

Commodity Markets Outlook

Lower Prices, Little Relief



WORLD BANK GROUP
Development Economics | Prospects Group

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Guiding Questions

How have commodity prices evolved since the last CMO in October?

Recent developments and price prospects for each major commodity group

1 What have been the key developments in the commodity markets?

2 What are the prospects for commodity prices?

3 What are the risks for commodity prices?

4 What are the implications for emerging markets and developing countries (EMDEs)?

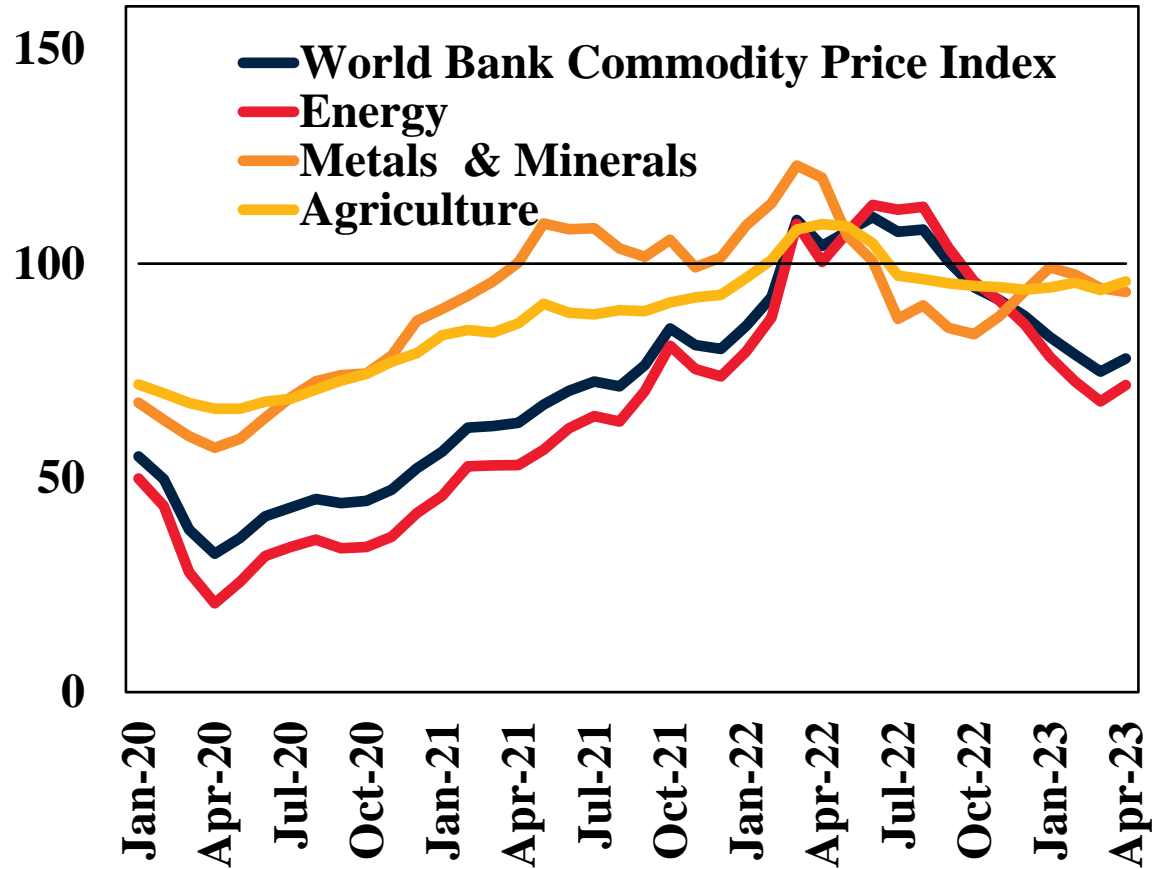
Commodity Markets

How have commodity prices evolved since the last CMO in October?

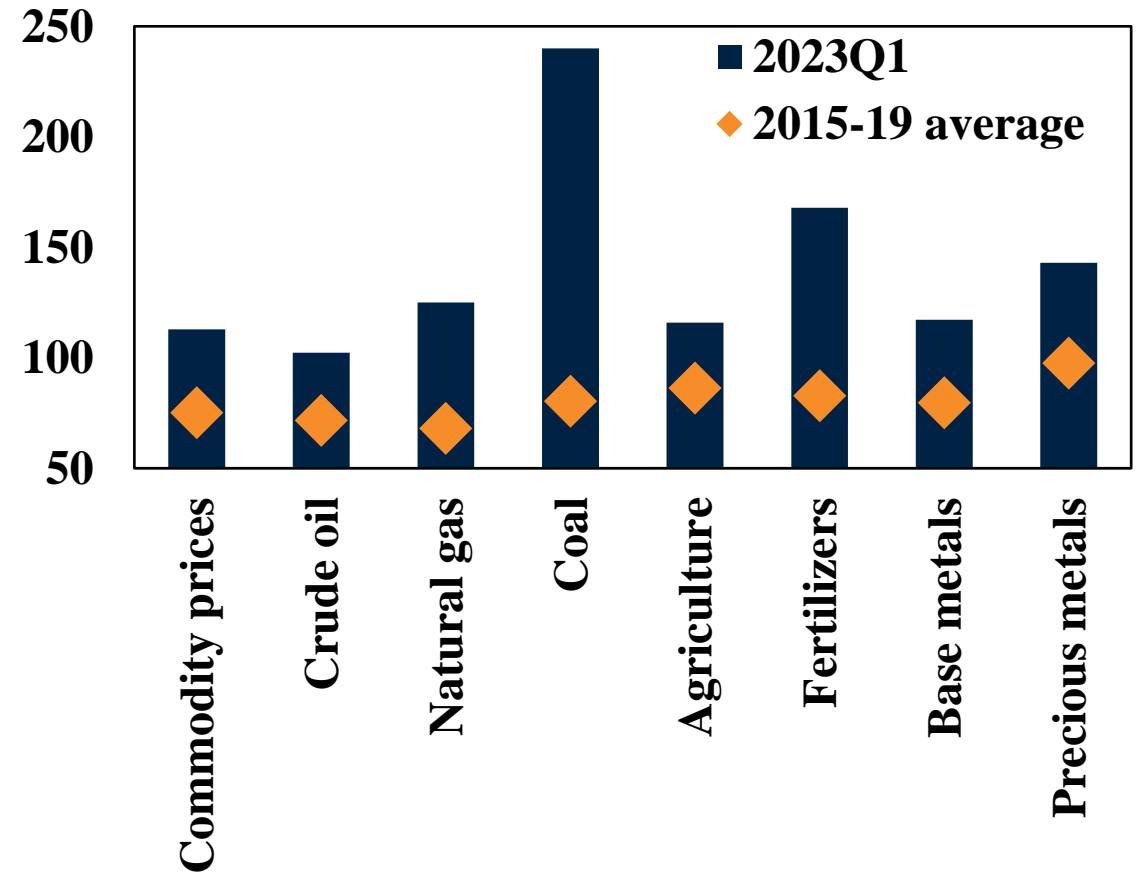
Commodity prices declined from 2022 peaks

But remain significantly above pre-pandemic levels

Commodity prices
(Index, 100 = 2022)



Commodity price indexes
(Index, 100 = 2010)



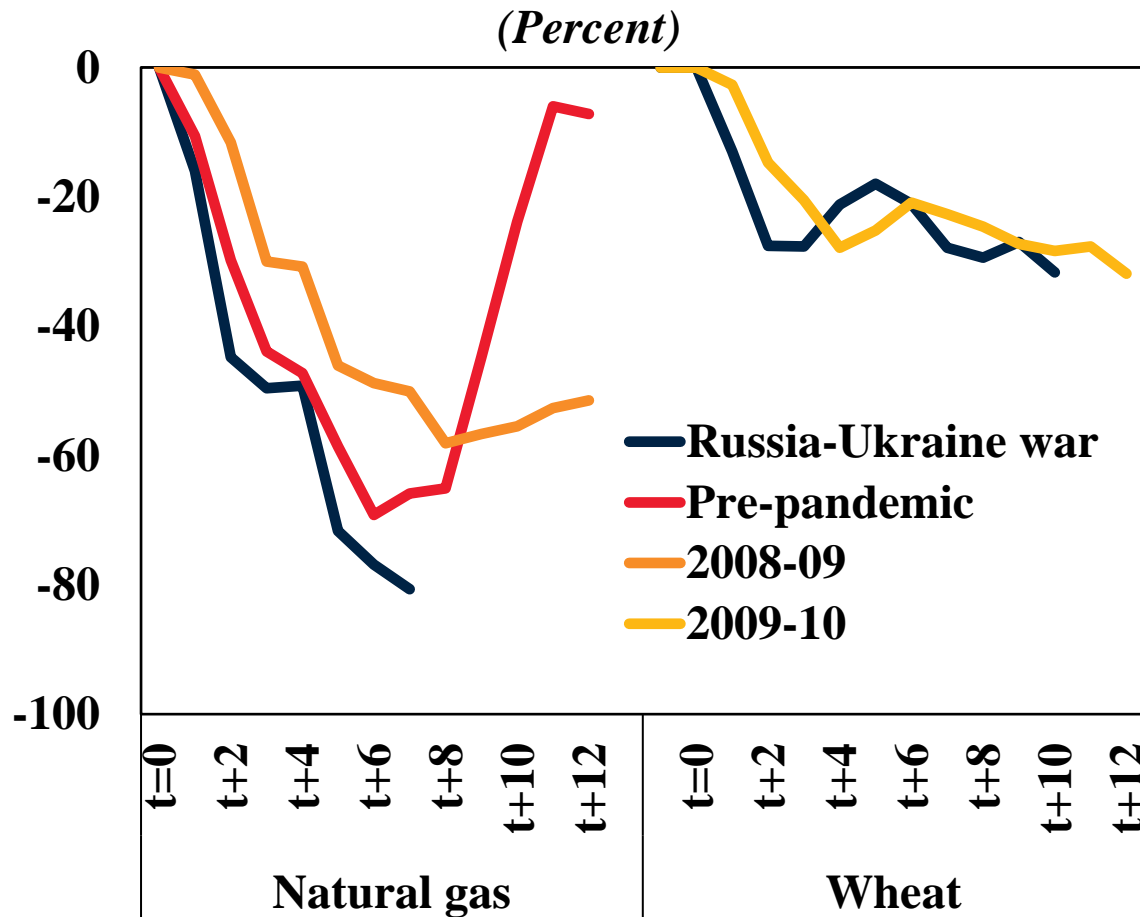
Sources: World Bank.

Note: Monthly data. Last observation is April 2023.

The spike has now unwound

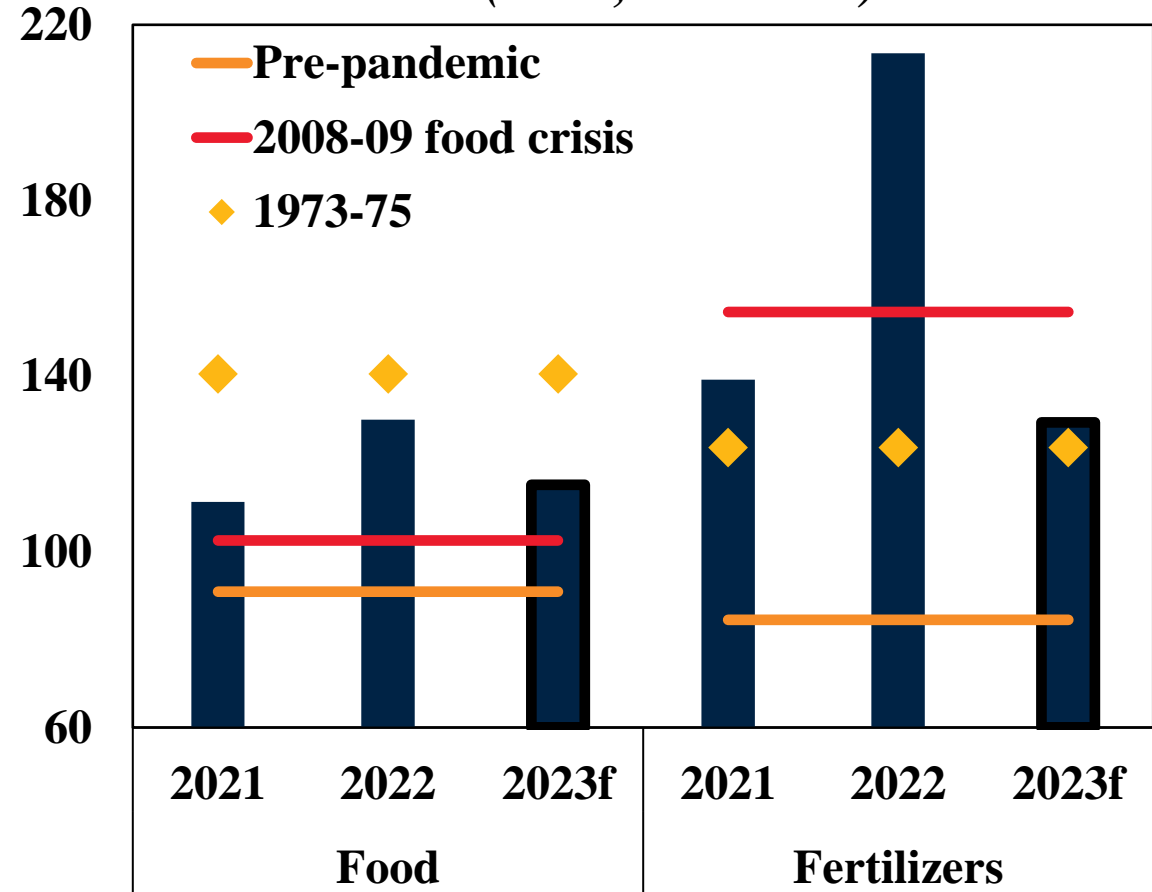
Though inflation-adjusted food and fertilizer prices still near record levels

Commodity price drops from crises peaks



Real food and fertilizer prices

(Index, 100 = 2010)

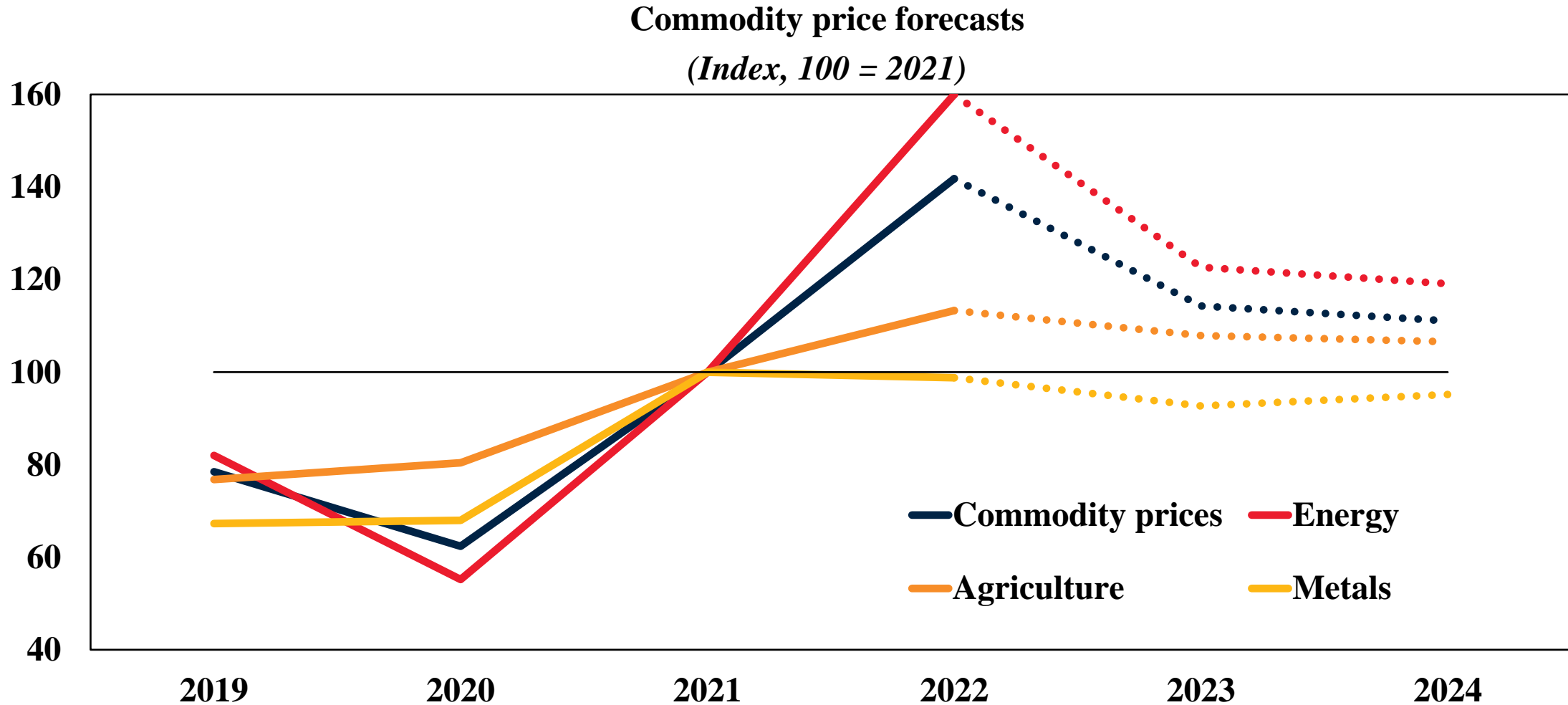


Sources: World Bank.

Left Panel. Natural gas and wheat showed the steepest declines from the recent 2022 peaks compared to 69 other key commodities examined. Crisis peaks are denoted t=0. For natural gas, t=0 for Russia-Ukraine war = August 2022; Pre-pandemic = Nov 2019; 2008-09 = November 2008. For wheat: Russia-Ukraine conflict = May 2022; 2009-10 = May 2009. Wheat drop starting in April 1996 not shown. Right Panel. Pre-pandemic = 2015-19 average; 2008-09 food crisis = 2008-09 average. 1973-75 = 1973-75 average. Real price indexes for 2023 calculated assuming an annual change for U.S. CPI deflator of 4 percent.

Prices to drop over 20 percent in 2023 and flatten in 2024

Metals flat since 2022, energy's decline continues

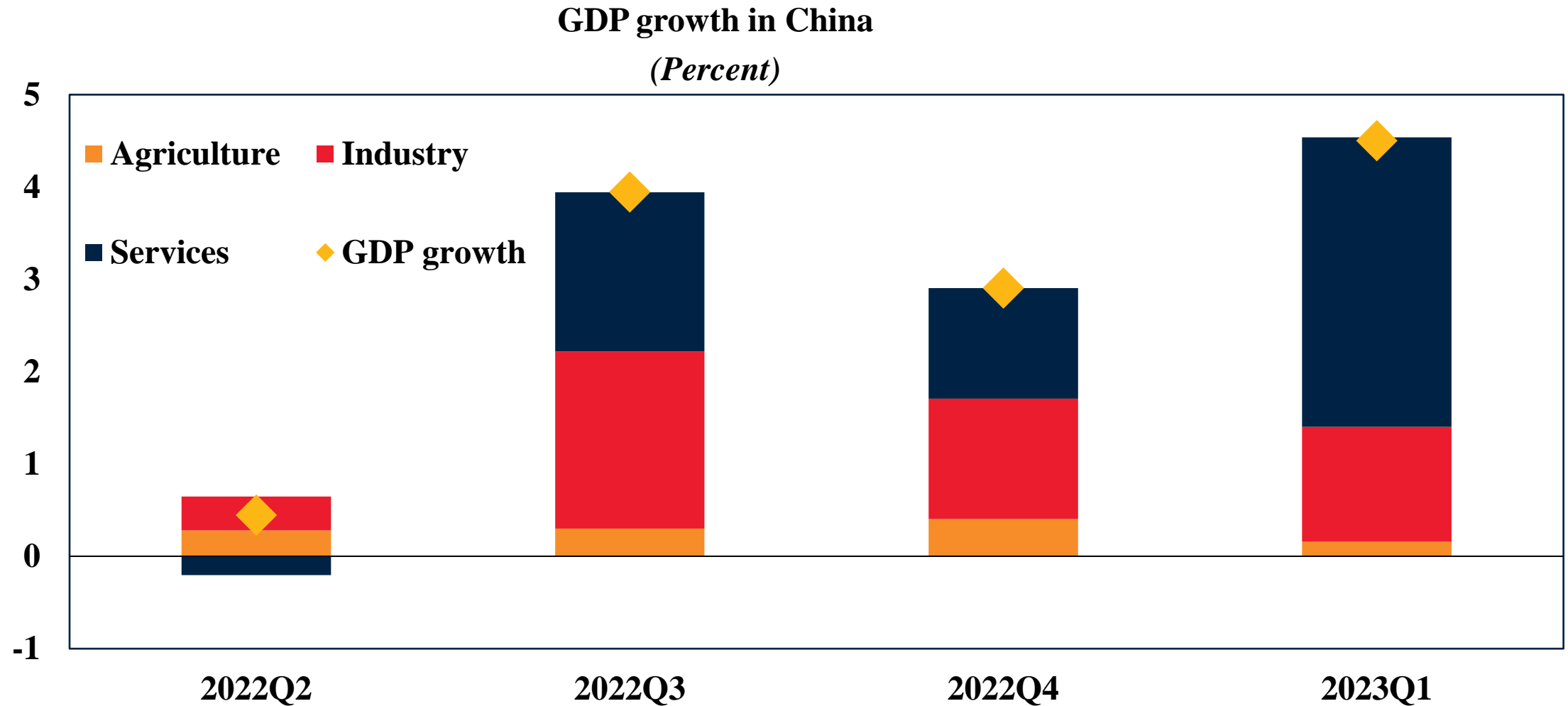


Source: World Bank.

Note: Commodity prices line refers to the World Bank commodity price index, excluding precious metals. Dashed lines indicate forecasts.

Risks to the price forecasts

Direction of China's demand



Sources: National Bureau of Statistics of China

Note: Year-on-year real GDP growth and industry contributions. Last observation is 2023Q1.

Energy

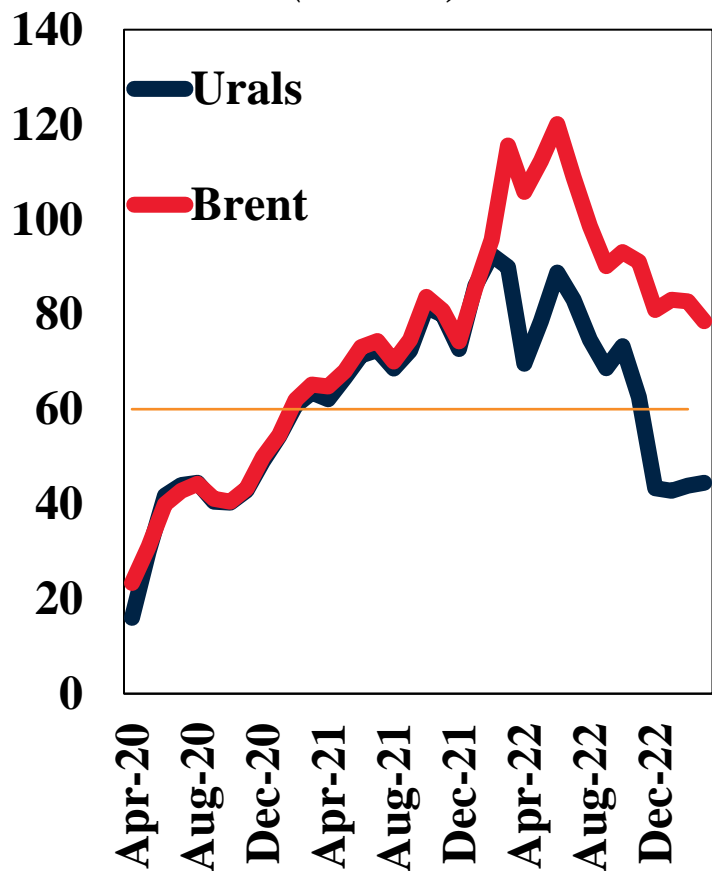
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What have been the key developments in the energy markets?

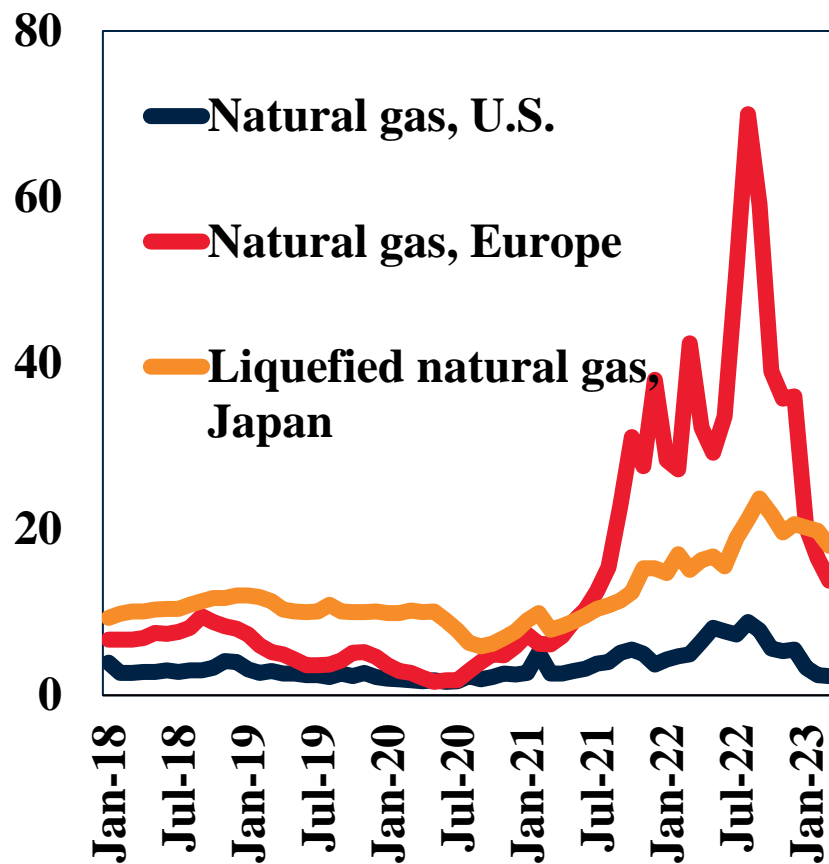
Energy prices

Falling prices among stable supply from Russia, resilient trade, and recovering demand

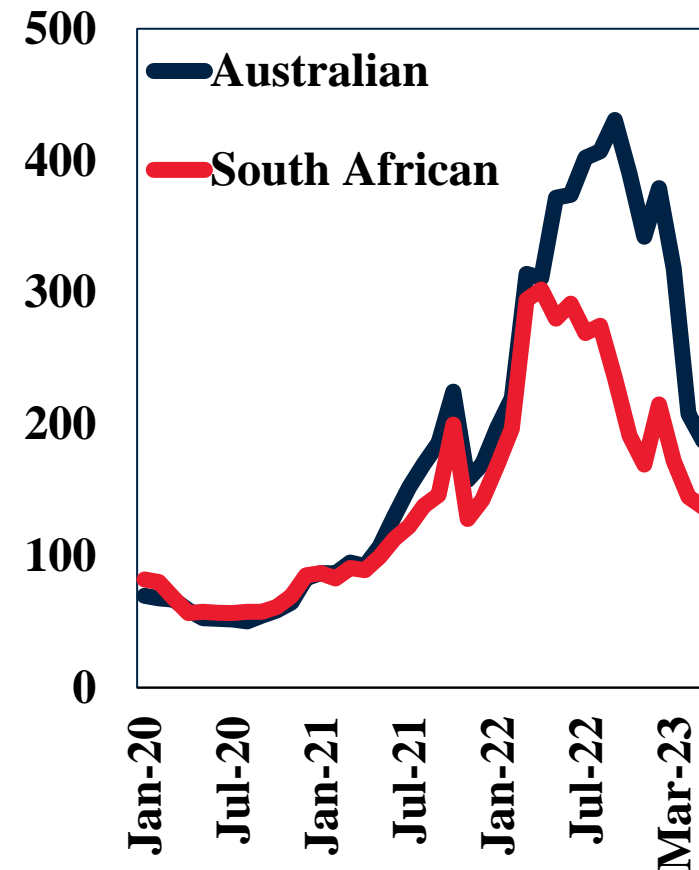
Brent and Urals prices
(US\$/bbl)



Natural gas prices
(US\$/mmbtu)



Coal prices
(US\$/mt)

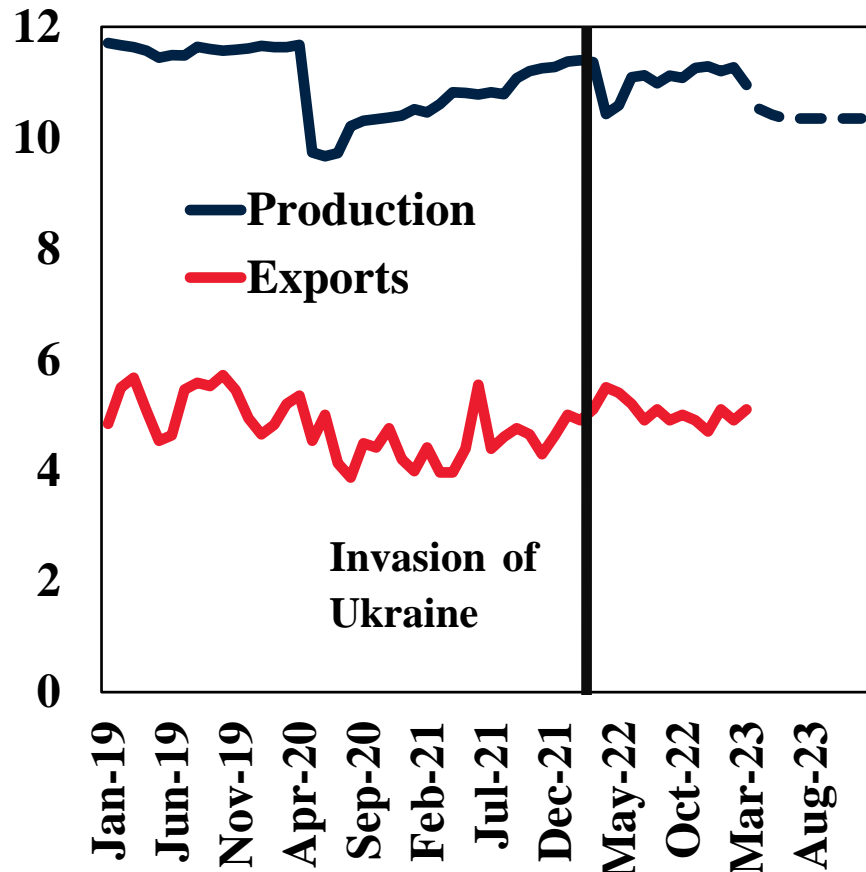


Sources: Eurostat; Energy Information Administration; International Energy Association; World Bank.
Note. Monthly data, last observation is March 2023.

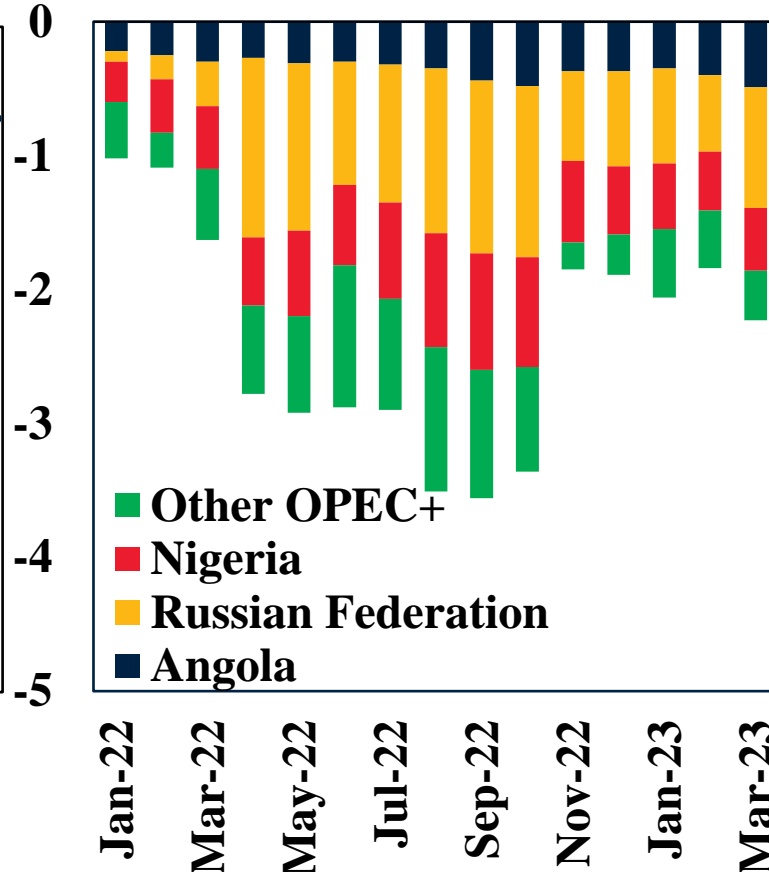
Oil production

Some stability while further adjustments await?

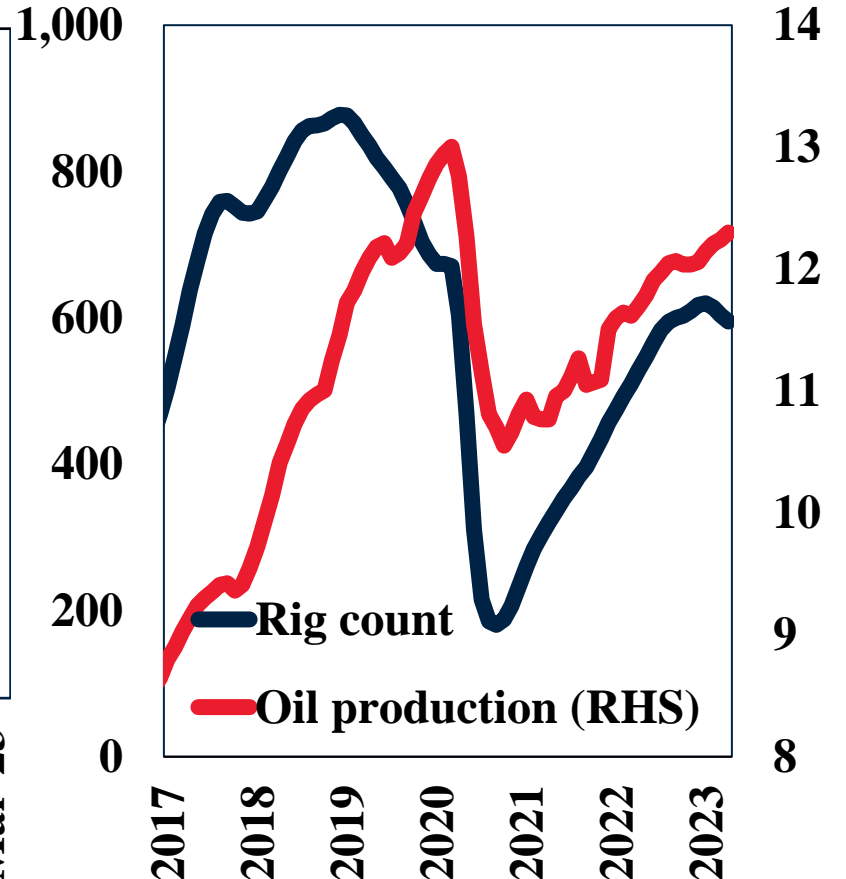
Russian oil production and export
(Million barrels per day, Mb/d)



Shortfall from OPEC+ quota
(Mb/d)



U.S. rig count and production
(Number, Mb/d)



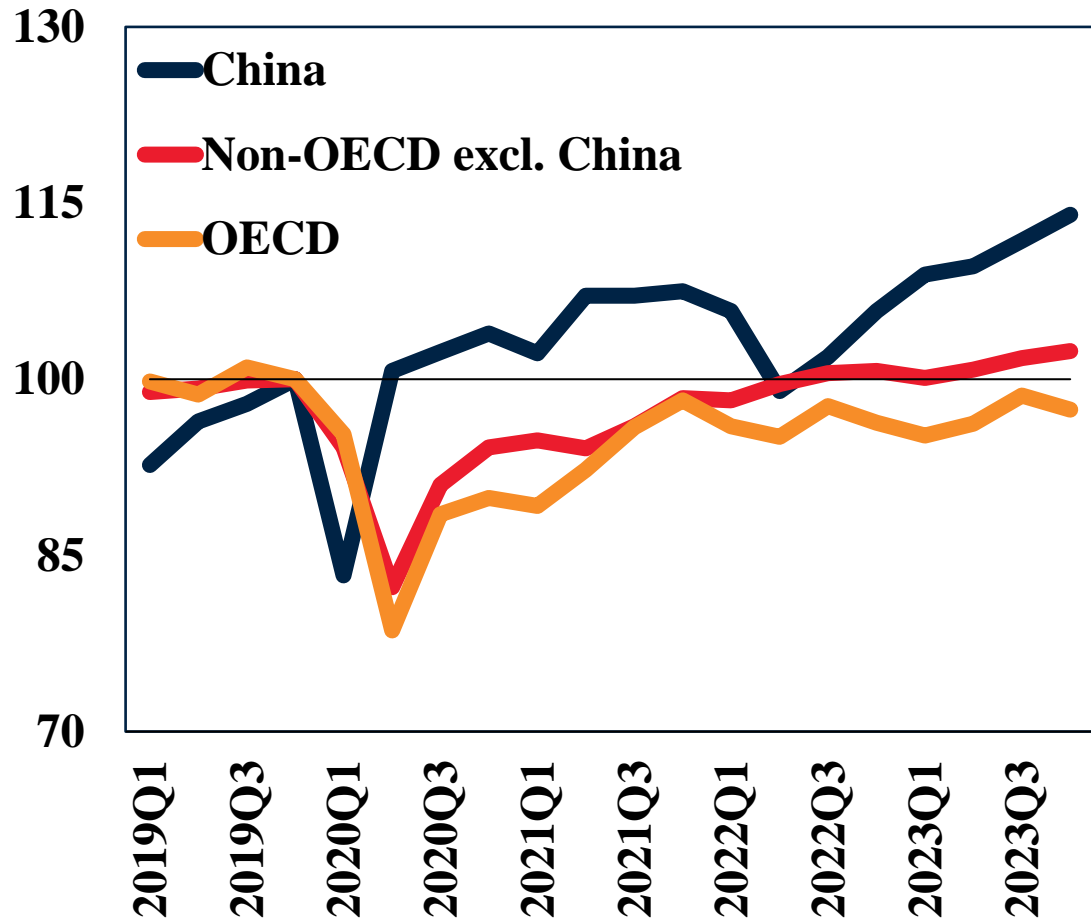
Sources: Baker Hughes; International Energy Agency; U.S. Energy Information Administration; World Bank.

Left Panel: Data on exports from 2016-2021 are from JODI database. Data for 2022 on crude oil exports are from IEA's Oil Market Report, April 2023 edition. Monthly production data for 2023 are IEA forecasts. Center Panel: Data based on the IEA Oil Market Report March 2023. Target refers to the maximum production level allowed under the OPEC cartel's agreement. Right Panel: 3-month rolling average of rig count. Three-month rolling averages. Latest data as of April 6, 2023.

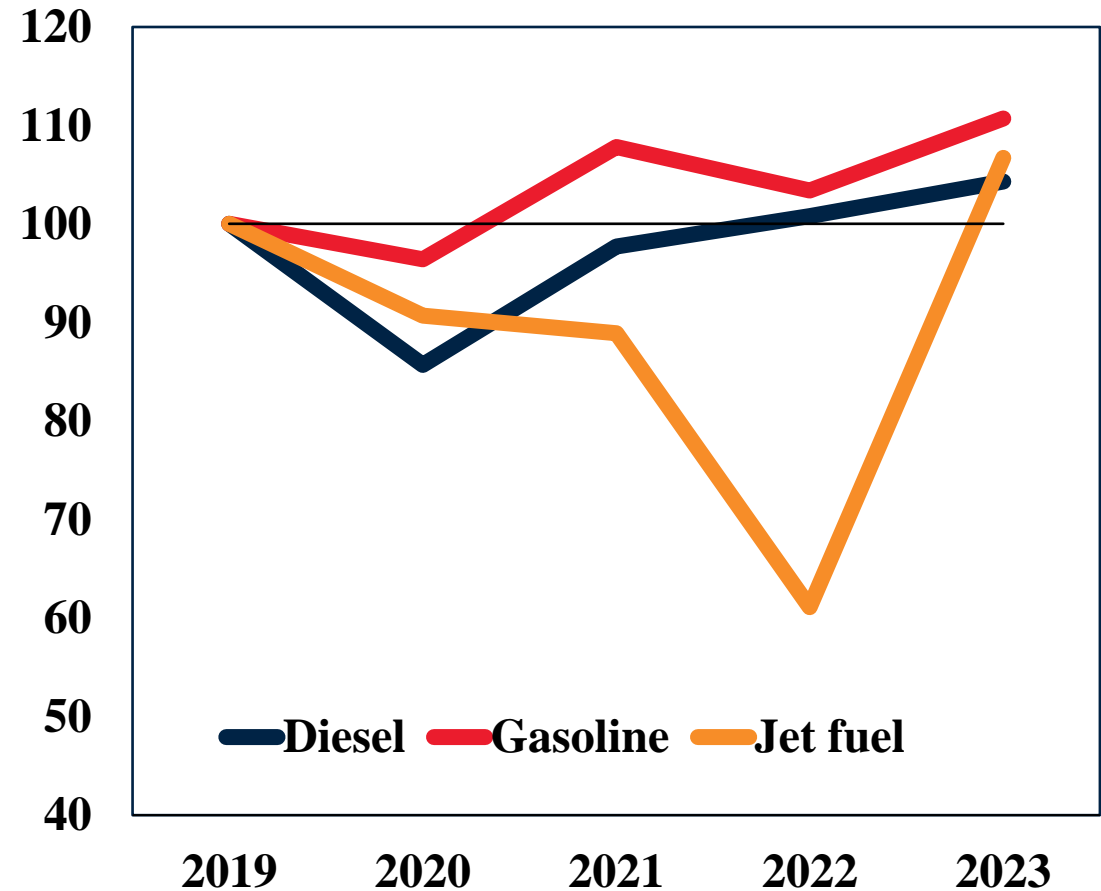
Oil demand

Increasing demand among economic uncertainty and a consumption-driven recovery

Oil demand
(Index, 2019Q1 = 100)



Consumption of oil products in China
(Index, 2019 = 100)



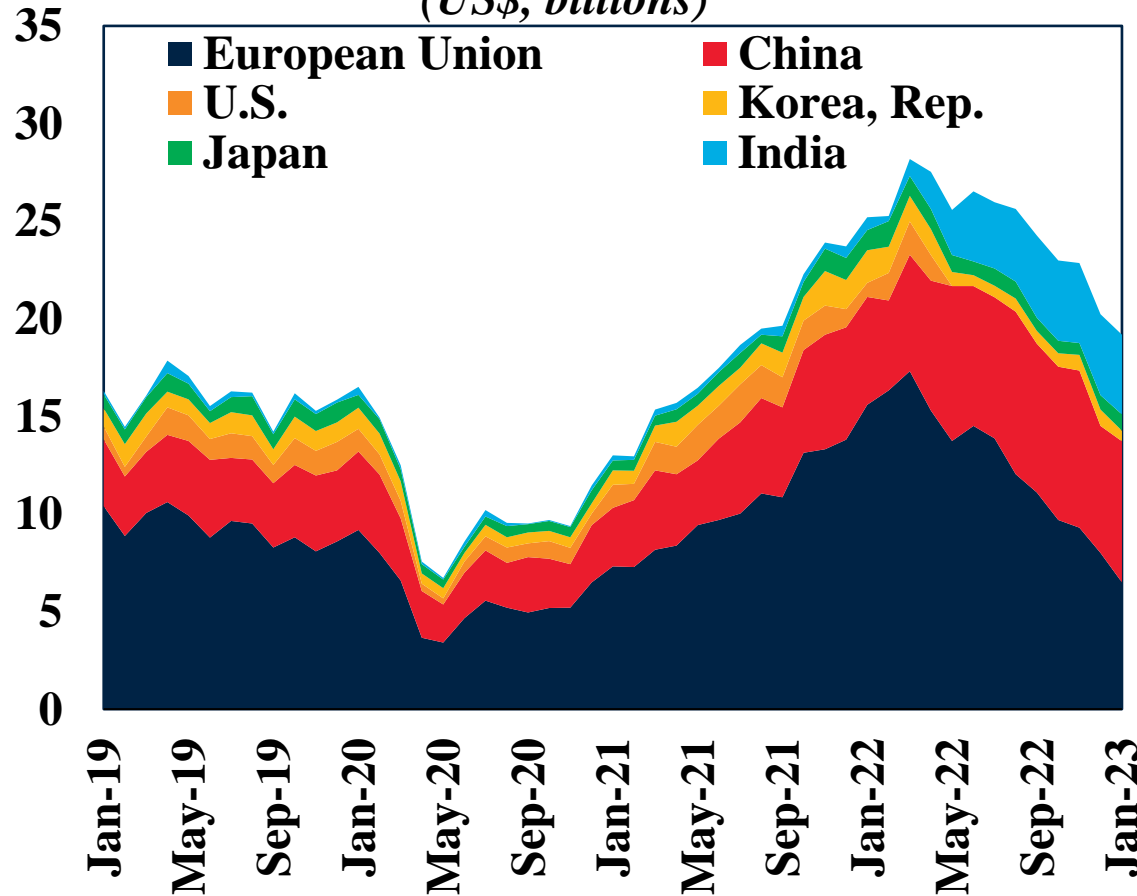
Sources: International Energy Agency; World Bank.
Note: Annual and quarterly data for 2023 are IEA forecasts.

Oil trade

Revenue rollercoaster amid a reconfiguring trade network

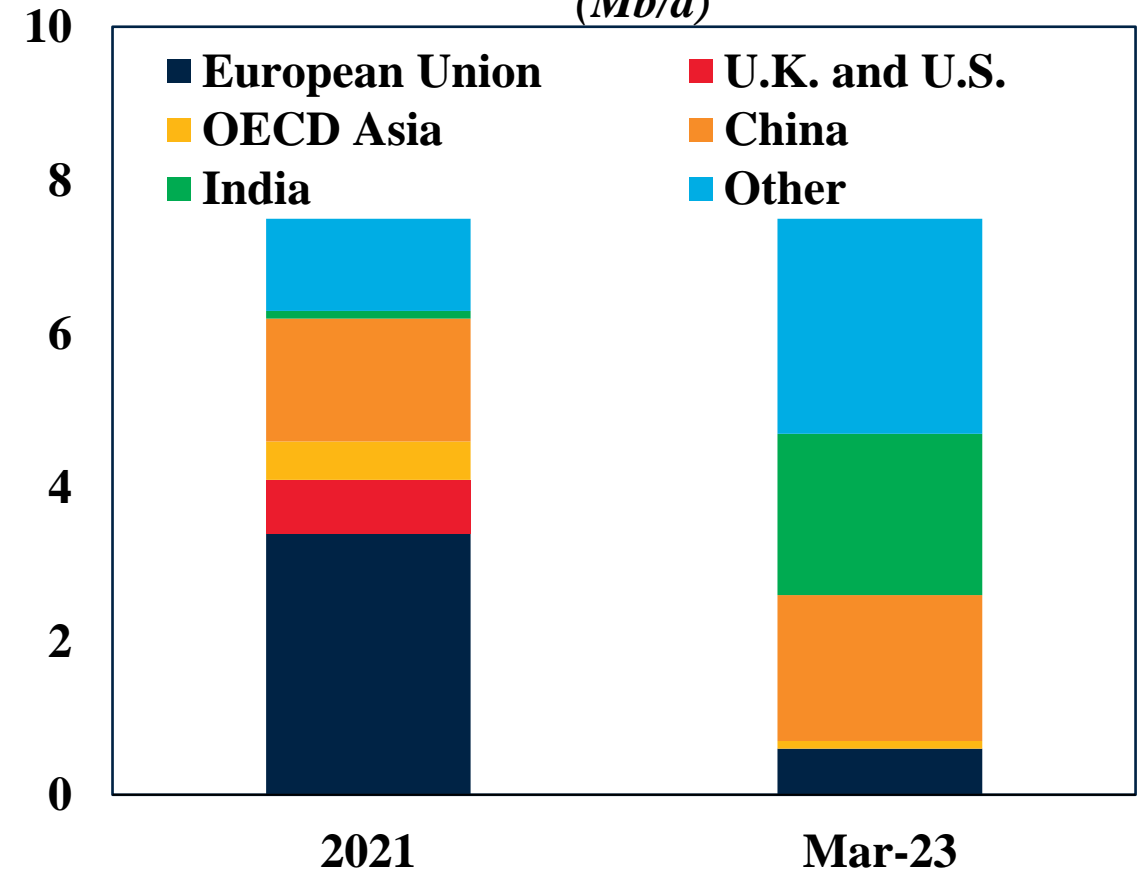
Destination of Russia's mineral fuels exports

(US\$, billions)



Oil exports from Russia, by destination

(Mb/d)



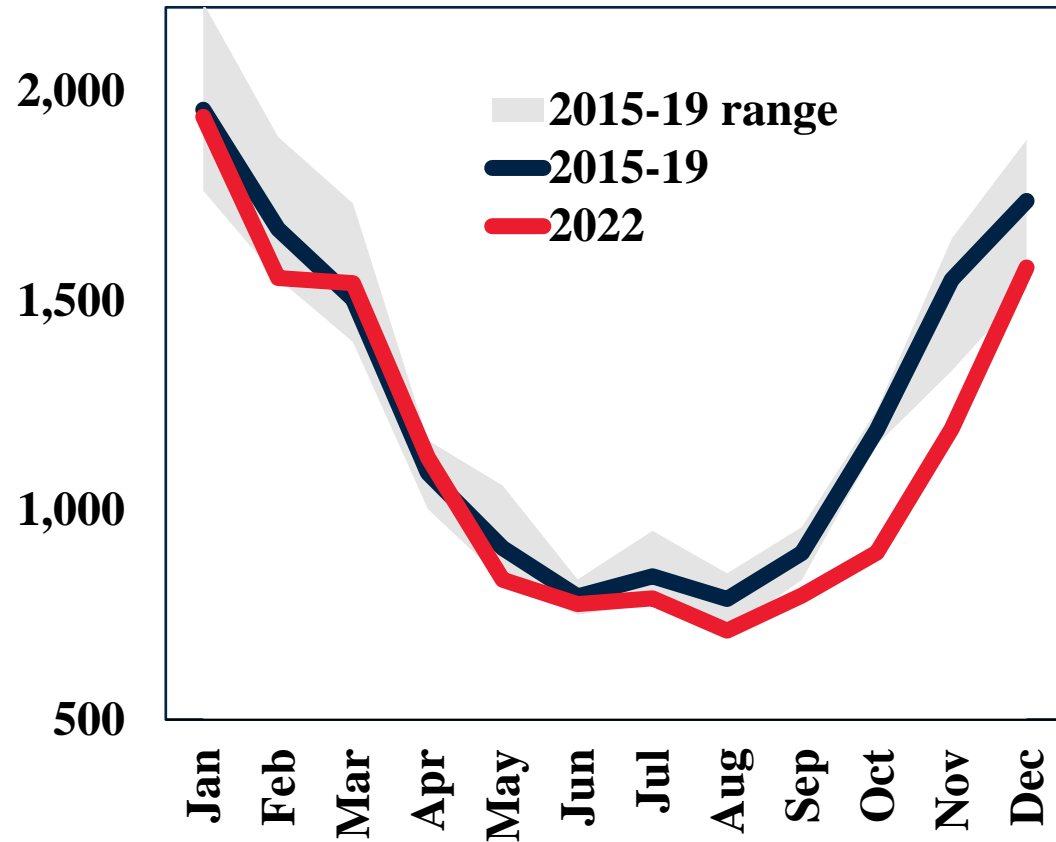
Sources: Eurostat; Haver Analytics; Bruegel (database); World Bank. .

Left Panel: Monthly series. Area represents share in Russia's total export of mineral fuels. Last observation is January 2023. Right Panel: Area represents share of EU imports from each individual country (or group of countries as indicated within "Other countries") averaged over the identified period. "Other countries" include major gas exporters to Europe not identified in the chart, e.g., Qatar.

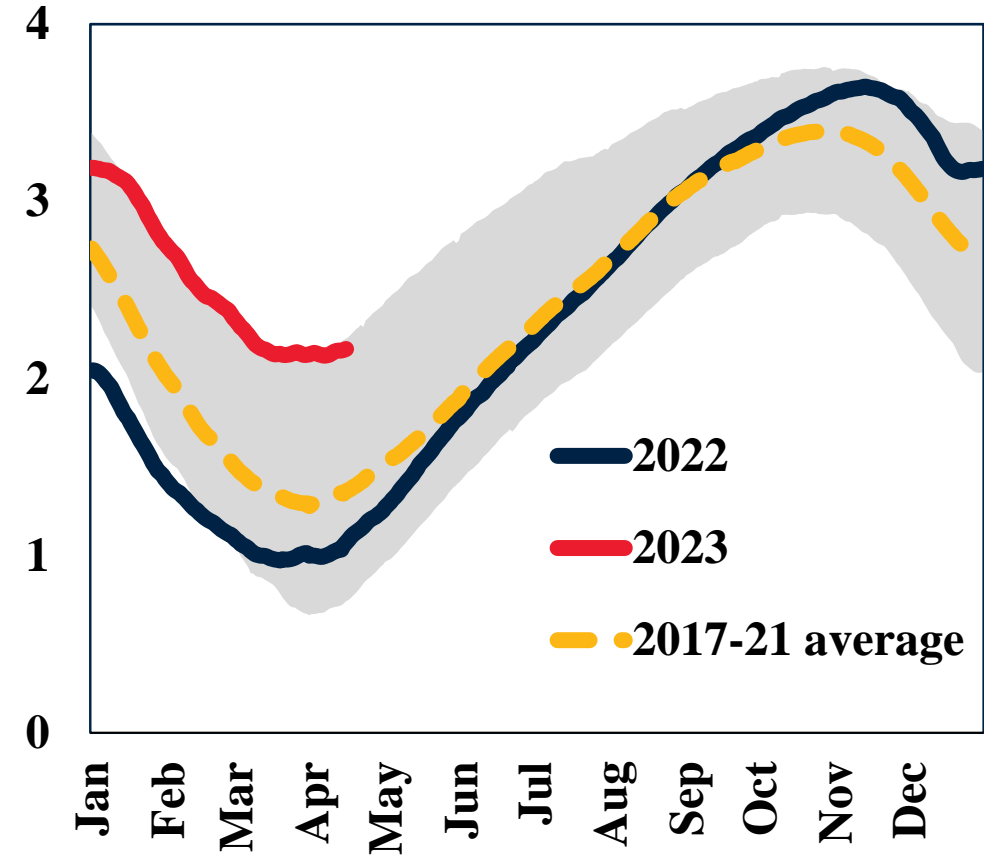
Natural gas consumption and storage

Decreasing consumption and increasing supply led to record storage levels

European natural gas consumption
(Petajoules)



European natural gas inventories since 2017
(Trillion cubic feet)



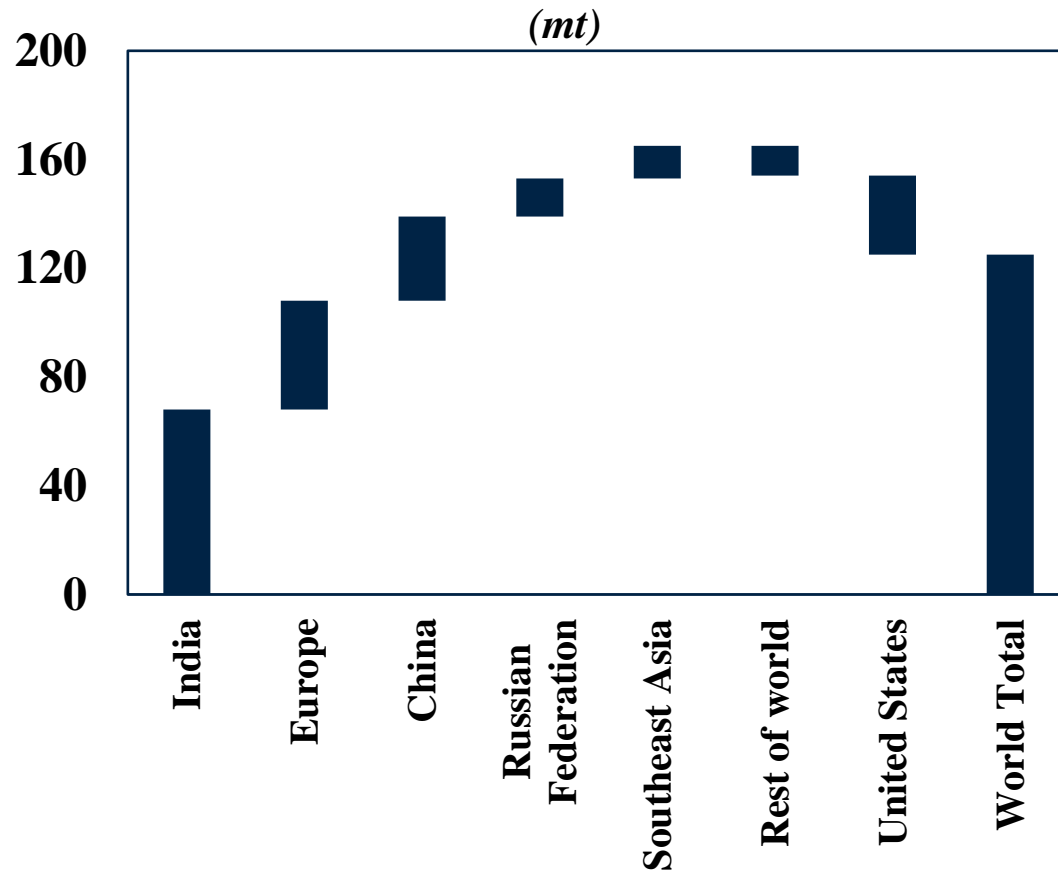
Sources: Eurostat; Gas Infrastructure Europe (AGSI+); World Bank.

Left Panel: Monthly data. Last observation is December 2022. Right Panel: Includes 20 European Union countries and the United Kingdom. Last observation is April 15, 2023.

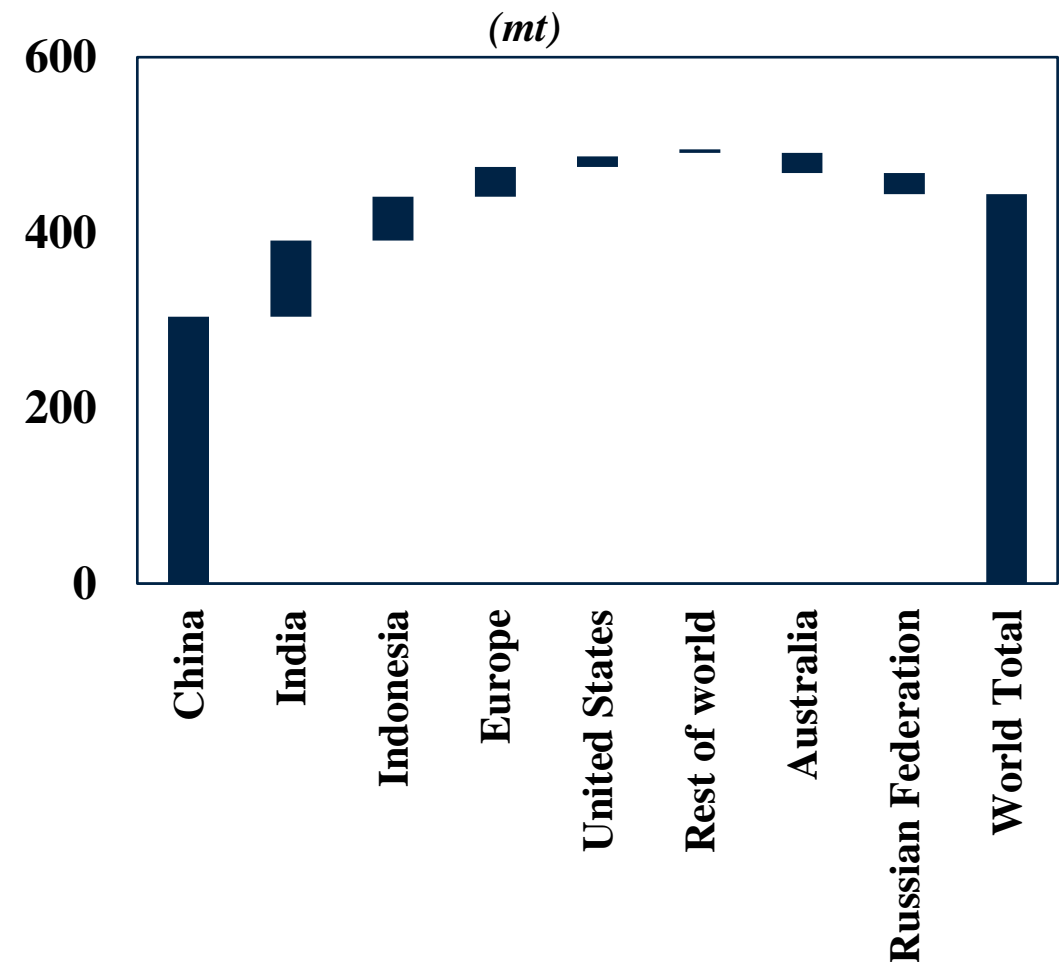
Coal gas consumption and production

Record production levels meeting increasing consumption

Changes in global coal consumption



Changes in global coal production



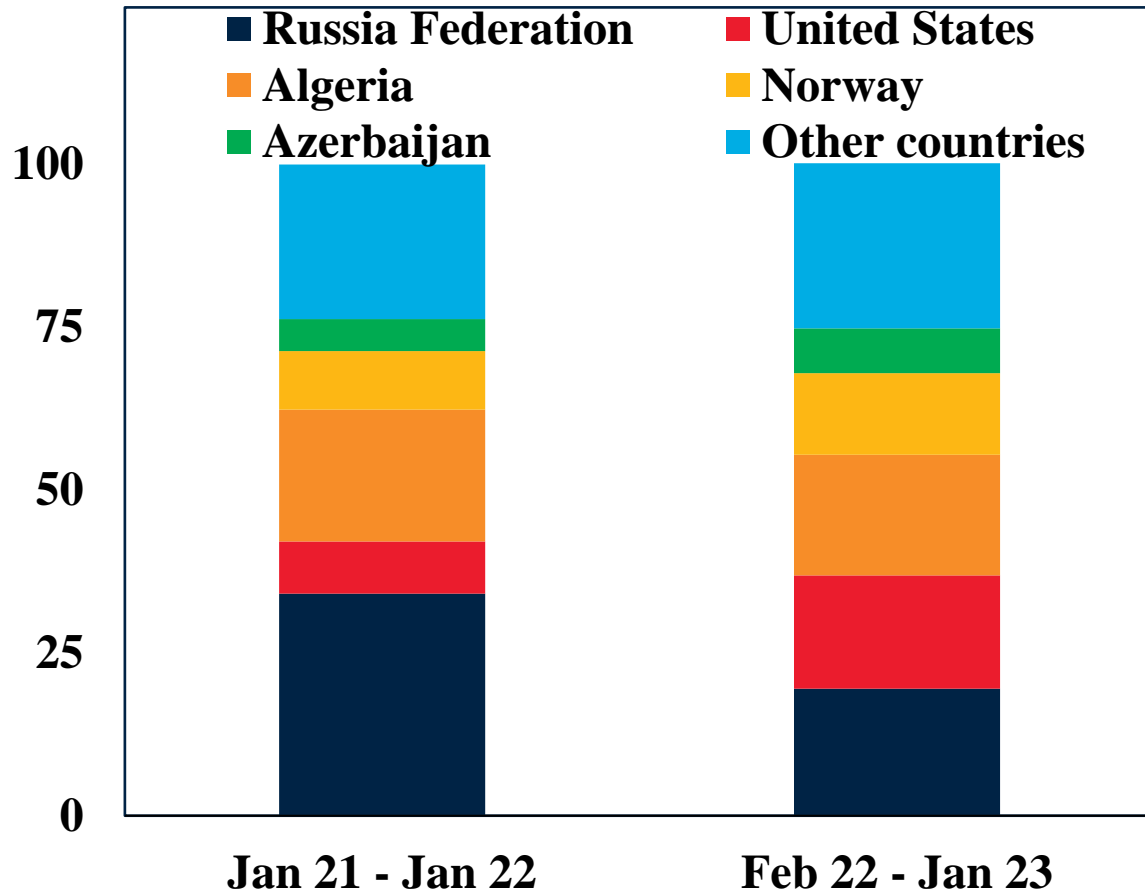
Sources: International Energy Agency, World Bank.

Note: Monthly data for coal. Last observation is March 2023 (prices). Last observation is 2022 (additional production).

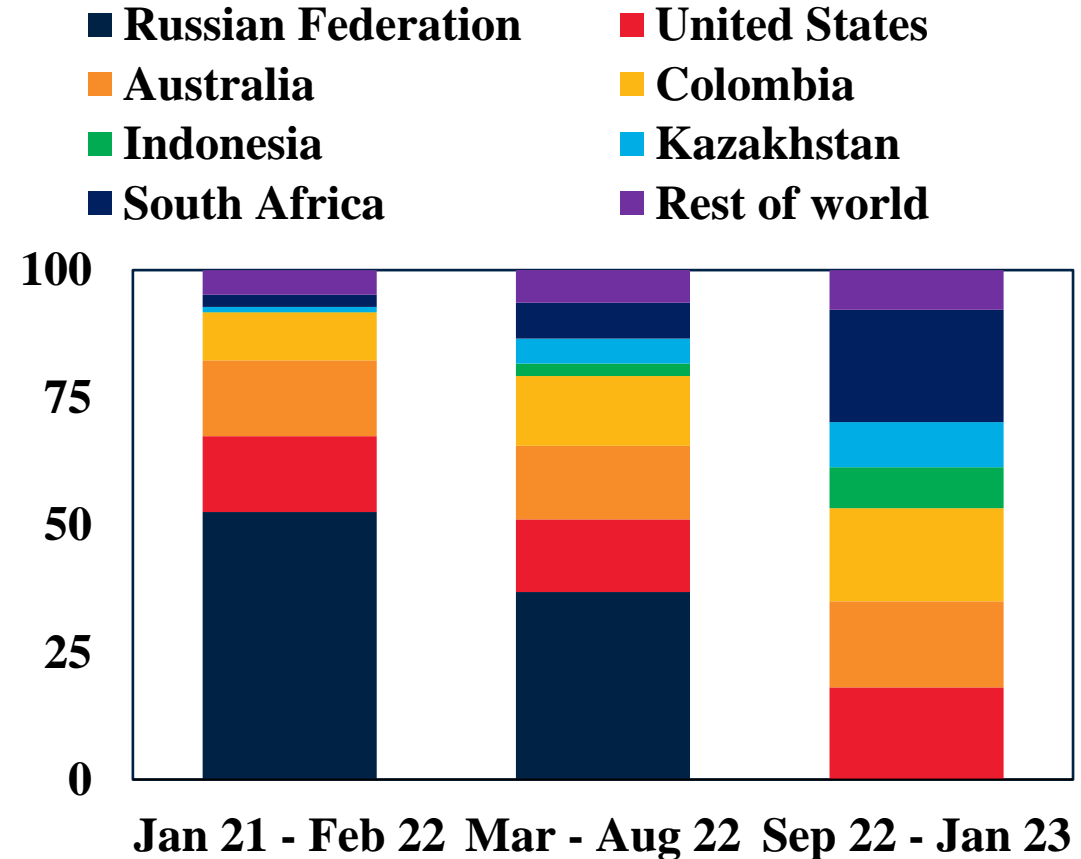
Coal and natural gas trade

Russian exports redirected, supplies to Europe diversify

Share of EU natural gas imports, by country
(percent)



Share of EU coal imports, by country
(percent)



Sources: Energy Information Administration; Eurostat; World Bank.

Left Panel: Shares of EU natural gas imports. "Other countries" include gas exporters to Europe not identified in the chart, for example Qatar. Right Panel: Shares of EU coal imports by country. January 2021-February 2022 is the period before the Russian invasion of Ukraine; March-August 2022 is the period between the start of the invasion and the effective date of embargoes on Russian export; September 2022 onwards represents the period when sanctions were in place.

Energy

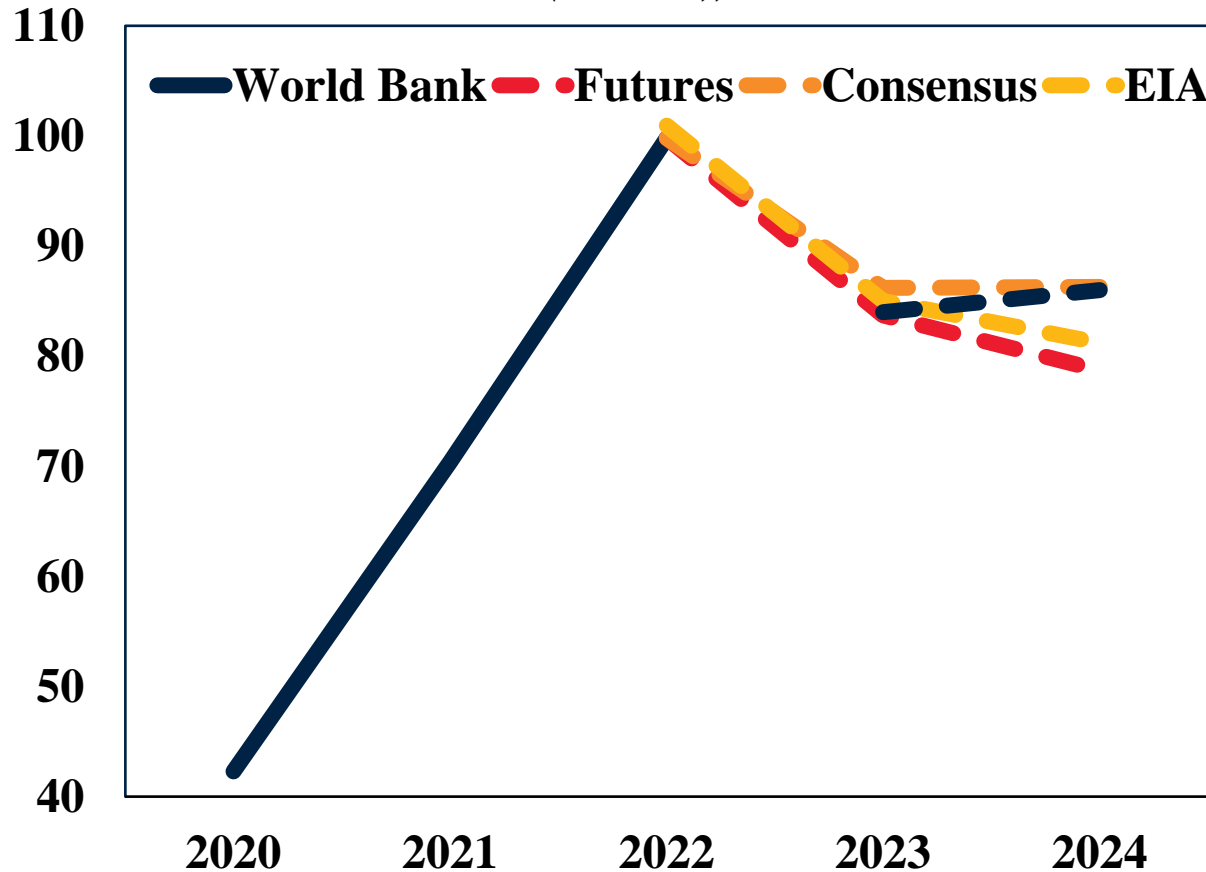
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What are the prospects for energy prices?

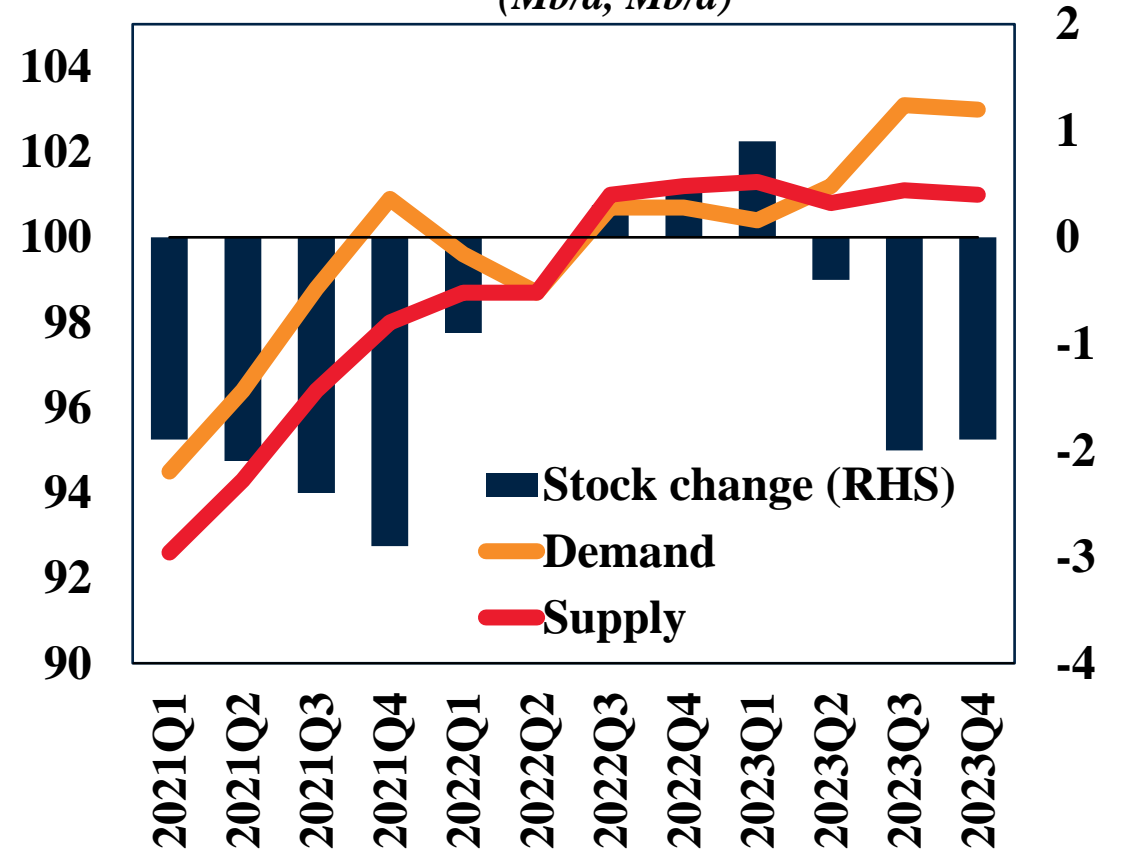
Price and market oil prospects

Higher oil demand in Asia moderating the decrease in oil price

Oil price forecast
(US\$/bbl)



Changes in oil demand, supply, and inventory
(Mb/d, Mb/d)



Sources: Bloomberg; Consensus Economics; Energy Information Administration; International Energy Agency; World Bank.
Note: Data for 2023-24 are projections.

Price and market **Oil** prospects

Record levels of consumption amid decreasing Russian output and surging U.S. production

Oil

- Consumption rising by 2 percent in 2023 to a new all-time high
- China is responsible for about half of the additional demand in 2023, the rest occurring mainly in Asia
- Sluggish industrial activity and low-carbon transition moderating demand, especially in Europe and the United States
- United States responsible for most of the additional production in 2023
- Russian production expected to decline
- No marked change in OPEC+ production
- Market expected to tighten in the back-end of 2023

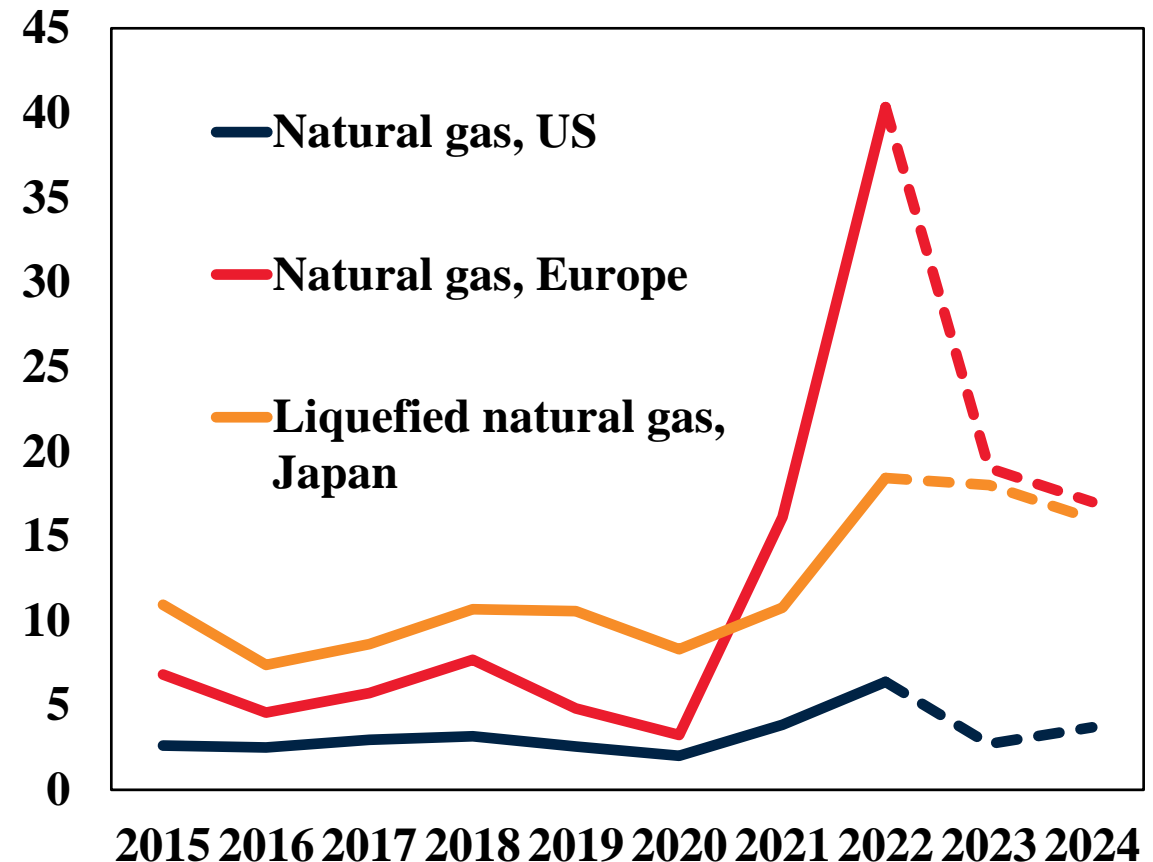
Price and market natural gas prospects

Price premium in Europe drawing LNG supplies amid low U.S. prices

Natural gas

- Increasing gap between regional benchmarks
- Decrease in global demand and supply
- Russian production continues to decrease
- Decreasing consumption in the EU and USA power sector (renewables)
- LNG continuing to flow to the EU
- Very strong rise in EU import capacity, less so for U.S. export capacity (by 2024)

Natural gas price prospects
(US\$/mmbtu)



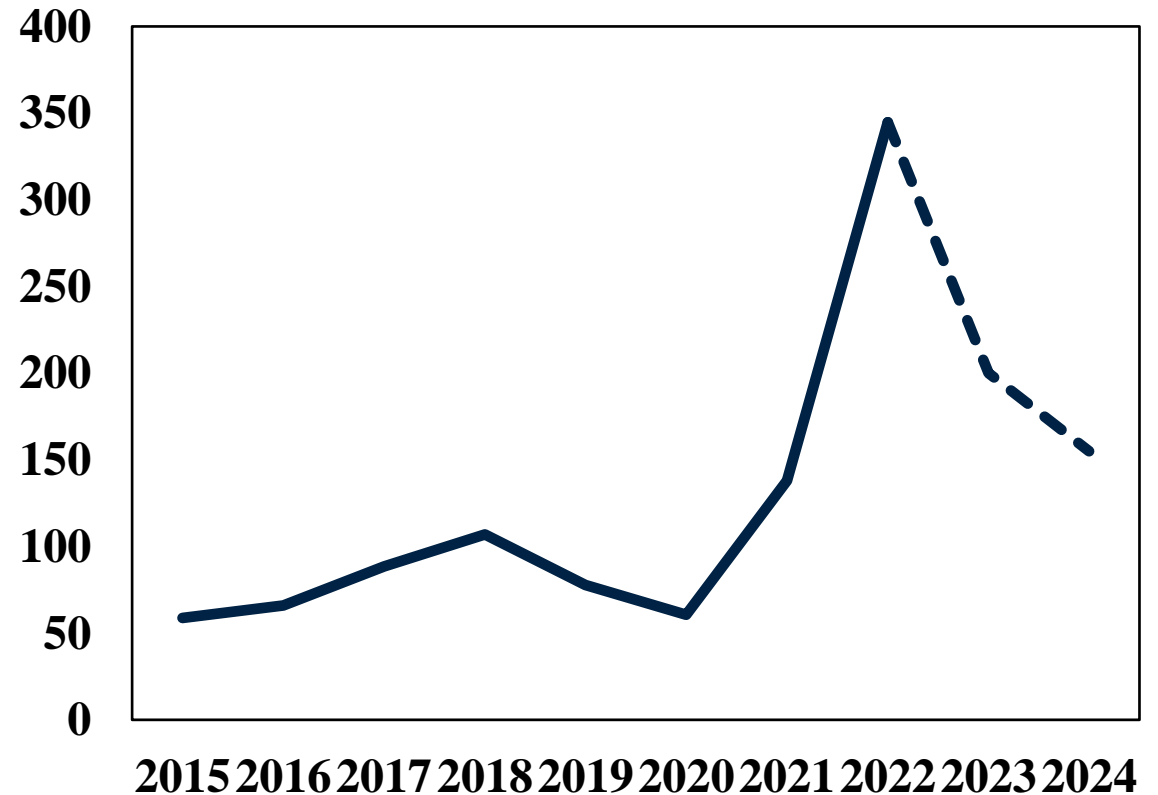
Price and market coal prospects

Lower prices amid sustained demand but increasing production

Coal

- Global demand plateauing
- Price falling but still high
- Shrinking EU demand (high carbon and lower gas prices)
- Strong demand from Chinese industry and Indian power
- Russian coal flowing to China and India
- Increasing production (except Russia) and exports (e.g., Indonesia, USA, and Australia)
- South African power and logistic problems persist

Coal price prospects
(US\$/mt)



Energy

3

What are the risks for energy prices?

Price and market oil risks

Supply restrictions amid economic uncertainty affecting demand

Oil

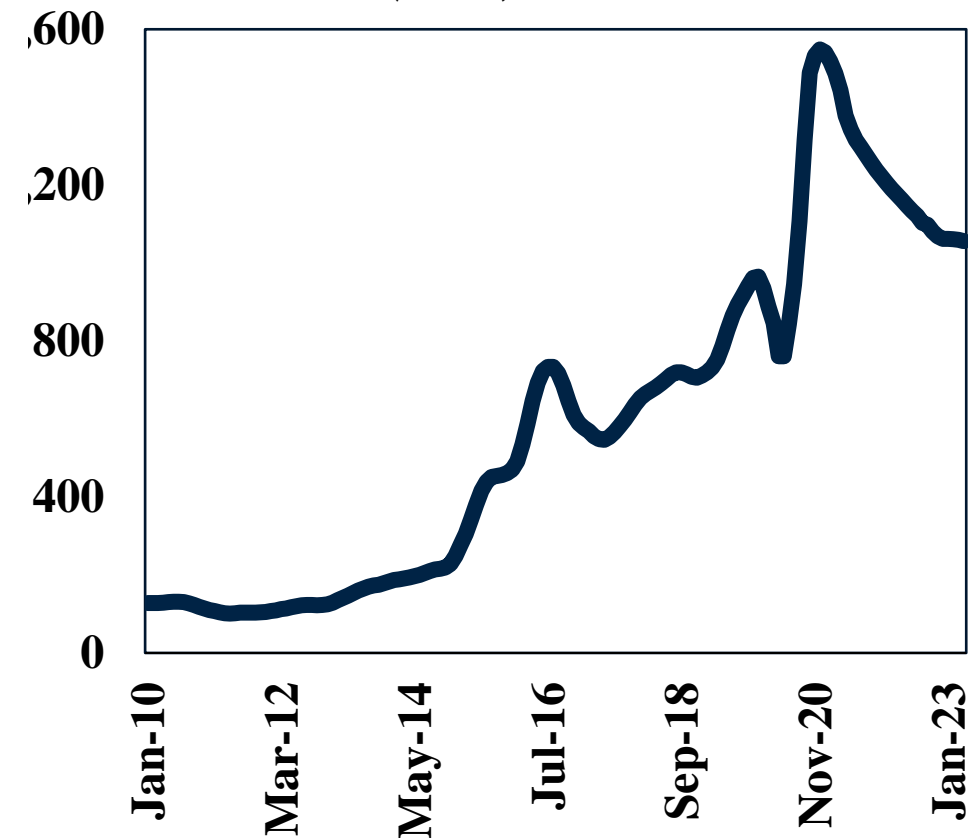
Upside risks

- China's recovery driven by industrial sector
- Low production (low investment or productivity)
- Interventionistic OPEC+
- Reduction in Russian exports

Downside risks

- Slowdown in economic activity
- Increasing inventory for crude and oil products

U.S. oil well productivity
(*bb/d*)



Price and market natural gas risks

Increasing LNG demand amid overproduction and long-term fuel substitution

Natural gas

Upside risks

- Increasing Chinese LNG imports
- Further reduction in Russian pipes export to Europe

Downside risks

- Unresponsive U.S. natural gas production
- Power generators switching to coal
- Strong and sustained demand destruction (renewables and energy efficiency)

Russia's share of EU gas pipeline imports
(percent)



Price and market coal risks

Supply and demand upside factors amid long-term coal decline

Coal

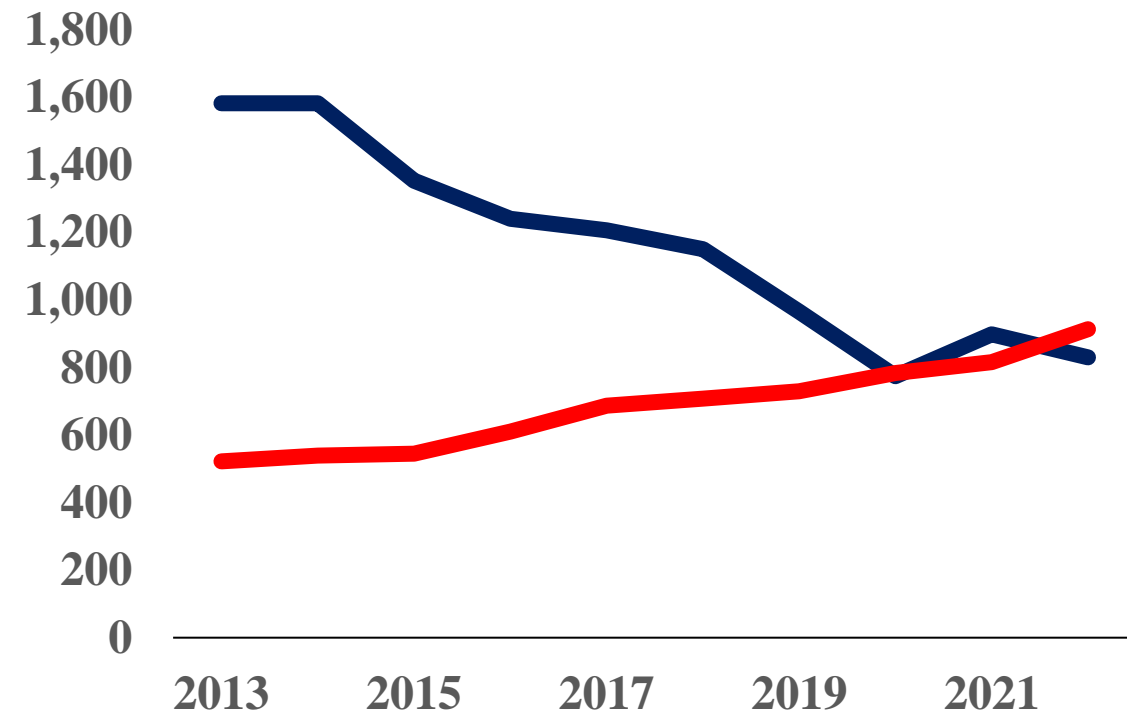
Upside risks

- China's recovery driven by industrial sector
- Supply bottlenecks (logistics)
- Limited availability of nuclear and hydro
- High natural gas prices

Downside risks

- Peak coal
- Policy drivers (local pollution and renewables)

U.S. power generation
(Million Megawatt-hours)



Energy

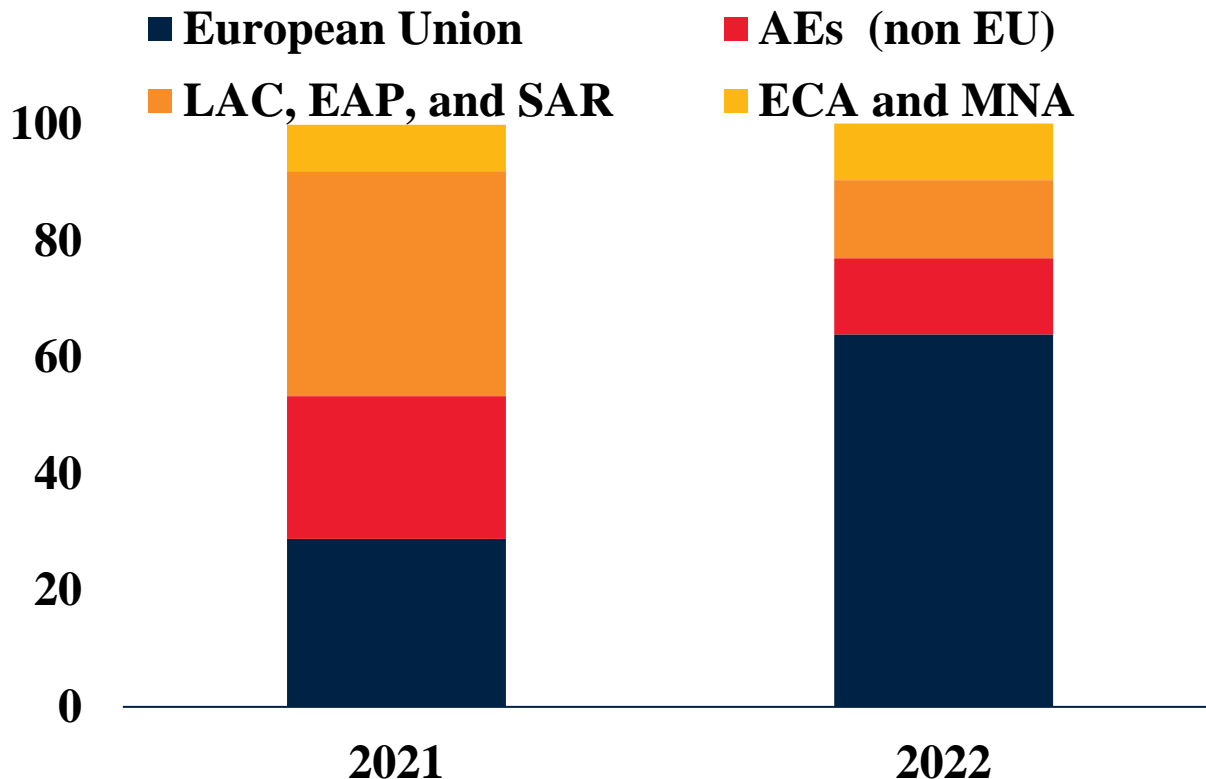
4

What are the implications for emerging markets and developing countries (EMDEs)?

Energy market implications for EMDEs

High prices and reduced access to international trade

Destination of U.S. LNG exports
(Percent)



- Relatively high international energy prices
- Affordability and distributional impacts on households
- Limited fiscal space for EMDE governments
- Energy subsidies reform implications
- In worst cases, impact on access to energy (e.g. Bangladesh and Pakistan)
- Further economic impact from energy for exporting firms

Agriculture

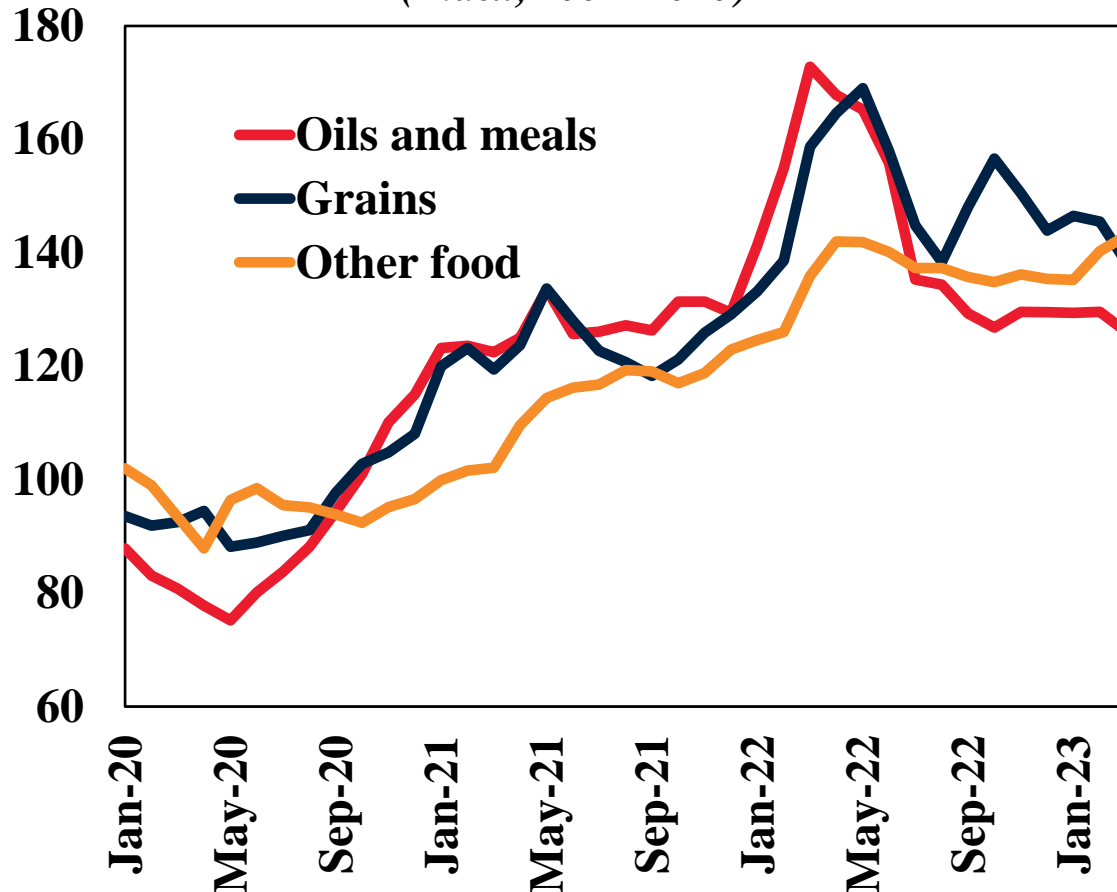
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What have been the key developments in the agricultural markets?

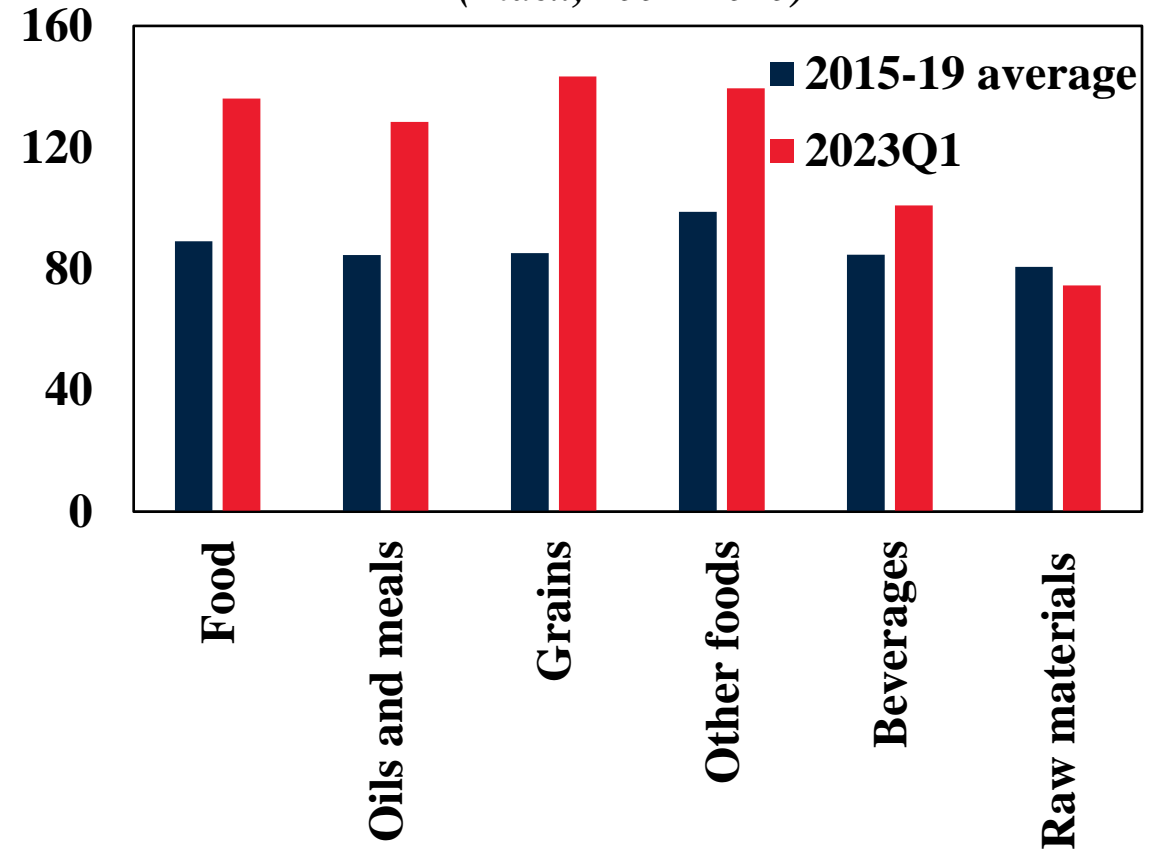
Falling food prices

though prices are still at historically high levels

Agriculture price indexes
(Index, 100 = 2010)



Agriculture price indexes
(Index, 100 = 2010)



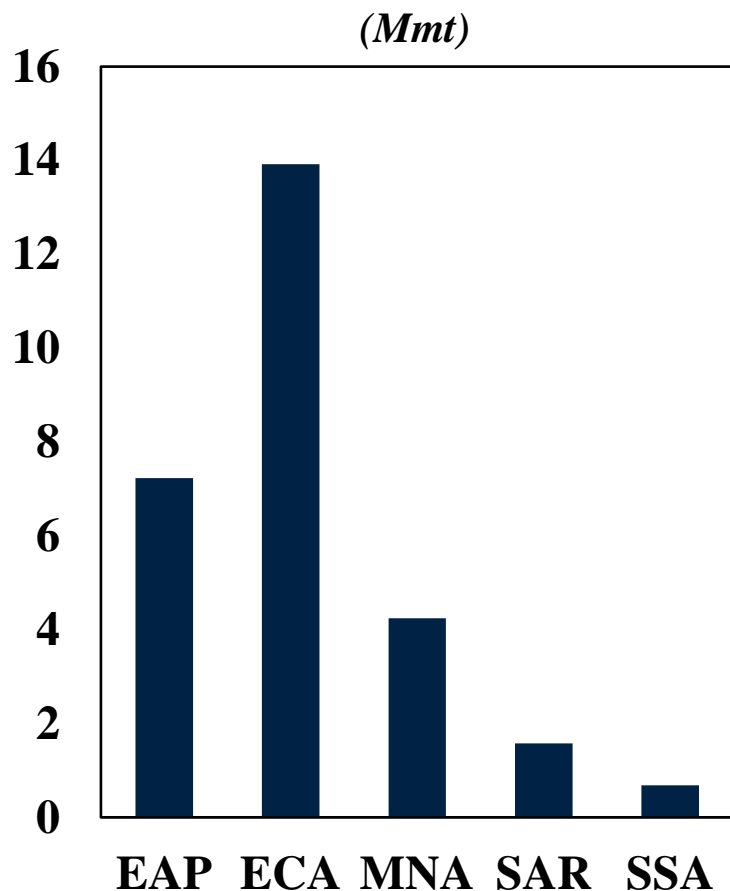
Source: World Bank.

Note: Monthly data. Last observation is March 2023.

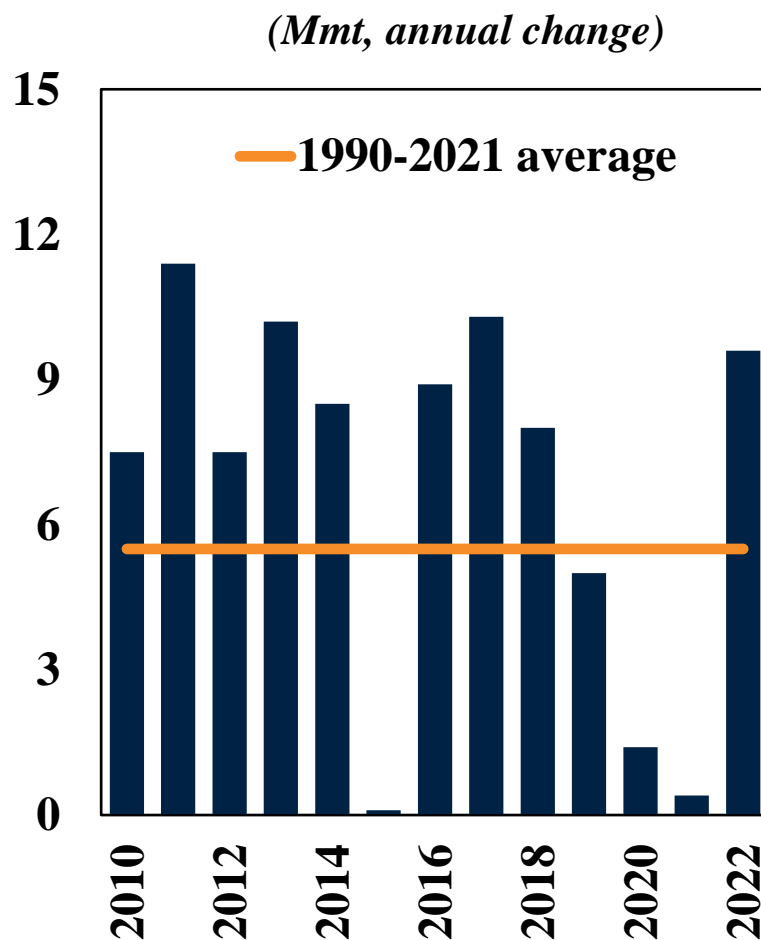
Factors contributing to food price declines

Ukrainian grain shipments, supply expansion, adequate stocks

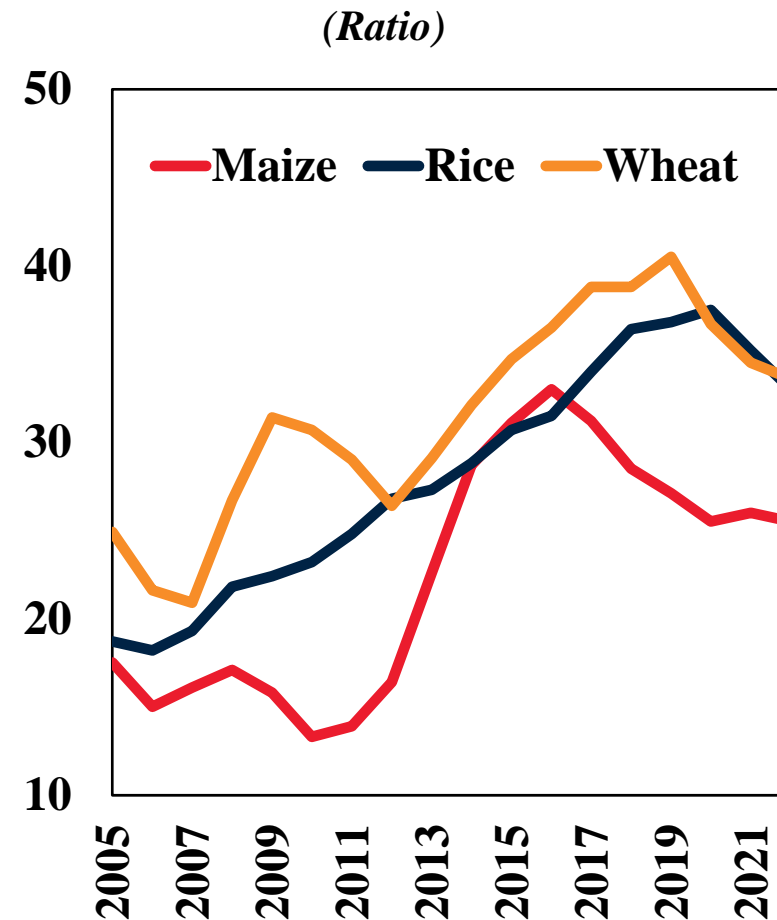
Black Sea Initiative volume of shipments



Edible oil supply growth



Stock-to-use ratio

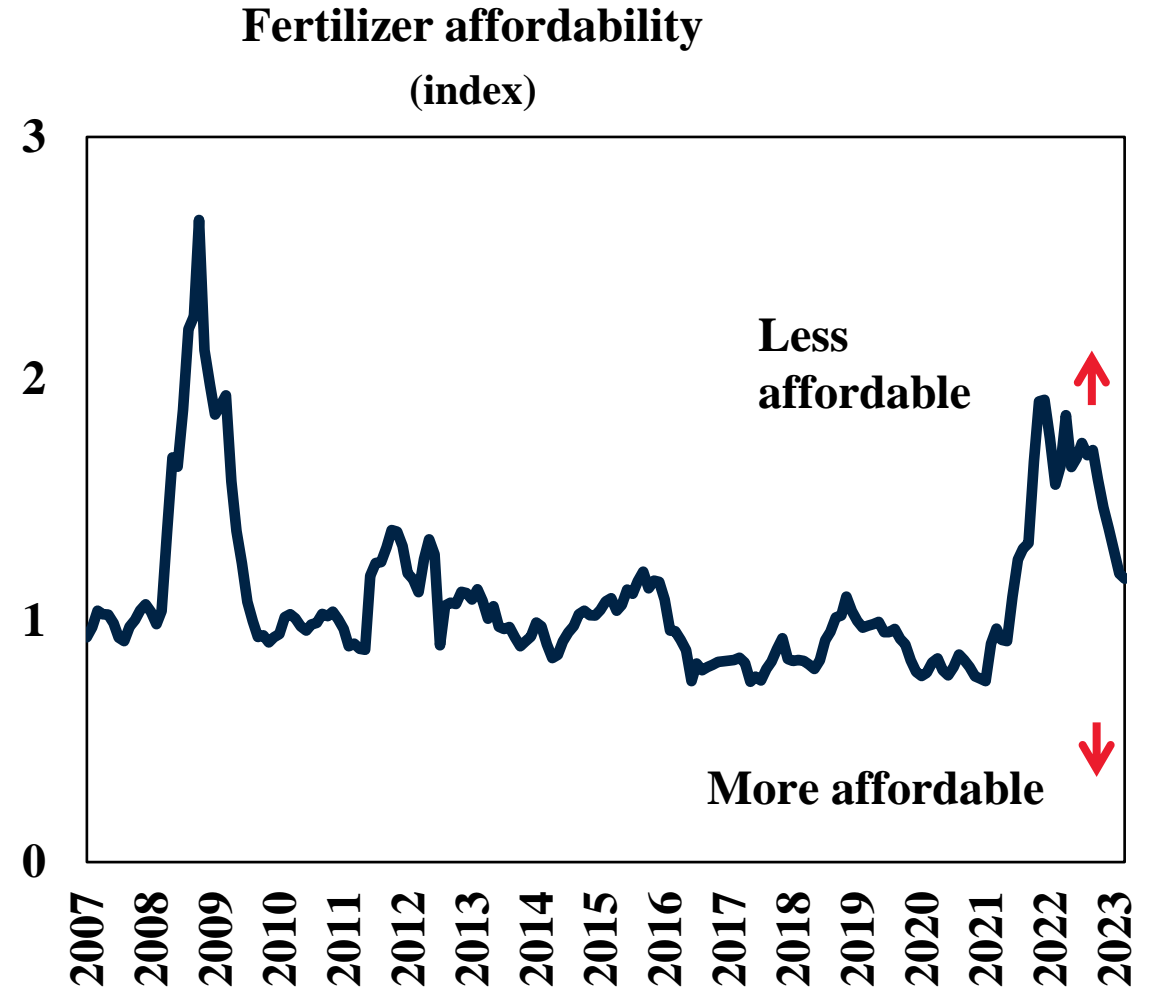
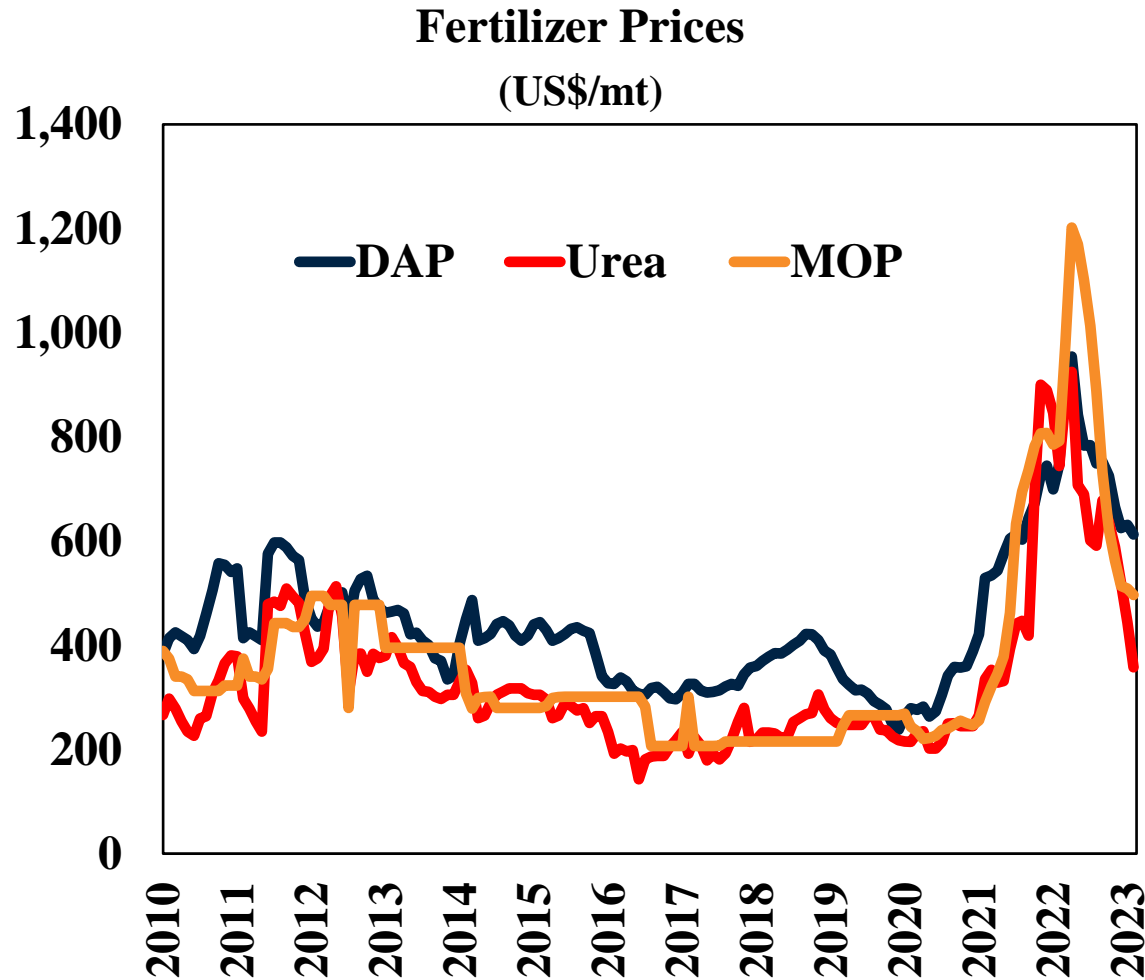


Source: World Bank.

Left Panel: EAP = East Asia and Pacific; ECA = Europe and Central Asia; MNA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa. Mmt = million metric tons. Black Sea Grain Initiative Outbound Shipments from inception in July 22, 2022 to April 12, 2023. Center and Right Panel. Years represent crop season (for example, 2019 refers to 2019-20). Data as of April 2023.

Falling fertilizer prices

Prices and affordability levels still well above pre-pandemic levels

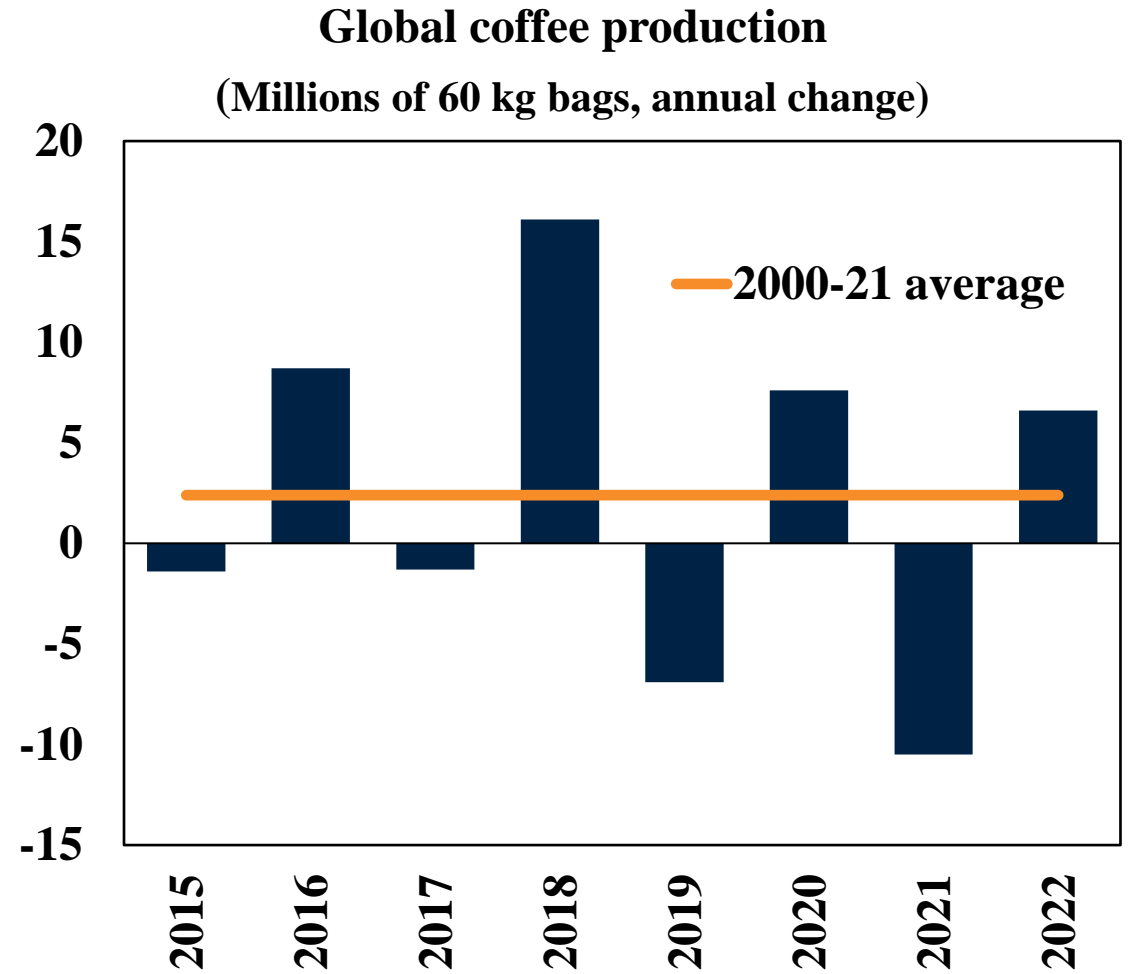
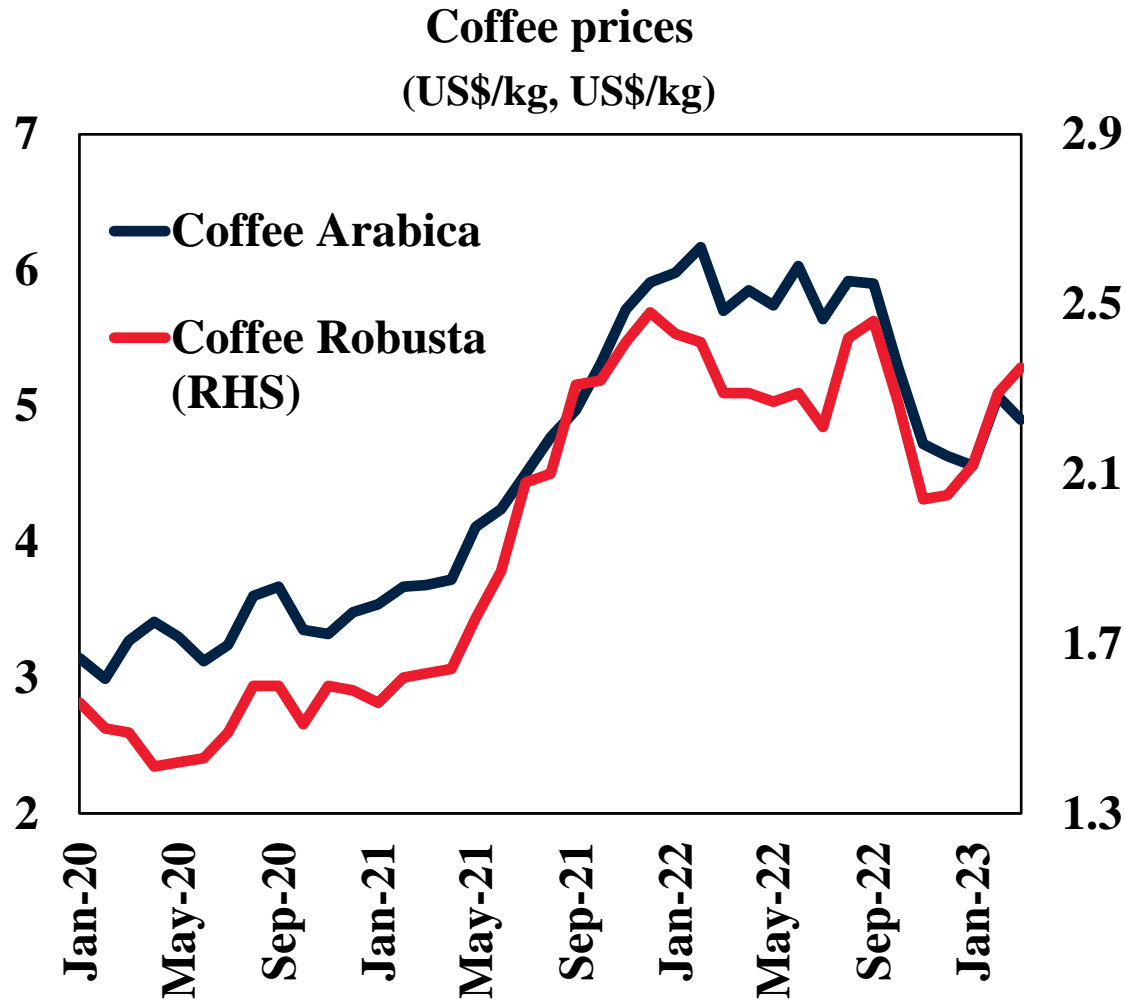


Sources: Bloomberg; General Administration of Customs (China); UN Comtrade; World Bank.

Left Panel DAP = diammonium phosphate; MOP = muriate of potassium; mt = metric tons. Monthly series. Last observation is March 2023.. Right Panel: Ratio of Fertilizer prices over Food price index. Last observation is March 2023.

Coffee prices changed little, remain elevated

Coffee production expected to increase

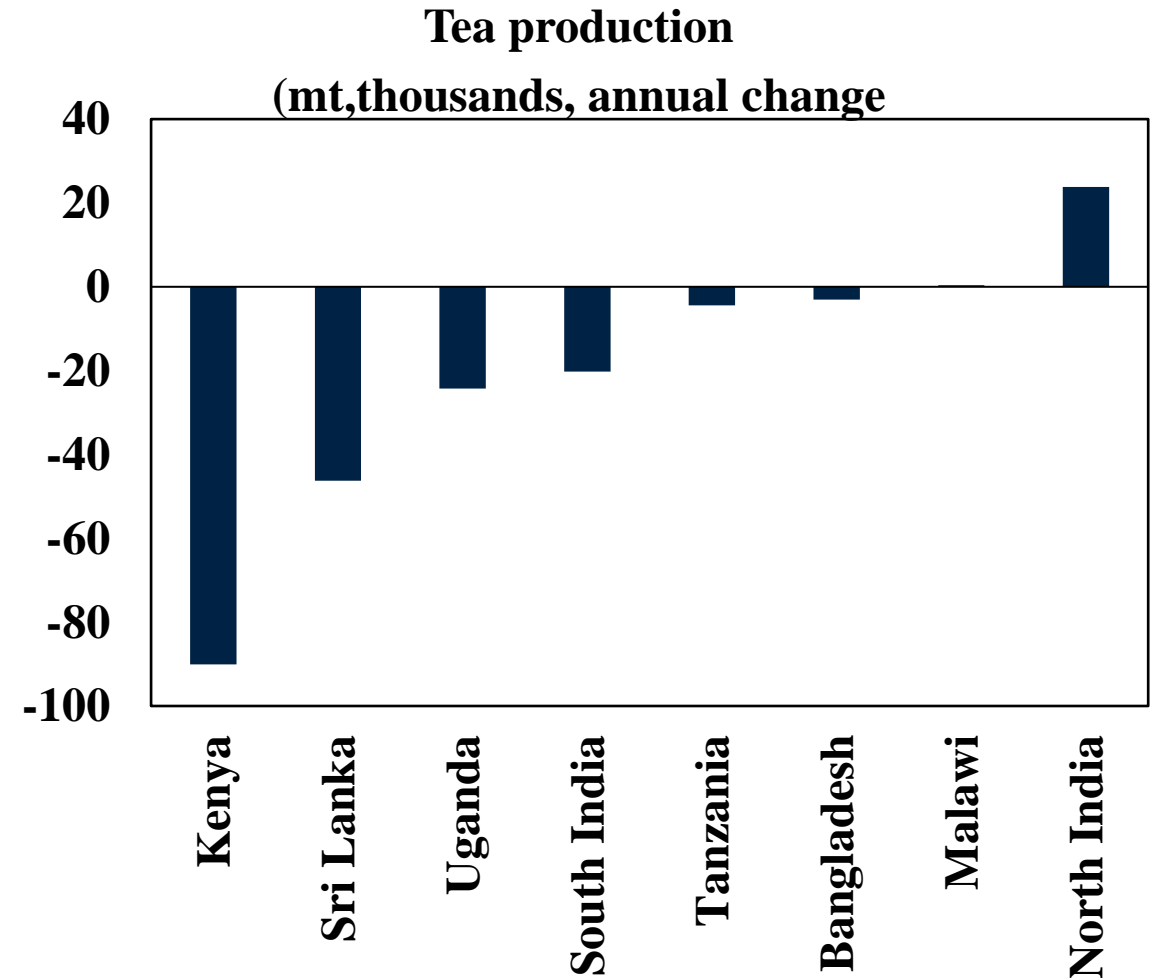
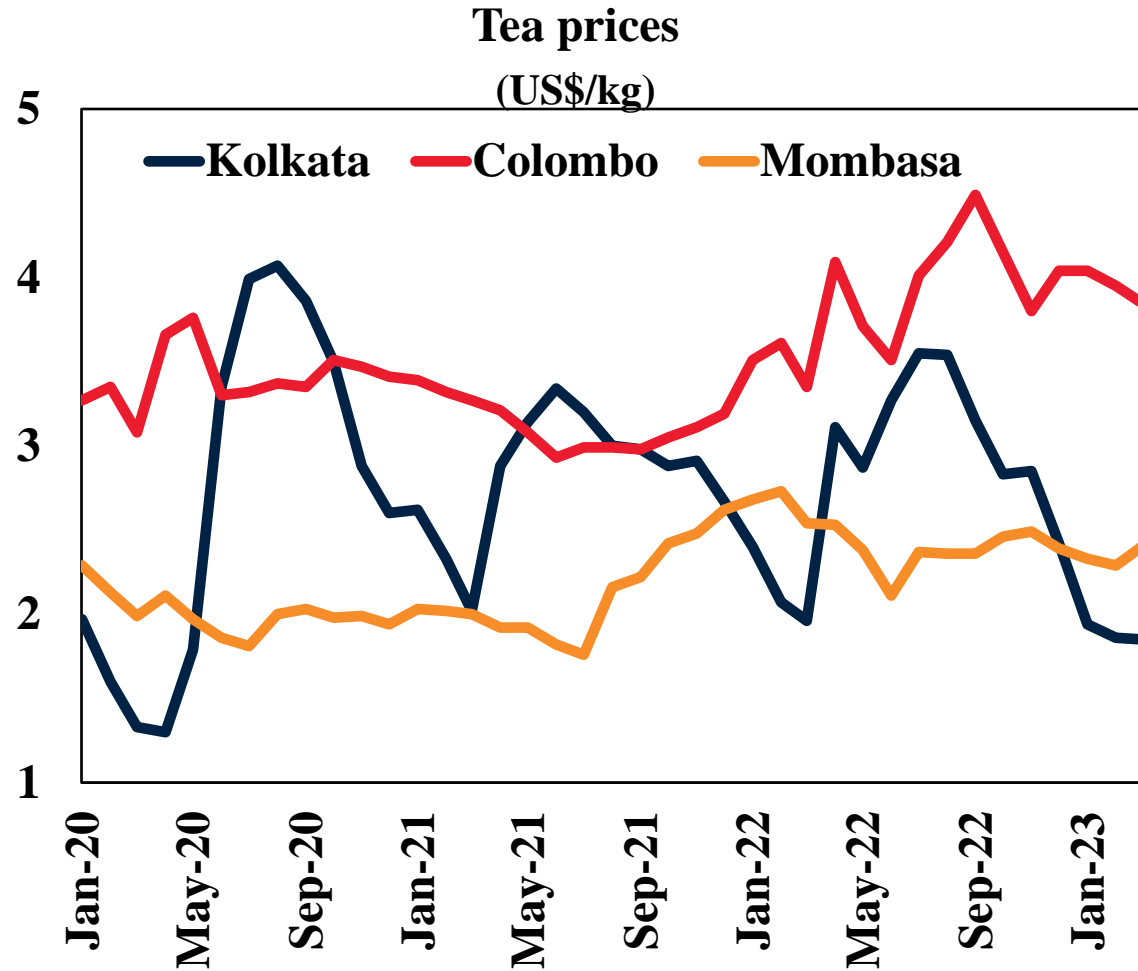


Sources: Bloomberg; U.S. Department of Agriculture, World Bank.

Left panel: Monthly data. Last observation is March 2023. Right Panel: Years represent crop season (for example, 2021 refers to 2021-22). Data updated as of February 12, 2023.

Tea prices declined, sharply in the Kolkata auction

Slowing demand in key tea consumption regions, especially in Central Asia

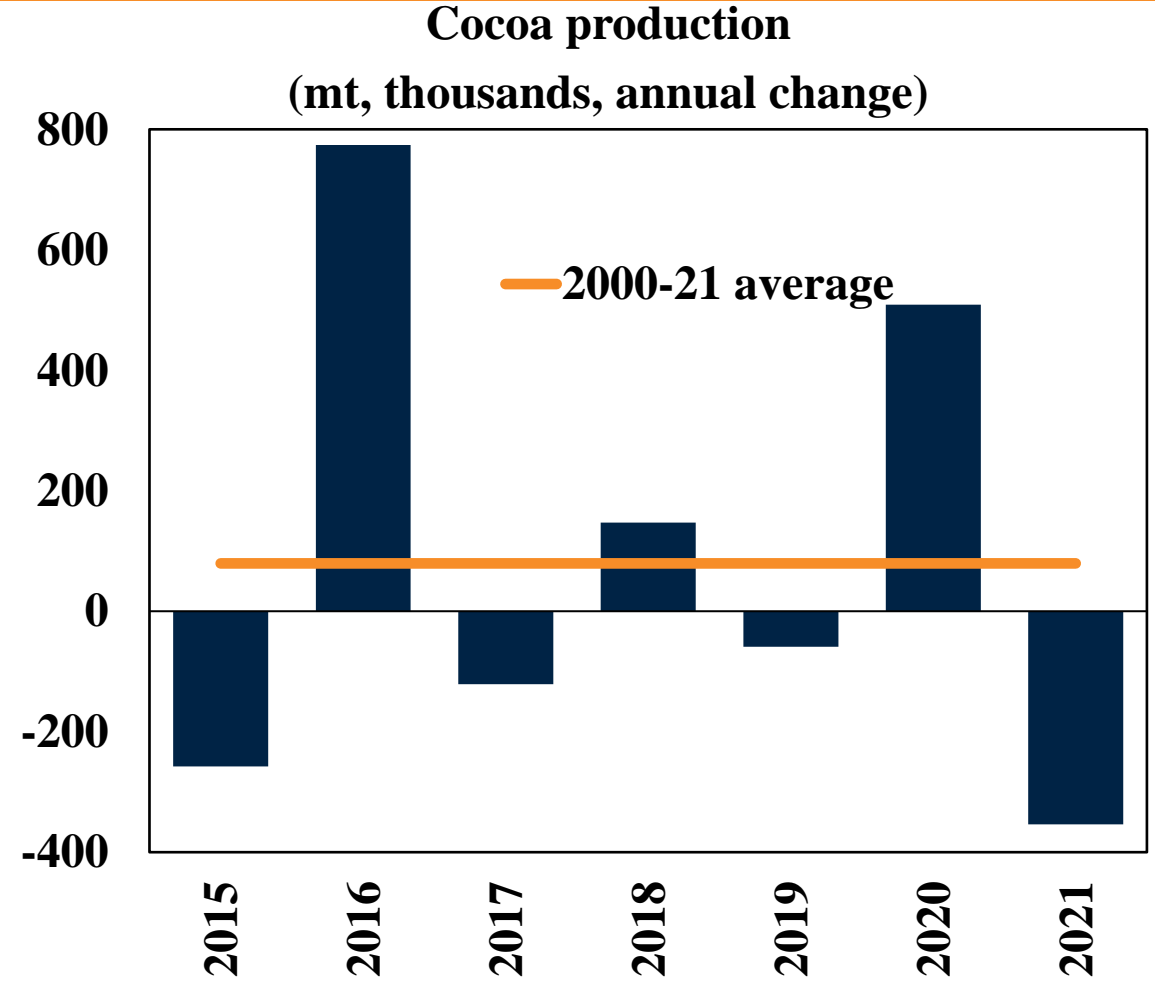
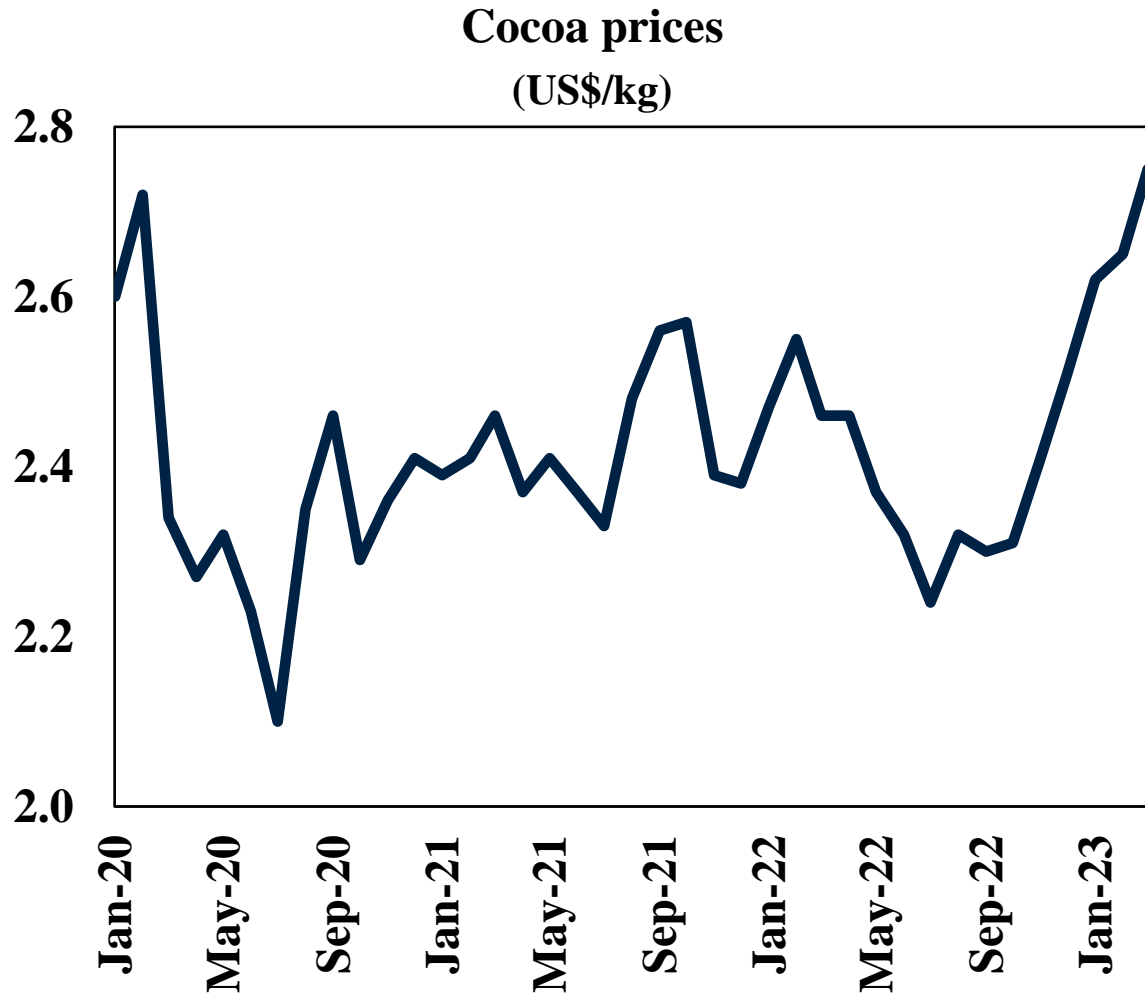


Sources: Africa Tea Brokers Limited; Tea Board India; Tea Exporters Association Sri Lanka; World Bank.

Left panel: mt = metric tons. Monthly data. Last observation is March 2023. Right Panel: 12-month change in tea production between March 2022 and February 2023.

Cocoa consumption grew faster than production

supporting higher prices

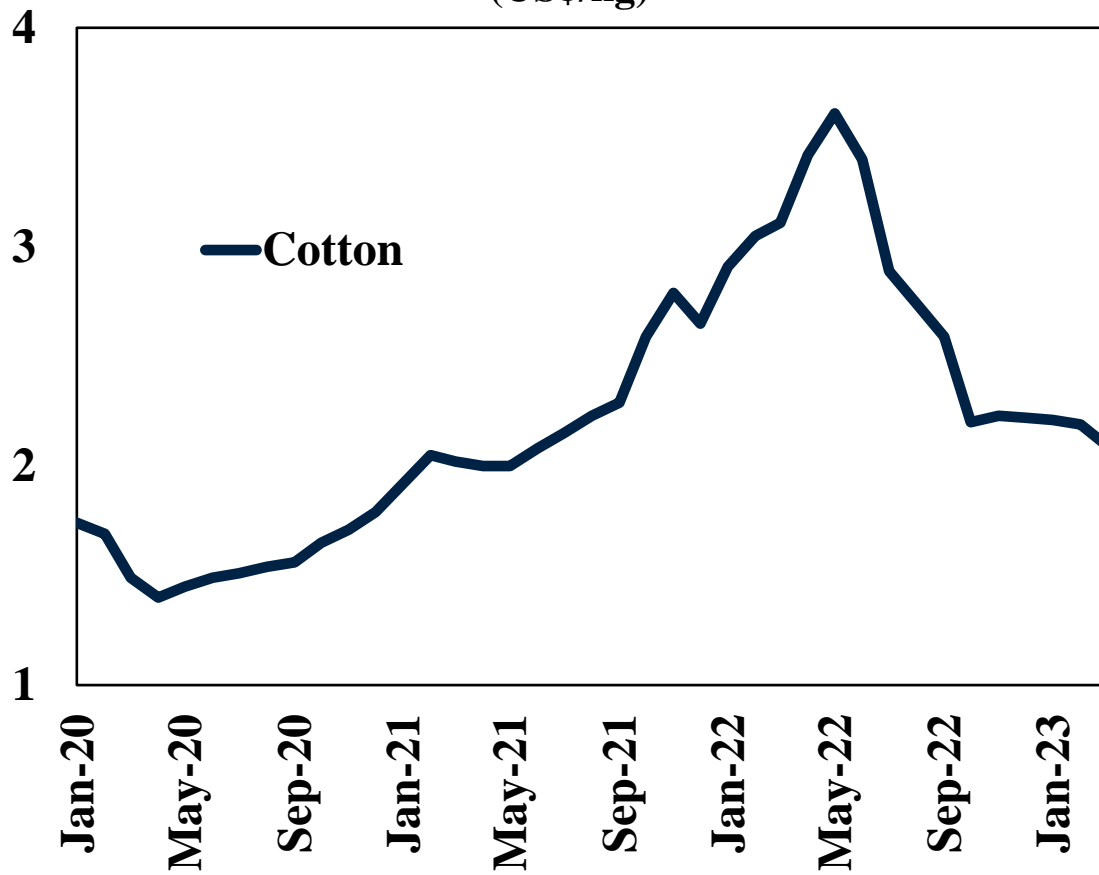


Sources: Bloomberg; International Cocoa Organization (ICCO); World Bank.

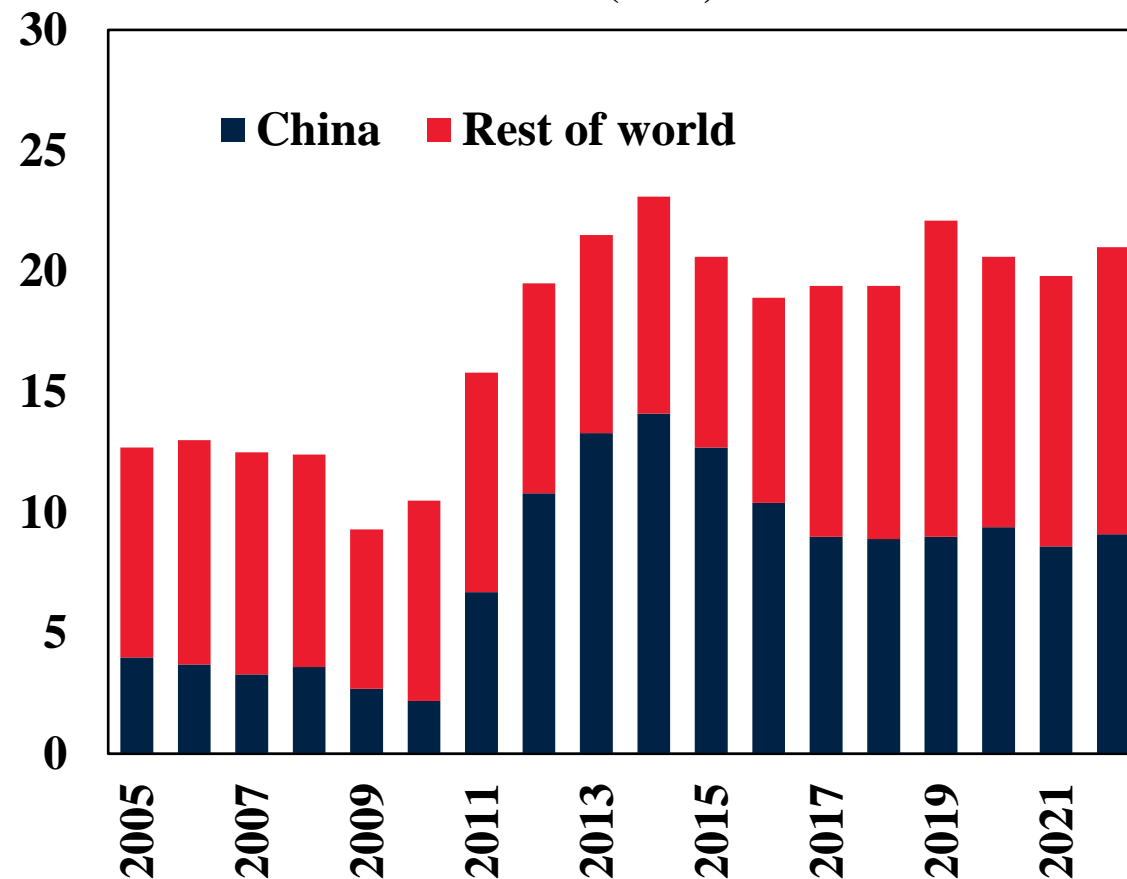
Left panel: Monthly data. Last observation is March 2023.. Right Panel: Years represent crop season (for example, 2021 refers to 2021-22). Data updated as of February 12, 2023. Data for 2021-22 is ICCO forecast.

Cotton prices declined marginally in 2023Q1, due to improved stocks and weaker demand

Cotton prices
(US\$/kg)



Cotton ending stocks
(mmt)



Sources: Bloomberg; International Cotton Advisory Committee; World Bank.

Left panel: Monthly data. Last observation is March 2023.. Right Panel: mmt = million metric tons. Ending stocks, based on International Cotton Advisory Committee projection for 2022-23. Years represent crop season (for example, 2020 refers to 2020-21 crop season).

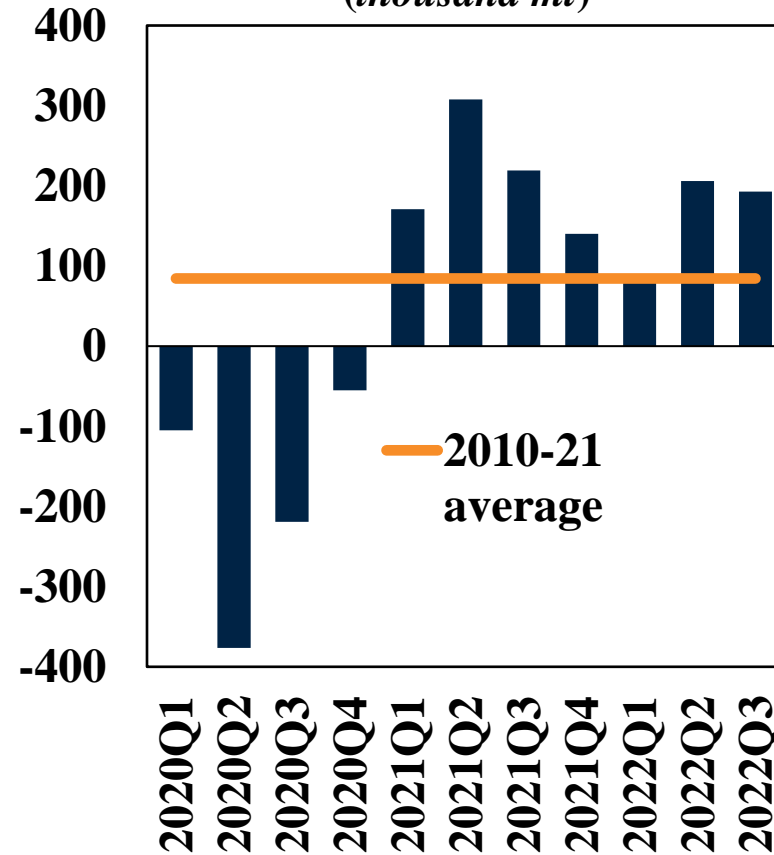
Natural rubber prices increased

The reopening of China has strengthened demand and prices

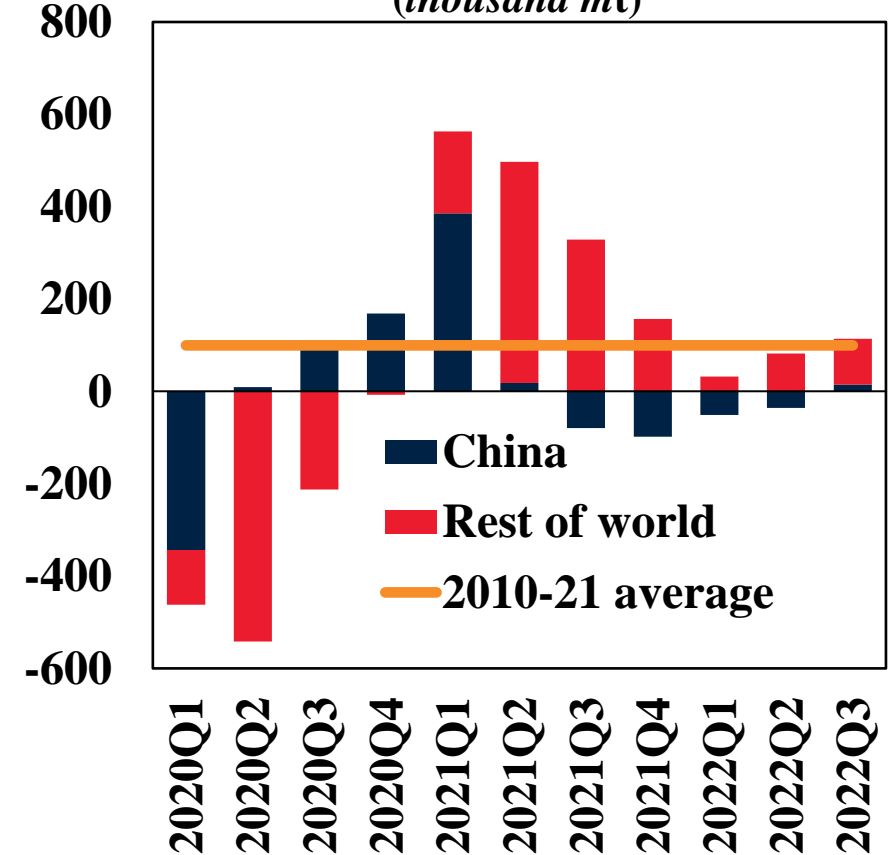
Natural rubber prices
(US\$/kg)



Change in production, y/y
(thousand mt)



Change in consumption, y/y
(thousand mt)



Sources: Bloomberg; International Cotton Advisory Committee; World Bank.

Left panel: Monthly data. Last observation is March 2023.. Center Panel: Changes from the same quarter of the previous year. Last observation is 2023Q2.

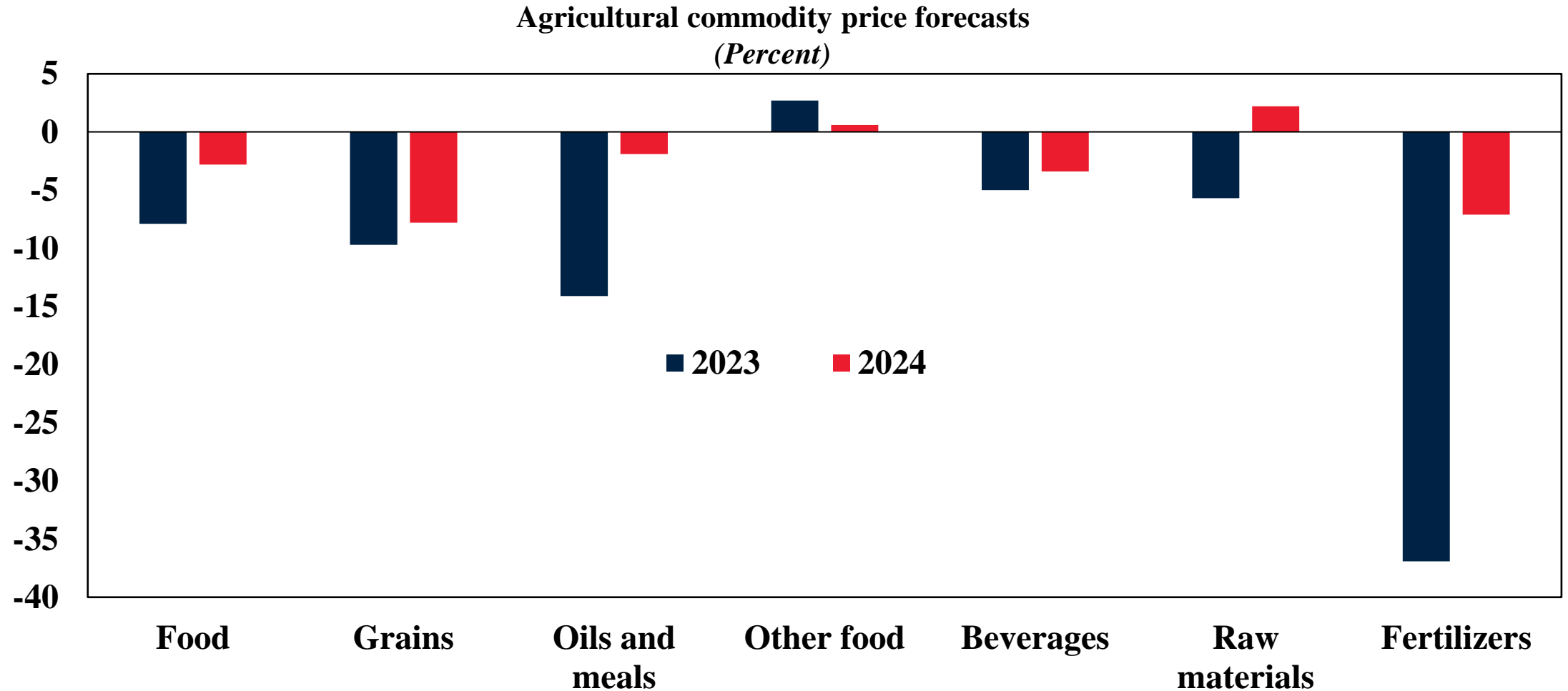
Right Panel: Changes from the same quarter of the previous year. Last observation is 2023Q2.).

Agriculture

2

What are the prospects for agricultural prices?

Most agricultural prices projected to decline in 2023, and ease further in 2024



Source: World Bank.

Note: Percentage changes in forecast from the previous year.

Agriculture

3 What are the risks for agricultural prices?

Risks to price prospects of agricultural commodities

- Severe weather events (ENSO)
- Unraveling of the Black Sea Grains Initiative
- Trade restrictions and related policies
- High input prices
- Lower global growth
- Biofuel policies and demand
- Climate change
- Changing market structure

Agriculture

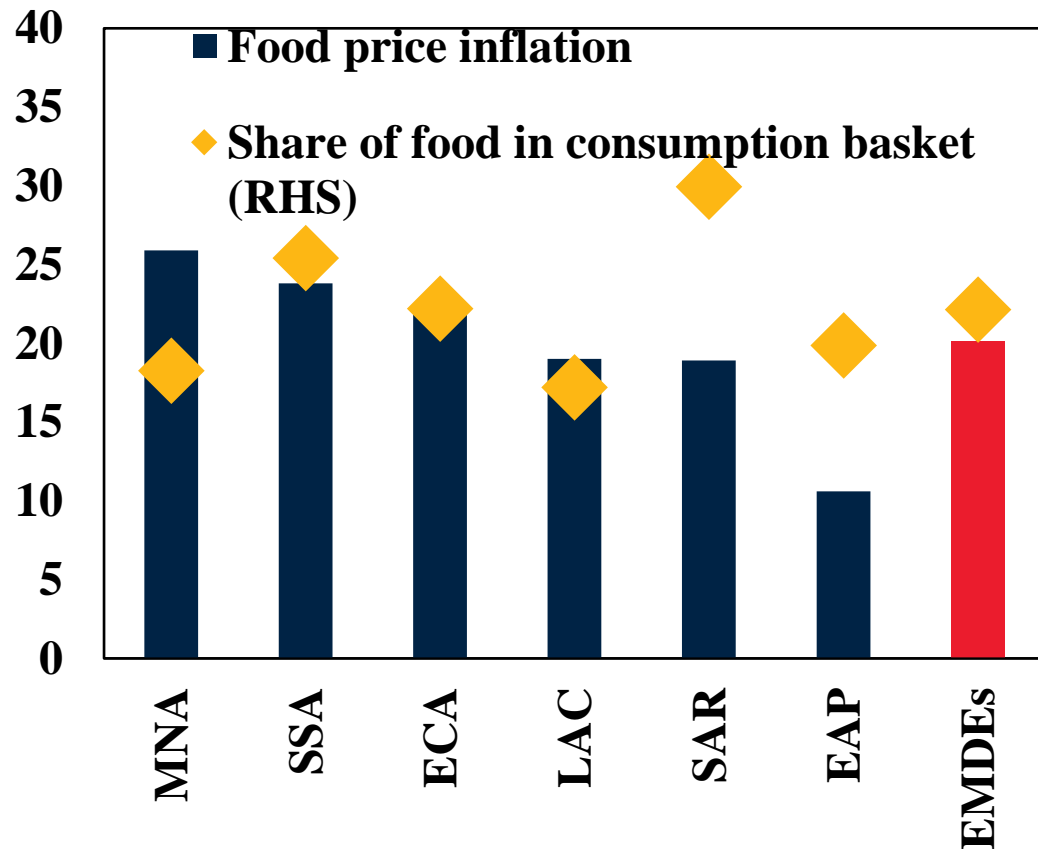
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What are the implications for emerging markets and developing countries (EMDEs)?

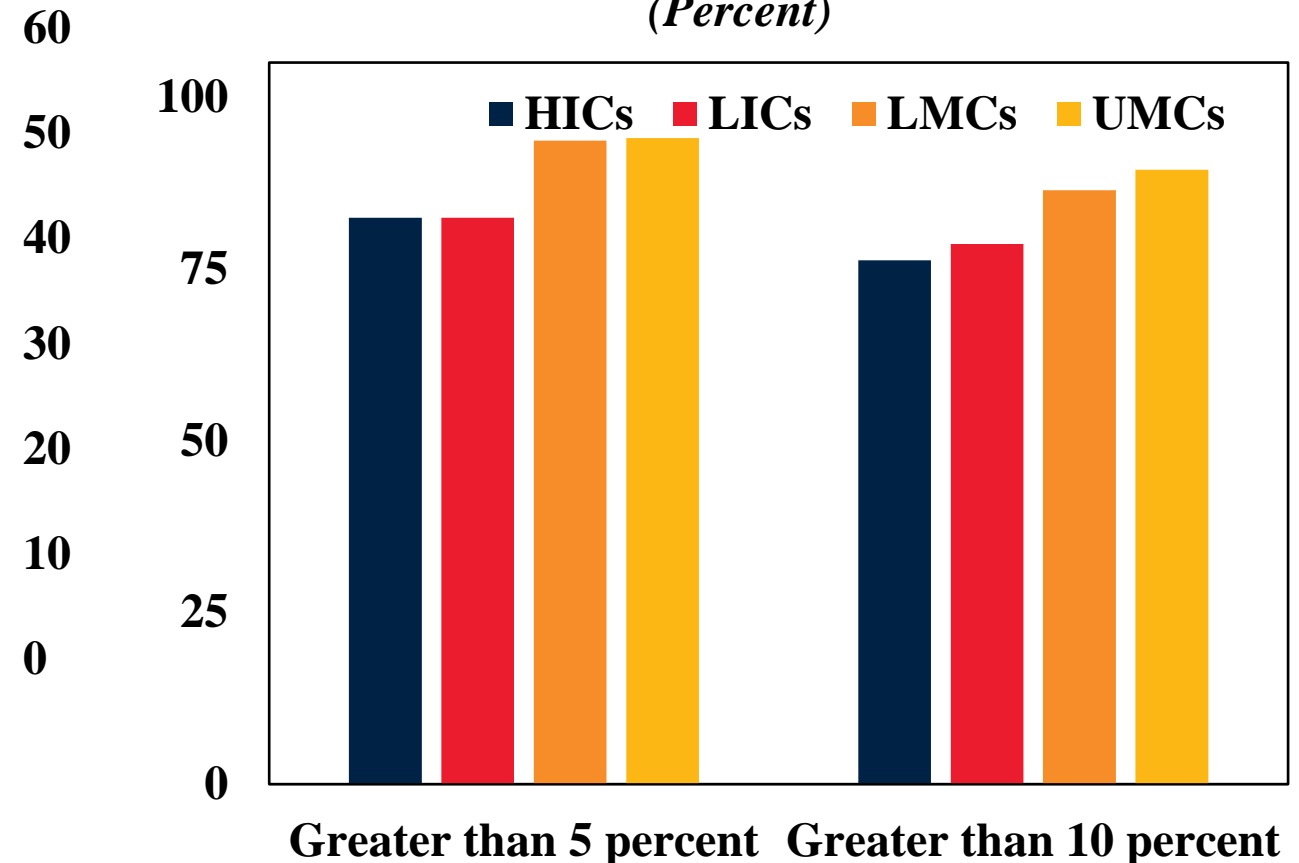
Food price inflation affecting almost all countries

EMDEs especially affected with high share of food in their consumption basket

Domestic food price inflation
(Percent, Percent)



Share of countries with high domestic food price inflation
(Percent)

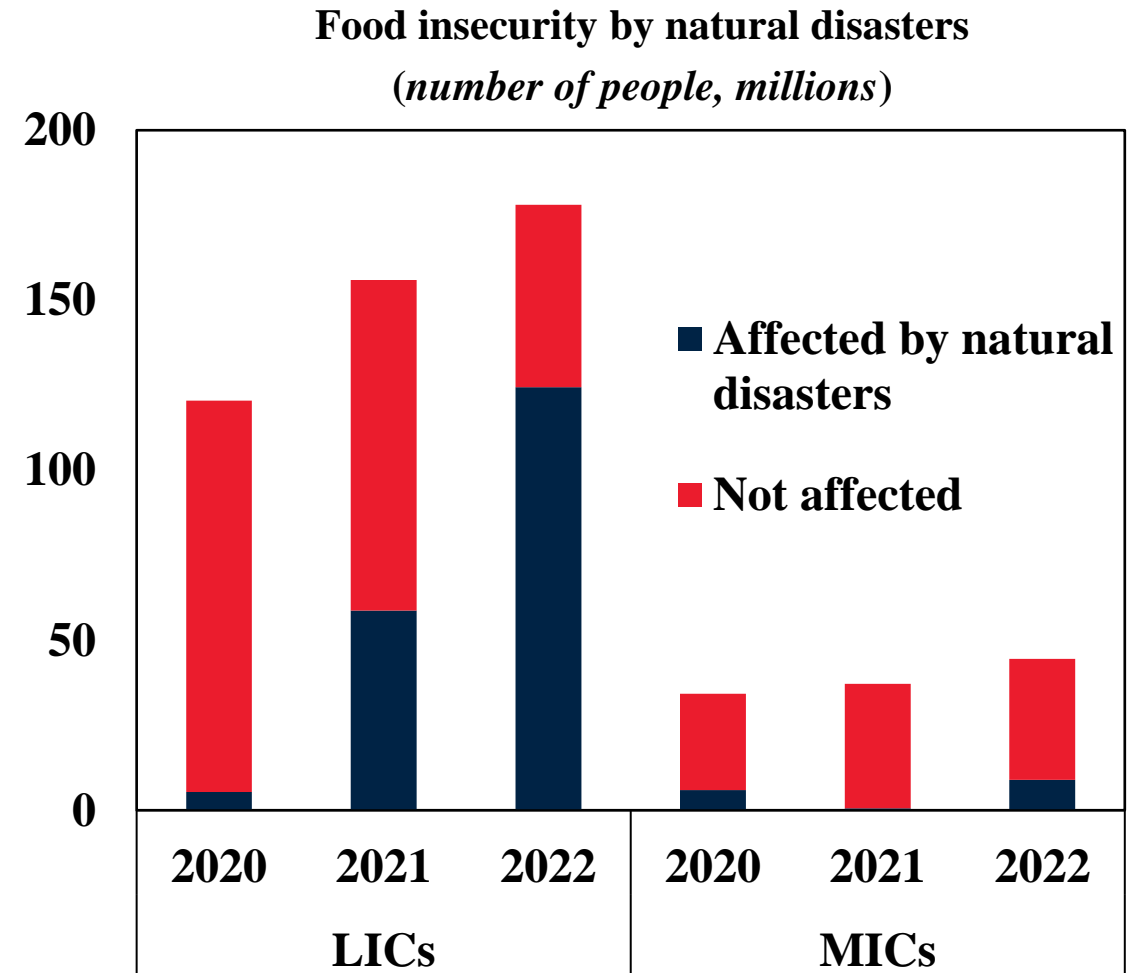
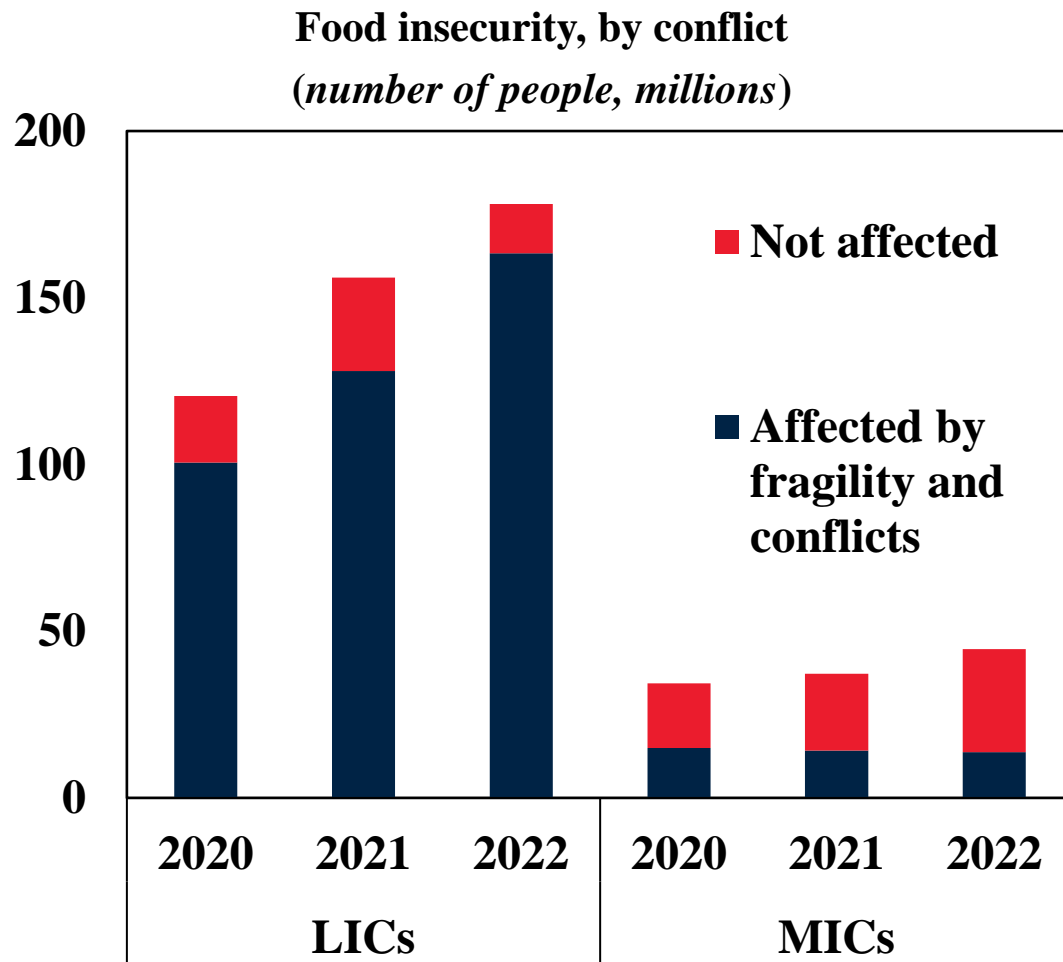


Sources: Food and Agriculture Organization of the United Nations; World Bank; World Food Program.

Note: Year-on-year change of food price inflation, average of January-March 2023. EAP = East Asia and Pacific; ECA = Europe and Central Asia; MNA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa. HICs = high-income countries; UMCs = upper-middle income countries; LMCs = low-middle income countries; LICs = low-income countries. Data for 2023Q1.

Food insecurity has worsened in 2022

due to food price inflation, adverse weather, fragility, and conflicts



Sources: Food and Agriculture Organization of the United Nations; World Bank; World Food Program.

Note: LICs = low-income countries; MICs = middle-income countries. International Food Security Phase Classifications (IPC) include (1) minimal/none, (2) stressed, (3) crisis, (4) emergency, and (5) catastrophe/famine. Bars represent the number of people worldwide that face crisis or more severe (IPC3+) food insecurity. Natural disasters are floods, droughts, or wildfires that affected at least 4 million people, as recorded in the EM-DAT database.

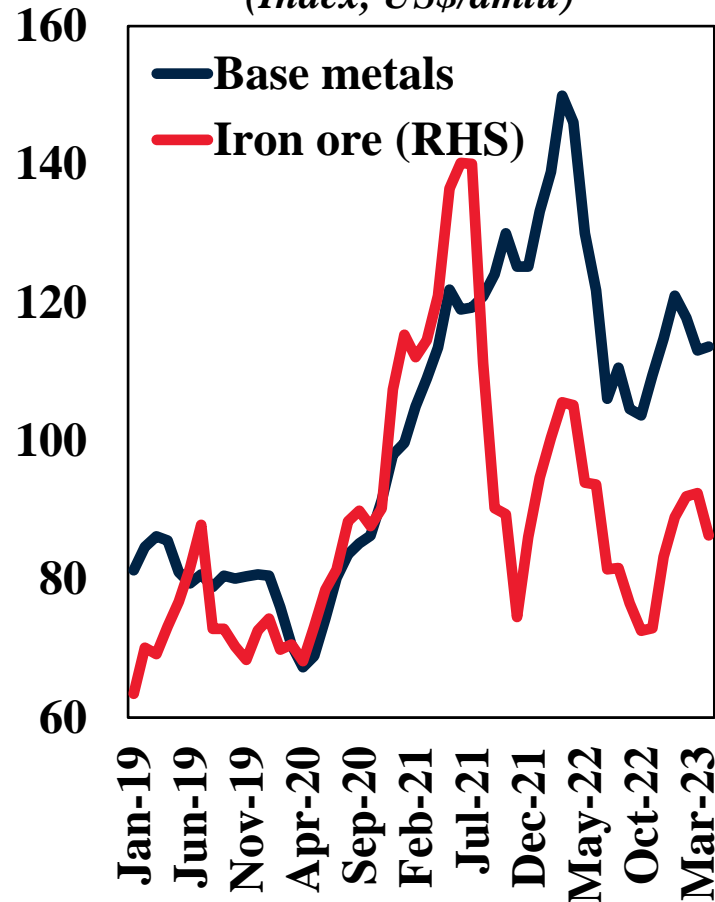
Metals and minerals

What are the development, prospects, and risks in metals and minerals?

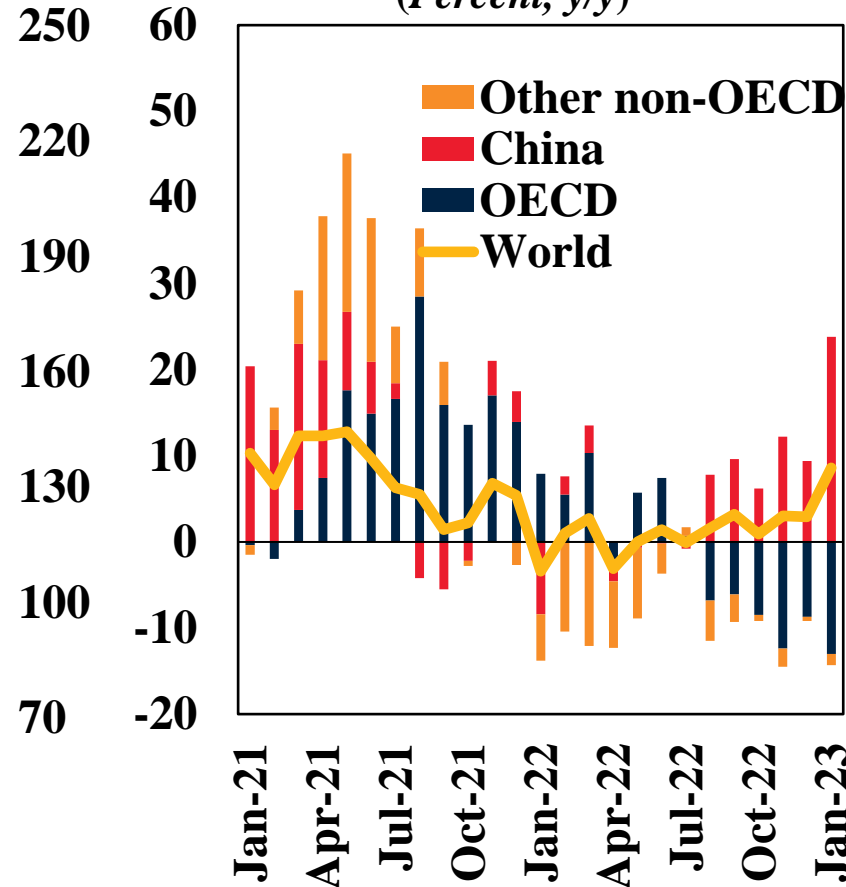
Metals Prices and Demand Concerns

Falling Prices, Weak Demand amid Supply Recoveries

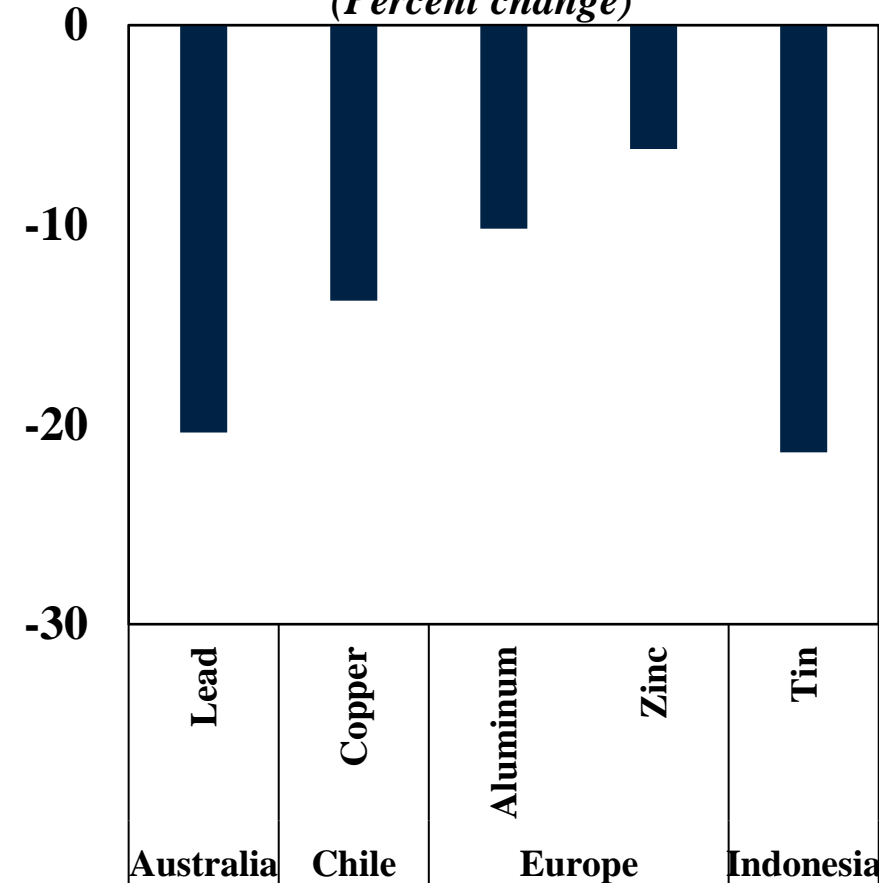
Base metals index and iron prices
(Index, US\$/dmtu)



Metals demand growth
(Percent, y/y)



Production disruptions in 2022
(Percent change)

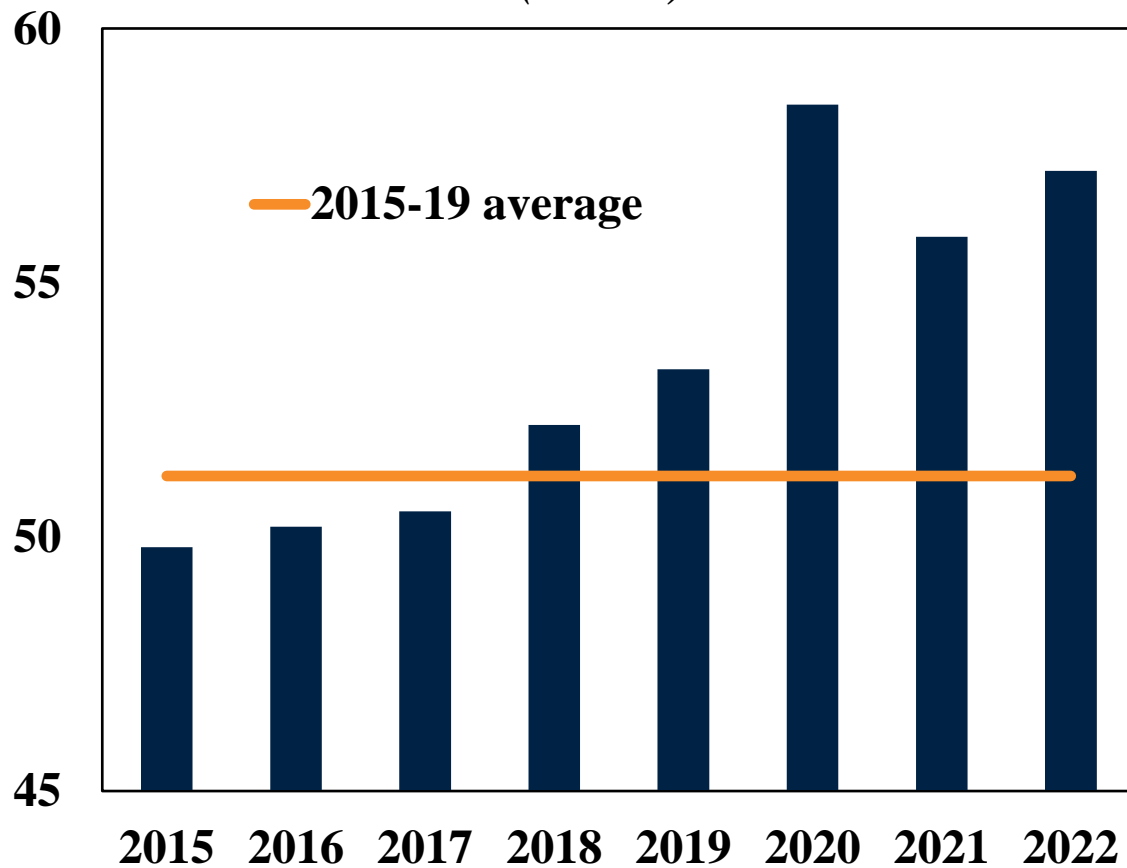


Sources: Haver Analytics; national authorities; World Bank; World Bureau of Metal Statistics.

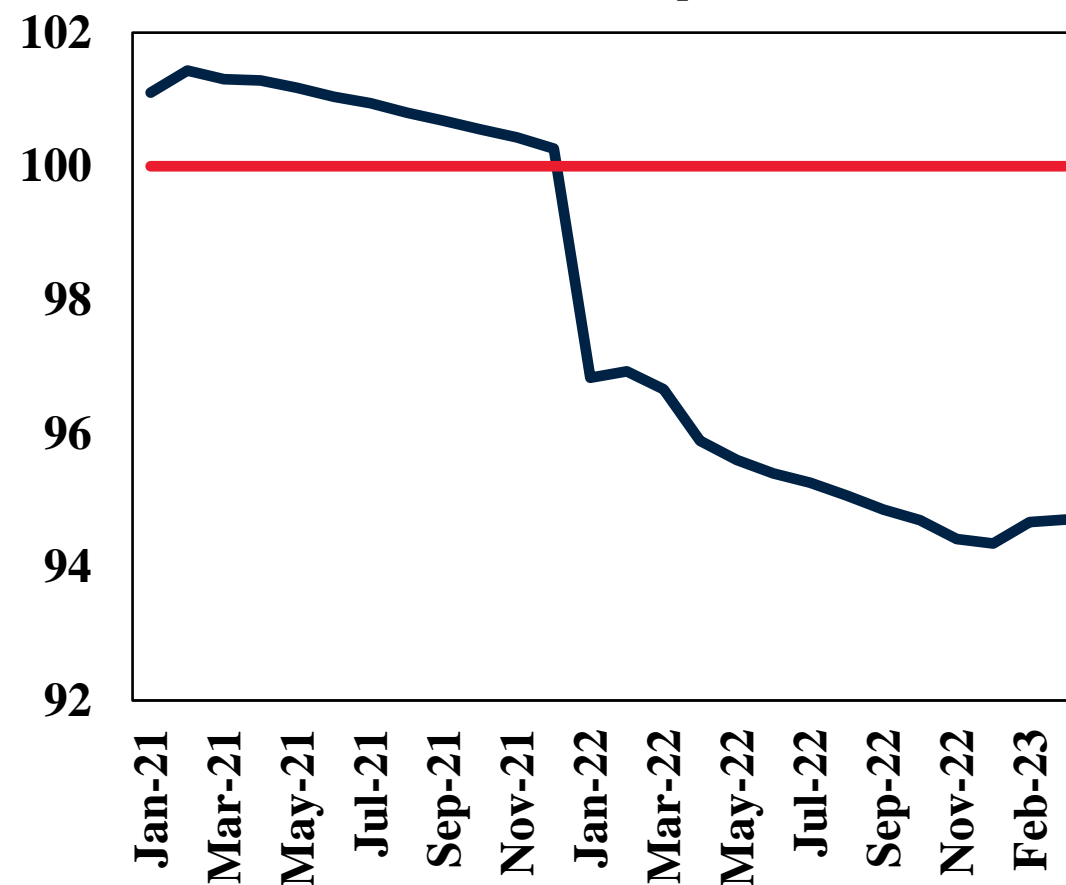
Key upside risk to metal price prospects

nature of China's recovery, production constraints, trade policies, and the evolution of the energy transition

China's share in global copper consumption
(Percent)



China real estate climate indicator
(Index, +100 = expansion)



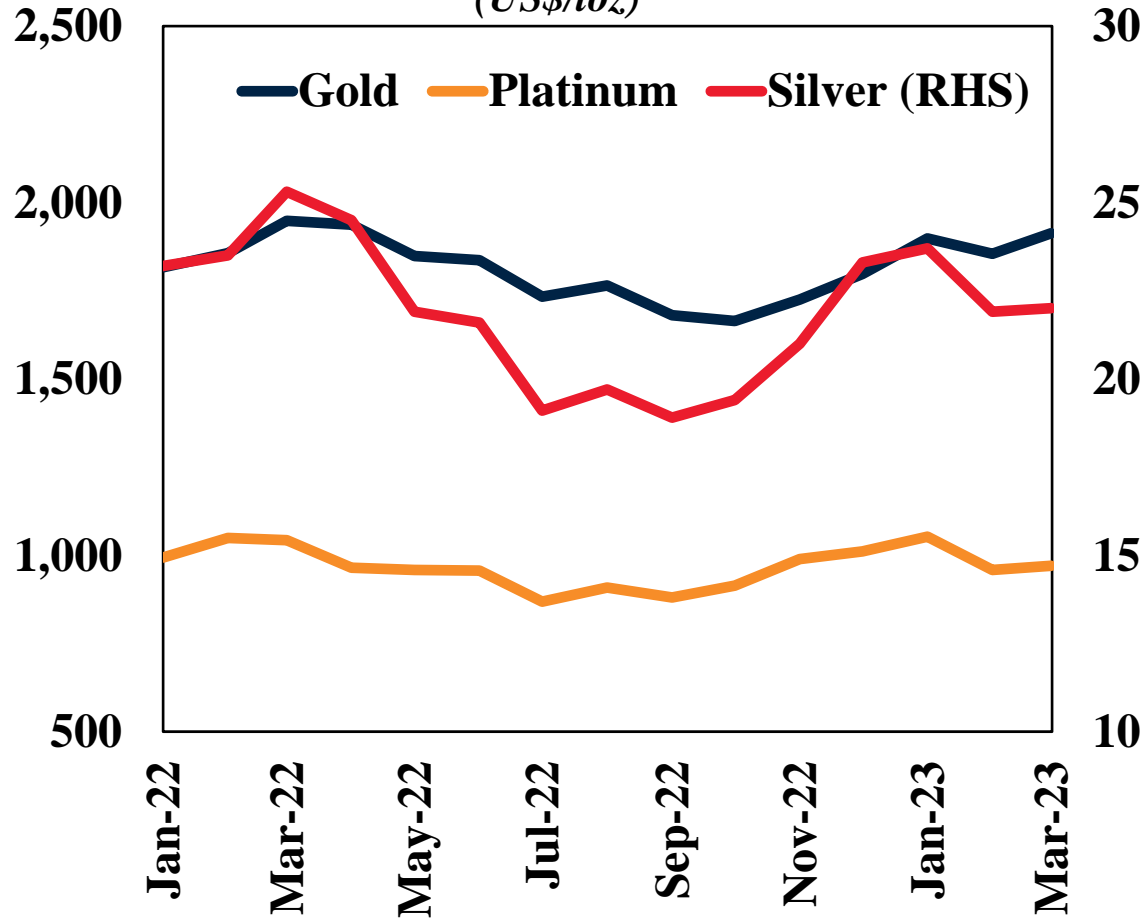
Sources: Haver Analytics; World Bank; World Bureau of Metal Statistics

Note.: A reading above 100 indicates economic growth and a reading below 100 indicates a slowdown in China's real estate market. Last observation is March 2023.

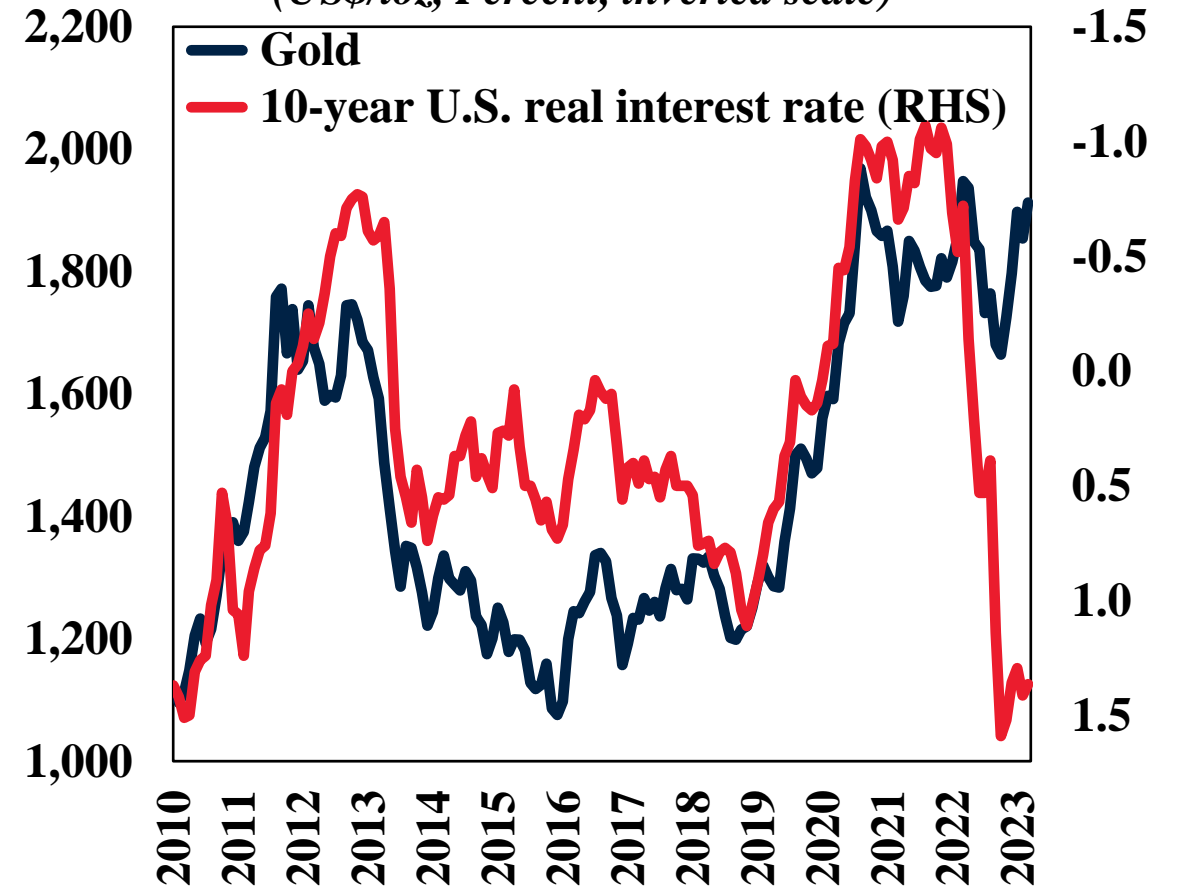
Precious Metals Prices and Gold with Interest Rates

Gold Prices Rise on Elevated Geopolitical Uncertainty and Inflation

Monthly precious metals prices
(US\$/toz)



Gold price and interest rates
(US\$/toz, Percent, inverted scale)

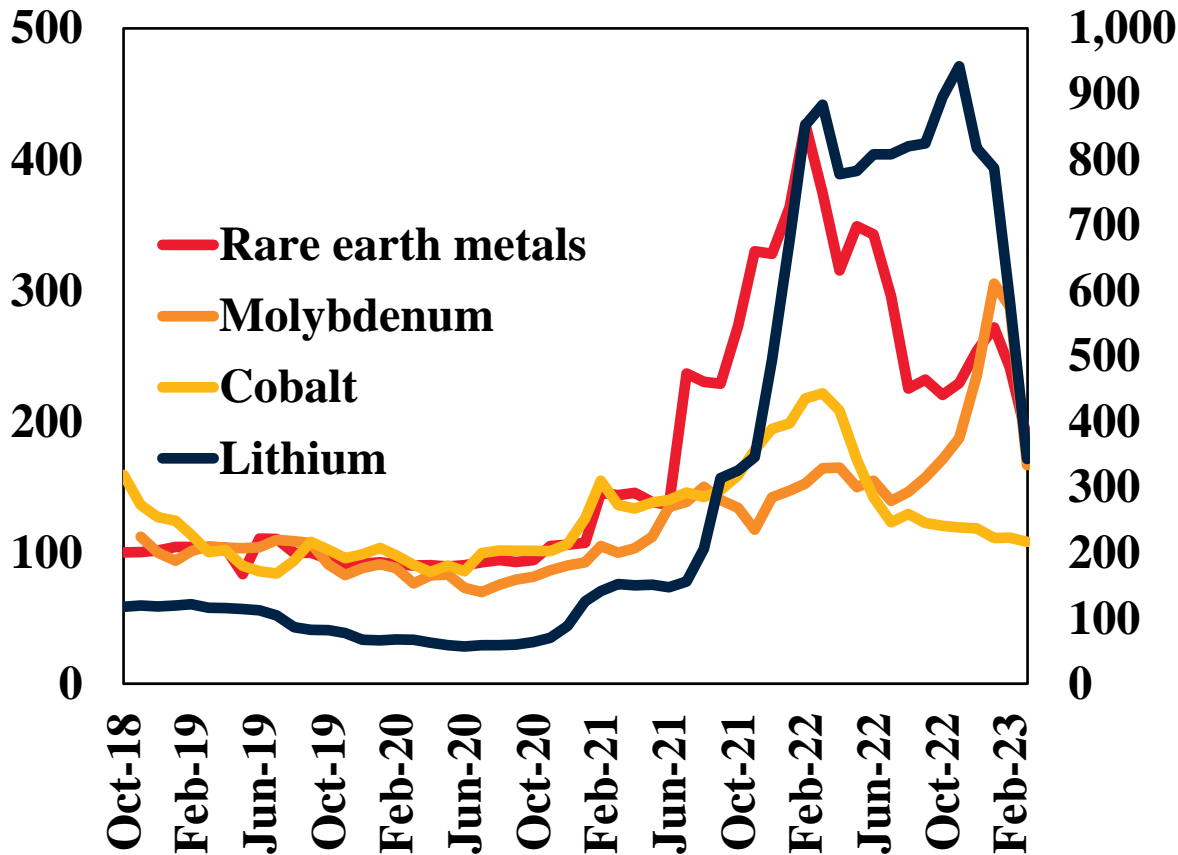


Sources: Bloomberg; Federal Reserve Bank of St. Louis; World Bank.

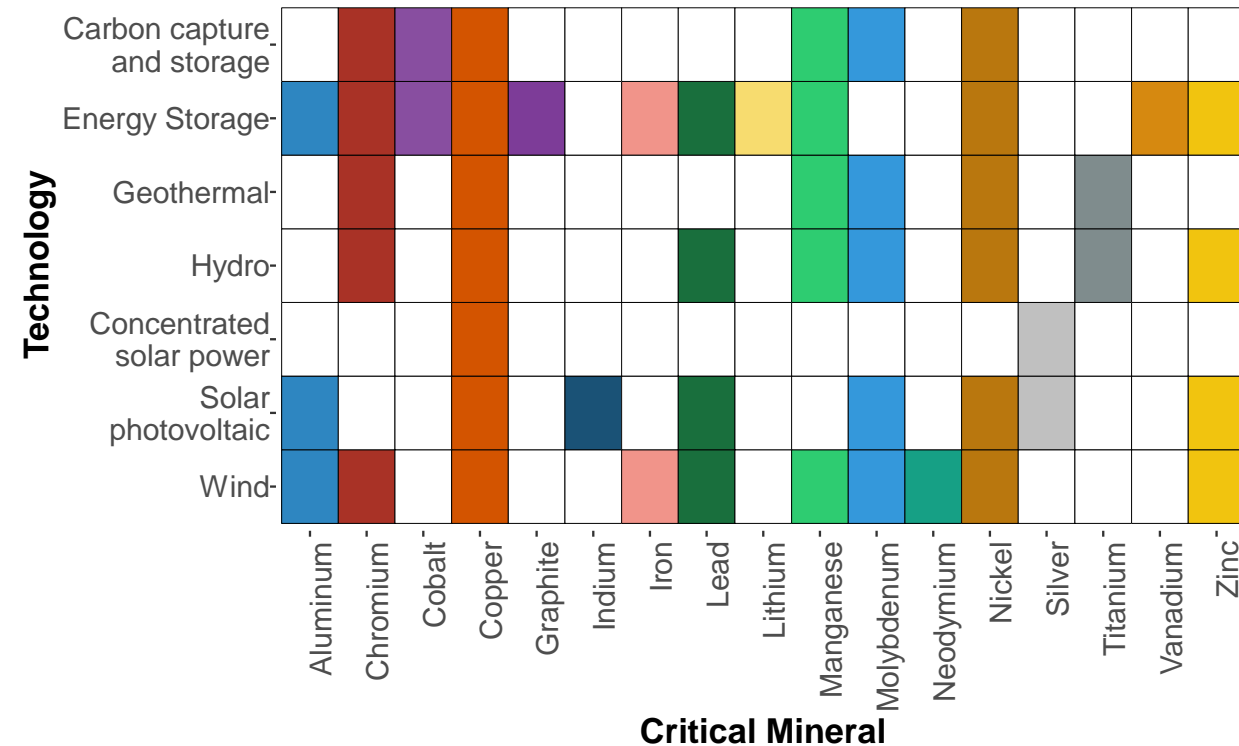
Recent volatility in critical mineral prices

Declining prices amid weak demand and heterogeneity from diverse applications

Price indexes for selected critical minerals
(Index, 100 = 2019 avg.)



Critical mineral uses in renewable energy technology



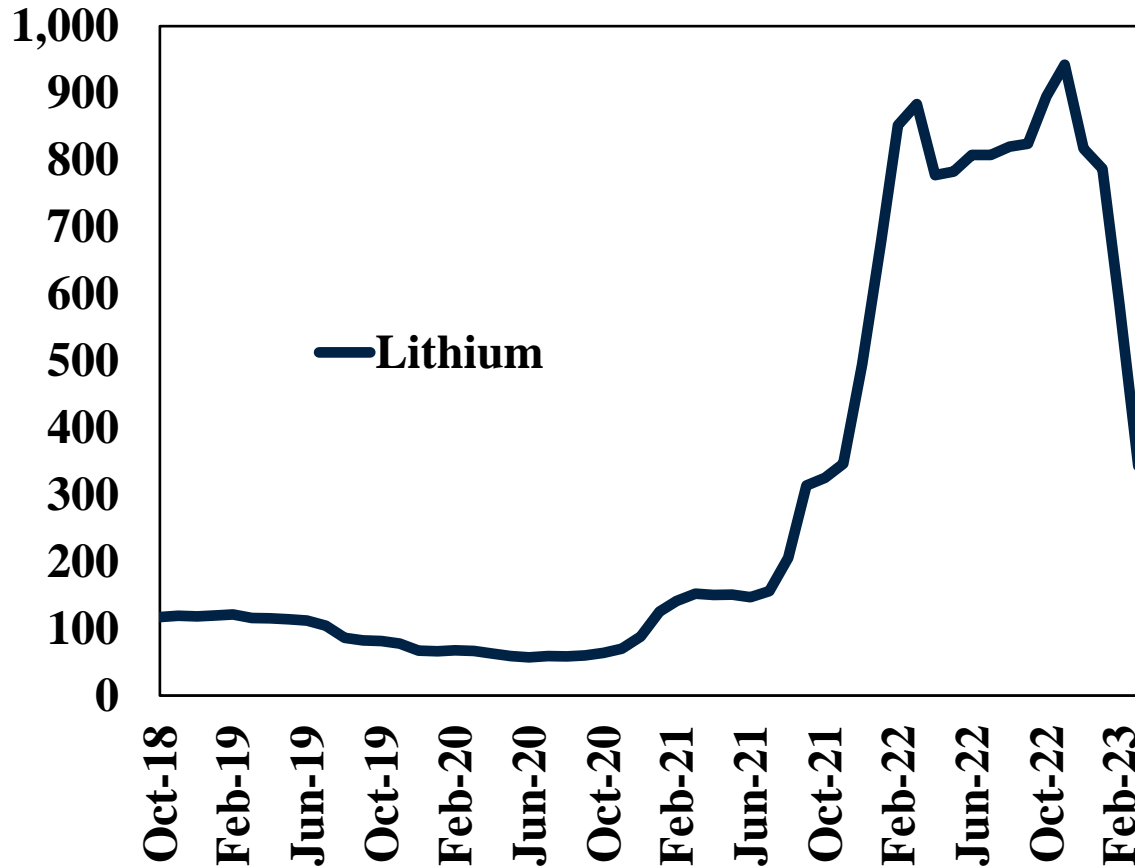
Sources: Bloomberg; World Bank

Note: Monthly data for China Lithium Carbonate 99% Battery Grade. Last observation is March 2023. Critical minerals shown correspond to the critical minerals' designation for use in renewable technologies identified in World Bank (2020b)

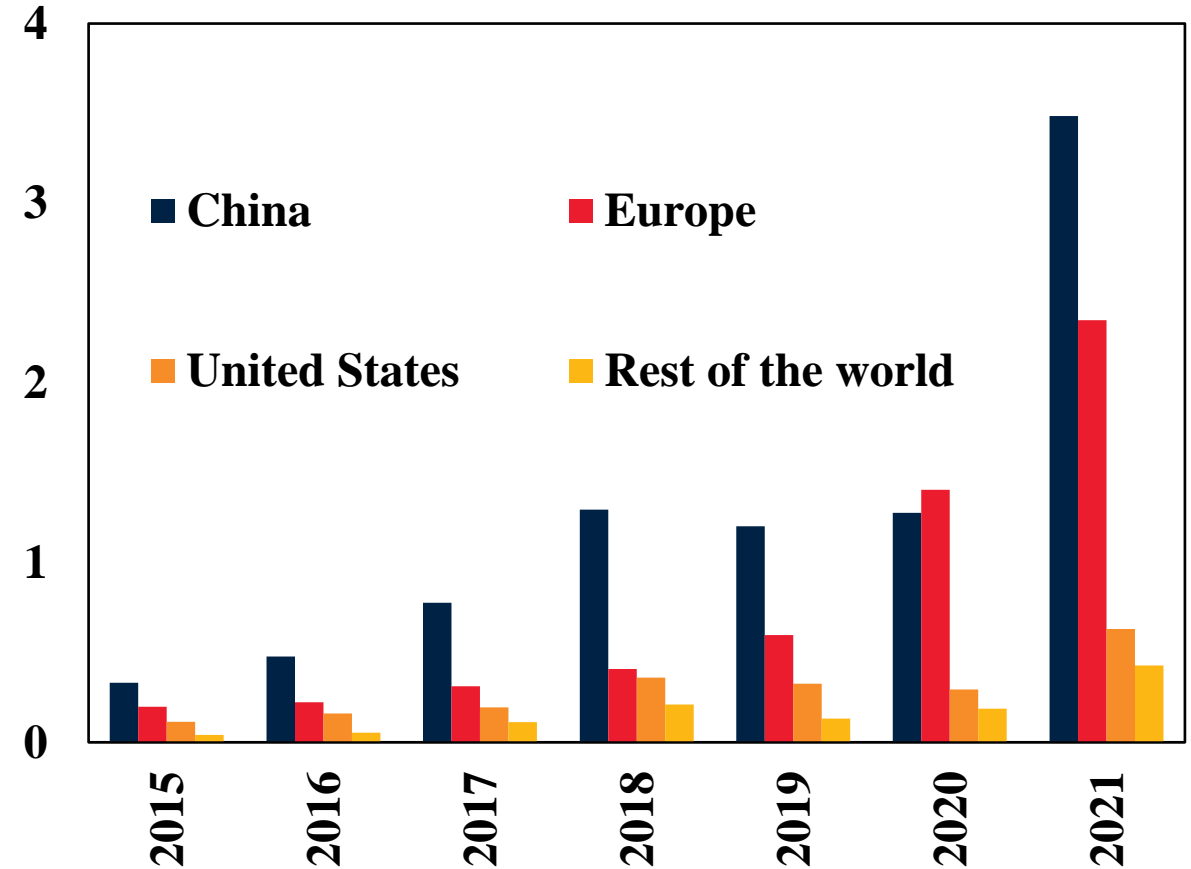
Lithium prices and demand

China dominates lithium consumption for electric vehicles (EVs)

Price Index for Lithium
(Index, 100=2019 avg.)



Electric Vehicle Sales
(Millions)



Sources: Bloomberg; International Energy Agency (IEA).

Note: Monthly data for China Lithium Carbonate 99% Battery Grade. Last observation is March 2023. Electric vehicles (EVs) encompass cars, vans, buses, and trucks with powertrains including battery electric vehicles (BEV) and plug-in hybrid electric vehicles (PHEV). Annual data. Last observation is 2021.

**Thank you for your attention.
Questions?**

Selected Publications by Prospects Group

- *Commodity Markets Outlook* – *April 2023*
(April and October)
- *Global Monthly*
- *Global Economic Prospects* – *January 2023*
(January and June)
- *Commodity Markets* – *May 2022*
- *The Impact of the War in Ukraine on Commodity Markets* – *April 2022*
- *Falling Long-Term Growth Prospects* – *April 2023*