, prices are projected to climb markedly in 2025-26, as new infrastructure allows U.S. exports to increasingly serve growing global demand, generating upward pressure on domestic prices. Coal prices are projected to fall throughout the forecast period as global consumption declines, led by China.

Metals prices

The metals price index is projected to drift slightly lower over 2025-26. After rising 6 percent this year (y/y), base metal prices are forecast to hold steady next year before softening by 3 percent in 2026. This reflects only moderate expected growth of industrial activity in major economies, particularly China. In contrast, following a 10 percent drop this year, iron ore prices are forecast to fall further in 2025-26 as major producers expand output and new mines come online. After increasing by 21 percent this year, the precious metals price index is forecast to plateau around record annual levels in the coming years. Sustained elevated price expectations are largely attributable to gold, which has broken price records in 2024 due to strong demand—both official demand from several emerging market and developing economy (EMDE) central banks and private demand, boosted by declining U.S. interest rates and heightened geopolitical tensions (figure 2.C).

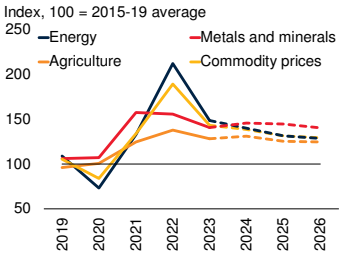
Agricultural prices

Agricultural prices, after edging up in 2024, are expected to fall by 4 percent in 2025 (y/y), largely reflecting increasing supplies amid favorable weather conditions, with little change anticipated in 2026. Within the agriculture index, food commodity prices—including grains, oils and

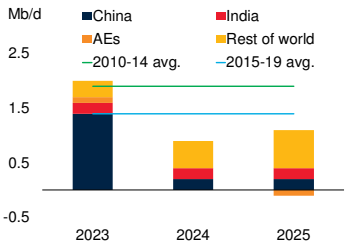
FIGURE 2 Commodity price forecasts, risks, and implications

Commodity prices are expected to decline moderately, overall, in 2025-26. A projected decrease in oil prices stems from steady supply growth set against decelerating global oil demand. Food prices are forecast to continue softening next year, reflecting solid harvests and favorable growing conditions. Gold prices, buoyed in part by strong central bank demand, are likely to remain elevated in 2025. In the near term, heightened geopolitical tensions pose notable upside risks to prices for energy and broader commodities. However, over the forecast period, risks to commodity prices are slightly tilted to the downside, as considerable excess oil supply could emerge if OPEC+ adheres to its current production schedule. In addition, two-sided risks to economic activity globally, and especially in China, are a further source of commodity price uncertainty.

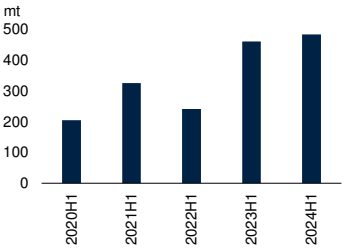
A. Commodity price projections



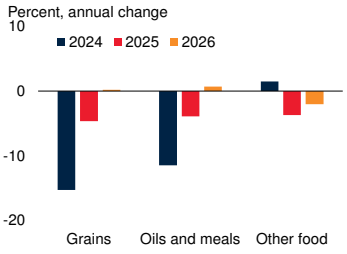
B. Change in global oil demand



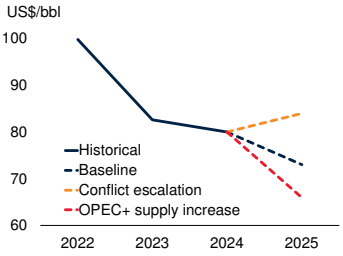
C. Gold purchases by central banks



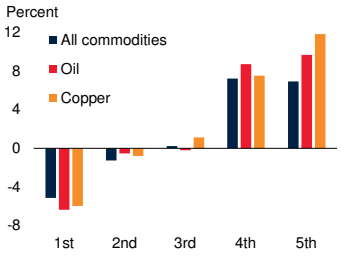
D. Food price forecasts



E. Brent oil prices in 2025 under risk scenarios



F. Quarterly commodity price changes by quintile of GDP growth in China, 2000-19



Sources: International Energy Agency (IEA); World Bank; World Gold Council.
Note: AEs = advanced economies; bbl = barrels of oil; mb/d = million barrels per day.
A. Commodity prices refers to the World Bank commodity price index, excluding precious metals. Dashed lines indicate forecasts.
B. Bars indicate change in annual global oil demand. Data based on IEA *Oil Market Report*, September 2024 edition. Green line displays the 2010-14 average, and blue line displays the 2015-19 average.
C. Gold purchases by central banks and other official sector institutions for the first half of each year in metric tons. Last observation is 2024Q2.
D. 2024, 2025 and 2026 are forecasts.
E. Blue dashed lines indicate baseline forecasts for the price of Brent oil. Oil prices are depicted as annual average values. Red and orange dashed lines indicate outcomes for the average Brent oil price in 2025 under different scenarios, as described in the text.
F. Bars show average changes in quarterly commodity prices in 2000-19, according to the quintile of China's q/q seasonally adjusted GDP growth rate during that period.

meals, and other foods—are on course to decline by 9 percent this year, then forecast to soften by a further 4 percent next year before leveling off in 2026 (figure 2.D). Over time, this should help improve overall food affordability, particularly in EMDEs. After a 58 percent surge in 2024, beverage prices are forecast to partially fall back in the next two years. Although growing conditions in major cocoa and coffee regions are likely to improve, prices are expected to remain elevated by historical standards. Meanwhile, agricultural raw material prices are projected to remain broadly stable over the forecast period.

Risks

In the near term, the possibility of escalating conflict in the Middle East poses substantial upside risks to energy prices. A conflict-related reduction in the region's energy exports could drive oil and gas prices higher in the closing months of 2024 and well above the forecasts for next year, with knock-on consequences for other commodities. Other upside risks to commodity prices include stronger-than-anticipated economic growth, especially if related to policy stimulus in China, and potential supply disruptions due to climate change-related extreme weather. Even so, over the forecast horizon, risks to the aggregate commodity price forecast are tilted slightly to the downside. This reflects a judgment that the steady unwinding of OPEC+ production cuts—in line with announced policy—could generate abundant oil supply, significantly reducing oil prices and lowering commodity prices overall. In addition, weaker-than-expected global industrial activity could weigh on energy and metal prices.

Upside risks

Geopolitical tensions. The recent surge in Middle East tensions—accompanied by a rapid rise in oil prices—underscores that broader conflicts remain a major risk in commodity markets. If intensifying conflict were to damage the oil and gas infrastructure of major commodity producers, energy prices could rise sharply.

Conflict escalation scenario: To calibrate the potential impact of a geopolitics-driven supply disruption, a scenario is assessed in which global oil supply declines by 2 mb/d due to a conflict-related shock in late 2024. A shortfall of this magnitude—equivalent to about 2 percent of global oil production—would be comparable to such historical oil supply decreases as those caused by the Iraq War in 2003 and the Libyan civil war in 2011, and consistent with events that materially encumber oil exports from the Middle East. In response, oil prices would rise sharply, with the price of Brent crude oil close to $92/bbl at peak impact, similar to last year's monthly high. After a couple of months, unaffected oil producers respond to higher prices by increasing oil production. As such, oil prices gradually decrease over 2025, while remaining above the pre-escalation level. For 2025 as a whole, the price of Brent oil averages $84/bbl, 15 percent above the baseline forecast but only 5 percent above the average 2024 price, reflecting price declines in the second half of this year (figure 2.E).

An energy supply shock comparable to the above scenario could also have repercussions for wider commodity prices, for example, by feeding into higher agricultural and fertilizer prices, as happened in early 2022. These potential knock-on effects reflect the role of energy commodities as key production inputs and of biofuels as crude oil substitutes. Moreover, depending on the specific permutations of conflict escalation, energy market impacts could be larger than envisaged. For example, oil and gas prices might respond particularly sharply if critical energy trade routes were compromised.

Stronger global GDP growth. Global GDP growth is expected to hold steady in 2025-26. As such, the commodity price forecasts do not anticipate any broad demand impetus from fluctuations in economic activity. However, economic growth could turn out higher than expected in both China and the United States—the world's two largest economies—driving significantly stronger commodity demand. If China's policymakers intensify stimulus efforts to bolster output growth prospects, industrial commodity prices could increase substantially. In general, the pace of output growth in China has been a key driver of commodity markets in recent decades. Between 2000 and 2019, quarters when China's GDP growth was in its bottom quintile were typically accompanied by a 5 percent decline in commodity prices, while top-quintile growth was marked by average increases of 7 percent in overall commodity prices and 12 percent in copper prices (figure 2.F). In addition, higher commodity prices could be buttressed by above-trend GDP growth in the United States. Despite an anticipated slowdown, recent indicators of U.S. economic activity remain robust.

Extreme weather events. The global average temperature over the last 12 months exceeded pre-industrial levels by more than 1.5 degrees Celsius, surpassing the threshold that countries committed to stay below under the 2015 Paris Agreement. In this context, climactic shifts and extreme weather events risk supply disruptions for a range of commodities. In agricultural markets, adverse weather events, particularly heat waves, can lead to yield losses by inducing water stress, worsening pest and disease issues, and decreasing labor productivity. By curbing supply in affected markets, such losses could push prices above their forecast levels. In the energy sector, more frequent and lengthy heat waves could compromise hydropower output while stoking energy demand for air conditioning. As a result, consumption of natural gas and coal could be greater than envisaged in the baseline, also implying higher prices.

Downside risks

Increased oil supply. OPEC+ has maintained its agreement, first reached in late 2023, for voluntary oil supply cuts of 2.2 mb/d, in addition to 1.65 mb/d of prior cuts. The duration of the voluntary reductions has been repeatedly extended as oil demand has undershot OPEC+ forecasts. Given this trend, the oil price projections assume that the large majority of OPEC+ output cuts are retained until the end of 2025. However, in view of expanding oil production in non-OPEC+ countries, OPEC+ could instead opt to prioritize market share over price.

Increased oil supply scenario: If the 2.2 mb/d of OPEC+ voluntary cuts were unwound during 2025—in line with announced policy but contrary to the baseline assumptions—global oil production would be expected to markedly exceed demand next year. In a scenario where OPEC+ largely follows the current stated policy and other oil exporters do not reduce production to offset the associated supply increase, global oil production in 2025 would be, on average, about 1.5 mb/d greater than in the baseline. As a result, global oil stocks would build considerably, putting sustained downward pressure on prices. Reflecting ample supply set against modest demand growth, the Brent oil price would be expected to decline to average $66/bbl in 2025, about 10 percent below the baseline forecast and 18 percent lower than the projected 2024 average price.

Weaker global industrial activity. In the context of still elevated interest rates and subdued global trade growth, recent data releases indicate potential downside risks to global industrial activity. For example, despite declining policy rates, euro area industrial production has contracted (compared to 12 months earlier) for most of 2024, while global manufacturing PMIs for output, new orders, and new export orders signaled contraction in 2024Q3. Meanwhile, protracted domestic demand weakness in China has partly stemmed from a persistent drag from the commodity-intensive construction sector. If stimulus measures do not take root and the property sector weakens further, GDP growth in China could undershoot forecasts. The materialization of downside risks to global industrial activity would significantly dampen associated commodity demand, with commodity prices falling alongside.

Broader implications

Implications of the baseline commodity price forecasts

Global consumer price inflation. As past and anticipated declines in energy and food commodity prices pass through to consumer prices—albeit to varying degrees across different products and regions—they should continue to put downward pressure on headline inflation, particularly its non-core components. Lower commodity prices should, therefore, help central banks bring headline inflation back toward targets, especially in EMDEs where food and energy form relatively large components of consumption baskets.[3] Furthermore, given that energy and food prices tend to be particularly salient to consumers, the projected easing of commodity prices could also temper inflation expectations, which could feed back into reduced core inflation pressures.[4]

Food insecurity. Declining food commodity prices are likely to bolster food affordability in EMDEs, helping to alleviate systemic food insecurity in some contexts. However, the relationship between global commodity prices and food insecurity is increasingly complicated by localized food crises related to conflicts, natural disasters, and idiosyncratic economic shocks. As a result, with armed conflict remaining the predominant cause, the global incidence of undernourishment—a key measure of global hunger—has not fallen since 2017, affecting over 9 percent of the global population, or more than 730 million people, in 2023. Moreover, the UN Food and Agriculture Organization is expecting the number of people experiencing undernourishment to rise further in 2025, to 735 million.

Implications of risks to the commodity price forecasts

Conflict-related commodity price spike. A conflict-driven spike in commodity prices would represent a negative commodity-specific supply shock for the global economy. Commodity price increases, like those envisaged in the conflict escalation scenario, could drive headline inflation higher next year through both direct effects on energy and food prices and via the pass-through of

[3] Ha, J., M. A. Kose, and F. Ohnsorge, eds. 2019. *Inflation in Emerging and Developing Economies: Evolution, Drivers and Policies*. Washington, DC: World Bank.

[4] D'Acunto, F., U. Malmendier, J. Ospina, and M. Weber. 2019. "Exposure to Daily Price Changes and Inflation Expectations." NBER Working Paper 26237, National Bureau of Economic Research, Cambridge, MA.

commodity input costs into wider consumer prices. While inflation has broadly declined this year, much of this reflects downward pressure from food and energy components. A reversal of this trend could reignite concerns about above-target inflation in many economies at a time when elevated core and services inflation have proved persistent. This would likely result in the paring back of expectations for widespread and substantial interest rate cuts this year, which could weigh on global GDP growth by tightening global financial conditions. Moreover, real household incomes would be curbed by rising prices for essential goods, constraining consumption growth.

Greater oil supply. If a larger-than-expected increase in oil supply were to occur, it would represent a positive commodity-specific supply shock for the global economy in the near-term, although it could also potentially slow the energy transition by incentivizing fossil fuel consumption. All else being equal, reduced energy prices would result in increased real incomes for consumers, reduced industrial input costs, and terms of trade benefits in oil importers, likely boosting global demand. That said, for the envisioned potential price declines, the net benefit to global activity could be marginal, tempered by weaker activity in oil exporters. Indeed, a large decline in oil prices in 2014-16, with a major supply-driven component, failed to generate a material positive global growth impulse. At that time, factors behind the muted response of global demand—all of which could potentially materialize again—included declining U.S. extractives investment, limited pass-through of crude oil price declines to consumers, and pro-cyclical policy tightening in some oil exporters.[5]

Special Focus

The Special Focus analyzes commodity price synchronization from 2020 to mid-2024, a period including the pandemic-related global recession and subsequent recovery, and contrasts it with earlier commodity cycles, including around the 2007-08 Global Financial Crisis. The analysis reveals three main findings. First, a common factor has played a significant role in explaining industrial commodity prices, particularly during periods of economic stress. This factor accounted for over 60 percent, 40 percent, and 26 percent of price movements for base metals, energy, and food commodities, respectively, during 2020-24. Second, non-commodity global supply shocks typically have the largest and most lasting effects on commodity prices, followed by commodity-specific shocks—such as weather or geopolitical events—while global demand shocks, such as fiscal stimuli, tend to have more temporary effects. Third, while global supply shocks were dominant in the early 2000s and around the Global Financial Crisis, post-pandemic commodity prices have been substantially shaped by commodity-specific shocks, such as those related to conflict. This has given rise to novel price patterns, such as precious metals moving more in sync with the common factor, due to safe-haven demand. Although the commodity market effects of global shocks earlier this decade have largely subsided, resulting in more varied price movements across commodities, risks remain. Specifically, major supply disruptions in energy and agricultural producing regions could trigger a renewed synchronized upswing in commodity prices. Such synchronized spikes are particularly detrimental for global inflation and economic activity.

[5] Stocker M., J. Baffes, Y. M. Some, D. Vorisek, and C. M. Wheeler. 2018."The 2014-16 Oil Price Collapse in Retrospect: Sources and Implications." Policy Research Working Paper 8419, World Bank, Washington, DC.

TABLE 1 World Bank Commodity Price Forecasts

							Percent change from previous year			Differences in levels from April 2024 projections	
Commodity	Unit	2022	2023	2024f	2025f	2026f	2024f	2025f	2026f	2024f	2025f
INDEXES (in nominal U.S. dollars, 2010 = 100)											
Total [1]		142.5	108.0	104.3	99.0	97.3	-3.4	-5.1	-1.7	-1.0	-2.6
Energy [2]		152.6	106.9	100.8	94.5	92.5	-5.8	-6.2	-2.1	-3.2	-5.5
Non-Energy		122.1	110.2	111.6	108.2	106.9	1.3	-3.1	-1.2	3.7	3.3
Agriculture		119.3	110.9	113.2	108.4	107.9	2.1	-4.2	-0.5	3.8	3.6
Beverages		106.3	107.8	170.7	155.0	150.8	58.4	-9.2	-2.7	38.8	39.2
Food		138.1	125.4	114.8	110.2	109.8	-8.5	-4.0	-0.4	-3.7	-3.7
Oils and Meals		145.2	118.9	105.3	101.2	102.0	-11.4	-3.9	0.7	-4.9	-3.7
Grains		150.4	133.0	112.9	107.6	107.9	-15.2	-4.6	0.2	-5.1	-6.0
Other food		117.7	127.2	129.1	124.4	121.9	1.5	-3.7	-2.0	-0.7	-1.8
Raw Materials		80.3	77.1	80.1	80.4	81.4	3.9	0.4	1.2	4.3	3.3
Timber		80.1	79.1	80.2	81.9	83.2	1.3	2.1	1.6	1.9	1.8
Other raw materials		80.5	74.9	80.1	78.9	79.4	6.9	-1.5	0.7	7.0	4.9
Fertilizers		235.7	153.5	116.9	115.2	117.1	-23.9	-1.4	1.6	-3.3	2.3
Metals and Minerals [3]		115.0	104.0	107.7	106.8	103.7	3.6	-0.9	-2.9	4.3	2.7
Base Metals [4]		122.4	109.0	115.6	116.5	113.5	6.1	0.8	-2.6	5.7	5.0
Precious Metals [5]		136.8	147.3	177.6	178.0	174.3	20.5	0.2	-2.1	18.7	21.2
PRICES (in nominal U.S. dollars)											
Energy											
Coal, Australia	$/mt	344.9	172.8	137.0	120.0	105.0	-20.7	-12.4	-12.5	12.0	10.0
Crude oil, Brent	$/bbl	99.8	82.6	80.0	73.0	72.0	-3.2	-8.8	-1.4	-4.0	-6.0
Natural gas, Europe	$/mmbtu	40.3	13.1	10.8	11.5	10.5	-17.6	6.5	-8.7	1.3	1.0
Natural gas, U.S.	$/mmbtu	6.4	2.5	2.2	3.4	3.7	-13.3	54.5	8.8	-0.2	-0.1
Liquefied natural gas, Japan	$/mmbtu	18.4	14.4	13.0	13.5	12.5	-9.6	3.8	-7.4	0.5	0.0
Non-Energy											
Agriculture											
Beverages											
Cocoa	$/kg	2.39	3.28	6.90	6.00	5.90	110.3	-13.0	-1.7	1.90	2.00
Coffee, Arabica	$/kg	5.63	4.54	5.45	5.00	4.80	20.0	-8.3	-4.0	1.10	0.60
Coffee, Robusta	$/kg	2.29	2.63	4.50	4.20	3.90	71.3	-6.7	-7.1	1.00	1.40
Tea, average	$/kg	3.05	2.74	3.10	3.15	3.20	13.1	1.6	1.6	0.30	0.40
Food											
Oils and Meals											
Coconut oil	$/mt	1,635	1,075	1,460	1,550	1,400	35.8	6.2	-9.7	275	450
Groundnut oil	$/mt	2,203	2,035	1,770	1,750	1,700	-13.0	-1.1	-2.9	-130	-100
Palm oil	$/mt	1,276	886	925	860	850	4.3	-7.0	-1.2	20	35
Soybean meal	$/mt	548	541	445	435	444	-17.8	-2.2	2.1	-35	-25
Soybean oil	$/mt	1,667	1,119	1,030	1,020	1,053	-7.9	-1.0	3.2	-100	-130
Soybeans	$/mt	675	598	455	430	440	-23.9	-5.5	2.3	-45	-45
Grains											
Barley	$/mt	…	…	186	185	184	...	-0.5	-0.5	-9	0
Maize	$/mt	319	253	187	185	188	-26.0	-1.1	1.6	-13	-11
Rice, Thailand, 5%	$/mt	437	554	598	530	518	8.0	-11.4	-2.3	3	-20
Wheat, U.S., HRW	$/mt	430	340	270	265	268	-20.7	-1.9	1.1	-20	-20

TABLE 1 World Bank Commodity Price Forecasts (*continued*)

							Percent change from previous year			Differences in levels from April 2024 projections	
Commodity	**Unit**	**2022**	**2023**	**2024f**	**2025f**	**2026f**	**2024f**	**2025f**	**2026f**	**2024f**	**2025f**
PRICES (in nominal U.S. dollars)											
Non-Energy											
Other Food											
Bananas, U.S.	$/kg	1.49	1.60	1.30	1.25	1.20	-18.6	-3.8	-4.0	-0.40	-0.30
Beef	$/kg	5.62	4.90	5.70	5.90	5.91	16.3	3.5	0.2	0.50	0.60
Chicken	$/kg	1.68	1.53	1.42	1.40	1.38	-7.4	-1.4	-1.4	-0.10	-0.10
Oranges	$/kg	0.92	1.57	2.20	1.70	1.58	39.8	-22.7	-7.3	0.50	0.20
Shrimp	$/kg	13.51	10.19	8.60	9.00	9.50	-15.6	4.7	5.6	-0.90	-1.00
Sugar, World	$/kg	0.41	0.52	0.45	0.46	0.46	-12.9	2.2	-0.2	0.00	0.00
Raw Materials											
Timber											
Logs, Africa	$/cum	369	379	380	390	395	0.4	2.6	1.3	-10	-5
Logs, S.E. Asia	$/cum	228	212	200	210	215	-5.8	5.0	2.4	0	0
Sawnwood, S.E. Asia	$/cum	675	678	700	710	720	3.3	1.4	1.4	20	20
Other Raw Materials											
Cotton	$/kg	2.86	2.09	1.90	2.00	2.05	-9.3	5.3	2.5	-0.30	-0.20
Rubber, TSR20	$/kg	1.54	1.38	1.75	1.80	1.85	26.6	2.9	2.8	0.20	0.20
Tobacco	$/mt	4,270	5,016	5,350	4,900	4,800	6.7	-8.4	-2.0	1050	650
Fertilizers											
DAP	$/mt	772	550	560	510	505	1.8	-8.9	-1.0	-40	-40
Phosphate rock	$/mt	266	322	155	160	165	-51.8	3.2	3.1	-10	-10
Potassium chloride	$/mt	863	383	295	290	295	-23.0	-1.7	1.7	-5	0
TSP	$/mt	716	480	475	425	425	-1.1	-10.5	0.0	25	45
Urea, E. Europe	$/mt	700	358	330	335	340	-7.8	1.5	1.5	-20	10
Metals and Minerals											
Aluminum	$/mt	2,705	2,256	2,475	2,500	2,600	9.7	1.0	4.0	175	100
Copper	$/mt	8,822	8,490	9,250	9,300	8,500	8.9	0.5	-8.6	350	500
Iron ore	$/dmt	121.3	120.6	108.0	95.0	90.0	-10.4	-12.0	-5.3	-2	-10
Lead	$/mt	2,151	2,136	2,100	2,050	2,100	-1.7	-2.4	2.4	0	0
Nickel	$/mt	25,834	21,521	17,000	17,500	18,500	-21.0	2.9	5.7	0	-500
Tin	$/mt	31,335	25,938	30,000	32,000	34,000	15.7	6.7	6.3	3000	4000
Zinc	$/mt	3,481	2,653	2,700	2,600	2,500	1.8	-3.7	-3.8	200	0
Precious Metals											
Gold	$/toz	1,801	1,943	2,350	2,325	2,250	21.0	-1.1	-3.2	250	275
Silver	$/toz	21.8	23.4	28.0	30.0	31.0	19.7	7.1	3.3	3.0	4.0
Platinum	$/toz	962	966	1,000	1,050	1,100	3.5	5.0	4.8	0	0

Source: World Bank.
1. The World Bank's *commodity total price index* is composed of energy and non-energy prices (excluding precious metals), weighted by their share in 2002-04 exports. The energy index's share in the overall index is 67 percent.
2. Energy price index includes coal (Australia), crude oil (Brent), and natural gas (Europe, Japan, U.S.).
3. Base metals plus iron ore.
4. Includes aluminum, copper, lead, nickel, tin, and zinc.
5. Precious metals are not part of the non-energy index.
f = forecast.

Commodity Market Developments and Outlook

Energy

After falling 4 percent in 2024Q3 (q/q), energy prices showed heightened volatility in October, driven by shifting market assessments of geopolitical risk, signs of subdued economic growth in China, and concerns about potential oversupply. In 2024, the World Bank's energy price index is projected to dip about 6 percent (y/y), before softening a further 6 percent in 2025 and 2 percent in 2026. The Brent price is expected to average $80/bbl (per barrel) in 2024, down from $83/bbl in 2023, before receding further to $73/bbl in 2025 and $72/bbl in 2026. These projections assume that ongoing armed conflicts do not escalate further, global economic growth remains stable, and the vast majority of the 2.2 mb/d voluntary OPEC+ supply cuts is further extended. In addition, oil supply from non-OPEC+ producers is assumed to grow by almost 2 mb/d in 2025. European natural gas prices are expected to decrease by 18 percent in 2024, before firming somewhat in 2025 and then moderating in 2026. U.S. natural gas prices are set to decline in 2024, climb sharply next year, and edge up further in 2026. Coal prices are projected to fall throughout the forecast horizon. A prolonged intensification of the conflict in the Middle East poses pronounced upside risks to energy prices. Other upside risks stem from lower-than-expected North American oil output, increased competition for liquefied natural gas cargoes, and sustained, higher-than-assumed coal and natural gas consumption in Asia. However, there are also substantial downside risks to energy prices, particularly an earlier-than-expected unwind of OPEC+ supply cuts, which could generate abundant oil supply, as well as weaker-than-expected economic growth, including in China.

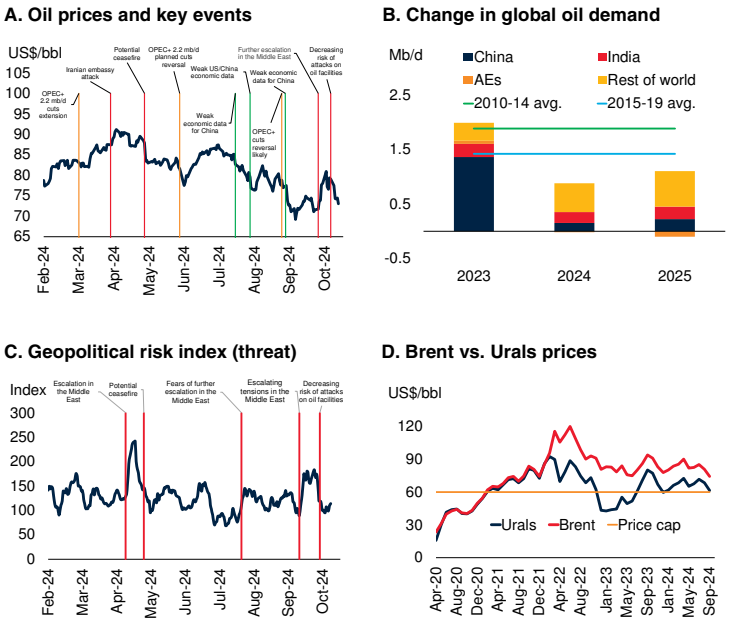
Oil

Recent Developments

Oil prices surged 10 per cent in the first week of October to almost $81/bbl, propelled by a marked surge in geopolitical tensions. By the middle of the month, this rise had largely reversed as concerns over oil oversupply and weak economic growth in China took center stage, while perceived risks to oil infrastructure in the Middle East receded. In the previous quarter, oil prices declined significantly, with the Brent oil price decreasing from $87/bbl in early July to about $73, on average, in September (figure 3.A). This steady fall was due to a trickle of disappointing updates on the Chinese economy and heightened expectations that China's oil consumption is decelerating substantially relative to last year (figure 3.B). In parallel, signs of softening momentum in the U.S. economy added to bearish sentiment last quarter. This was only partly offset by announcements of

FIGURE 3 Oil market: Global price and demand developments

The Brent oil price gained more than 10 percent in early October before shedding most of the gains by mid-month. Signs of weak economic growth weighed on oil prices, consistent with feeble demand growth in China. This was compounded by the decline in the perceived risk to oil infrastructure in the Middle East and the possible start of OPEC+ unwinding its 2.2 mb/d voluntary supply cuts in December. The Urals oil price has remained above the $60/bbl price cap throughout 2024Q3.



Sources: Bloomberg; Caldara and Iacoviello (2022); International Energy Agency (IEA); World Bank.
Note: AEs = advanced economies; bbl = barrel; mb/d = million barrels per day.
A. Daily Brent prices. Last observation is October 18, 2024. Yellow lines indicate events related to OPEC+ supply management, red lines indicate geopolitical events, and green lines display economic news.
B. Bars indicate change in annual oil demand in million barrels per day (mb/d). Data based on IEA's *Oil Market Report*, October 2024 edition. Lines indicate average changes in annual oil demand for the two specified 5-year periods.
C. The Geopolitical risk index (threat) reflects automated text-search of electronic archives from 10 newspapers, related to adverse geopolitical events. Blue line is the 7-day moving average of the daily series. Last observation is October 21, 2024.
D. Monthly data. Data for Russian Urals prices from IEA *Oil Market Reports*. Last observation is September 2024.

easing monetary policy in major economies, short-term disruptions to U.S. oil supply, and a rise in conflict-related concerns in early August (figure 3.C).

In late August, perceptions that OPEC+ might start unwinding their voluntary supply cuts in September, as announced in June, gained traction in the market. This, along with expectations that the Libyan production crisis would soon abate, pushed the Brent price sharply downward. OPEC+ subsequently postponed the unwind of their supply cuts by two months. Still, oil prices continued to fall due to subdued economic data, reaching $69/bbl in the second week of September, their lowest level since December 2021. In recent months, the price of Urals oil has remained above the $60/bbl price cap agreed by the G7-led Price Cap Coalition, with the recent Brent-Urals differential considerably narrower than in early 2023 (figure 3.D).

The growth of global oil demand is estimated to have declined by almost three-fourths relative to a year earlier, from 2.4 million barrels per day (mb/d) in 2023Q3 to 0.7 mb/d in 2024Q3 (y/y; figure 4.A). The slowdown has been particularly stark in China, where changes in consumption plunged from a 2.0 mb/d gain in 2023Q3 to a 0.3 mb/d decline in 2024Q3, driven by subdued growth of industrial production, rapid take up of electric and hybrid vehicles, and the increasing prevalence of trucks powered by liquefied natural gas (LNG). In other emerging market and developing economies (EMDEs), growth in total consumption remained stable at about 0.7 mb/d in 2024Q3, but it increased by 0.3 mb/d in advanced economies. Across EMDE regions, oil demand growth in 2024 is estimated to have slowed in Latin America and the Caribbean (LAC), but increased in East Asia and Pacific (EAP) excluding China, the Middle East and North Africa (MNA), and South Asia (SAR; figure 4.B). In contrast, oil demand stalled in Europe and Central Asia (ECA) while decreasing in Sub-Saharan Africa (SSA). Solid demand increases in India have been mainly driven by growing consumption of industrial fuels, such as naphtha and diesel, and of liquid petroleum gas (LPG; figure 4.C).

Global oil supply rose by 1.1 percent in 2024Q3 (y/y), a 0.2 percentage point increase compared to the expansion (y/y) in the previous quarter. In 2024Q3, q/q changes in production among OPEC+ members were minor, with the exception of Libya and Russia. Libya's output decreased by 25 percent to 0.9 mb/d due to the recent production crisis, while Russia's production edged down, with September exports 7 percent below last December's peak of 8.1 mb/d. Overall, production continued to increase in advanced economies and LAC in 2024, more than offsetting the decline in MNA (figure 4.D). Computed global spare capacity, almost half of which is held by Saudi Arabia, increased in September 2024 month-on-month (m/m) to slightly more than 7 percent of current global production (figure 4.E).

Partly reflecting OPEC+ supply management, the supply-demand balance in the oil market has remained tight in 2024, with surpluses in 2024Q1 and 2024Q2 offset by a deficit in 2024Q3 (figure 4.F). In August, the amount of oil stored on water declined for the fifth month in a row, as the market adjusted to the rerouting of tankers from the Suez Canal to around southern Africa. OECD countries' industry stocks have been steady in 2024. The refilling rate of the U.S. Strategic Petroleum Reserve remained stable in 2024Q3, at a modest 3.2 million barrels per month, with no significant changes planned for the rest of 2024.

Outlook

The Brent oil price is projected to average $80/bbl in 2024, about $3/bbl lower than last year, with prices expected to hover around $75 for the rest of the year before drifting lower to $73/bbl in 2025 and $72/bbl in 2026 (figure 5.A). This projection is predicated on no prolonged escalation in ongoing armed conflicts, a slowdown in oil demand growth, and a well-supplied oil market. Indeed, under these baseline assumptions, global oil supply next year is expected to exceed demand by an average of 1.2 mb/d—a degree of oversup-

ply only surpassed during COVID-19-related shutdowns in 2020 and the 1998 oil price collapse.

Global oil supply is expected to reach about 103 mb/d in 2024, up from 102.3 mb/d in 2023, before rising to about 105 mb/d in 2025. Most of the growth in production is expected to occur in the United States, with increases of about 0.6 mb/d in both 2024 and 2025. Supply is projected to continue increasing up to 0.5 mb/d a year in Brazil, Canada, and Guyana combined. In 2025, production is also predicted to increase in several small producers, such as Kazakhstan, Norway, and several African countries. Supply from OPEC+ members is assumed to increase only slightly in 2025, based on the assumption that the great majority of the 2.2 mb/d voluntary cuts will be extended further.[1]

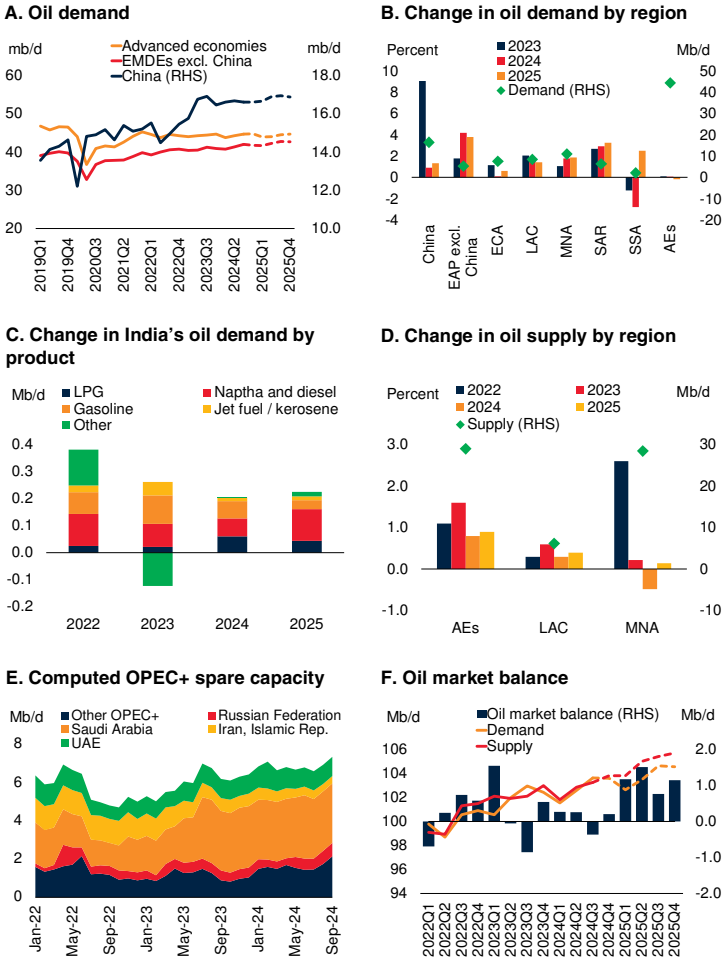
Global oil consumption is expected to rise by about 0.9 mb/d in both 2024 and 2025, a marked slowdown from the 2 mb/d increase in 2023, after China lifted pandemic-related policy measures. Up to 45 percent of the growth in global consumption in 2024 and 2025 is expected to occur in China and India, despite China's increase being only about one tenth of the rise seen in 2023. In contrast, consumption in advanced economies is projected to stall this year and next. In 2026, the growth in global oil consumption is expected to be broadly in line with the previous two years, in the region of 0.8 mb/d, with increases remaining concentrated in EAP, SAR, and SSA. These projections would continue a secular deceleration in global oil consumption, reflecting both the declining oil intensity of global GDP and subdued global economic growth by recent historical standards.[2] Consumption in China will continue to be dampened by the ongoing rapid diffusion of electric and hybrid vehicles, which recently reached 50 percent of total monthly vehicle sales, as well as LNG-powered trucks.

[1] International Energy Agency. 2024. *Oil Market Report*, October edition, IEA, Paris.

[2] World Bank (2024). *Global Economic Prospects*, Washington, D.C.: World Bank.

FIGURE 4 Oil market: Regional demand and supply developments

Oil demand growth has lost momentum in 2024 due to a stark slowdown in China, despite growth holding in East Asia and Pacific excluding China, South Asia, and the Middle East and North Africa. In India, the rise in consumption has been driven by gasoline, naphtha and diesel, and LPG. In terms of supply, oil production is expected to rise in advanced economies and Latin America and the Caribbean. As a consequence of OPEC+ supply management, spare capacity has remained elevated while the oil market remained tight in 2024. In contrast, a sizable surplus is expected in 2025, even if OPEC+ voluntary cuts are maintained.



Sources: International Energy Agency (IEA); World Bank.

Note: AEs = advanced economies; EMDEs = emerging market and developing economies; EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; LPG = liquefied petroleum gas; MNA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa; UAE = United Arab Emirates.

A. Dashed lines indicate IEA forecasts for 2024Q4 to 2025Q4.

B. Bars show the percent year-on-year change in oil demand. Green diamonds show demand for oil in millions of barrels per day (mb/d) for 2023. Data for 2024 and 2025 are IEA forecasts.

C. Bars show the year-on-year change in millions of barrels per day (mb/d). Data for 2024 and 2025 are IEA forecasts.

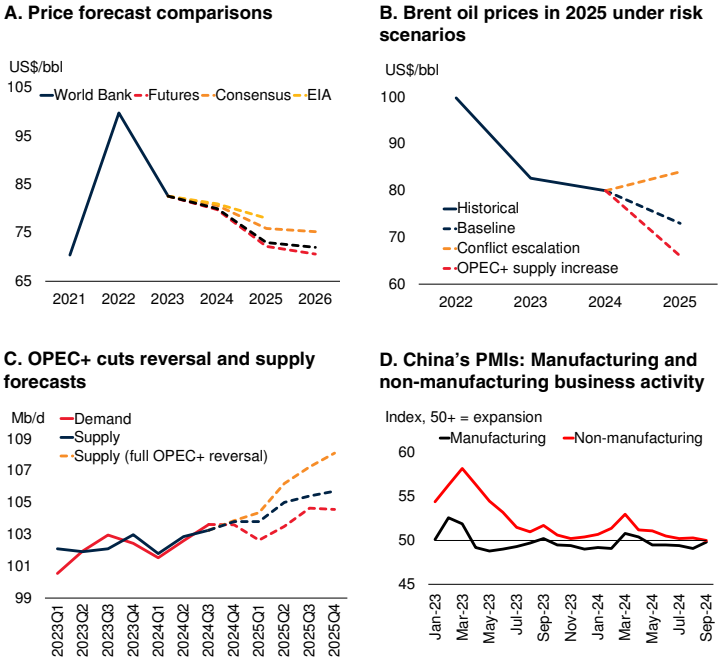
D. Bars show the percent year-on-year change in oil supply. Green diamonds show supply of oil per region in million barrels per day (mb/d) for 2023. Data for 2024 and 2025 are IEA forecasts.

E. Spare capacity for OPEC+ members from monthly IEA *Oil Market Reports*. Other OPEC + includes Algeria, Azerbaijan, Bahrain, Brunei, Congo, Equatorial Guinea, Gabon, Iraq, Kazakhstan, Kuwait, Libya, Malaysia, Mexico, Nigeria, Oman, South Sudan, Sudan, and República Bolivariana de Venezuela. Values for Islamic Republic of Iran, Libya, Russian Federation, and República Bolivariana de Venezuela are computed from data on sustainable capacity and actual supply in monthly IEA *Oil Market Reports*. Values for all other countries are published in IEA *Oil Market Reports*.

F. "Oil market balance" is the difference between supply and demand in each quarter. Data from IEA *Oil Market Report*, October 2024 edition. Dashed lines indicate IEA forecasts for 2024Q4 to 2025Q4, based on extension of voluntary OPEC+ cuts.

FIGURE 5 Oil market: Outlook

After averaging an estimated $80/bbl in 2024, the Brent oil price is forecast to decrease to $73/bbl in 2025, before edging down further to $72/bbl in 2026. These projections assume that the vast majority of OPEC+ supply cuts will be maintained. The Brent price in 2025 could average $85/bbl if conflict-driven disruptions reduce global oil supply by 2 million barrels per day (mb/d), or fall as low as $66/bbl if OPEC+ reverses its voluntary supply cuts in line with the announced schedule. Other downside risks include weaker-than-expected output growth in China, where purchasing managers' index (PMI) readings have recently deteriorated.



Sources: Bloomberg; Consensus Forecasts; Energy Information Administration (EIA); Haver Analytics; OPEC; World Bank.

Note: PMI = purchasing managers' index.

A. Brent crude oil forecasts for 2024 and 2025. Futures data as of October 18, 2024. Consensus data as of October 2024 report. EIA data from October issue of *Short-Term Energy Outlook*. Dashed lines indicate forecasts for 2024 - 2026.

B. Blue dashed lines indicate baseline forecasts for the price of Brent oil. Oil prices are depicted as annual average values. Red line reflects a scenario in which OPEC+ production cuts are reduced sooner than in the baseline. Orange line depicts outcomes under conflict-related disruptions to oil supply.

C. Supply and demand are based on data from IEA *Oil Market Report*, October 2024 edition. The supply forecast with a full OPEC+ reversal incorporates the schedule for cut reversals announced by OPEC+ on September 6, 2024, while assuming no response from other non-OPEC+ producers. Dashed lines indicate forecasts for 2024Q3 to 2025Q4.

D. PMI for Manufacturing and non-manufacturing in China, seasonally adjusted. Values above 50 indicate expansion.

Risks

In the near term, heightened tensions in the Middle East present significant upside risks to oil prices, as conflict-driven disruptions of the region's exports could push the price well above the forecast. Other upside risks include U.S. shale oil producers not meeting expected output and stronger oil consumption in China. However, over the full forecast period, risks are tilted slightly to the downside, in view of the potential for a sustained period of excess oil supply. Key downside risks include weaker-than-expected economic growth and a steady unwind of OPEC+ supply cuts—broadly in line with the announced schedule—which could generate a larger supply surplus.

Upside risks

Geopolitical developments. The significant swings in oil prices over the last year have been due partly to geopolitical developments, particularly events related to the current conflict in the Middle East. The baseline forecast accounts for the continuation of relatively small-scale conflict-related disruptions, such as limited attacks toward ships in the Red Sea, which are expected to have only short-lived impacts on oil prices. However, since the forecast does not factor in a major escalation of ongoing conflicts, any significant broadening of hostilities to oil-producing countries in the Middle East could pose a major upside risk, leading to a sharp and sustained rise in oil prices.

Conflict escalation scenario: The potential oil market repercussions of the conflict in the Middle East are assessed by quantifying the impact of a conflict-related shock decreasing global oil production by 2 mb/d. In line with recent insights into the effect of different sources of supply shocks, this scenario assumes that oil prices are more responsive to conflict-driven oil supply reductions than to other shocks reducing oil output.[3] The magnitude of the shock, which is assumed to take place in late 2024, is roughly equivalent to 2 percent of global oil production.

A shock of this size, which is consistent with oil exports from the Middle East being severely

[3] In a forthcoming paper, Verduzco-Bustos and Zanetti use episodes of exceptional increases in geopolitical tensions to identify the effects of an oil supply shock that is produced during periods of elevated geopolitical risk. Their findings indicate that geopolitical oil price shocks have a stronger impact on oil prices than supply shocks during peaceful times. Verduzco-Bustos, G. and F. Zanetti. Forthcoming. "The Effects of Geopolitical Oil Price Shocks." World Bank Policy Research Working Paper, World Bank, Washington. DC.

encumbered, leads to a sharp rise in oil prices, with the Brent price close to $92/bbl at peak impact within a couple of months. Under this scenario, unaffected oil producers are expected to respond to higher prices by increasing supply, as has typically occurred following past conflict-related declines in global production. The Brent oil price would then be expected to gradually decrease, while remaining above the pre-escalation level. This would result in an average price of $84/bbl in 2025, 15 percent above the baseline forecast, but only 5 percent above the average 2024 price (figure 5.B). At the current juncture, high levels of spare capacity held by OPEC+ members could be a key factor defining the size and timing of a supply response to an oil price increase.

North American oil output. The price forecast assumes that U.S. oil production will increase by about 0.6 mb/d in 2025. However, U.S. output has recently stagnated, and the Dallas Federal Reserve Energy Survey's business activity index contracted in 2024Q3, indicating potential headwinds that may slow the expansion of shale output.[4] Apart from uncertainty about the trajectory of OPEC+ production, factors curbing the growth of U.S. oil supply include rising input and capital costs, a declining number of both active and drilled but uncompleted (DUC) wells, workforce constraints, and the financial discipline imposed by a recent wave of mergers and acquisitions in the industry. If these restraining conditions persist amid increasing global demand and no supply increase from OPEC+, a shortfall in the market could result.

Robust consumption in China. The baseline price forecast assumes modest oil consumption growth in China, reflecting weak economic activity and the continued penetration of electric and hybrid vehicles. Recently announced stimulus measures and the possible introduction of new expansionary fiscal policies could lessen headwinds in the property market, increase business and consumer confidence, and lift economic growth. This could result in higher demand from the industrial and transportation sectors, giving rise to oil consumption growth considerably higher than the annual increases embedded in the baseline forecast.

Downside risks

Increased oil supply. The baseline forecast assumes that OPEC+ supply remains largely unchanged throughout the rest of 2024 and in 2025. This contrasts with the production schedule announced by OPEC+ in September 2024, which indicated that member countries would return 180 thousand barrels per day to global markets in December 2024 and an average of 1.5 mb/d in 2025. Full implementation of this schedule would be consistent with OPEC+ prioritizing market share over price, given expanding oil production in non-OPEC+ countries.

Increased oil supply scenario: The OPEC+ production schedule, if implemented without reductions in output elsewhere, would create significant oversupply in the oil market (figure 5.C). With global supply projected to be about 2.5 percent higher than demand in 2025, the resulting surplus would be comparable to the levels seen during the COVID-19 pandemic in 2020. Although other oil producers would likely be pressured to reduce production, bulging global oil stocks would still exert downward pressure on oil prices next year. In a context of ample supply and modest demand growth, this scenario sees the Brent oil price decline to an average $66/bbl in 2025, about 10 percent below the baseline forecast and 18 percent lower than the projected 2024 average price.[5]

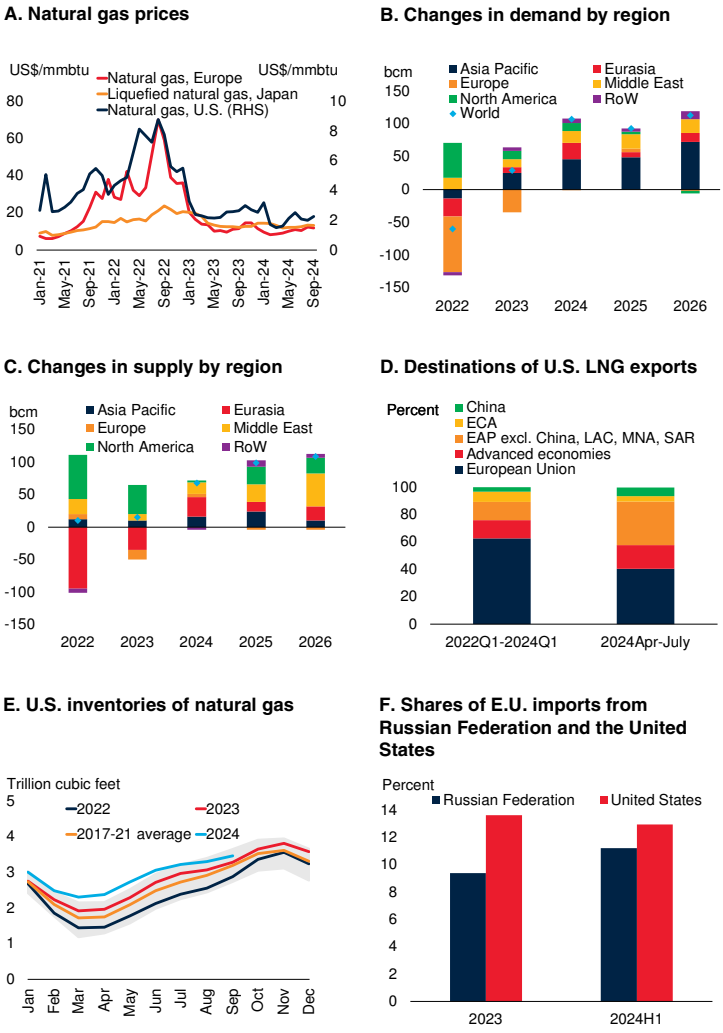
An increase in OPEC+ supply and the subsequent price drop would likely prompt a delay in production increases elsewhere. For example, the increase in supplies from Brazil, Canada, and Guyana could be smaller than the 0.5 mb/d assumed in the baseline, while U.S. shale producers could reduce extraction activity, particularly in

[4] Federal Reserve Bank of Dallas. 2024. *Dallas Fed Energy Survey*, Fourth quarter edition. Dallas: Federal Reserve Bank of Dallas.

[5] The impact of this scenario is obtained using the methodology in *Commodity Markets Outlook: Under the Shadow of Geopolitical Risks*, October 2023 (World Bank, Washington, DC), which incorporates impulse response functions from D. Caldara, M. Cavallo, and M. Iacoviello. 2019. "Oil Price Elasticities and Oil Price Fluctuations," *Journal of Monetary Economics* 103 (May): 1-20.

FIGURE 6 Natural gas markets

The dynamics of natural gas prices differed across markets in 2024Q3. The U.S. benchmark price was stable, while benchmarks for Japan's liquefied natural gas (LNG) and European natural gas increased. Asia Pacific is expected to drive increasing global demand in 2025 and 2026, while North America and the Middle East are expected to be the main sources of increasing output. U.S. gas inventories have remained elevated throughout 2024. In terms of trade, the lower share of U.S. LNG destined for the European Union (EU) was more than compensated by increased exports from Russia to the EU.



Sources: Bloomberg; Eurostat; International Energy Agency (IEA); Official Statistics of Japan; U.S. Energy Information Administration (EIA); World Bank.
Note: EAP = East Asia and Pacific; ECA = Europe and Central Asia; EMDEs = emerging market and developing economies; LAC = Latin America and the Caribbean; LNG = liquefied natural gas; MNA = Middle East and North Africa; RoW = rest of world; SAR = South Asia.
A. Monthly data. Last observation is September 2024.
B.C. Billion cubic meters (bcm). Regions in the charts defined as in IEA Gas Market Reports. Data for 2024-26 are computed based on IEA forecasts.
D. Averages using monthly data of U.S. LNG shipments. Last observation is July 2024.
E. Gray area indicates 2017-21 range. Working gas in underground storage in lower 48 U.S. states (that is, excluding Alaska and Hawaii).
F. Averages using monthly data. Last observation is June 2024.

view of their increased focus on returns on capital. That said, with average U.S. shale operating expenses reportedly covered at an oil price as low as $37/bbl, many U.S. shale oil producers could likely withstand lower prices, which, if realized, would weigh on the fiscal balances of OPEC+ members.[6]

Weak economic growth. Weaker-than-expected global economic growth, particularly a more pronounced slowdown in China than currently anticipated, would translate into lower oil demand in 2025 and 2026, causing prices to fall below forecasts. China's property sector has faced protracted headwinds, with house prices continuing to decline. In addition, business and consumer confidence have recently been close to record lows and consumption growth has been sluggish, while manufacturing surveys signal decelerating activity (figure 5.D).

Natural gas

Recent developments

The World Bank's natural gas price index increased by 10 percent in 2024Q3 (q/q), with significant divergence among the trajectories of the three prices within the index (figure 6.A). The U.S. benchmark was stable, reflecting continued strong domestic production, while Japan's LNG prices increased by 8 percent. The European benchmark increased by 15 percent in 2024Q3 as Europe faced increased global competition for LNG imports. This steep rise narrowed the gap between the European and the LNG benchmarks by about 40 percent in 2024Q3.

After stagnating in 2023, natural gas demand increased by 2.8 percent in 2024Q1-Q3 (y/y), with Asia Pacific accounting for 60 percent of this change (figure 6.B). In China, consumption rose by 10 percent in 2024Q1-Q3, driven by the government's efforts to enhance energy security and achieve its carbon goals. Growth was also robust in India, Japan, and the Republic of Korea. Meanwhile, consumption in Europe fell by about

[6] Federal Reserve Bank of Dallas. 2023. *Dallas Fed Energy Survey*, First quarter edition. Dallas: Federal Reserve Bank of Dallas.

3 percent, reflecting reduced demand for heating due to mild weather conditions and lower demand from the power sector due to robust output from renewables and nuclear plants. In North America, natural gas consumption increased by about 1.5 percent in 2024Q1-Q3, as low prices continued to stimulate strong demand from the power sector.

Global natural gas production expanded in 2024H1, but growth rates differed across the main suppliers (figure 6.C). U.S. production was up about 1 percent (y/y), reflecting sustained natural gas output accompanying increased oil extraction. Supply from Russia is estimated to have expanded by over 7 percent in 2024H1, partially recovering from two years of decline. Production is also estimated to have increased steadily in the Middle East.

International trade in LNG grew by about 2.8 percent in 2024Q1-3 (y/y), but the market remained tight. LNG exports from producers in Asia, Russia, and the United States increased. U.S. exports were redirected from Europe to other regions, including Asia, where prices surpassed the European benchmark (figure 6.D). Mild winter temperatures in early 2024 led to large accumulations of inventories in the European Union (EU) and the United States. With EU inventories near record highs at the end of 2024Q3, the European natural gas market has entered the 2024-25 heating season with a substantial buffer. Inventory levels are also above their five-year range in the United States due to elevated production (figure 6.E).

Outlook

After falling in 2024, natural gas prices are projected to recover sharply in the United States in 2025, and more modestly in Europe and Japan. The U.S. benchmark price, after an expected 13 percent decline in 2024, is forecast to jump almost 55 percent in 2025 as new LNG terminals draw international demand for U.S. natural gas exports, and then increase a further 9 percent in 2026. The European gas price is expected to rise by 7 percent in 2025, then decline in 2026 by 9 percent as demand stagnates. Japan's LNG price is expected to broadly track the European benchmark, reflecting competition for LNG between Asia and Europe.

This price forecast is predicated on supply just meeting the increasing global demand for natural gas in 2025 and 2026, keeping markets tight. The Asia-Pacific region is expected to be the main driver of increasing global consumption, with significant demand growth also anticipated in the Middle East. Consumption in Europe and North America should remain stable throughout the forecast period. The Middle East and North America are expected to be the main sources of supply growth. In the United States, the forecast for natural gas prices assumes increasing LNG exports as new infrastructure comes online—the global fleet of LNG carriers is forecast to grow by 40 percent over the next two years. Further growth in Russian LNG exports is likely to be hindered by recently introduced sanctions. Starting in 2026, LNG capacity is set to expand significantly to 2030, led by the United States and Qatar, to help accommodate continued gains in demand.

Risks

Risks to the natural gas price forecast are tilted to the upside. Prices could be higher than projected due to conflict-driven disruptions to production and shipping in the Middle East. They could also be lifted by increasing competition for U.S. exports, reduced availability of Russian production in global markets, and colder temperatures. On the downside, weaker-than-expected economic growth, particularly in EAP, could lower demand and prices.

Upside risks

Conflict escalation in the Middle East and wider geopolitical developments. Increased geopolitical tensions remain a key upward risk to the price forecast, especially for the European and LNG benchmarks. This is due to the fact that gas supplies from major Middle Eastern producers form a substantial portion of natural gas output, with about 20 percent of global LNG supply transiting through the Strait of Hormuz. Additionally, gas fields in the Mediterranean Sea could also be at risk. If production were seriously

affected, there could be a substantial and prolonged rise in natural gas prices. On the other hand, the impact of any disruption to the Suez Canal will not affect natural gas prices, as LNG carriers stopped using this route in January 2024, with the market having absorbed increased transport times and higher insurance costs.

Increased competition for U.S. exports. Following Russia's invasion of Ukraine, LNG exports from the United States were swiftly redirected to Europe from other advanced economies and several EMDEs. In part, this shift was facilitated by weak demand in these economies. In April 2024, this pattern started to reverse, as the share of U.S. LNG bound for Europe decreased substantially while shipments to countries in EAP, LAC, MNA, and SAR rose, driven partly by higher consumption (figures 6B and 6.D). As demand is poised to continue increasing in 2025 and 2026, greater competition for LNG cargoes might deliver higher-than-expected prices. This risk could be magnified by delays in the completion of new U.S LNG infrastructure or by dry weather conditions, as currently ongoing in Brazil, which could reduce output from hydropower and increase demand for LNG in the power sector. These factors would put additional upward pressure on European and LNG prices, while introducing downward price risks for the U.S. natural gas due to lower export volumes.

Russian supply to Europe. After substantial reductions following Russia's invasion of Ukraine, Europe increased imports from Russia by 14 percent (2 billion cubic meters) in 2024H1 compared to the same period last year. Consequently, gas imports from Russia increased as a share of total European gas imports (figure 6.F). This suggests that European natural gas prices could rise higher than projected, either due to the failure to renegotiate commercial arrangements for Russia's gas exports to reach Europe through Ukraine, which expire in December 2024, or more stringent enforcement of sanctions on Russia's LNG exports.

Colder temperatures. The baseline price forecast assumes seasonal normal temperatures across the Northern Hemisphere. Recent long-range forecasts point at the possibility of La Niña bringing lower temperatures to Europe, including colder spells in November and December, and higher temperatures in the eastern and southern regions of the United States. If these forecasts prove accurate, higher heating requirements would prompt higher prices in Europe, while warmer weather would limit increases in U.S. natural gas prices.

Downside Risks

Weaker growth in East Asia. More than half of gas demand growth in 2025 and 2026 is set to originate in Asia Pacific region. Therefore, weaker economic growth—particularly in China—poses a significant downside risk to the price forecast due to weaker-than-expected gas consumption. As the bulk of projected growth in gas demand in China comes from the industrial, service, and household sectors, recent weakness in manufacturing surveys and consumer confidence may signal a more pronounced slowdown in these key components of demand than assumed in the baseline, with an associated downside risk to the price forecast.

Coal

Recent developments

The price of Australian coal increased by about 3 percent in 2024Q3 (q/q), following an 8 percent increase in 2024Q2. The benchmark continued to move upward in early October, reaching its highest value since December 2023 (figure 7.A). The rise was fueled by strong demand from the power sector in both India and China, with China's imports reaching their highest monthly level in September. In contrast, the price of South African coal remained steady in the last two quarters, impacted by decreasing exports to India and discounted Russian supplies. After spiking in mid-2022, coal prices fell significantly in the following year before stabilizing, though they remain elevated, with the Australian benchmark in September 2024 about 75 percent above its 2015-19 average.

In 2024H1, global coal consumption was 1 percent higher than the same period a year earlier, with this modest growth largely driven by power

sector demand. India led the increase, as a heat wave spurred record demand for air conditioning amid reduced hydropower output. In China, thermal power generation, including coal, rose a modest 1.5 percent in 2024H1, as solar, wind, and hydropower met about 80 percent of the increase in electricity demand (figure 7.B). Consumption of coal in 2024H1 is estimated to have decreased in Europe while holding steady in the United States.

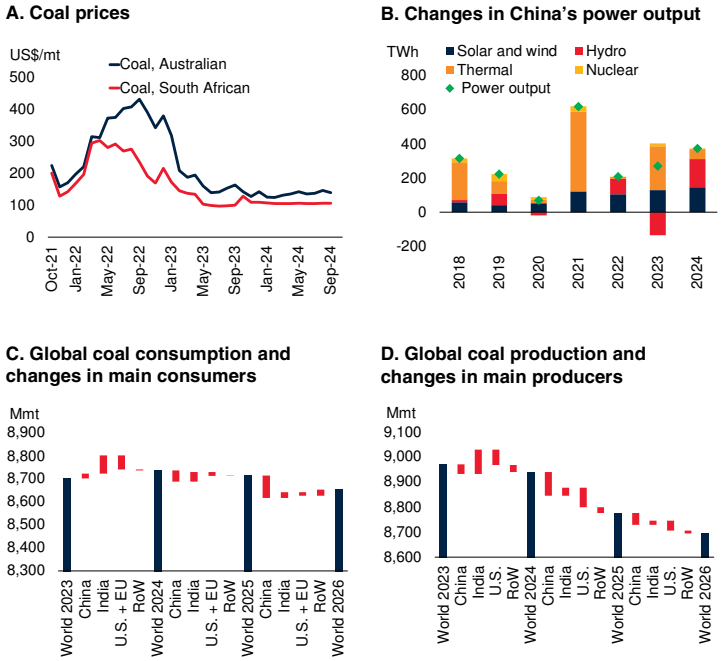
Global coal supply is estimated to have decreased in 2024H1 (y/y), mainly due to declining output from China and the United States. Shrinking Chinese supply was largely due to stricter regulatory constraints introduced to counteract a rise in mining accidents following previous increases in production targets. In contrast, output in India rose by 10 percent in 2024H1—slower than the 17 percent growth recorded in the same period last year, but still reflecting a rapid expansion driven by rising power demand and efforts to bolster energy security. Coal supply in Indonesia, the world's biggest exporter, increased by about 9 percent in 2024H1, while production in the United States decreased by 17 percent. Output in Russia was largely unchanged.

Outlook

The Australian coal price is forecast to fall by about 12 percent in both 2025 and 2026 (y/y), following an expected 21 percent decline in 2024. Global coal consumption is estimated to shrink in 2025 and 2026 (figure 7.C). This year, a sizable increase in consumption in India, accompanied by a smaller pick-up in China, is expected to outweigh a fall in demand in Europe. In 2025, demand in China is poised to decline, while India's demand growth is likely to slow. The decline in coal consumption is expected to gain momentum in 2026, as demand softens in China, Europe, and the United States, with growing shares of power generation from renewables and natural gas coming mainly at the expense of coal. If these forecasts prove accurate, global coal consumption will have peaked in 2024—marking an important milestone in the global energy transition.

FIGURE 7 Coal markets

The price of Australian coal increased in 2024Q3, while the price of South African coal was stable. As additional electricity demand in China is largely met by renewables and hydropower, India is expected to drive a modest rise in global coal consumption in 2024. In 2025, global coal consumption is expected to edge down, before posting a larger decrease in 2026. Coal production is anticipated to decline in line with demand in 2025 and 2026, with most of the reduction in the United States and China.



Sources: Bloomberg; International Energy Agency (IEA); National Bureau of Statistics of China (NBS); World Bank.
Note: Mmt = million metric tons; TWh = terawatt hour; RoW = rest of world.
A. Monthly data. Last observation is September 2024.
B. Composition of China's power output growth by source. Thermal includes oil, natural gas, and coal. Data show the average from January to August for each year.
C.D. Data for 2024 and 2025 are computed based on the IEA forecast for 2024-26. Blue bars indicate global levels of production and consumption, while red bars indicate the change in main producers and consumers. Data based on IEA annual coal report, 2023 edition, and IEA coal mid-year update (July 2024).

Global coal production is expected to decrease throughout the forecast period, mainly reflecting reductions in China and the United States (figure 7.D). Production is also poised to fall in Indonesia, in line with targets announced by the government. Among the major producers, India alone is set to post growth in the next two years to meet domestic demand.

Risks

Risks to the coal price forecast are broadly balanced. Upside risks relate to China's coal consumption continuing to rise beyond 2024, and

to shortfalls in electricity generation from other sources. Downside risks include a potential supply glut and weaker-than-expected economic growth.

Upside risks

Increasing Chinese consumption. The baseline assumption that China's coal demand will peak in 2024 is premised on moderate increases in the demand for electricity and robust output from hydropower and renewables in 2025 and 2026. If these plants are negatively affected by heat waves or droughts, coal demand and prices would rise. Similarly, higher-than-expected economic growth in China, driven by recent stimulus measures or the possible introduction of new expansionary fiscal policies, would lead to higher demand for power. Even though only 8.5 TW of coal power capacity was added in 2024H1—the lowest rate since 2002—China has abundant coal power plant capacity that could be brought into operation to meet robust increases in the demand for electricity.[7]

Electricity generation shortfalls. Coal-fired power stations have frequently been used to fill any shortfalls from other power generating technologies. These shortfalls can result from increased electricity demand during extreme weather events, such as heat waves, from outages, including unplanned maintenance, or from bottlenecks in the availability of other fossil fuels. The rapid deployment of electric and hybrid vehicles could prolong the reliance on coal power plants to meet excess power demand.

Downside Risks

Ample supply. The forecast assumes a decline in global coal supply from 2025 onward, driven by shrinking U.S. and Chinese output and constraints on production in Indonesia related to national targets. There is a material risk that the assumed reductions will not occur. In recent months, Chinese output has fully recovered from the impact of stricter regulations imposed early in the year, while Indonesia's output has come in well above targets in the past.

Weak economic activity. Lower prices than projected could result from weaker-than-expected economic growth, especially in China and India, which represent about 70 percent of global coal consumption. Downside risks to China's economic growth relate to both subdued household consumption and decelerating industrial activity, as discussed in the oil section.

[7] Global Energy Monitor et al. (2024). "New Coal-fired Power Capacity by Country (MW)," available on-line at https://docs.google.com/spreadsheets/d/1j35F0WrRJ9dbIJhtRkm8fvPw0Vsf-JV6G95u7gT-DDw/edit?gid=647531100#gid=647531100.

Agriculture

Prices of several agricultural commodities rose slightly in September and the first half of October on news of bad weather in key exporting countries. Despite declining by 3 percent in the third quarter of 2024, the World Bank's agricultural commodity price index is expected to be 2 percent higher in 2024 (y/y), driven by a 58 percent spike in beverages and a 4 percent increase in raw materials, partly offset by a 9 percent decline in food prices. The agriculture price index is forecast to decrease by 4 percent in 2025 owing to favorable growing conditions in key exporters, before stabilizing in 2026 as supply and demand come into better balance. Food prices are expected to soften by a further 4 percent in 2025 then level out in 2026, while beverage prices are projected to decline by 9 percent in 2025 and 3 percent in 2026. Raw material prices are forecast to remain broadly stable over the next two years. Risks to the forecast are broadly balanced. Upside risks include heat waves, biofuel policies that favor higher blending mandates, and geopolitical tensions that could push energy and fertilizer prices higher. Downside risks include lower-than-expected crude oil prices, which could reduce demand for biofuel feedstocks, and the onset of a strong La Niña.

Food Commodities

Recent developments

Prices of food commodities increased somewhat in September and the first half of October, following news of dry weather in South America, coupled with excessively wet conditions in Canada and the European Union. Even so, the World Bank's *food price index* fell by about 3 percent overall in 2024Q3 (q/q), to a level 8 percent lower than a year earlier. A 6 percent decline in grain prices in 2024Q3, which took prices to 15 percent below 2023Q3 levels, led the overall decline. Among other components, *oils and meals* and *other foods* edged lower in 2024Q3 (figures 8.A and 8.B).

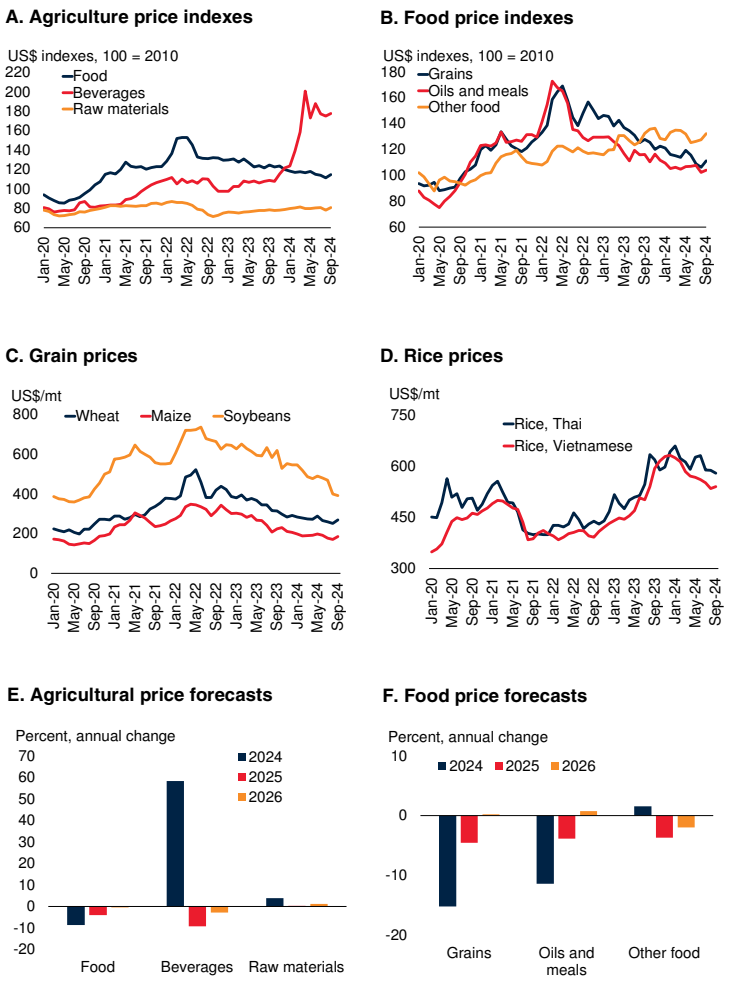
Maize and wheat prices declined by 8 percent and 6 percent, respectively. As a result, both staples reached four-year lows in 2024Q3, down about 20 percent from a year earlier (figure 8.C). Record-high maize production in the 2023-24 season and favorable crop expectations for the current season have exerted downward pressure on prices. Rice prices declined in October as harvests arrived in key exporting countries and India eased export restrictions, following a 5 percent fall in 2024Q3 (q/q) to levels slightly lower than a year earlier (figure 8.D). Global rice production rose by about 1 percent in the 2023-24 season, reaching a record high.

The *oils and meals price index* inched down 1 percent in 2024Q3 (q/q), reaching a level 11 percent lower than a year earlier. A 13 percent decline in soybean prices in 2024Q3—to a level almost a third lower than in 2023Q3—and a 3 percent dip in soymeal prices were largely offset by increases in soybean oil and palm oil prices of 7 percent and 5 percent, respectively. Falling soybean prices reflect record global production, with Argentina's crop rebounding alongside growing output in Canada, China, and Europe. However, soybean prices strengthened in late September and early October due to dry weather in South America. Hot and dry conditions in the EU and the Black Sea region also caused crop losses in sunflower seeds and rapeseed, helping boost demand for soybean oil. The associated increase in the processing of soybeans for oil has, in turn, expanded the supply of soymeal, which pushed its price down in 2024Q3. In contrast, palm oil prices strengthened, with production estimated to have grown only marginally in 2023-24, while exports declined because of a substantial rise in domestic consumption in Indonesia, which accounts for more than half of global palm oil exports.

The *other foods price index*—which includes sugar, meat, and fruits—moved lower by 2 percent in 2024Q3 (q/q) but remained slightly above year-earlier levels. The quarterly decline was partly driven by a 1 percent dip in sugar prices and a 4 percent decrease in chicken prices, partly offset by a 6 percent rise in beef prices. Improved sugarcane harvests in India and Thailand, along with falling prices for crude oil—which reduce demand for the conversion of sugarcane to ethanol—drove the weakness in sugar prices. However, sugar prices

FIGURE 8 Agricultural prices

Agricultural prices declined by 3 percent in 2024Q3 (q/q), driven by a 6 percent drop in beverage prices and a 3 percent decline in prices of food commodities, while raw materials prices remained steady. All components of the food price index moved lower in 2024Q3. Rice prices have declined from a post-2008 peak reached earlier this year but remain elevated. Food prices are projected to decrease by 3 percent in 2025, before stabilizing in 2026. Prices for grains and oils and meals are forecast to fall by 5 and 4 percent in 2025, respectively, before holding steady in 2026.



Sources: Bloomberg; S&P Global; U.S. Department of Agriculture (USDA); World Bank.
Note: mt = metric tons.
A-D. Monthly data. Last observation is September 2024.
C.D. "Wheat" refers to U.S. Hard Wheat Winter benchmark, while Thai and Vietnamese rice refers to the 5% broken ratio.
E.F. 2024, 2025, and 2026 are forecasts.

picked up in September and early October, driven by supply concerns in Brazil due to dry weather and fires that damaged sugarcane fields in late August. As the United States is the reference market for beef and chicken prices, the rise in beef prices in the third quarter of this year partly reflects contraction in the U.S. beef cow herd following several years of drought, together with low returns in 2024 partly because of higher interest expense. The decline in chicken prices in 2024 was due to an increase in U.S. broiler production (chickens raised for meat), among other factors.

Outlook

Following an expected 9 percent decline in 2024, the World Bank's *food price index* is projected to ease by an additional 4 percent in 2025 before stabilizing in 2026 (figure 8.E). Grain prices are forecast to soften by 5 percent in 2025, driven by increasing global grain supplies, before leveling out in 2026 (figures 8.F and 9.A).

Wheat prices, which are set to drop by 21 percent in 2024, are forecast to edge lower by a further 2 percent in 2025. Production in the 2024-25 season is expected to match the previous season's level, with the stock-to-use ratio (a measure of supply availability relative to demand) declining but remaining adequate (figures 9.B and 9.C). In 2026, wheat prices are projected to rise by a modest 1 percent as stocks become somewhat tighter. Global maize supply in 2024-25 is expected to be roughly unchanged from 2023-24. After tumbling an expected 26 percent in 2024, maize prices are forecast to fall by just 1 percent in 2025, then edge up 2 percent in 2026 as global supply remains steady. Strong maize yield prospects in the United States for the 2024-25 season, which more than offset a 4-million-acre reduction in planted area, are being counterbalanced by poor growing conditions in southeastern Europe and parts of Russia and Ukraine.

Following an expected 8 percent increase in 2024, rice prices are forecast to fall by 11 percent in 2025 and 2 percent in 2026, as global output reaches a new high in the 2024-25 season and India eases its rice export restrictions. Ample monsoon rains have expanded rice sowings in India for the 2024-25 season, while the probable emergence of La Niña weather conditions, which typically bring more rainfall to South Asia, is expected to improve yields and boost inventories. Production in other major exporters across Asia and the United States is expected to hold steady in 2024-25.

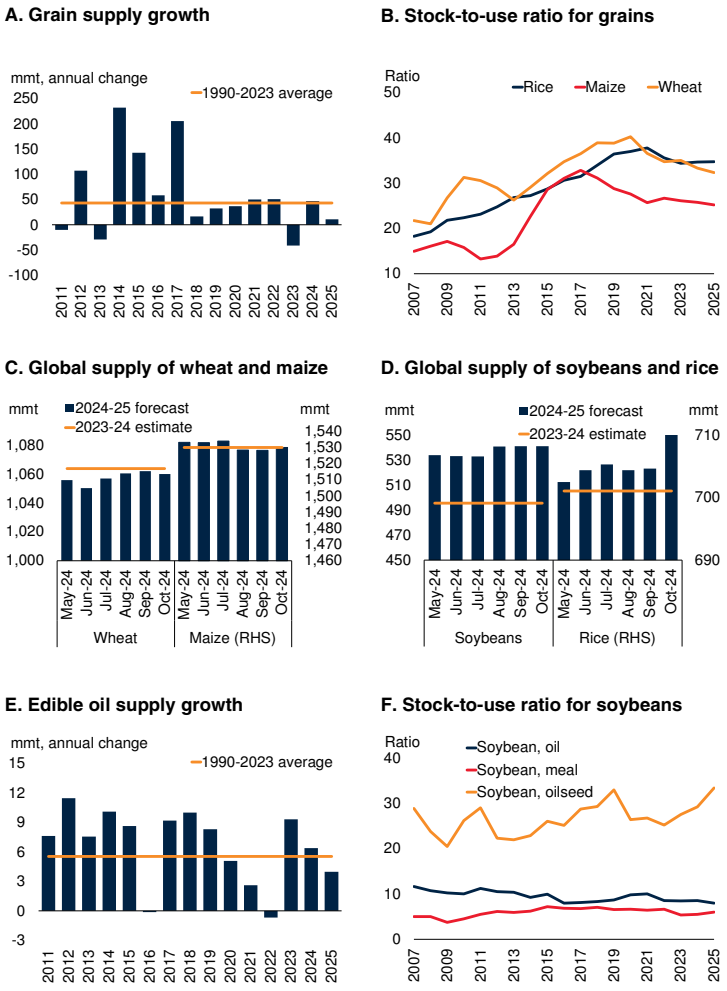
After declining by 11 percent in 2024, the *oils and meals price index* is forecast to soften a further 4 percent in 2025, driven by favorable global oilseed supplies, before flattening out in 2026 (figures 9.D and 9.E). Following an anticipated 24 percent drop in 2024, soybean prices are projected to decrease by a further 6 percent in 2025, with global production projected to rise by 9 percent in the 2024-25 season to reach a new record. Among major exporters, soybean production is set to increase by 10 percent in Brazil and the United States and 6 percent in Argentina, driven by a combination of larger acreage and improving yields. The anticipated record-high soybean production of the 2024-25 season is likely to push the stock-to-use ratio to a new high, slightly surpassing the levels seen in 2018-19 when U.S.-China trade tensions reduced exports and boosted stocks (figure 9.F). In 2026, soybean prices are forecast to edge up by 2 percent, with the soybean-to-maize price ratio expected to fall below its two-decade average, slightly favoring maize acreage over soybeans.

Soybean oil production is poised to rise sharply in 2024-25, but prices are expected to weaken by only 1 percent in 2025 before increasing by 3 percent in 2026, as crop losses in sunflower seed and rapeseed in the EU and the Black Sea region reduce the availability of alternative oils. Soymeal prices are expected to decline by 18 percent in 2024, followed by a 2 percent drop in 2025, before recovering by 2 percent in 2026, in line with expected movements in soybean processing. Palm oil prices are expected to rise by 4 percent this year because of lower production in Indonesia and crop losses in Central America but are forecast to decline by 7 percent in 2025 and 1 percent in 2026 as global production recovers.

The price index for *other foods* is projected to trend lower by 4 percent in 2025 and 2 percent in 2026, after strengthening marginally in 2024. Beef prices, which are expected to rise by 16 percent in 2024, are forecast to increase by an additional 4 percent in 2025, reflecting further declines in beef production, before stabilizing in 2026 as the U.S. cow herd begins to expand and production improves. In contrast, following an expected 7 percent drop in 2024, chicken prices are projected to decline by 1 percent in both 2025 and 2026, driven by 1.5 percent annual growth in U.S. broiler production. Sugar prices are expected to fall by 13 percent in 2024 owing to improved production in major exporters, before rising by 2 percent in 2025. Global sugar supply is set to

FIGURE 9 Supply conditions for grains and edible oils

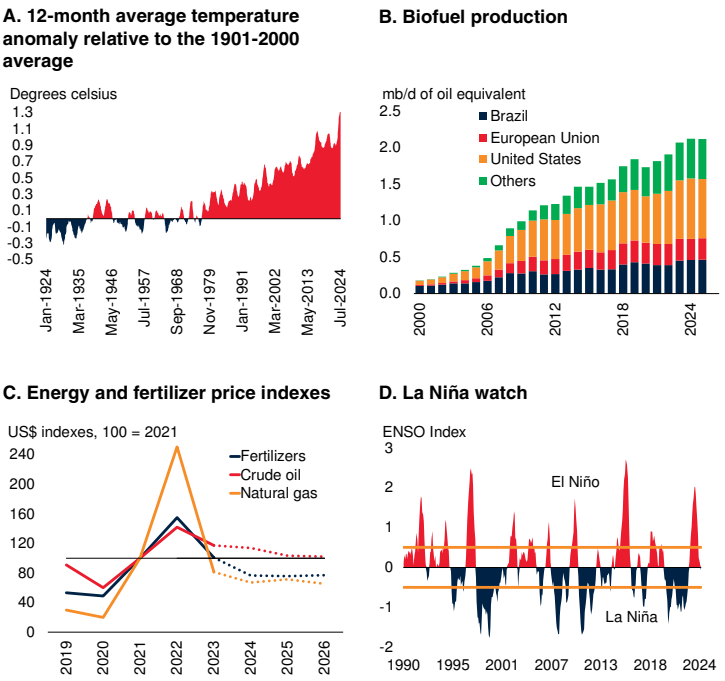
In the 2024-25 crop year, global grain output is expected to be roughly unchanged from 2023-24, while global edible oil supply is forecast to increase by about 1 percent. Maize and wheat supplies in the 2024-25 season are projected to be little changed from 2023-24. In contrast, soybean and rice supplies are set to reach record highs. The stock-to-use ratio for soybeans is forecast to hit a new high, while ratios for maize and rice are expected to remain stable, and decline slightly for wheat.



Sources: U.S. Department of Agriculture; World Bank.
Note: mmt = million metric tons. Years represent crop seasons (for example, 2025 refers to 2024-25).
A.E. Supply is the sum of beginning stocks and production. Data updated as of October 11, 2024.
B.F. Stock-to-use ratio is the ratio between domestic consumption and ending stocks. Data updated as of October 11, 2024.
C.D. Blue bars denote the 2024-25 supply assessment (based on monthly USDA updates); orange lines denote the latest (October 11, 2024) estimate for the 2023-24 season.

FIGURE 10 Risks to agriculture price projections

As climate change advances, more frequent and intense heat waves are affecting supplies of agricultural commodities. In addition, a La Niña watch has been issued, with an estimated 60 percent chance of the weather phenomenon emerging during the Northern Hemisphere fall. Upside risks to projected agriculture prices include higher-than-expected natural gas and fertilizer prices, and policy shifts favoring increased biofuels production. Downside risks include lower-than-expected crude oil prices, which could reduce demand for agricultural products as feedstocks.



Sources: National Oceanic Atmospheric Administration; Organization for Economic Co-operation and Development (OECD); Statistical Review of the World Energy, Energy Institute; World Bank.
A. The temperature anomaly measures the difference between the preceding 12-month average global land and ocean temperature for each month and the long-term average temperature (1901-2000). Last observation is August 2024.
B. Years 2024-25 include projections from *OECD-FAO Agricultural Outlook 2024-2033*.
mb/d = million barrels per day.
C. Dashed lines indicate forecasts. "Crude oil" refers to the Brent benchmark and "natural gas" to the European benchmark.
D. The ENSO (El Niño Southern Oscillation) Index represents a centered three-month mean SST (Sea Surface Temperature) anomaly for the Niño 3.4 region (that is, 5oN-5oS,120o-170oW). According to NOAA, events are defined as five consecutive overlapping three-month periods at or above the +0.5o anomaly for El Niño events and at or below the -0.5o anomaly for La Niña events. Orange lines indicate the +0.5o and -0.5o anomaly. Last observation is August 2024.

decline marginally due to dry weather in Brazil and India's decision in late August to lift restrictions on ethanol production from sugarcane. Sugar prices are expected to remain mostly unchanged in 2026.

Risks

Risks to the price forecasts for agricultural commodities, and for food commodities specifically, are broadly balanced. Upside risks include extreme weather events, particularly heat waves; policy shifts that favor higher blending mandates for biofuels; and increased geopolitical tensions that could push energy prices higher, increasing input costs. Downside risks include lower-than-expected crude oil prices and a strong La Niña that boosts harvests.

Upside risks

Heat waves. Between September 2023 and August 2024, the world experienced its hottest 12-month period on record, continuing a trend of record-breaking temperatures nearly every year since 2013 (figure 10.A). During this 12-month period, the global average temperature exceeded pre-industrial levels by more than 1.5 degrees Celsius—the threshold that countries committed to staying below under the 2015 Paris Agreement—and was 0.8 degrees above the 1991-2020 average. This year's heat waves have scorched crops and starved them of needed moisture, reducing yields. Such impacts have been felt in the production of maize, rice, soybeans, and wheat in China; rapeseed and sunflower seed in the EU and the Black Sea region; sugarcane in Brazil; and palm oil in Indonesia. The frequency, intensity, and duration of heat waves are inherently difficult to predict, but worse-than-normal heat waves could exert sizeable upward pressure on agricultural prices.

Biofuel policies. After years of growth, biofuel production is expected to stabilize next year in response to lower projected energy prices coupled with only moderate global economic growth (figure 10.B). However, biofuel policies—especially in relation to biodiesel, the fastest-growing biofuel—also affect production and have been evolving in several countries. Argentina is reviewing its biofuel policies to potentially increase its domestic blending mandate (admixture), Brazil is planning to raise its biodiesel admixture next year, and the European Commission has introduced anti-dumping tariffs on biodiesel imports from China which could encourage greater domestic production. Additionally, Indonesia plans to increase its biodiesel blend from the current 35 percent to 40 percent in 2025. Since global biodiesel demand growth is primarily driven by emerging market and developing

economies (EMDEs), where policy changes have tended to favor increasing admixture, demand for biofuels may exceed expectations, putting upward pressure on the prices of feedstocks such as grains, vegetable oils, and sugar.

Two-sided risks

Energy prices. Crude oil prices are forecast to decrease by 9 percent in 2025 (figure 10.C). However, if OPEC+ smoothly unwinds its 2.2 mb/d of voluntary supply cuts starting in late 2024, and there are no offsetting oil production cuts from other sources, oil prices could fall substantially. This could reduce demand for energy feedstocks such as maize, sugar, soybean oil, and palm oil, leading to lower prices for these commodities than currently forecast. Conversely, oil and natural gas—an essential input for fertilizer production—could be priced much higher should there be a prolonged escalation of conflict in the Middle East. Natural gas prices could also be driven upward by greater-than-anticipated reductions in Russian natural gas supplies to Europe. Such developments, in turn, could lead to higher-than-expected fertilizer prices, and hence higher agricultural prices more broadly.

La Niña. Meteorologists estimate that there is a 60 percent chance that La Niña will emerge during the Northern Hemisphere fall and persist through January-March 2025 (figure 10.D). This typically brings wetter-than-normal conditions in Australia, Southeast Asia, southern Africa, and northern South America, while causing drier weather in east Africa, the U.S. Gulf Coast, southern Brazil, and Argentina. This weather pattern is expected to ease upward pressure on the prices of some commodities in 2025—including cocoa, food oils, natural rubber, rice, and sugar—and could have an even greater impact if La Niña is stronger than the weak, short-duration pattern assumed in the forecast. However, if La Niña fails to materialize, these prices could exceed current forecasts.

Implications for food security and food price inflation

One in five people in Africa, one in 13 in Asia, and one in 17 in Latin America and the Caribbean were chronically undernourished last year. Since 2021, the global prevalence of undernourishment has remained steady at around 9 percent, with no decline recorded since 2017 (figure 11.A). More than 730 million people were affected by hunger in 2023, including 385 million in Asia and almost 300 million in Africa. Based on recent trends, the United Nations Food and Agriculture Organization projects that there will be 735 million undernourished people globally in 2025 and more than 580 million in 2030. Thus, the world remains far off-track from achieving the goal of zero hunger by 2030.

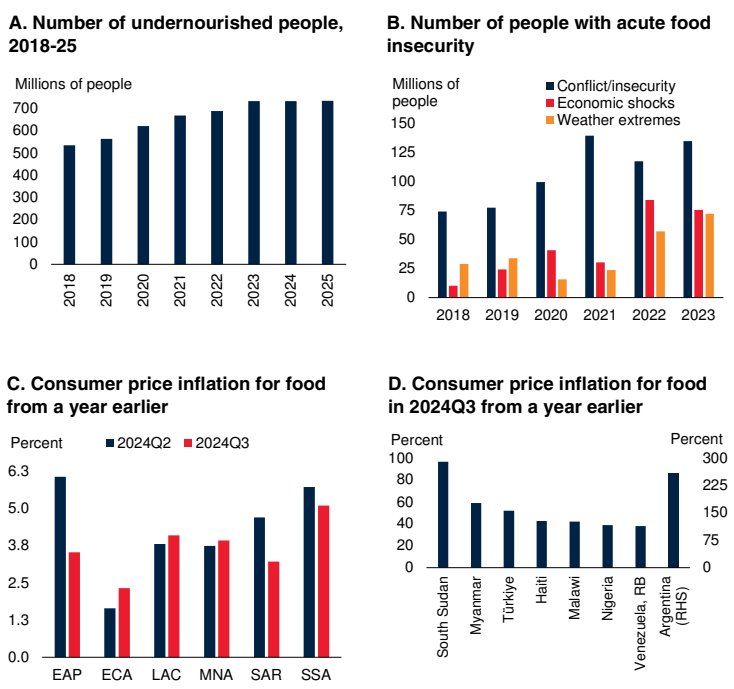
Recent and projected declines in global food commodity prices are likely to feed through to domestic food price inflation to varying degrees in the coming year, bolstering food affordability and helping attenuate food insecurity in some contexts. However, armed conflicts, extreme weather events, and economic shocks have eroded local access to food in many vulnerable countries and are often the primary drivers of acute food insecurity—a crisis level that threatens lives and livelihoods without urgent intervention (figure 11.B). In such crisis settings, weak local market functioning, security issues, and governance fragilities may limit the extent to which lower global food prices reach households.

In 2024Q3, the median 12-month rate of domestic food price inflation globally was 3.6 percent (in domestic currency terms), unchanged from 2024Q2 but down from about 8 percent a year earlier. Median food price inflation in EMDEs in 2024Q2 and 2024Q3 was twice that of advanced economies. In terms of regional developments, food price inflation declined in 2024Q3 from 2024Q2 in East Asia and the Pacific, South Asia, and Sub-Saharan Africa, while it edged up in Europe and Central Asia, Latin America and the Caribbean, and the Middle East and North Africa (figure 11.C).

Although declining food commodity prices have contributed to a broad easing of domestic food price inflation, it remains exceptionally high in several countries with high headline inflation, including Argentina (where food inflation recently exceeded 250 percent), South Sudan (96 percent),

FIGURE 11 Food insecurity and consumer price inflation for food

More than 730 million people were chronically undernourished in 2023, including 385 million in Asia and almost 300 million in Africa; the global number is projected to plateau in 2025. Conflict, extreme weather, and economic shocks are the major drivers of food insecurity. The median rate of global domestic food price inflation was 3.6 percent in the year to 2024Q3, down from 8 percent a year earlier, though food inflation remained very high in several countries.



Sources: Food and Agriculture Organization of the United Nations (FAO); FSIN and GNAFC (2024); Haver Analytics; World Bank.
Note: EAP = East Asia and the Pacific; ECA = Europe and Central Asia; LAC = Latin America and Caribbean; MNA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa.
A. Estimated number of people in the population consuming insufficient calories to meet the energy requirements for an active and healthy life. It is used to monitor hunger and is based on country data on food availability, food consumption, and energy needs. 2023-25 data are forecast.
B. Data are as reported in Figure 1.8 and discussed in the text of *Global Report on Food Crises 2024* by the Global Network against Food Crises. Acute food insecurity identifies areas and populations with food deprivation that threatens lives or livelihoods, regardless of the causes, context, or duration. It identifies the need for urgent action to decrease food gaps and protect lives and livelihoods.
C. Sample consists of median value of food price inflation in domestic currency terms for 125 EMDEs, including 13 EAP, 22 ECA, 24 LAC, 17 MNA, 8 SAR, and 41 SSA. 2024Q3 includes only July and August. Last observation is August 2024.
D. Average food price inflation for the third quarter of 2024 (July-August), including eight countries with the highest rates.

Myanmar (59 percent), and Türkiye (52 percent). Food price inflation has also hovered around 40 percent in Haiti, Malawi, Nigeria, and República Bolivariana de Venezuela (figure 11.D). In 2024Q3, food price inflation outpaced headline inflation by at least 4 percentage points in Argentina, Burkina Faso, Chad, Guatemala, Malawi, Maldives, Niger, Nigeria, Paraguay, Togo, and Viet Nam—indicating a decline in food affordability relative to other goods and services.

Beverages

The World Bank's beverage price index declined nearly 6 percent in 2024Q3 (q/q), as recent gains in coffee prices were more than offset by declines in cocoa prices. However, the index remained 65 percent higher than a year ago, following surges earlier this year in prices for Robusta coffee and cocoa, and more recently, Arabica coffee. After a 58 percent gain in 2024, the index is expected to fall by 9 percent in 2025 and slide a further 3 percent in 2026 as coffee and cocoa production recover.

Coffee prices reached multi-year highs in 2024Q3. Arabica prices rose by 11 percent in 2024Q3, to stand more than 40 percent higher than a year earlier, while Robusta prices gained 16 percent in the quarter to reach a level in September double that of a year earlier (figure 12.A). There remain significant risks to global coffee supply: while weather conditions in East Asia have improved, easing pressures on Robusta prices, recent concerns over Brazil's Arabica production, arising from adverse weather in August, have reduced expectations of a bumper crop this year. Global coffee production, which increased to an estimated 170 million bags in 2023-24, is expected to reach 173 million bags next season (figure 12.B).

However, this will still be considerably lower than global coffee production in 2020-21. The lingering impact of a major production shortfall in 2021-22, combined with steady demand growth of around 1 percent annually, has kept prices elevated. Following a projected 20 percent increase in 2024, Arabica prices are forecast to decline by 8 percent in 2025 before stabilizing in 2026. Robusta prices, which are expected to rise by more than two-thirds in 2024, are projected to drop by a similar magnitude as Arabica in 2025, with a further 7 percent decrease in 2026. Key risks to this outlook, particularly for 2025, include worsening weather conditions in South America, which could damage Brazil's crop, and the poten-

tial emergence of La Niña, which could adversely affect production in South America and East Asia.

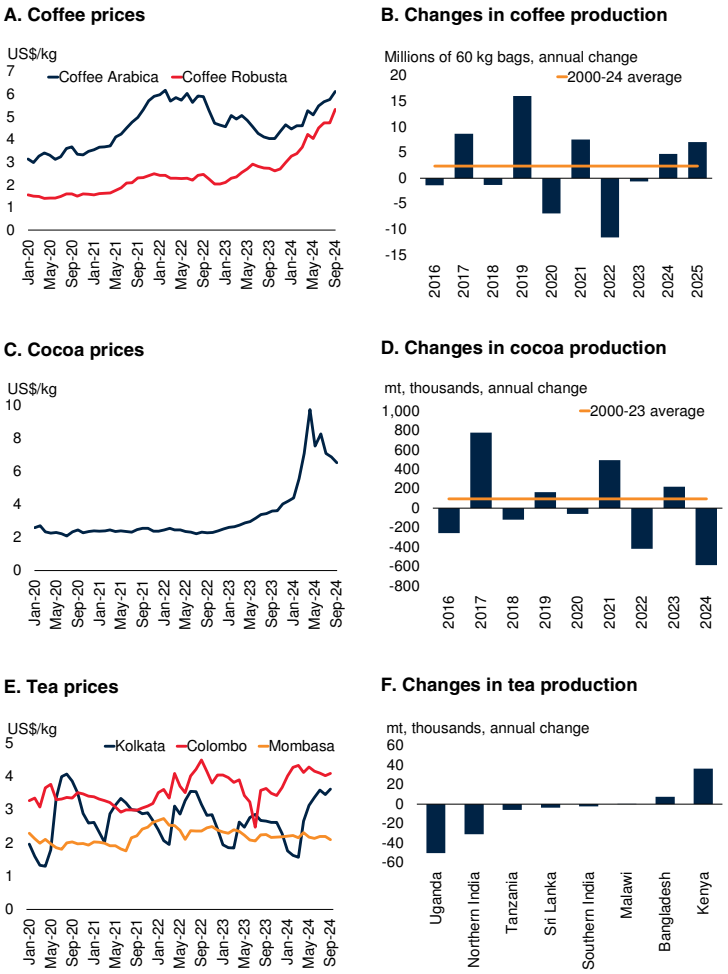
Cocoa prices fell by 20 percent in 2024Q3 but were still nearly double their level in 2023Q3 (figure 12.C). After reaching an all-time high of almost $10/kg earlier in the year, cocoa prices have dropped significantly, trading around $6.5/kg in October. This decline has been partly driven by favorable weather conditions in West Africa, which have improved supply expectations. Global cocoa production is estimated to have decreased by about 14 percent in the 2023-24 season, falling to 4.2 million metric tons (mmt) from 4.9 mmt in 2022-23, mainly due to lower output in Côte d'Ivoire and Ghana, which account for almost 60 percent of global cocoa production (figure 12.D).

Cocoa supply conditions are expected to improve in 2024-25, especially in Côte d'Ivoire, where better weather across key production zones could boost output by as much as 15 percent. Nevertheless, with limited supply increases anticipated from other regions, cocoa prices will remain elevated. After a projected doubling of prices in 2024, cocoa prices are expected to ease in the coming years, by around 13 percent in 2025 and 2 percent in 2026. A return of unfavorable weather in West Africa is a key upside risk to this price outlook.

Tea prices (three-auction average) rose by almost 4 percent in 2024Q3 (q/q), reaching a level 20 percent higher than a year earlier. A 16 percent increase at the Kolkata auction was partly offset by modest declines at the Colombo and Mombasa auctions (figure 12.E). The moderate rise in average tea prices reflects, in part, lower production from South Asian producers, including India (down 13 percent in first half 2024, compared the first half of 2023), Bangladesh (-8 percent), and Sri Lanka (-5 percent). Meanwhile, in Kenya—the world's leading tea exporter—production increased by 25 percent over the same period due to improved weather conditions (figure 12.F). Following an estimated 13 percent increase in 2024, tea prices are set to remain fairly flat in 2025, as a limited recovery in supplies in South Asia (especially India) and East Africa (notably Kenya) is balanced by subdued demand growth, particularly in the Middle East.

FIGURE 12 Beverage markets

Coffee prices have continued to rise, driven by supply concerns, particularly in recent months regarding the upcoming Brazilian Arabica crop. Cocoa prices have eased this year, reflecting improved weather conditions in West Africa, though they remain historically high. Tea prices have shown no overarching trend, as reduced production in South Asia has been offset by stronger output in East Africa.



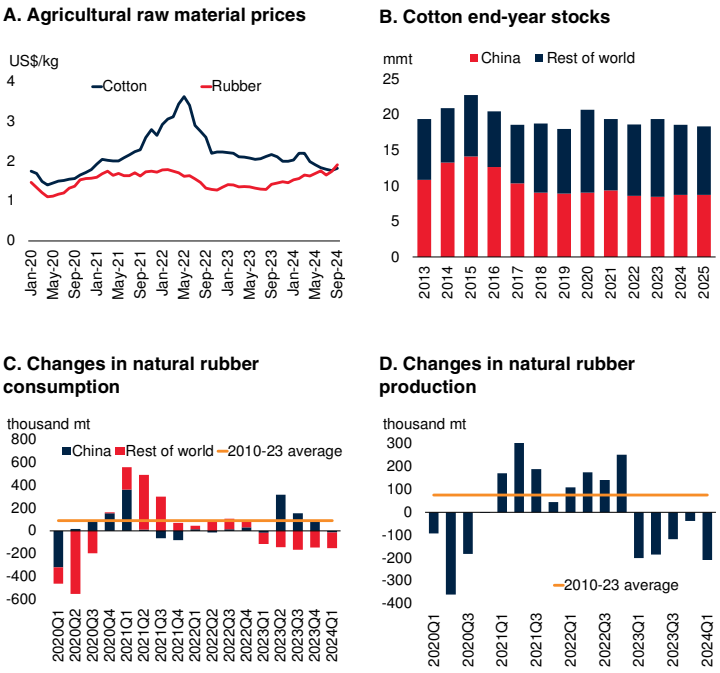
Sources: Africa Tea Brokers Limited; Bloomberg; International Cocoa Organization (ICCO); International Tea Committee; Tea Board India; Tea Exporters Association Sri Lanka; U.S. Department of Agriculture; World Bank.
Note: mt = metric tons.
A.C.E. Monthly data. Last observation is September 2024.
B.D. Years represent crop seasons (for example, 2024, refers to 2023-24).
B. Data updated through October 11, 2024.
D. Data for 2024 is ICCO estimate.
F. 12-month change in production from June 2023 to July 2024.

Agricultural raw materials

The World Bank's agricultural raw material price index was little changed in 2024Q3 (q/q), as gains in the prices of natural rubber and some timber products were offset by declines in other components,

FIGURE 13 Agricultural raw materials markets

The agricultural raw materials price index remained largely unchanged in 2024Q3. Price increases in natural rubber and some timber products were driven by supply shortfalls, but these were offset by price declines in other commodities—such as cotton and tobacco, where demand has been subdued and supply has strengthened.



Sources: Bloomberg; International Cotton Advisory Committee (ICAC); International Rubber Study Group; World Bank.
Note: mmt = million metric tons. mt= metric tons.
A. Monthly data. Last observation is September 2024.
B. Years represent crop seasons (for example, 2024, refers to 2023-24). Ending stocks. Data for 2024/2025 is ICAC projection.
C.D. Change in natural rubber consumption (production) compared to the same quarter in the previous year. Last observation is 2024Q1.

notably cotton and tobacco prices. After a moderate rise in 2024, the index is projected to edge up in each of the next two years, supported by firm demand. Weaker-than-expected global growth remains a key downside risk.

Cotton prices fell by more than 6 percent in 2024Q3 (q/q), reaching a level 15 percent lower than a year earlier (figure 13.A). The recent decline is attributed to weakening demand and strong production prospects for the 2024-25 crop season, which has just begun. According to the latest U.S. Department of Agriculture assessment (October), global cotton production is expected to rise by 4 percent in the 2024-25 season. Significant output surges in Brazil (+15 percent), Türkiye (+25 percent), and the United States (+33 percent), will outweigh declines in India (-6.5 percent) and Pakistan (-10 percent), the world's dominant suppliers. With global consumption set to increase by 2.3 percent, the global stock-to-use ratio is expected to stay steady at around 70 percent (figure 13.B). After a decline of nearly 10 percent in 2024, cotton prices are projected to rebound in 2025 and 2026 as supply growth moderates. Key downside risks to this outlook are weaker-than-anticipated global economic growth and higher-than-anticipated global production.

Natural rubber prices have risen for four consecutive quarters, reaching $1.76/kg in 2024Q3—more than 30 percent higher than a year earlier. Weather-related supply disruptions, including reduced rainfall in Southeast Asia, contributed to the price increases (figure 13.C). Production declines in Thailand (of more than 8 percent in the 12 months ending August 2024, compared to a year earlier) and Indonesia (-13 percent), the world's largest producers, were only partly offset by output gains in Côte d'Ivoire (+18 percent) and other producers (+3 percent; figure 13.D). Demand for natural rubber remains solid, growing by 2 percent in the 12 months ending August 2024. In 2024Q2, global tire production, which accounts for nearly two-thirds of natural rubber consumption, was 5.8 percent higher than in the same quarter of last year, reflecting robust automotive sector demand. Following a projected increase of 27 percent in 2024, natural rubber prices are expected to rise 3 percent in the next two years. However, a potential downturn in automobile production, particularly due to a supply glut in China, poses a significant downside risk to the forecast.

Fertilizers

The World Bank's fertilizer price index rose by more than 5 percent in 2024Q3 (q/q), reflecting a jump in urea prices. However, prices remained 22 percent below the level of a year earlier, reflecting increased production and lower feedstock prices. As of September 2024, the fertilizer affordability index (the ratio of fertilizer prices to food prices) had returned to its 2015-19 average level. The fertilizer price index is expected to drop by 24 percent for 2024 as a whole—

consistent with the decline in prices of natural gas, an important input—and is projected to weaken further in 2025 before stabilizing in 2026. However, projected prices are still above 2015-19 levels, reflecting strong demand and export restrictions, particularly by China, which aims to ensure sufficient domestic supplies. Upside risks to this forecast include adverse shocks to input costs, especially natural gas prices, while a resumption of China's exports could help ease prices.

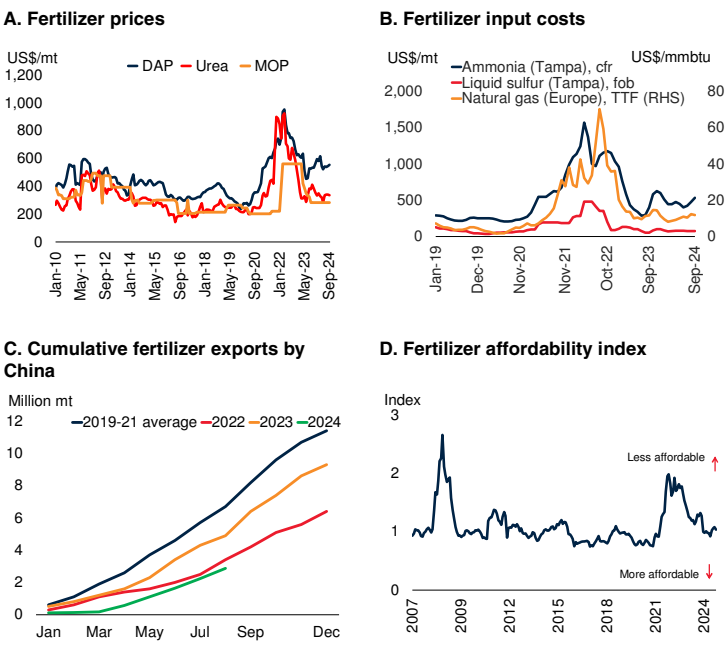
Nitrogen (urea) prices rose by nearly 9 percent in 2024Q3 (q/q), though they were still 7 percent lower than a year earlier (figure 14.A). The recent increase reflects the ongoing reduction in China's exports (down nearly 85 percent for the first eight months of 2024 compared to the same period of 2023) as well as production shortfalls in the Arab Republic of Egypt due to declining domestic natural gas production. Global consumption rose moderately in the first half of 2024—following a sharp contraction last year—in response to declines in the prices of key feedstocks, such as coal and natural gas (figure 14.B).

After halving in 2023, urea prices are on course to decline by a further 8 percent in 2024 before stabilizing in 2025. Production is expected to grow in the forecast period, with much of the new capacity expected in East Asia and the Middle East. A recovery in urea output is also expected in Europe, where production has been hampered by the 2022 surge in natural gas prices. Key upside risks to the price outlook include a smaller-than-expected expansion of productive capacity, especially in the Middle East; further trade restrictions by major producers such as China; and spikes in natural gas prices. Longer-term challenges for urea consumption—and thus prices—arise from the fertilizer's high carbon content.

DAP (diammonium phosphate) prices increased slightly in 2024Q3 (q/q) to stand more than 8 percent higher than a year earlier. The relative strength of DAP prices compared to other fertilizer prices is partly due to export restrictions on phosphate from China and ammonia from Russia, which have disrupted global trade (figure 14.C). This impact is particularly noticeable in Europe, where imports from China and Russia have been

FIGURE 14 Fertilizer markets

Increased production, primarily driven by lower feedstock prices, has pushed fertilizer prices lower over the past year despite reduced exports from China. The fertilizer affordability index (the ratio of fertilizer prices to food prices) has returned to its 2015-19 average.



Sources: Bloomberg; Bloomberg L.P. - Green Markets; General Administration of Customs of the Republic of China; World Bank.

Note: cfr = cost and freight; DAP = diammonium phosphate; fob = free on board; MOP = muriate of potassium; mt = metric tons; ttf = title transfer facility.

A. Monthly series. Last observation is September 2024.

B. Last observation is September 2024.

C. Monthly series. Lines show the sum of DAP and Urea exports by China.

D. Ratio of fertilizer prices over food price index. Last observation is September 2024.

replaced by higher-cost supplies from exporters such as Egypt, Morocco, Saudi Arabia, and the United States. China's phosphate exports were down 16 percent in the first eight months of 2024 (compared to the same period last year), reflecting government restrictions aimed at keeping domestic prices low and ensuring greater availability of phosphates for lithium iron phosphate (LFP) batteries used in electric vehicles. However, despite continuing export restrictions, export quantities rose in July and August (compared to 12 months earlier), putting annual exports on a trajectory that is little changed from last year.

After a sharp 30 percent drop last year, DAP prices are expected to stabilize in 2024 before declining by 9 percent in 2025 and 1 percent in 2026 as supply conditions improve and new production capacity comes online. The forecast

assumes that Russia will continue redirecting exports previously destined for European markets to other major agricultural producers, such as Brazil and India. However, further trade restrictions, supply disruptions, or spikes in ammonia and natural gas prices—potentially triggered by escalating conflict in the Middle East—could drive DAP prices higher.

MOP (muriate of potash, or potassium chloride) prices fell by more than 4 percent in 2024Q3 (q/q), reaching levels nearly 16 percent lower than a year earlier, due to seasonally weak demand and robust exports. The decline in potash and other fertilizer prices from post-COVID peaks in 2022, along with price drops in DAP and urea, has brought the fertilizer affordability index close to its 2015-19 levels (figure 14.D). Exports from Belarus and Russia have remained solid despite sanctions on the former. Russia's potash exports, which are not subject to sanctions, were up 70 percent in the first half of 2024 (compared to the first half of 2023). Both countries are developing new export markets, with Belarus reaching export terminals via Russia. At the same time, Canadian exports have shifted toward Europe. MOP demand is gradually recovering after a large drop in 2022 and is expected to return to pre-2022 levels by early next year.

Following a sharp decline in 2023, MOP prices are on course to fall a further 23 percent this year and a more modest 2 percent next year, before leveling out in 2026 as demand strengthens. Potential downside risks to prices include further expansion of Belarusian exports through alternative trade routes. In the longer term, the introduction of significant new production capacity, especially from Canada, could also drive prices lower.

Metals and Minerals

Metal prices saw a short-lived rally in recent weeks following China's stimulus announcements in late September. This came after a 7 percent drop in prices in 2024Q3 (q/q), driven by subdued industrial activity in major economies. The metals and minerals price index is projected to increase by 4 percent in 2024 (y/y) and then inch lower in 2025, before declining by 3 percent in 2026. Precious metal prices are expected to remain stable next year and edge down in 2026, following a 21 percent increase in 2024. Upside risks to these price projections include further stimulus measures that benefit metal-intensive sectors in China, potential production disruptions, and new trade restrictions that could tighten supply, and—for gold—further escalation of geopolitical tensions. On the downside, weaker-than-expected growth in major economies could dampen demand for metals such that prices undershoot the forecasts.

Base metals and iron ore

Metal prices were bolstered in late September by policy measures—which included monetary easing, housing market support, and liquidity injections for the stock market—aimed at lifting growth and stabilizing the property sector in China. However, metal prices have since softened again amid uncertainty over the scale of future policy support in China. Previously, base metal and iron ore prices had declined in 2024Q3, reflecting weaker-than-anticipated economic data releases for China, coupled with signs of moderating growth in the United States and continued industrial weakness in Europe (figure 15.A). These developments were reflected in steep price declines for some metals used intensively in construction and manufacturing, such as copper and iron ore. Base metal prices are projected to stabilize next year before declining in 2026, as steady supply growth is counterbalanced by secular demand growth, including tailwinds from the energy transition.

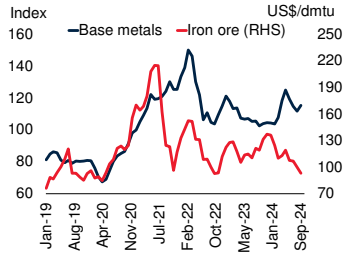
Aluminum prices dropped by 6 percent in 2024Q3 (q/q), due to weak industrial activity—notably in China—amid a buildup of inventories. Prices rose following stimulus announcements in China in late September but softened again thereafter. An uptick in production growth in China, aided by favorable weather that enabled smelters in Yunnan province to resume operations, contributed to downward price pressures earlier in 2024Q3. Global aluminum demand is expected to remain resilient over the forecast horizon, driven by the expanding use of renewable energy technologies such as solar panels and electric vehicles, and increased power-grid infrastructure needs. Rising demand should be met with steady supply growth in Africa, Asia, and the Middle East, as well as a recovery in major European smelters, which had reduced production because of high energy costs stemming from Russia's invasion of Ukraine—aluminum production in Europe fell by almost 15 percent from 2021 to 2023. In addition, China—the world's largest aluminum producer—is expanding smelter operations in Southeast Asia as it approaches its self-imposed domestic annual production cap of 45 million tons. After an expected 10 percent increase in 2024 (y/y), aluminum prices are forecast to hold steady in 2025 before rising by 4 percent in 2026, underpinned by resilient demand.

Copper prices fell by 6 percent in 2024Q3 (q/q) due to signs of decelerating industrial activity in some major economies, with recent price increases on the back of stimulus measures in China also proving short-lived (figures 15.B and 15.C). Supply concerns, including a speculative rally in late May that pushed prices to near historic highs in 2024Q2, have eased due to increasing output from major producers—including Chile, following the resolution of labor disputes at the world's largest copper mine. Global copper supply is expected to rise steadily in the next few years, with additional output from Africa, South America, and elsewhere coming online. Global demand for copper is also likely to remain stable, despite the prolonged downturn in China's property sector. This partly reflects the copper-intensive nature of many energy-transition technologies, including electric vehicles, renewable energy systems, and grid infrastructure. Following an expected 9 percent increase in 2024 (y/y), copper prices are forecast to edge up by almost 1 percent in 2025 supported by steady demand growth. In 2026, copper prices are projected to fall by 9 percent

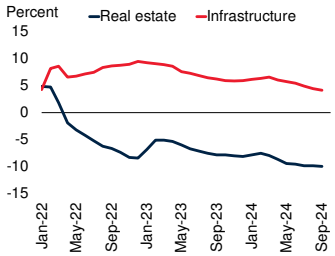
FIGURE 15 Metals and minerals markets

Base metal and iron ore prices fell overall in 2024Q3, reflecting signs of decelerating demand in major economies, including China. The metals and minerals price index is projected to edge down in 2025 and decline further in 2026. Supply disruptions, including from additional trade policy restrictions, and further stimulus measures in China are the main upside risks to this forecast. On the downside, weaker-than-expected industrial activity in major economies, particularly China, could cause prices to fall short of forecasts.

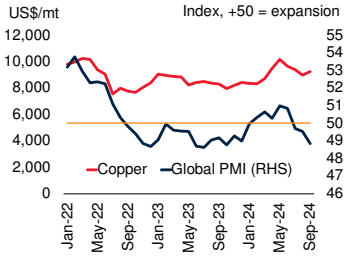
A. Base metals and iron ore prices



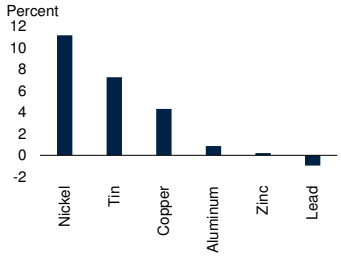
B. China: Fixed asset investment growth



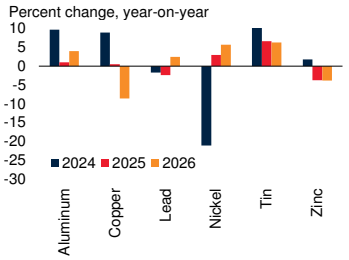
C. Copper prices and global manufacturing PMI



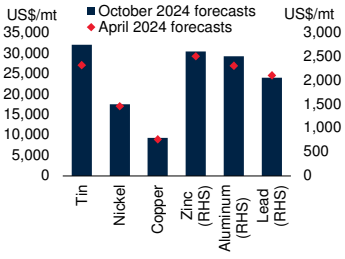
D. Base metals: Production growth, 2024H1



E. Changes in base metal prices



F. Base metal price forecasts for 2025



Sources: Bloomberg; Haver Analytics; Refinitiv (database); World Bank.
Note: dmtu = dry metric ton unit; PMI = purchasing managers' index; mt = metric ton.
A. Last observation is September 2024.
B. Year-on-year change in real estate and infrastructure investment. Last observation is September 2024.
C. PMI readings above (below) 50 indicate an expansion (contraction). Last observation is September 2024.
D. Year-on-year change in global metal production in 2024H1, compared to 2023H1. Last observation is June 2024.
E. Year-on-year change in base metal prices based on forecast table 1.
F. Blue bars indicate current forecasts. Red markers indicate 2025 forecasts made in the latest *Commodity Markets Outlook*, April 2024 edition.

owing to stronger supply growth. Prices are forecast to remain more than 50 percent above their 2015-19 average over the next two years.

Lead prices dropped by 6 percent in 2024Q3 (q/q) as supply concerns eased, and they remained relatively stable in early October. Lead is primarily used in battery production, with replacement batteries for the existing stock of internal combustion engine vehicles accounting for a significant portion of demand. This helps buffer lead from the cyclical demand fluctuations affecting other industrial metals and implies that lead demand should remain stable over the next two years. After an expected 2 percent decline in 2024 (y/y), lead prices are projected to edge down another 2 percent in 2025, mainly due to rising mine supplies from Australia, Brazil, Russia, and the United States. In 2026, prices are forecast to increase by a modest 2 percent.

Nickel prices fell by 12 percent in 2024Q3 (q/q) but partially rebounded in recent weeks following stimulus measures in China. The price declines in 2024Q3 largely reflect growing production amid signs of weakening demand from the stainless steel and battery markets (figure 15.D). Global nickel output continues to increase rapidly, despite the suspension of operations at several mines outside Indonesia following the sustained decline in prices: nickel prices have fallen by about 30 percent since 2022. The ramp-up of supply has occurred primarily in Indonesia—which accounts for more than half of global nickel production—where substantial investment from China has expanded smelting operations. Most of this investment is aimed at producing high-grade material for the battery market. Global demand for nickel is expected to increase steadily in the coming years, supported by the production of stainless steel and batteries for EVs. Following an expected 21 percent plunge in 2024 (y/y), nickel prices are forecast to rebound by 3 percent in 2025 and 6 percent in 2026.

Tin prices inched 2 percent lower in 2024Q3 (q/q), following a 23 percent surge in the previous quarter due to supply disruptions from major producers in Indonesia and Myanmar. Indonesia's tin exports are expected to stabilize after licensing

delays caused a sharp decline earlier in 2024. In contrast, operations are yet to restart at key mines in Myanmar—the third largest tin producer—despite the partial lifting of a 2023 mining ban in early 2024. With few new tin mining projects in development, global supply is likely to remain tight in the coming years. After an expected 16 percent (y/y) increase this year, tin prices are set to rise by 7 percent in 2025 and 6 percent in 2026, supported by growing demand for semiconductors, photovoltaic panels, and other energy transition technologies.

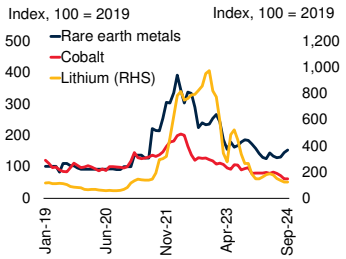
Zinc prices dipped by 2 percent in 2024Q3 (q/q) due to subdued demand in major economies. However, prices partially rebounded in recent weeks as sentiment regarding construction-related demand in China improved. Zinc is mainly used to galvanize steel for construction, manufacturing, and infrastructure, and demand is therefore sensitive to the global industrial cycle, particularly conditions in China. Production of refined zinc is expected to grow steadily as major European producers restart smelters that have been offline since 2022 because of high energy costs, and as new smelters come online in Russia. The ramp-up of several large mine projects globally will likely feed through to ample zinc supply. After an expected 2 percent increase in 2024 (y/y), zinc prices are forecast to fall by 4 percent in both 2025 and 2026 as global zinc supply picks up (figures 15.E and 15.F).

Iron ore prices declined by 12 percent in 2024Q3 (q/q) but jumped in early October following the announcement of regulatory measures intended to stabilize property demand in China. Earlier declines in iron ore prices—the main input for steel production—reflect softening steel demand, notably in China, amid plentiful supplies. Looking ahead, the likelihood of continued softness in China's property sector is expected to keep iron ore demand subdued. Additionally, steady growth in iron ore production from Australia and Brazil—the world's two largest producers—along with new low-cost production from West Africa, likely to come online in 2025, is expected to exert further downward pressure on prices. After an expected 10 percent (y/y) drop this year, iron ore prices are projected to fall by 12 percent in 2025 and 5 percent in 2026.

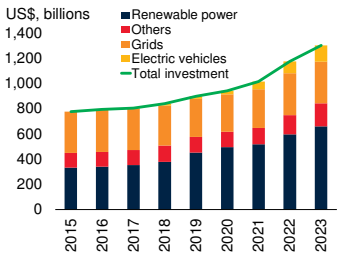
FIGURE 16 Critical minerals markets

Critical mineral prices fell in 2024Q3, driven by a strong increase in supply and recent signs of weakening demand growth for EVs and other critical-mineral-intensive products. Although falling prices have sparked concerns about reduced investment in new mineral supplies, exploration spending continues to grow. However, with clean energy investment steadily rising in the longer term, supply risks for critical minerals remain.

A. Price indexes for selected minerals



B. Global clean energy investment



Sources: Bloomberg; International Energy Agency (IEA); World Bank.
A. Last observation is September 2024.
B. Bars indicate global clean energy investment. 2023 data are estimated. "Others" refers to end-use renewable energy; electrification in buildings, transport, and industrial sectors; and battery storage.

Critical minerals

Critical mineral prices tumbled in 2024Q3 and continued to decline in October. Cobalt and lithium prices plunged by 18 and 25 percent (q/q), respectively, while rare earth metals increased by 5 percent (figure 16.A). Price declines for cobalt and lithium reflected continued growth in supplies from key producers, which have recently more than met demand arising from the energy transition. By contrast, the rise in prices of rare earth metals was due to concerns about export restrictions by China, especially on antimony—a critical mineral used to manufacture batteries, solar panels, smartphones, and weaponry.

Critical mineral prices are expected to remain depressed in the near term but are likely to rise over time as demand from the expanding use of energy transition technologies—including EV batteries and other clean renewable energy technologies—outpaces supply growth. Although falling prices have sparked concerns about reduced investment in new mineral supplies, exploration spending has continued to grow, led by Australia

and Canada (figure 16.B). Other major economies have introduced incentives to boost domestic critical mineral production, including through the U.S. Inflation Reduction Act and the European Commission's Critical Raw Materials Act. Even so, future supply growth could be constrained by a range of factors, including environmental concerns, long lead times for developing new mines, and further increases in trade restrictions on critical minerals, whose mining and processing remain geographically concentrated.

Precious metals

Precious metal prices continued to rise in October, building on a 6 percent increase in 2024Q3 (q/q). Recent price increases were driven by a continued surge in gold prices, which reached new nominal record highs in October, reflecting heightened geopolitical tensions, sustained demand from central banks, and the onset of U.S. monetary easing. Silver prices also gained in 2024Q3, while platinum prices edged down. Amid heightened geopolitical risks, gold prices are expected to remain elevated. Meanwhile, tight supplies are expected to support higher prices for platinum and silver. A further escalation of geopolitical tensions could push gold prices above current forecasts. Meanwhile, weaker-than-expected industrial activity in major economies may dampen demand for silver and platinum, causing prices to fall below projections.

Gold prices rose by 6 percent in 2024Q3 (q/q), reaching an all-time nominal high in mid-October (figure 17.A). The recent increase in prices was supported by various factors, including heightened geopolitical tensions, continued demand from central banks, and the onset of U.S. monetary easing, which was foreshadowed by a weaker dollar and lower U.S. government bond yields (figure 17.B). Additionally, a resurgence in demand for gold from exchange-traded funds helped propel prices higher in 2024Q3 (figure 17.C). Robust safe-haven demand for gold—which typically rises during periods of geopolitical, financial, and policy uncertainty—is expected to be sustained in the near term. However, demand from central banks and jewelry production, which together account for about two-thirds of global gold demand, is likely to ease over the forecast horizon due to record high prices. Gold prices are expected to increase by 21 percent in 2024 (y/y) and remain around 80 percent higher than their 2015-19 average throughout the forecast period, edging down by just 1 percent in 2025 and 3 percent in 2026.

Silver prices increased by 2 percent in 2024Q3 (q/q) and extended their gains in October, after surging by 23 percent in 2024Q2. Recent price increases were driven by investment demand, supported by the onset of U.S. monetary policy easing. Silver demand is expected to grow steadily over the forecast horizon, fueled by its dual financial and industrial uses. Solar panel installations, together with increasing vehicle electrification, are expected to drive the expansion in industrial silver demand. Global silver supply is expected to grow modestly in the next couple of years, driven by production in Canada, Peru, Russia, and the United States, along with contributions from recycling. With modest supply growth lagging behind strong demand tailwinds, silver prices are projected to rise by 7 percent in 2025 (y/y) and 3 percent in 2026, after an expected 20 percent increase in 2024 (figure 17.D).

Platinum prices fell by 2 percent in 2024Q3 (q/q) but edged up in recent weeks as stimulus measures in China boosted demand sentiment. Price declines in the third quarter of this year largely reflect subdued activity in the automotive sector, a major end-user of platinum. Additionally, demand for platinum as a substitute for palladium in autocatalyst manufacturing, which had previously supported prices, has been limited this year due to a narrowing of the price gap between the two metals. Growth of auto-linked demand—which accounts for two-fifths of platinum usage—is expected to remain soft in the next few years as internal combustion engine vehicles gradually lose market share to battery EVs. Demand growth for jewelry production is also set to be relatively weak, with investment demand expected to provide some support. Nonetheless, after an expected 4 percent increase in 2024 (y/y), platinum prices are forecast to gain 5 percent in both 2025 and 2026, supported by tighter mine supply among the major producers, particularly declining output capacity in South Africa. Additionally, recycled

supply—accounting for nearly one-fourth of total supply—is decreasing in the automotive sector, its primary source, as vehicles are staying on the road longer.

Risks

Risks to the price forecasts are broadly balanced. Upside risks to base metals and iron ore prices include more concerted stimulus policies in China, including fiscal measures; unexpected production disruptions; and trade restrictions. Weaker-than-expected industrial activity in major economies remains the main downside risk to the metal price forecasts. For precious metals prices, escalating geopolitical tensions represent a key upside risk.

Upside risks

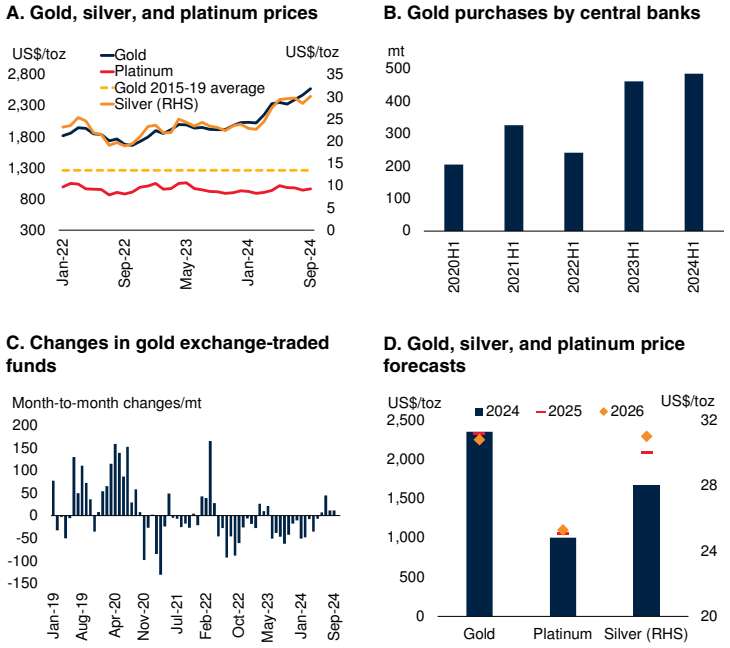
Stronger-than-expected growth in China. In September, China rolled out a monetary and regulatory stimulus package intended to counter slowing growth and stabilize the ailing property sector. Most metal prices, particularly construction-related metals such as iron ore, rose in response to the stimulus measures, but prices retreated again in October amid uncertainty over the scale of future policy support. If policymakers in China implement more aggressive stimulus measures, including additional fiscal support, it could substantially boost industrial output and help curb the decline in the property sector. Under such circumstances, metal demand could increase significantly—especially in cases of tight supply—pushing prices above current forecasts.

Supply disruptions. Mining operations and associated processing could be constrained by various factors, including environmental issues, labor disputes, constraints on power and water availability, and weather conditions. Unexpected developments like these could raise prices above projections. Prices for metals which are critical to the energy transition, like copper and nickel, might prove especially sensitive to supply outages.

Trade restrictions. Several metals have become subject to increasing trade restrictions, including import curbs on aluminum from China and Russia by some advanced economies, an export ban on nickel ore by Indonesia, and export taxes on tin concentrate by Myanmar. Further proliferation of such restrictions could reduce the volume of metals production and trade, effectively tightening supply and raising prices above forecast levels. Additionally, China's aluminum production is close to hitting a self-imposed limit of 45 million tons per year, introduced in 2017 to limit carbon emissions. Should the cap be enforced, aluminum supply could be tighter in the coming years, pushing prices higher.

FIGURE 17 Precious metals markets

Precious metal prices increased by 6 percent in 2024Q3. Gold prices recently reached all-time highs, buoyed by elevated geopolitical tensions, the onset of U.S. monetary policy easing, and central bank buying. Silver prices edged up 2 percent, while platinum prices fell by 2 percent. After rising by 21 percent in 2024, gold prices are projected to stay elevated, with only a slight decline expected in 2025-26. Silver and platinum prices are forecast to increase in both 2025 and 2026, supported by steady demand growth amid tight supplies. Weaker-than-expected industrial activity in major economies is a key downside risk for the silver and platinum price forecasts.



Sources: Bloomberg; Federal Reserve Bank of St. Louis; Haver Analytics; World Bank; World Gold Council.
Note: mt = metric ton; toz = troy ounce.
A. Monthly prices, last observation is September 2024.
B. Gold purchases by central banks and other official sector institutions for the first half of each year, in metric tons. Last observation is 2024Q2.
C. Month-to-month changes in gold exchange-traded funds. Last observation is September 2024.
D. Price forecasts based on table 1.

Geopolitical tensions. Gold's appeal as a safe-haven asset tends to increase during times of heightened geopolitical tensions and policy uncertainty. A further escalation of conflicts, particularly in Europe and the Middle East, could drive gold prices beyond current projections.

Downside risk

Weaker-than-expected global industrial activity. Amid elevated interest rates and subdued global trade growth, weaker-than-expected industrial activity across major economies could depress metals demand in the coming years, resulting in significantly lower prices than anticipated. In particular, the forecasts assume that China's GDP growth will remain above 4 percent per year on average in 2025-26. However, if recent stimulus measures fail to gain traction and further stimulus is not introduced, domestic demand in China could weaken further, with construction activity continuing to slow. Additionally, an anticipated recovery in euro area manufacturing may not materialize, consistent with persistently weak industrial production this year.

SPECIAL FOCUS

Commodity Price Synchronization: A New Era?

Over the past five decades, commodity markets have experienced periods of heightened price synchronization, particularly during times of global economic stress, such as the pandemic-induced recession and the Global Financial Crisis (GFC). The record pace at which prices rebounded from pandemic lows in April 2020 gave way to broad-based declines starting in March 2022. Unlike the rebound after the global financial crisis, which was primarily driven by economic recovery and strong growth in emerging market and developing countries, the recent period has been marked by a series of disparate, commodity-specific shocks that have come from such sources as increased conflict in key commodity-producing regions and severe weather events. These shocks drove inflation higher and adversely affected global economic activity. In recent months, the commodity market effects of these shocks have largely subsided, leading to greater dispersion in price movements across commodities. However, the risk of synchronized price increases, due to an escalation in geopolitical tensions, remains significant. When price rises are broad-based across commodities, it limits consumers' ability to substitute toward lower-priced goods, amplifying welfare losses and reducing the effectiveness of inflation mitigation efforts.

Introduction

The widespread collapse in commodity prices in early 2020, caused by the pandemic-induced global recession, was followed by a broad-based rebound, during which prices of several commodities recorded nominal all-time highs. This synchronized variation in commodity prices is not unprecedented in the post-World War II era. The most recent preceding boom occurred in the early 2000s, fueled by rising commodity demand triggered by strong growth in emerging market and developing economies (EMDEs), especially China (Alquist, Bhattarai, and Coibion 2020; Baffes and Haniotis 2010; World Bank 2015). This upswing in prices was disrupted by the global financial crisis of 2007–09; having risen steadily from the mid-2000s to 2008, commodity prices then declined in unison to early-2006 levels by the end of 2008.

Several studies have examined common cycles in commodity markets and their causes. A prevailing view attributes the phenomenon to fluctuations in the global business cycle, which represents a common underlying component driving prices (Alquist, Bhattarai, and Coibion 2020; Byrne, Sakemoto, and Xu 2020; Delle Chiaie, Ferrara, and Giannone 2022). However, developments specific to individual commodities can also create a "perfect storm," in which distinct factors align to cause price comovement. During the post-pandemic recovery, as commodity prices surged because of rebounding economic activity, a series of disparate shocks further intensified price pressures. For example, geopolitical risks, such as the Russian invasion of Ukraine, led to increased inventory demand for crude oil due to concerns about supply disruptions. Meanwhile, extreme weather events, such as droughts and flooding, strained agricultural yields and drove up prices of key crops (World Bank 2022a).

In addition to direct shocks, spillover effects can further synchronize price movements in commodity markets. Price fluctuations in energy, a key input in metal production and agriculture, increase costs across sectors, both directly (as fuel costs) and indirectly (through chemical and fertilizer prices; World Bank 2016, 2019).[1] Similarly, elevated crude oil prices can incentivize increased production of biofuels, increasing demand, and prices, for biofuel feedstocks such as palm oil, maize, soybean oil, and sugar.

Commodity price synchronization depends on the type of underlying shocks. A common underlying cause, such as a surge in productivity-driven global growth, might typically lead to a stronger comovement in commodity prices than would result from disparate shocks, which affect markets unevenly. The effects on global economic activity and inflation also vary. For example, technological

Note: This Special Focus was prepared by Hamza Zahid and is based on Kabundi and Zahid (forthcoming).

[1] Rising agricultural prices can spill over into energy markets through increased biofuel production costs, which in turn push up overall energy prices (Hertel and Beckman 2011; Peersman et al. 2021).

advancements that increase productivity in non-commodity sectors can boost demand for inputs such as energy and metals. Consequently, both commodity prices and global output rise due to this increased productivity. However, broader consumer prices may decline due to lower production costs. In contrast, commodity price spikes driven by geopolitical tensions may have a more pronounced inflationary effect but result in a relatively transitory drag on economic activity as the shocks dissipate or alternative supply chains emerge (Kilian, Plante, and Richter 2024).

This Special Focus explores synchronized cycles in commodity prices and their underlying drivers. Specifically, it addresses the following questions:

- How has commodity price synchronization changed over the past five decades?
- What are the key drivers behind synchronized cycles in commodity prices?
- How do synchronized commodity price movements during the pandemic-induced global recession of 2020 compare with those occurring during the global financial crisis of 2009?

This Special Focus builds on existing literature that examines commonalities in commodity price movements and their linkages to the global economy (for example, Alquist, Bhattarai, and Coibion 2020; Delle Chiaie, Ferrara, and Giannone 2022). Unlike these studies, which focus on pre-pandemic periods, this analysis extends the investigation to the period from the onset of the pandemic in early 2020 through mid-2024, incorporating drivers of synchronized commodity price cycles more relevant to the post-COVID-19 period. More recent research on commodity market developments has primarily focused on specific commodities. For instance, Baumeister, Ohnsorge, and Verduzco-Bustos (2024) explore how underlying demand and supply shocks drove metal price swings during the global recession induced by the pandemic. Other studies concentrate on the macroeconomic effects of individual commodity shocks. Ha et al. (2023) assess the impact of oil price shocks on global inflation, while Kilian, Plante, and Richter (2024) examine the role of geopolitical risk in oil markets and its broader effects on economic activity.

This Special Focus presents several key findings. First, there is a joint cycle in commodity prices—over the past five decades, a common component has explained price movements, such as in the pandemic and the subsequent recovery period. From early 2020 through mid-2024, this shared component has, on average, explained 61.4 percent of fluctuations in base metal prices, 41.7 percent of energy prices, and 26.4 percent of food prices. Price synchronization remained strongest in energy and metals, much as it did during the global financial crisis—reflecting the close relationship between their consumption and industrial activity. However, in the post-COVID period, precious metals have also increasingly aligned with other commodities. Latterly, greater price dispersion has started to return, tempering the peak synchronization seen from the early 2020s to mid-2022.

Second, a one standard deviation global demand shock—such as fiscal support or shifts in consumer preferences that raise commodity demand—can increase commodity prices by up to 4.8 percent over six months before the effect fades. In contrast, a one standard deviation global supply shock—such as productivity gains from structural reforms in the global economy—has a stronger and more persistent impact. So do commodity-specific shocks—such as conflicts in key commodity-producing regions that disrupt commodity supply or increase inventory demand. Global supply shocks raise prices by 10.3 percent, and commodity-specific shocks by 6.2 percent, within seven months, with effects lasting over a year.

Third, during global recessions and their recoveries, global demand and supply shocks have been the main drivers of price changes. However, in the recovery from the global recession of 2020, commodity-specific shocks, such as heightened geopolitical tensions, also contributed sizably to the rebound in commodity prices. This contrasts with the price swings during the global recession of 2009 when commodity-specific shocks played a less important role.

Methodology and data

A common factor among 35 monthly commodity price series is estimated using a dynamic factor model, as in Kose, Otrok, and Whiteman (2003), which captures joint variation in commodity prices. To explore the drivers of joint fluctuations in commodity prices, a structural vector autoregression (SVAR) model is estimated with three key variables—global consumer price inflation, global industrial production growth, and the common commodity factor itself.[2] Sign restrictions from the literature are used to identify three types of shocks:

- *Global demand shocks*—such as a shift in consumer preferences, an exogenous fiscal stimulus, or an unanticipated monetary policy change—imply an increase in global economic activity, inflation, and commodity prices.
- *Global supply shocks*—such as advancements in information and communication technology, an increase in productivity growth in EMDEs, or trade liberalization throughout the 1990s—raise global industrial production and reduce global inflation. In commodity markets, they increase global consumption of commodities and, consequently, raise commodity prices.
- *Commodity-specific shocks*—such as natural disasters in commodity-producing regions, geopolitical tensions that increase precautionary demand for commodity inventories, or speculative trading in commodity markets—lead to a surge in commodity prices and global inflation, while decreasing global economic activity.

The methodology is built to analyze the links between short-term fluctuations in the global economy and global commodity markets—not long-term trends. The restrictions to identify the structural shocks are consistent with theoretical predictions (Fry and Pagan 2011) and follow other empirical studies in the literature (Charnavoki and Dolado 2014; Ha, Kose, and Ohnsorge 2021).

Note that the global demand and supply shocks in the model used here differ significantly from the commodity-specific shocks examined in Kilian and Murphy (2014) and others (Baumeister and Hamilton 2019; Jacks and Stuermer 2020). In the framework here, an increase in both economic activity and commodity prices can result from either a global demand shock or a global supply shock, depending on the direction of global inflation. Both types of global shocks drive up commodity demand, aligning with Kilian and Murphy's (2014) definition of a commodity demand shock. However, unlike commodity supply shocks—which typically lead to higher commodity prices and reduced economic activity—global supply shocks in the model used here are unrelated to specific commodities and can also result in increased economic activity alongside rising commodity prices. This distinction is important because, while many readers may naturally categorize oil shocks as supply shocks, global supply shocks encompass broader factors that are not tied to individual commodities.

The Special Focus relies on monthly data from January 1970 to July 2024. The data for the dynamic factor model are sourced from the World Bank Commodities Price Data (the Pink Sheet), which includes more than 70 commodity prices and indices. After excluding series that are averages or close substitutes to avoid artificial comovement, 35 commodity prices remain.[3] All prices are expressed in real terms, deflated by the U.S. Consumer Price Index (CPI). The SVAR model incorporates additional global data sources. Global consumer price inflation is defined as CPI infla-

[2] Several other studies use a similar framework to examine determinants of commonalities in commodity prices. see, for example, Byrne, Fazio, and Fiess (2013); Lombardi, Osbat, and Schnatz (2010); Poncela, Senra, and Sierra (2014); and Vansteenkiste (2009). However, these studies focus on a subset of commodities.

[3] The 35 commodity price series included in this analysis are: aluminum, banana, beef, chicken, coal, cocoa, coffee arabica, coconut oil, copper, cotton, crude oil, diammonium phosphate (DAP), gold, lead, logs (Cameroon), logs (Malaysian), maize, natural gas, nickel, orange, palm oil, platinum, potassium chloride, rice, rubber, silver, soybeans, sugar, tea, tin, tobacco, triple super phosphate (TSP), urea, wheat, and zinc.

tion for the Organisation for Economic Co-operation and Development (OECD) countries. Global economic activity is measured using the global industrial production index by Baumeister and Hamilton (2019). All variables, including the common commodity factor from the dynamic factor model, are expressed in month-on-month log changes and are seasonally adjusted, covering the period January 1970 to May 2024.

Synchronized commodity price cycles

Evolution of synchronized commodity prices. Synchronized commodity prices, reflected by the common factor, typically mirror the global business cycle. These prices peak before global recessions—such as those in 1975, 1982, 1991, 2009, and 2020—and decline during these periods before recovering. However, this factor does not solely track changes in global economic activity. Significant deviations arise because of specific events within commodity markets—such as the oil price spikes in 1973–74, 1978–79, and 1990–91 (figure SF.1.A).

At the onset of the COVID-19 pandemic in early 2020, commodity prices experienced a sharp and broad-based decline, driven by a severe contraction in demand as widespread lockdowns disrupted global economic activity. Subsequently, commodity prices surged in the second half of 2020, reflecting a recovery in economic activity as the initial shock of the pandemic subsided. This upsurge was further intensified by the Russian invasion of Ukraine in early 2022, which raised concerns about disruptions in energy and grain supplies, increasing inventory demand for these commodities.

The synchronized commodity price cycle represents a smoothed version of the fluctuations in individual commodity prices (figure SF.1.B). Although closely correlated with crude oil, at 0.61, and copper prices, at 0.81, the cycle exhibits important differences. For example, the common commodity factor rose earlier than crude oil prices in the early 1970s, reflecting broad-based price pressures in markets like copper and maize. These pressures began before the 1973 oil price shock triggered by the Arab-Israeli War, illustrating that the global factor captures underlying trends across multiple commodities, rather than simply responding to oil-driven shocks (Cooper et al. 1975). During the 2008–09 global financial crisis, the common factor declined more gradually than did copper prices, as the sharp fall in industrial metals was offset by more stable agricultural prices, resulting in a smoother overall decline. Similarly, during the COVID-19 recession, the common factor fell less sharply than oil prices, which were particularly volatile because of the collapse in energy demand.

Synchronization in commodity prices across commodity groups. The role of a common commodity factor is especially clear in explaining industrial commodity price movements. From 1970 to 2024, it explained 15 percent of the variation in energy prices and 28 to 35 percent of the variation in base metals, rubber (used in tires and tubes), and platinum (used in catalytic converters). In contrast, it accounted for only 11 percent of the variation in agricultural commodity prices, precious metals, and fertilizers (figure SF.1.C). The stronger association with industrial commodities reflects the close relationship between metal and energy consumption and industrial activity, a link established by several studies. Metal prices, particularly copper, are often seen as leading indicators of global economic activity (Baffes and Nagle 2022; Bernanke 2016; Hamilton 2015). By contrast, agricultural commodities are more affected by supply shocks, primarily driven by weather and policy changes, which dominate demand fluctuations. These findings align with other studies showing that industrial commodity prices are shaped mainly by short-term shocks, while agricultural commodities are more influenced by long-term factors (Baffes and Kabundi 2021).

Synchronization in commodity prices over time. The role of the common commodity factor in explaining industrial commodity price movements has increased considerably when comparing the periods 1970-95 and 1996-2024, and this shift has been broad-based, affecting most com-

modities (figure SF.1.D).[4] Between 1996 and 2024, the contribution of the global factor to the price variations of energy, base metals, and platinum nearly doubled compared with 1970-95. This stronger comovement in commodity prices since the mid-1990s reflects the influence of increased globalization—including greater trade and capital flow openness—and the associated trend of higher comovement in macroeconomic variables such as inflation and output (Eickmeier and Kühnlenz 2018; Ha, Kose, and Ohnsorge 2019). The growing use of financial instruments in commodity markets has also likely contributed to the increased synchronization of commodity prices (World Bank 2022a).

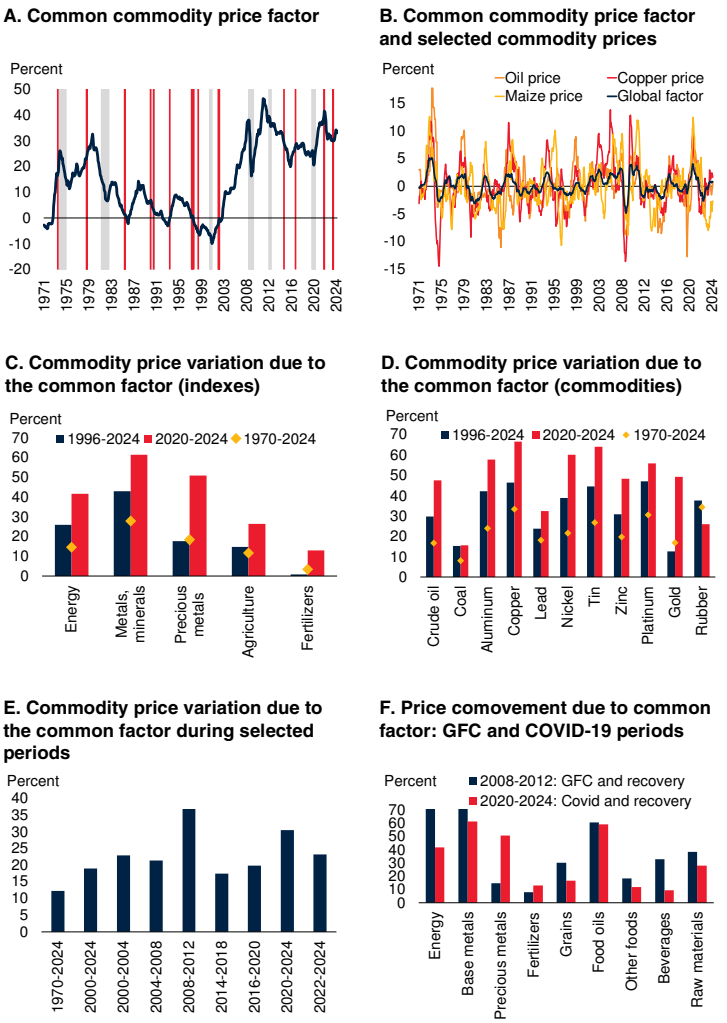
After 2020, this trend became more pronounced, with the global factor having since then explained, on average, 41.7 percent of energy price variability and 61.4 percent of fluctuations in base metal prices. Agricultural commodities also exhibited greater comovement with the global factor, which accounted for nearly 27 percent of price variability (excluding rubber). Heightened synchronization is typical during periods of recession and recovery, as consumption of several commodities tends to fluctuate with the business cycle. As such, the pandemic era stands out—ranking second only to the global financial crisis in terms of the breadth and extent of comovement across commodities (figure SF.1.E).

During the global financial crisis and its aftermath, more than one-third of commodity price movements were synchronized across different commodities. The widespread collapse in prices during this period followed a record high, primarily driven by material-intensive economic growth in China. This boom in commodity prices began in the late 1990s and persisted until 2014, despite a disruption caused by the financial crisis, a period often referred to as the 2000s commodity "super-

[4] The 1996 cutoff aligns with significant global economic changes, including the accession of key emerging market and developing economies (EMDEs) such as India (in 1995) and China (in 2001) to the World Trade Organization, along with the implementation of structural and trade reforms. These shifts contributed to the onset of a major commodity supercycle in the late 1990s. We also tested alternative subsample periods, such as pre- and post-2000, and found similar results, further supporting the robustness of our findings.

FIGURE SF.1 Synchronization of commodity price cycles

Broad-based movements in commodity prices, captured by the common commodity price factor, have often been linked to global cyclical developments and commodity market events. This comovement in commodity prices has strengthened over the past two decades. Price synchronization remained particularly strong in energy and metals during both the global financial crisis and the pandemic era, highlighting their close connection to industrial activity. Recently, idiosyncratic developments have moderated the increased price comovement observed during the pandemic-induced recession and recovery.



Source: World Bank.

A. Common factor (accumulated) of 35 commodity prices in a one-factor dynamic factor model as in Kose, Otrok, and Whiteman (2003). Gray bars indicate global recessions as identified in Kose, Sugawara, and Terrones (2020). Red lines indicate events specific to commodity markets, including the first oil price shock of October 1973; the Iranian revolution in January 1979; the beginning of the Gulf War in August 1990; the memorandum of understanding between Australia, Canada, the European Union, Norway, the Russian Federation, and the United States to cut aluminum production; OPEC meetings to ease production quotas (December 1985 and November 2014); selected OPEC meetings to reestablish production quotas (December 2016, 1998-1999); Russian invasion of Ukraine in 2022; and the Middle East conflict in 2023.

B. Common commodity price factor (y/y), oil price (crude oil, average, y/y), copper price (y/y), maize price (y/y). Common commodity price factor is multiplied by the average factor loading to make the scales comparable.

C.-F. Share of variation in month-on-month growth of 35 commodity prices—3 energy commodities, 6 metal and mineral commodities, 3 precious metals, 4 fertilizers, and 19 agricultural commodities accounted for by the common factor and derived from a one-factor dynamic factor model as in Kose, Otrok, and Whiteman (2003). Bars show consumption-weighted averages. Windows correspond to 1970-2024 (Full Sample), 2000-24 (Post-2000 subsample), 2000-04 (Early 2000s Boom), 2004-08 (Pre-GFC Boom), 2008-12 (GFC and Recovery), 2014-18 (Oil Price Collapse), 2016-20 (Pre-COVID Stability), and 2020-24 (Post-COVID Period).

cycle." These sustained increases in commodity prices are typically associated with the industrialization of the global economy (Baffes and Kabundi 2024; Cuddington and Jerrett 2008; Erten and Ocampo 2013). Consequently, the significant synchronization of commodity prices during the global financial crisis was shaped not only by the global recession and subsequent recovery, but also by the ongoing dynamics of the commodities boom that had started in the 2000s.

In contrast, the post-COVID period has been marked by a combination of idiosyncratic events affecting commodity markets (World Bank 2020, 2022b, 2023). Although the economic recovery from the pandemic served as a common driver of rising prices, commodity-specific factors—such as extreme weather events and escalating conflicts in key commodity-producing regions—played a prominent role in price fluctuations. Additionally, the transition toward a low-carbon energy landscape created opposing pressures on energy and metal prices. These disparate shocks are reflected in the varying degrees of comovement across more disaggregated commodity categories (figure SF.1.F). Synchronization remained strongest in energy, metals, and grains, much as it did during the global financial crisis. However, during the post-COVID-19 period, precious metals also increasingly aligned with the global factor, driven by heightened geopolitical tensions and inflationary pressures, which boosted demand for safe-haven assets like gold.

Despite the relatively large contribution of the common factor in 2020-24 on average, since the third quarter of 2022, price synchronization has decreased, reaching 26 percent. This likely reflects the dissipation of earlier large shocks to global growth and geopolitical tensions, giving way to a range of idiosyncratic developments—for example, coffee and cocoa prices have surged due to localized supply disruptions, rice has been subject to export restrictions, and oil markets have become less sensitive to shifting geopolitical tensions amid increasing spare capacity.[5] These developments have led to more distinct price movements across individual commodities, thereby moderating the peak synchronization seen during the pandemic.

Drivers of synchronized commodity price cycles

To assess the role of different underlying shocks in driving common cycles in commodity prices, the effects of three shocks are estimated: global supply, global demand, and commodity-specific shocks. Global supply shocks—such as a boost in productivity that leads to sustained industrial growth—have a much larger and longer-lasting effect on commodity prices than the other shocks. A one standard deviation global supply shock raises commodity prices by 10.3 percent over the following seven months, with the effect remaining significant for a year and a half (figure SF.2.C). Although this supply shock slightly reduces global inflation at first, the effect becomes insignificant after three quarters (figure SF.2.D).

In contrast, a one standard deviation global demand shock increases global industrial production and commodity prices, but its effect is shorter-lived. This shock increases commodity prices by up to 4.8 percent over the following six months, but the effect quickly fades (figure SF.2.A). A positive global demand shock, however, often has a larger effect on global inflation than either global supply or commodity-specific shocks (figure SF.2.B). Persistent inflation increases can be driven by sustained demand shocks, such as expansionary fiscal programs, because they may cause labor markets to tighten and push output closer to or beyond the economy's potential (Blanchard and Bernanke 2023; Ha et al. 2023).

Commodity-specific shocks lead to lasting increases in commodity prices. A one standard deviation commodity-specific shock raises prices by more than 6.2 percent within 12 months, with effects continuing for at least 18 months (figure SF.2.E). This persistence is partly due to the low elasticity

[5] This is also reflected in the growing number of negative factor loadings with the estimated common commodity factor, indicating that some commodity prices are moving in opposite directions to the broad-based trend. This shift suggests a more diverse pattern of price movements compared to the period before 2023, when loadings were predominantly positive.

of supply in certain commodities, such as metals, where significant lead times between resource discovery and production limit adjustments (World Bank 2016).[6] While these shocks cause a smaller increase in global inflation than global demand shocks, their impact on inflation is persistent (figure SF.2.F). In particular, wage and price rigidities amplify the inflationary effects of these shocks by preventing real wages and prices from adjusting downward quickly. This rigidity elevates firms' marginal costs, leading to sustained higher inflation even after the initial shock subsides (Bodenstein, Erceg, and Guerrieri 2008; Plante 2014). The effect on global industrial production, however, is modest, as commodity prices are a small share of global economic activity (Blanchard and Gali 2007; Kilian, Plante, and Richter 2024).

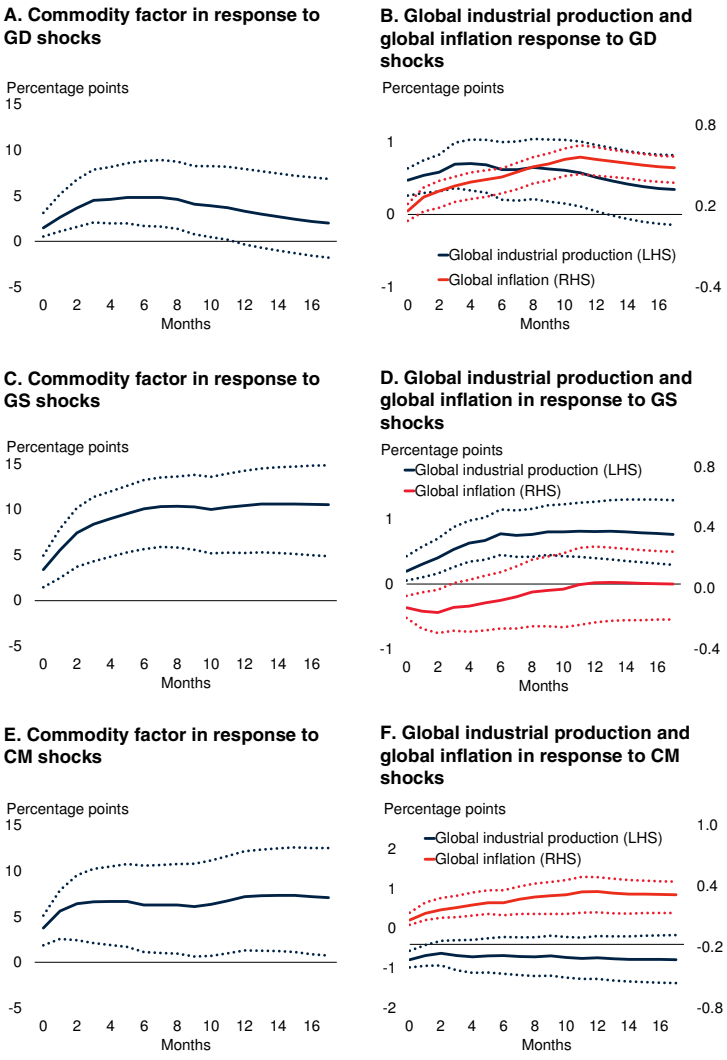
Drivers of synchronized commodity price cycles during recessions and recoveries

Over the past four years, a series of shocks has resulted in broad-based fluctuations in commodity prices. The pandemic-induced global recession was followed by a sharp rebound that later slowed amid policy tightening. Historically, global recessions have weakened demand and disrupted supply chains outside of commodity markets, depressing commodity prices—effects that typically reversed during ensuing recoveries. However, in the post-2020 period, Russia's invasion of Ukraine, the conflict in the Middle East, shifts in U.S. monetary policy, and decelerating long-term growth in China—which is the world's largest commodity consumer—have caused additional disruptions. These factors have affected multiple commodity markets simultaneously, albeit unevenly:

[6] Note that, in contrast, commodities like oil and natural gas may exhibit higher short-term supply elasticity due to factors like shale production and OPEC's ability to adjust output. Similarly, agricultural commodities can respond more rapidly to supply shocks through mechanisms such as crop rotation and expedited harvesting, depending on the concentration and flexibility of production systems.

FIGURE SF.2 Dynamics of commodity prices, economic activity, and inflation

Global supply shocks drive a sustained rise in global industrial production and lead to a larger and more persistent effect on commodity prices than other shocks, while temporarily reducing global inflation. Global demand shocks elevate both global industrial production and commodity prices, with a marked positive effect on global inflation. Commodity-specific shocks result in persistent increases in commodity prices, with a moderate increase in inflation and minimal impact on global industrial production.



Source: World Bank.

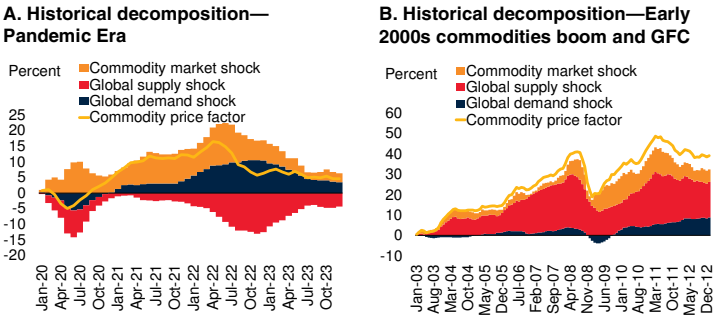
A.-F. Solid lines represent median responses, dotted lines represent upper and lower bounds of 68 percent confidence intervals. Global economic activity is represented by the global industrial production index from Baumeister and Hamilton (2019), and global inflation is represented by CPI inflation for the OECD countries. GD: global demand shock, GS: global supply shock, CM: commodity market-specific shock.

A.C.E. Impulse response of global commodity price factor (accumulated) in response to 1 standard deviation global demand (GD), global supply (GS), and commodity market-specific (CM) shocks.

B.D.F. Impulse response of global industrial production (accumulated) and global inflation in response to global demand (GD), global supply (GS), and commodity market-specific (CM) shocks, each raising global commodity prices by 1 standard deviation (approximately 5 percent).

FIGURE SF.3 Drivers of commodity prices during global recessions and recovery

During global recessions and recoveries, global demand and supply shocks predominantly drive commodity price changes. In the recovery following the 2020 global recession, commodity-specific shocks, such as geopolitical tensions, had a marked influence on price rebounds. This contrasts with the global financial crisis, where such shocks had a lesser impact on price dynamics. The synchronized commodity price cycle around the GFC was also shaped by the commodities boom that began in the 2000s.



Source: World Bank.
A.B. Cumulative historical decomposition of common commodity price factor into global demand, global supply, and commodity market-specific shocks.

- *Covid Recession and Recovery.* Commodity prices plummeted between March and August 2020, driven by both global demand and supply shocks (figure SF.3.A). The sharp decline in global economic activity especially affected the energy and metals sectors, as reflected in steep drops in prices. By the third quarter of 2020, however, most commodity prices had rebounded from their earlier lows. The recovery was driven by a combination of non-commodity global demand and supply shocks and commodity-specific shocks. Commodity-specific shocks contributed to the increase in prices, capturing the OPEC+ supply cuts in crude oil, although prices remained one-third below pre-pandemic levels. Global supply shocks, on the other hand, reflected the faster-than-expected resumption of much industrial activity in China, which led to rapid recovery, especially in metal prices (World Bank 2022c).

- *Russian invasion of Ukraine.* The Russian invasion of Ukraine in early 2022, reflected in commodity specific shocks, caused sharp increases in commodity prices. Had there been no war in Ukraine, commodity prices would have stabilized at a lower overall level, and likely begun to decline in early 2022 (figure SF.3.A). The conflict severely disrupted production and trade in key commodities, notably energy and such food products as wheat and oilseeds, of which Russia and Ukraine are significant exporters. These disruptions compounded existing stresses in commodity markets during the initial post-COVID recovery, when rebounding global demand, coupled with still-constrained supply, exerted upward price pressure.

- *Global growth slowdown.* A notable global growth slowdown, particularly in China's industrial sector, weighed heavily on commodity prices by the second quarter of 2022. Prices began easing from their 2022 peaks, driven primarily by negative global supply shocks, including continued supply chain disruptions, as well as weaker industrial output. U.S. monetary tightening further contributed to this decline, both directly by raising the opportunity cost of holding inventories and indirectly by dampening global demand (figure SF.3.A).[7]

- *Conflict in the Middle East.* The recent conflict in the Middle East has heightened geopolitical risks in commodity markets. Against a backdrop of adequately supplied energy markets, the conflict's impact on broad commodity prices has so far been limited. Nonetheless, commodity-specific shocks—relating to tensions in key producing regions—exerted upward price pressure in late 2023 and again in early 2024 (figure SF.3.A). Although neither Israel nor Gaza are major energy producers, rising oil prices during periods of conflict escalation suggest a risk that the conflict could broaden. This could potentially result in significant supply disruptions and

[7] Higher interest rates directly reduce commodity prices by increasing the opportunity cost of holding inventories, which raises storage costs and leads to decreased storage demand. This reduction in storage demand puts downward pressure on commodity prices. Additionally, higher interest rates can indirectly dampen global demand by making borrowing more expensive, thereby reducing investment and consumption.

energy price increases. These disruptions could have downstream effects on other commodities through input cost channels (World Bank 2023).

The role of underlying shocks during the COVID-19 recession and recovery has differed from the global financial crisis. Steep global recessions that drove down prices accompanied both the pandemic (in 2020) and the global financial crisis (2008–09). Unlike the global recession of 2008–09, when commodity-specific shocks played a relatively minor role, these shocks contributed considerably to the price rebounds following the pandemic (figure SF.3.B). Geopolitical developments in major commodity-producing regions, especially the war in Ukraine in 2022, compounded previous upward pressure on commodity prices.

The differing nature of these shocks has led to distinct dynamics between global economic activity, inflation, and commodity prices across the two periods. Unlike after the global financial crisis, when productivity-driven global supply shocks sustained elevated commodity prices while suppressing inflation, the post-pandemic surge in commodity prices was primarily driven by global demand and market-specific shocks (figure SF.3.B). This led to commodity price increases in 2020-22 that were shorter-lived, but also more inflationary, with adverse implications for global economic activity.

Conclusion

The Special Focus highlights the evolving nature of common cycles in commodity prices and their underlying drivers. Over the past five decades, synchronized fluctuations in commodity markets have intensified during periods of global economic stress, such as the pandemic-induced recession and the global financial crisis. The common commodity factor is most significant for explaining the price movements of industrial commodities, reflecting their close link to global economic activity. In contrast, it plays a smaller role in explaining the price movements of agricultural crops and fertilizers, where idiosyncratic supply factors are more dominant.

The early 2020s stand out not only because of heightened comovement among commodity prices, but also because of a unique combination of global demand and supply shocks, alongside commodity-specific disruptions—including due to increased conflict in major commodity-producing regions and severe weather events. The nature of the underlying shocks driving commodity markets has varying implications for economic activity and inflation. During the early 2000s and the global financial crisis, positive global supply shocks associated with structural shifts in EMDEs supported robust output growth and elevated commodity prices, but with modest impacts on inflation. Conversely, commodity-specific shocks, such as those caused recently by conflict-driven disruptions in supply, put upward pressure on inflation and adversely affect global economic activity.

In recent months, broad-based shocks to commodity markets have substantially subsided, leading to greater dispersion in price movements across commodities. However, the risk of joint increases in commodity prices due, for example, to escalating conflicts remains significant. Major disruptions in commodity producing regions could lead to a reemergence of broad-based price increases across commodities. Such synchronized price spikes would constrain consumers' ability to shift toward lower-cost alternatives, thereby magnifying welfare losses and reducing the effectiveness of efforts to control inflation.

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Commodity prices are expected to decrease by 5 percent in 2025 and 2 percent in 2026. The projected declines are led by oil prices but tempered by price increases for natural gas and a stable outlook for metals and agricultural raw materials. The possibility of escalating conflict in the Middle East represents a substantial near-term upside risk to energy prices, with potential knock-on consequences for other commodities. However, over the forecast horizon, longer-term dynamics—including decelerating global oil demand, diversifying oil production, and ample oil supply capacity—suggest sizable downside risks to oil prices, especially if OPEC+ unwinds its latest production cuts. There are also dual risks to industrial commodity demand stemming from economic activity. On the one hand, concerted stimulus in China and above-trend growth in the United States could push commodity prices higher. On the other, weaker-than-anticipated global industrial activity could dampen them.

Following several overlapping global shocks in the early 2020s, which drove parallel swings in commodity prices, commodity markets appear to be departing from a period of tight synchronization. A Special Focus analyzes commodity price synchronization over time and considers the relative importance across commodity cycles of a wide range of demand and supply shocks, including global demand shocks and shocks specific to different commodity markets. It concludes that, while supply shocks were the dominant commodity price driver in the early 2000s and around the global financial crisis, post-pandemic price movements have been more substantially shaped by commodity-specific shocks, such as those related to conflicts.

The World Bank's Commodity Markets Outlook is published twice a year, in April and October. The report provides detailed market analysis for major commodity groups, including energy, metals, agriculture, precious metals, and fertilizers. Price forecasts for 46 commodities are presented together with historical price data. Commodity price data updates are published separately at the beginning of each month.

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