A World Bank Report

APRIL 2021

Commodity Markets Outlook

Causes and Consequences of Metal Price Shocks

Apr
Oct

WORLD BANK GROUP

A World Bank Report

APRIL 2021

Commodity Markets Outlook

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 April 16, 2021.

Table of Contents

Figures

Tables

Acknowledgments

This World Bank Group Report is a product of the Prospects Group in the Equitable Growth, Finance, and Institutions (EFI) Vice Presidency. The report was managed by John Baffes under the general guidance of Ayhan Kose and Franziska Ohnsorge.

Many people contributed to the report. Alain Kabundi, Peter Nagle, and Franziska Ohnsorge authored the *Special Focus* on Causes and Consequences of Metal Price Shocks. Section authors include Peter Nagle (energy), John Baffes (agriculture), and Wee Chian Koh (fertilizers, metals, and precious metals). Research assistance was provided by Arika Kayastha and Jinxin Wu. Maria Hazel Macadangdang produced the supply-demand balance section. Design and production was handled by Adriana Maximiliano. Graeme Littler produced the accompanying website.

Betty Dow, Patrick Alexander Kirby, Graeme Littler, Shane Streifel, and Temel Taskin reviewed the report. External affairs for the report were managed by Alejandra Viveros and supported by Mark Felsenthal and Mikael Reventar. Staff of the Translation and Interpretation Services unit provided translations of dissemination materials.

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 to 2035 for 46 commodities are presented, together with historical price data. The report also contains production, consumption, and trade statistics for major commodities. Commodity price data updates are published separately at the beginning of each month.

Background analytical work presented in this report was generously funded by the Government of Japan through the Policy and Human Resources Development (PHRD) Fund, administered by the World Bank Group.

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

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

Executive Summary

Commodity prices continued their recovery in the first quarter of 2021, with four-fifths of commodities now above their pre-pandemic levels, in some instances considerably so. Prices have been lifted by the global recovery from last year's recession, improved growth prospects, and commodity-specific supply factors for crude oil, copper, and several food commodities. Looking ahead, oil prices are forecast to average $56/bbl in 2021, more than one-third higher than in 2020, and see a further small rise to $60/bbl in 2022 as demand continues to gradually rise. Metal prices are expected to average 30 percent higher in 2021 than in 2020 on the back of strong demand, before dropping back somewhat in 2022. Agriculture prices are forecast to average nearly 14 percent higher in 2021, driven by a few food commodities, and are expected to stabilize thereafter. The main risks to the price forecasts are the evolution of the pandemic for industrial commodities, and weather shocks for agriculture. A Special Focus section documents the higher frequency, but smaller magnitude, of metals price shocks than oil price shocks. For some base metals, price declines are associated with significant output declines in exporters of these commodities. In these economies, such output declines after price declines are larger and longer-lasting than output increases following improvements in prices.

Recent trends

Nearly all commodity prices rose in 2021Q1, continuing the marked rebound since mid-2020 (figure 1.A). Almost all commodity prices now exceed their pre-pandemic levels, and those of some commodities, notably metals, are well above their previous levels—copper prices were nearly 50 percent higher in March 2021 relative to the end of 2019. The recovery has been driven by the improving global economic outlook, aided by significant monetary and fiscal stimulus in advanced economies, and steady, although uneven, vaccination rates.

Energy prices rose by one-third in 2021Q1 (q/q), with similar gains across the three main fuels. *Crude oil prices* have seen the fastest recovery from a price collapse on record, and reached a high of nearly $70/bbl in mid-March before dropping back to $63/bbl in the first half of April (figure 1.B). The recovery has occurred despite oil demand remaining around 5 percent below its 2019 level, and has been driven to a large extent by higher-than-expected agreed production cuts among OPEC and its partners. Prices have also been boosted by the improving economic outlook, as well as the passing of the U.S. stimulus bill. *Coal prices* rose 30 percent on the quarter and have almost doubled since August, largely as a result of supply disruptions. *Natural gas prices* also rose by one-third in 2021Q1 (q/q), primarily in response to cold weather in large markets, including the United States, Europe, Asia, and especially Japan.

Non-energy commodity prices rose 12 percent in the first quarter of 2021 (q/q), following a 10 percent increase during the previous two quarters. The World Bank's non-energy commodity price index has risen for 11 consecutive months since its trough in April 2020. *Base metals and ore prices* rose 16 percent, with strengthening demand across advanced and emerging market and developing economies (EMDEs; figure 1.C). Metal prices have also been supported by anticipation that the energy transition away from fossil fuels will result in sizeable increases in demand for metals. Copper prices have also been boosted by supply disruptions in Peru and Chile, while iron ore prices have been supported by supply disruptions in Australia. Most *agricultural commodity prices,* particularly for food commodities, saw substantial increases as well. Increases were partly driven by strong demand for soybeans and maize from China (linked to the recovery from the African Swine Fever and stockpiling), as well as supply shortfalls in South America (linked to La Niña) and the United States (figure 1.D). While global food markets remain well-supplied, some countries have experienced rising food prices.

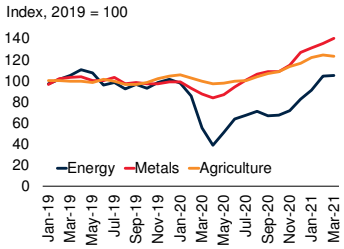
Outlook and risks

Energy prices are expected to average more than one-third higher in 2021 (a significant upward

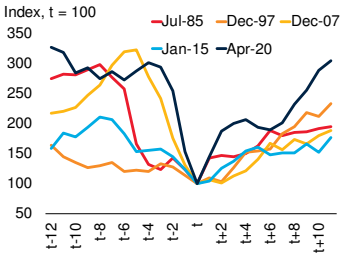
FIGURE 1 Commodity market developments

The recovery in commodity prices continued in the first quarter of 2021, with the three main price indices regaining their pre-pandemic levels. The recovery in oil prices that followed the COVID-19-driven collapse was the fastest recovery from a price collapse on record. However, OPEC+ continues to hold significant production off the market, posing a risk to the forecast. For metals, the recovery in demand is broadening, with strength across both advanced economies and EMDEs. Agricultural commodities, particularly food, have seen sharp price increases, and supply growth estimates have been revised down, although stocks remain ample.

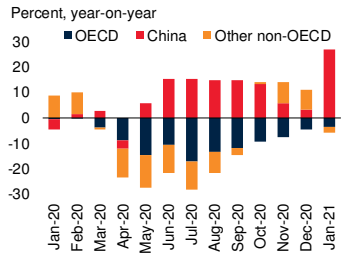
A. Commodity price indexes, monthly



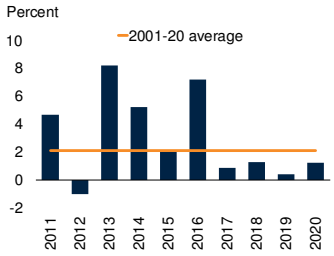
B. Oil price collapses and recoveries



C. Global metal demand growth



D. Global grain supply growth



Sources: USDA, World Bank, World Bureau of Metal Statistics.

A. Last observation is March 2021.

B. Lines indicate oil prices for 12 months before and after a price collapse, indexed to 100 at the trough. Dates indicate the date of the trough in prices for each episode.

D. Supply is the sum of beginning stocks and production. Years represent crop seasons (e.g., 2020 refers to 2020-21 crop season).

revision from the October report) followed by a smaller increase in 2022 (table 1). Non-energy prices are forecast to increase 19 percent in 2021 (also revised upward from October), but a modest decline is expected in 2022 as metal price increases partially unwind. The outlook is heavily dependent on the path of the pandemic, with the potential for additional upside risks if the vaccine rollout gathers pace and strong growth in the United States generates significant global spill-overs. However, on the downside, the global recovery could yet be derailed by renewed outbreaks in large economies.

Oil prices are expected to average $56/bbl in 2021 before rising to $60/bbl in 2022, a substantial upward revision from the October report. The revision reflects the improved global economic growth outlook, as well as a more gradual increase in production by OPEC and its partners (OPEC+) than previously expected. However, a further deterioration in oil demand, perhaps arising from a renewed outbreak of COVID-19 could put considerable additional pressure on the OPEC+ production agreement. An end to the agreement and a sudden increase in global production could result in oil prices being materially lower than currently expected. A further risk is the response of U.S. shale to higher prices—a faster than expected recovery in U.S. production would also put significant pressure on the OPEC+ producers.

Metal prices are forecast to rise nearly 30 percent in 2021 before dropping back in 2022, as stimulus driven growth eases and supply constraints are resolved. Risks to the forecast depend on major stimulus programs. A faster-than-expected withdrawal of stimulus by China would pose a significant downside risk to demand while the proposed infrastructure spending bill in the United States could provide further support for some metals, including aluminum, copper, and iron ore.

Agricultural prices, which are projected to rise nearly 14 percent in 2021, are expected to stabilize in 2022. Production shortfalls in some food commodities, such as soybeans, palm oil, and maize, have resulted in steep price increases; however, most global food commodity markets remain adequately supplied by historical measures. While the stock-to-use ratio, a rough measure of demand relative to supply, has fallen slightly during the past two crop seasons to around 28 percent, it is still much higher than the historical lows of 2006-07 of 17 percent. Despite well-supplied global markets and expectations of moderating food commodity prices, global food insecurity remains a concern. An additional 130 million people face chronic hunger and malnutrition because of the economic impacts of COVID-19, effectively doubling the number to

TABLE 1 Nominal price indexes and forecast revisions

	Price Indexes (2010=100)[1]					Change (%), q/q		Change (%), y/y		Forecast revision[3]	
	2018	2019	2020	2021f[2]	2022f[2]	2020Q4	2021Q1	2021f[2]	2022f[2]	2021f[2]	2022f[2]
Energy	**87**	**76**	**52**	**71**	**75**	**8.3**	**35.3**	**36.1**	**6.1**	**26.8**	**-5.9**
Non-Energy[4]	**85**	**82**	**84**	**100**	**97**	**9.3**	**11.8**	**19.0**	**-3.5**	**17.3**	**-5.0**
Agriculture	***87***	***83***	***87***	***99***	***100***	***8.7***	***9.3***	***13.5***	***1.0***	***12.1***	***-0.5***
Beverages	*79*	*76*	*80*	*81*	*83*	*-2.5*	*1.9*	*1.4*	*1.6*	*0.3*	*0.5*
Food	*90*	*87*	*92*	*108*	*109*	*11.9*	*12.3*	*17.1*	*0.9*	*15.6*	*-0.6*
Oils and meals	85	77	90	116	117	22.4	12.9	29.0	0.9	27.2	-0.9
Grains	89	89	93	106	107	10.7	17.2	13.8	0.9	12.3	-0.6
Other food	99	98	95	100	101	-0.1	6.8	5.2	0.9	4.2	-0.1
Raw Materials	*81*	*78*	*78*	*85*	*86*	*6.0*	*4.2*	*9.8*	*0.9*	*8.1*	*-0.8*
Fertilizers	***83***	***81***	***73***	***93***	***88***	***4.4***	***23.5***	***27.1***	***-5.0***	***23.9***	***-8.2***
Metals and Minerals	***83***	***78***	***79***	***103***	***91***	***11.2***	***16.0***	***30.4***	***-12.1***	***28.3***	***-13.4***
Precious Metals	**97**	**105**	**134**	**134**	**125**	**-1.6**	**-1.9**	**0.1**	**-6.8**	**3.8**	**-4.9**
Memorandum items											
Crude oil ($/bbl)[5]	68	61	41	56	60	3.8	35.9	35.7	7.1	28.4	-6.5
Gold ($/toz)	1,269	1,392	1,770	1,700	1,600	-2.0	-4.1	-4.0	-5.9	-2.0	-3.5

Source: World Bank.
Note: (1) Numbers may differ from tables A.1-4 due to rounding. (2) "f" denotes forecasts. (3) Denotes percentage points revision to the growth forecasts from the October 2020 report. (4) The non-energy price index excludes precious metals. (5) Average of Brent, Dubai, and WTI. See Appendix C for definitions of prices and indexes.

over 270 million, according to estimates by the UN Food and Agriculture Organization.

Special Focus: Causes and consequences of metal price shocks

Although they only account for around 7 percent of global commodity consumption, metals—especially copper and aluminum—are a major source of export revenue for around one-third of EMDEs. However, these economies' reliance on metal exports can make them vulnerable to sharp movements in metal prices. Metal price shocks are primarily driven by demand factors, such as global recessions and recoveries, in contrast to oil where both supply and demand factors play a role, and agriculture where supply factors dominate. As such, metals can have a procyclical impact on metal exporters—during a recession, metal exporters can be negatively affected by both the broader economic downturn that caused the metal price decline, and by the adverse effects of a collapse in metal prices on export revenue and economic activity. For metal exporting-EMDEs, metal price shocks appear to have asymmetric impacts, with small, temporary gains from price increases, but larger and longer-lasting output losses from price declines. These results suggest the need for metal exporters to save windfalls from metal price increases (which are typically short-lived), such that savings can be used to support activity when prices decline.

SPECIAL FOCUS

Causes and consequences of metal price shocks

Causes and consequences of metal price shocks

The 2020 global recession triggered by the COVID-19 pandemic delivered a major shock to commodity markets. Although they have since rebounded, oil prices fell by 60 percent between pre-pandemic levels and their trough in April and metal prices fell by 16 percent. These sharp moves in prices can have significant macroeconomic impacts for commodity exporters, with many emerging market and developing economies highly reliant on metals, especially copper and aluminum, for export revenue. Metal price shocks appear to have asymmetric impacts, with price increases associated with small, temporary expansions in activity, but price declines associated with more pronounced growth slowdowns and fiscal and export revenue losses. These results highlight the importance of counter-cyclical policy measures when responding to commodity price changes.

Introduction

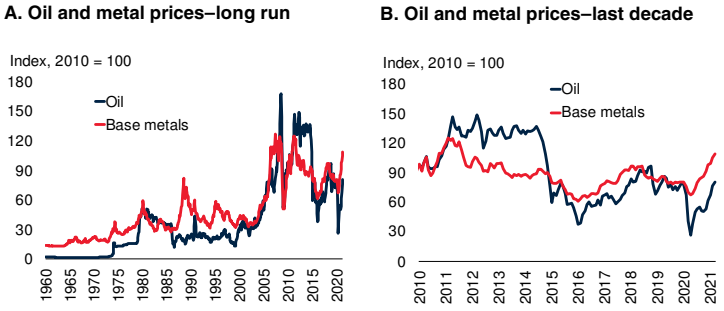
The COVID-19 pandemic had divergent impacts on different commodity groups (World Bank 2020a). Energy prices, particularly crude oil, plunged at the start of the pandemic, with the price of Brent crude oil declining by more than 60 percent from $64/bbl in January 2020 to a low of $23/bbl in April 2020. In contrast, metal prices declined by only 16 percent over the same period and quickly regained their pre-pandemic peak. By March 2021, several metal prices had reached their highest level in a decade.

Oil and metal prices can be affected by common shocks, such as global recessions and their subsequent recoveries, such that prices move in tandem (figure SF.1; Bilgin and Ellwanger, 2017; Chiaie, Ferrara, and Giannone, 2017). For example, both energy and metal prices declined during the 2009 global recession and rose during the subsequent recovery. These periods of synchronized price movements can occur both in the short-run and in the long-run—the price cycles of oil and metals coincided in the early 1970s to mid-1980s, and the early 2000s to late 2010s, although metal prices went through an additional cycle in the mid-1990s (Helbling 2012; World Bank 2020b).

Sometimes, however, oil and metals react differently to a common shock or are buffeted by commodity-specific shocks, including shocks to supply and technological change (Baffes and Kabundi, forthcoming). The COVID-19 pandemic is one example, with oil being significantly more affected than metals due to lockdown measures that disproportionately impacted travel.

FIGURE SF.1 Oil and metal prices

Oil and metal prices have similar drivers, notably economic growth. As such, they tend to follow one another closely, particularly around major economic events like global recessions and recoveries. However, they can also vary significantly as they are affected by other factors, including supply shocks. Notable periods of deviation include the mid-1980s, 2011-2014, and most recently the COVID-19 pandemic.



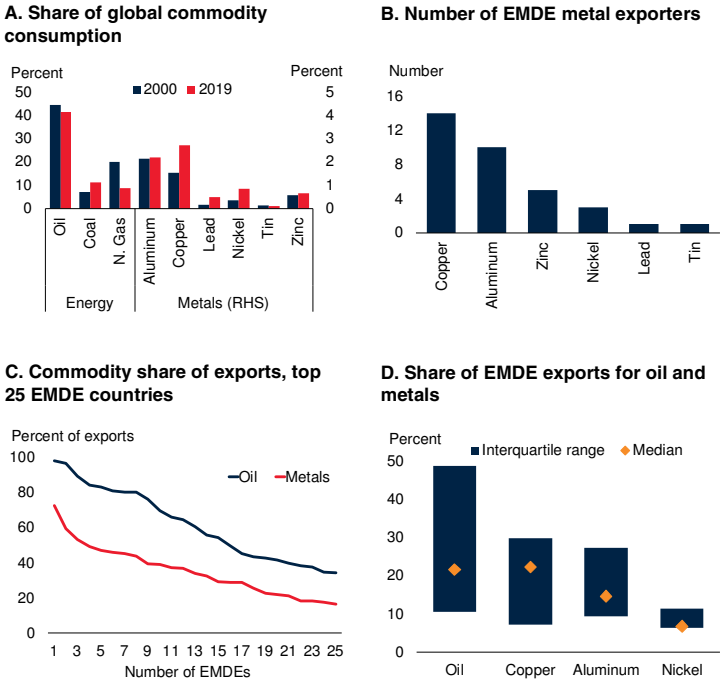
Sources: Bloomberg, World Bank.
Note: Both price series are taken from the World Bank's Pink Sheets. Oil refers to an average of Brent, WTI, and Dubai. Base metals index includes aluminum, copper, lead, nickel tin, and zinc.

Commodity price movements are a key source of macroeconomic volatility in EMDEs (Jacks, O'Rourke, and Williamson 2011). Terms-of-trade shocks can account for up to half of business cycle fluctuations, and the impact of shocks can be asymmetric, with export price shocks having a much larger impact than import price shocks (Di Pace, Juvenal, and Petrella 2020; Kose 2002; Richaud et al. 2019).

Energy and metal commodities are critical sources of export and fiscal revenue for almost two-thirds

FIGURE SF.2 The importance of energy and metals

Global crude oil consumption is six time larger than global base metal consumption. Among base metals, aluminum and copper account for the largest share of global commodity consumption. Metal exporters tend to be less reliant on metal exports than oil exporters are on oil exports. However, a number of countries are nonetheless heavily dependent on metal exports, especially some copper and aluminum exporters.



Sources: BP Statistical Review, Observatory of Economic Complexity, UN Comtrade; World Bank, World Bureau of Metal Statistics.

A. Value of commodity consumption calculated as the product of energy and metals consumption multiplied by their respective prices. Metals refers to the value of refined metals only.

B.D. An EMDE is defined as an exporter if exports of a given commodity are 5 percent of more of total exports in a single year between 2018-19.

B. Number of exporters among EMDEs of a given metal.

C. Chart shows the share of crude oil in total goods exports for 25 oil exporters, sorted by those with the highest share of oil in total exports in blue, and the equivalent for metals in red. Metals include both metal ores and refined metals.

D. Chart shows the median and interquartile range of the share of exports accounted for by oil, copper, aluminum, and nickel, for EMDE exporters of that commodity. Oil includes 62 EMDEs, copper 14, aluminum 10, and nickel 5. Lead, tin, and zinc are not shown due to small sample size.

of emerging market and developing economies (EMDEs). Prospects for these economies can vary significantly depending on the type of commodities they export, given the divergence in prices. Yet while a significant body of research has examined the impact of oil price shocks on the global economy, oil exporters, and oil importers, the literature on the impact of metal price shocks is much smaller, particularly for EMDEs.

Against this background, this *Special Focus* examines the importance of metals for EMDEs and analyzes the impact of metal price shocks on metal exporters and importers. It addresses the following questions:

i. How important are metals for the global economy and EMDEs compared to energy commodities?

ii. What are the drivers of metal price shocks?

iii. What are the implications of movements in metal prices for economic activity in EMDEs?

Definition of commodity exporter. For this Special Focus, exporters of individual commodities (oil, aluminum, copper, tin, nickel, lead, and zinc) are defined as countries in which the individual commodity accounts for 5 percent or more of goods exports (annex SF). This yields 62 EMDE oil exporters and 58 EMDE metal exporters. For the individual base metals, copper has the largest number of exporters (14), followed by aluminum (10), zinc (5), nickel (3), and lead and tin (1 each; figure SF.2). Although many of these EMDEs export multiple metals, almost all do not export enough for more than one metal to reach the exporter threshold. Tajikistan is a notable exception, exporting aluminum, copper, lead, and zinc. For four of the six base metals, the largest exporter of the metal was not classified as a metal exporter either because its economy was highly diversified, or because the value of the exported metal was small compared to its other exports. For example, Indonesia accounted for one -third of global tin exports in 2019, but these made up less than 1 percent of the country's total goods exports that year. Similarly, Russia accounted for around one-quarter of global nickel exports in 2019 but these accounted for just over 1 percent of Russia's total exports.

The importance of metals for EMDEs

While base metals may not currently play as large a role in global economic activity as oil—at least as measured in terms of global commodity consumption—they play an important role in economic activity in about one-third of EMDEs. In addition, as the energy transition away from fossil

fuels unfolds, base metals' role in the global economy is expected to increase considerably since base metals are heavily used in both renewable electricity generation and in electric vehicles.

Metals' role in global commodity consumption. Globally, base metals account for 7 percent of global commodity demand in value terms, about one-sixth of crude oil, which accounts for 42 percent of global commodity demand (BP 2020). Of this, copper and aluminum accounted for 3 percent and 2 percent of global commodity consumption, respectively (World Bureau of Metal Statistics 2021).[1] Since 2000, the share of copper, lead, nickel, and tin in global commodity consumption has increased, while that of aluminum remained broadly constant reflecting a sharp rise in volumes but relatively stagnant prices. Some base metals play an outsized role in global economic activity, notwithstanding their small share of global commodity consumption. For example, tin accounts for less than 0.1 percent of global commodity consumption but is an essential input into the electronics industry (Baffes, Kabundi, and Nagle 2020).

Commodity reliance of EMDE commodity exporters. In general, oil exporters tend to be more reliant on oil than metal exporters are reliant on metals. On average, oil exports accounted for 32 percent of total goods exports among oil exporters in 2019—considerably more than the 20 percent average for metal exporters overall. In the ten most-oil-reliant EMDEs, oil exports account for 84 percent of total goods exports, on average, compared with metals accounting for 49 percent for the ten most metal-reliant EMDEs, on average. Among base metal exporters, the most commodity-dependent exporters were copper exporters, with a median share of 22 percent of goods exports and a maximum share of 73 percent of goods exports for the most concentrated exporter, Zambia. Aluminum exporters were the second most concentrated, with a median share of 15 percent of exports and a maximum share of 48 percent of exports for Guinea.

Concentration of metal ore reserves. Global ore reserves, ore production, and refined production are highly concentrated in a limited number of countries and are significantly less diversified than, say, global oil production (figure SF.3).[2] For each of the six base metals, the top four countries with the largest share of reserves account for 50-75 percent of total reserves (USGS 2020a-f). Chile accounts for 23 percent of known copper reserves, while Australia and Peru have 10 percent each (USGS 2020a). Guinea has the world's largest reserves of bauxite, which is used in aluminum production (25 percent of the world's total); Indonesia the world's largest nickel ore reserves (24 percent); Australia the world's largest lead ore reserves (40 percent) and zinc ore deposits (27 percent); and China the world's largest tin ore reserves (23 percent).

In general, reserves of metal ores do not "run out". Instead, higher-grade supplies that contain a higher concentration of the metal are gradually depleted, but substantial lower-grade, currently uneconomical, ores remain. In the case of aluminum, bauxite is currently the preferred source of alumina, the intermediate product from which aluminum is derived. However, there are vast sources of other, currently uneconomic sources of alumina. The U.S. Geological Survey estimates that the world has an essentially inexhaustible supply of subeconomic resources of aluminum in materials other than bauxite (USGS 2020a). Some argue that innovation in extraction technology exploits a geological law where greater quantities of a resource are found in progressively lower-grade deposits (Schwerhoff and Stuermer 2019). The result is increasing resource production to meet growing global demand.

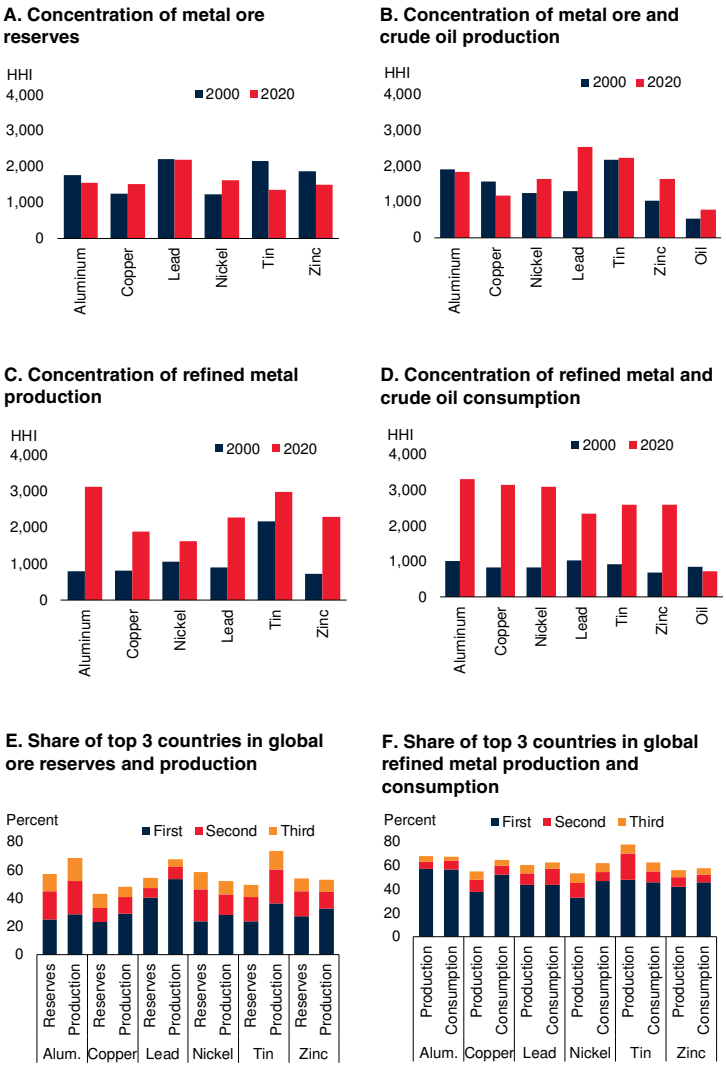
Concentration of metal ore production. While the concentration of ore reserves and production is due in large part to the nature of geographical deposits, refined production is less anchored to resource endowments. Although not the location of the world's largest reserves of all metals, China is now the largest producer of lead, tin, and zinc

[1] This value only includes refined base metals and does not include the value of metal ore production.

[2] If counting OPEC as a single producer, the concentration of the oil market would increase significantly.

FIGURE SF.3 Global market concentration of metal reserves, production, and consumption

The global concentration of ore reserves is high, given geographical deposits, and has changed little since 2000. In contrast, the concentration of refined metal production and consumption has increased sharply. This change has been driven by China, which now accounts for around half of consumption of base metals.



Sources: BP Statistical Review, World Bank, World Bureau of Metal Statistics
A.D. HHI stands for Herfindahl–Hirschman Index, and is a measure of market concentration. It is calculated by squaring the market share of each country and then summing the resulting numbers. The HHI can range in value between 0 and 10,000, where low scores indicate widespread production or consumption, while a value of 10,000 would indicate a single country accounted for all of global production or consumption. The higher the number, the more concentrated the market.

ores, and the second-largest producer of bauxite. China has around 3 percent of the world's known reserves for bauxite/aluminum, copper, and nickel, and roughly one-fifth of known reserves of lead, tin, and zinc. However, it is mining these ores at a much faster pace than other countries. As a result, it accounts for 20-47 percent of global production of bauxite, lead, tin, and zinc ores.

Concentration of refined metal production. Global refined metal production is also highly concentrated. China is the world's largest producer of all refined base metals, accounting for between 35-55 percent of global production. Aluminum is the most concentrated metal, with China accounting for 55 percent of global production, despite only accounting for 3 percent of bauxite reserves and 20 percent of bauxite production. Nickel is the least concentrated metal, with China accounting for 35 percent of production, followed by Indonesia with 12 percent.

Evolution of concentration over the 2000s. The concentration of global production of all refined metals and some metal ores has risen sharply over the past two decades, largely because of rapid production growth in China. Since 2000, China's share of global production of refined nickel has risen nearly eight-fold, its share of refined aluminum and copper production has risen four-fold, while its share of global production of refined lead has tripled and zinc has doubled. Among the metal ores, China's share of global production has tripled in bauxite, and nearly doubled for copper, lead, and zinc.

Concentration of global metal consumption. Global consumption of refined base metals has also been transformed over the past two decades by growth in China. In 2000, the United States was the single largest consumer of most metals (except zinc where China was the largest consumer) but only accounted for 15-25 percent of base metal consumption. However, China's commodity consumption has risen dramatically over the past two decades such that it is now the single largest consumer of all refined base metals, accounting for 45-57 percent of global consumption (figure SF.4). For lead, and to a lesser extent tin and zinc, China's demand can largely be met with domestic production. For copper and nickel, China relies heavily on imports, accounting for around one-third and one-fifth of global imports respectively. For aluminum, China's consumption far outstrips

what can be produced from its bauxite reserves. It therefore relies heavily on imports of bauxite and alumina to produce aluminum, and accounts for about 70 percent of global imports of bauxite.

Literature review: Drivers of metal price shocks

With almost two-thirds of EMDEs heavily reliant on commodities for fiscal and export revenues, their macroeconomic and financial stability has at times been threatened by large commodity price swings. Lasting commodity price changes have sometimes required wrenching macroeconomic adjustments, but even temporary price changes have also at times caused severe downturns (Baffes et al. 2015).

These factors have been explored in a large literature that splits into two branches. The first considers price cycles, typically decomposing these into transitory and permanent components, but without determining the drivers of prices. In general, this literature confirms the existence of price cycles that affect all commodities, while transitory shocks affect individual commodities differently. Metal prices are typically the most affected by short-term, business cycle shocks. The second branch of the literature focuses on the drivers of commodity prices, decomposing price changes into aggregate demand, commodity-specific demand, and commodity-specific supply shocks. Most of this literature has focused on oil prices. The literature on the drivers of metal prices is smaller, but there is greater consensus within the literature that aggregate demand is the main driver of metal price shocks.

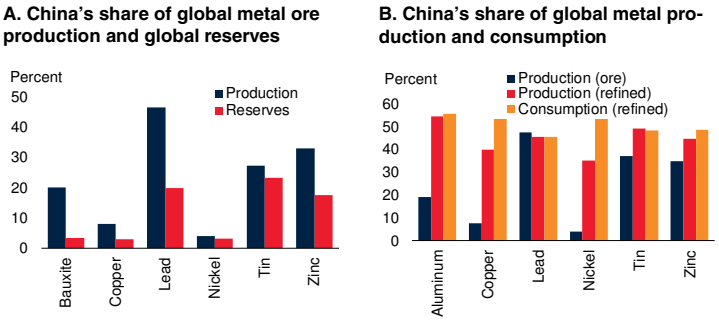
Price cycles. While much of the early literature on commodity price movements focused on the role of long-term trends in prices, subsequent research in the aftermath of the 2000s commodity price boom investigated the existence of common price cycles across many commodity groups (annex table SF.1). This literature typically decomposed price movements into transitory and permanent components or trends. This includes short-term or business cycles, medium-term cycles (of between 8 -20 years), and "supercycles," which span many commodities and last for several decades. For metals, in particular, the price cycle literature finds that the business cycle component of shocks accounts for a much greater share of their variability than for other commodities—about twice as much of the variance in metal prices compared to energy and agriculture (Baffes and Kabundi, forthcoming).

The short- and medium-term cycles are driven by transitory shocks, which can originate from several sources, including recessions, such as the 2007-09 global financial crisis, as well as accidents (e.g., the 2019 Vale accident in Brazil which disrupted iron ore supplies), conflicts (such as the first Gulf war, when Iraq/Kuwait oil production was halted), or terrorist attacks (e.g., the attacks on Saudi Arabian oil facilities in 2019, which temporarily disrupted oil exports). In contrast, permanent shocks, such as technology and policies, can exert a lasting impact on commodity markets—and prices. The development of shale technology in the natural gas and crude oil industries rendered the United States a net energy exporter in 2019 and the world's largest oil producer, for the first time since 1952 (EIA 2020).

Determinants of commodity price shocks. In general, the literature investigating the drivers of commodity price shocks builds on the study by Kilian (2009), which uses a structural vector autoregression (SVAR) model with sign

FIGURE SF.4 China's impact on metal markets

To meet its rapid increase in metal demand, China has sharply boosted its production of metal ores and refined metals. China is the single largest consumer of global metals and accounts for a large share of global refined lead, tin, and zin production.



Source: USGS, World Bank, World Bureau of Metal Statistics.
B. Calculated as current known metal ore reserves divided by current production levels (2019).

restrictions to identify the relative importance of different drivers of oil price shocks. Utilizing data on commodity prices, demand, and supply (and occasionally inventories), price shocks are decomposed into aggregate global demand shocks, commodity-specific supply shocks, and commodity-specific demand shocks. Aggregate global demand shocks include global recessions (such as the one associated with the 2008-09 global financial crisis), as well as pronounced expansions, which typically result from industrialization or urbanization (such as China's expansion in the 2000s). Commodity-specific supply shocks include accidents, strikes, conflicts, cartel production decisions, government policies, and weather events.[3] Commodity-specific demand shocks are typically captured as the residual component of the SVAR model, and incorporate the role of inventories (resulting from government stockpiling, producer inventories, and market-driven purchases), as well as that of technological changes, shifts in consumer preferences, and the impact of government policies (for example, a carbon tax).

While there is now an ample literature for oil prices, the literature is scarcer for metal prices. Two notable exceptions in this regard are Stuermer (2018), and Jacks and Stuermer (2020), which utilize a dataset of commodity supply and demand (and prices) for six and twelve commodities, respectively, from 1870-2013. Their analysis finds that for metals, aggregate demand shocks and commodity-specific demand shocks play a larger role than supply shocks and that their impact has increased over time. Supply shocks were found to have an impact for copper and tin only. The greater role for aggregate demand found by these two studies is consistent with other studies that find a strong response of metal consumption to industrial activity (Roberts 2009; Stuermer 2017; Marañon and Kumral 2019).

[3] Weather supply shocks mostly affect agriculture, such as the recurring El Niño and La Niña episodes, as well as droughts, and floods. However, industrial commodities can also be affected. For example, the oil facilities off the Gulf of Mexico are periodically disrupted by hurricanes. For metals, flooding can lead to temporary closures of open-pit mining facilities.

Macroeconomic impact of metal price shocks

Commodity price shocks can have major repercussions for the global economy or for individual countries.[4] For some commodities, such as crude oil, sharp price movements can cause business cycle fluctuations both globally and at the country-level, although effects have generally been found to be short-lived (Baumeister, Peersman, and Robays 2010; Kilian 2009). Other commodities, such as tin, may not cause global business cycle fluctuations but are critical inputs for some sectors (e.g. tin, in the electronics industry), and are important for the small number of countries that produce or export them.

Methodology. To assess the impact of metal price shocks on EMDEs, a local projections model is estimated for 153 EMDEs, of which 58 are metal exporters, 14 are copper exporters, and 10 are aluminum exporters (annex SF). The model examines the impact of metal price changes on real output over the period 1970-2019 under two different specifications.

- *Symmetric impact.* The model is first estimated to examine the impact of a change in metal prices (in aggregate) on both metal exporters and importers assuming that the impact is symmetric for price increases and decreases. The model is then repeated for aluminum and copper price shocks separately.

- *Asymmetric impact.* The model is extended by identifying large price shocks as an increase or decrease of 20 percent or more ("price jump" for increases, and "price collapse" for decreases). The model is estimated for these shocks separately, allowing an investigation of whether price increases and decreases have asymmetric impacts. This specification is repeated for aluminum and copper.

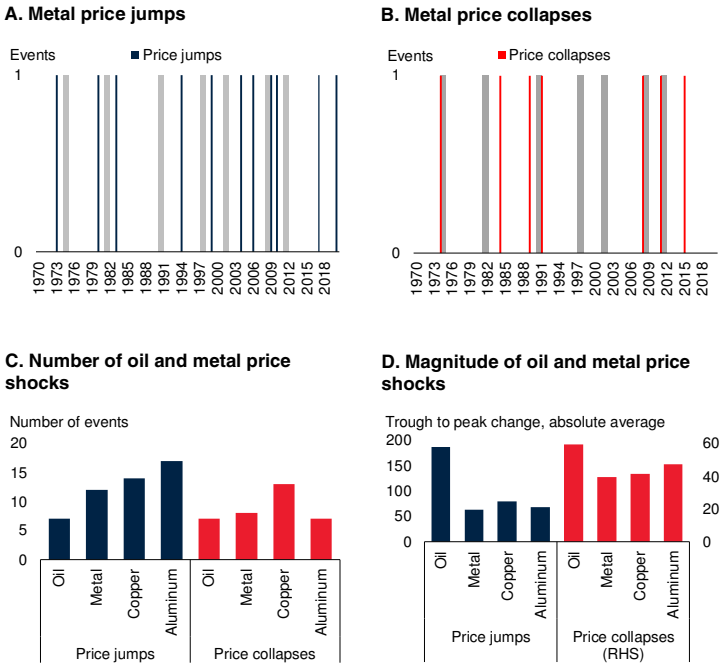
[4] Conversely, metals prices, especially copper, are also often considered barometers and leading indicators of global economic activity (Bernanke 2016; Hamilton 2015).

Features of large metal price jumps and collapses. The metal price jumps and collapses are clustered around major economic events, notably the four global recessions (1974-75, 1981-82, 1990-91, and 2008-09), and three global slowdowns (1998, 2001, and 2012) which have occurred since 1970 (figure SF.5; Kose, Sugawara, and Terrones 2020). A global recession also occurred in 2020 but is not included here. In general, the metal price jumps occurred in the years prior to global recessions and slowdowns (such as 1973, 1980, and 2006), and in the years following these when global recoveries were underway (such as in 1983, 1999, and 2009). In contrast, price collapses tended to occur during global recessions and slowdowns (such as in 1974, 1991, and 2008). This is consistent with earlier findings about the considerable role of aggregate demand in driving prices. Metal price jumps were fairly synchronized before and after recessions and slowdowns, as were price collapses during recessions and slowdowns. In general, metal price shocks are more frequent, but of smaller magnitude, than oil price shocks.

Impact of metal price shocks. For EMDE metal exporters, a positive metal price shock resulted in a gradual rise in output that became statistically significant after two years, declined gradually, and became statistically insignificant after four years (figure SF.6). The results indicate that a 20 percent increase in metal prices was followed by a 0.32 percent rise in economic activity two years after the shock. For EMDE metal importers, there was no statistically significant impact.[5] For metal importers, metal imports are typically a relatively small share of total goods imports (around 5 percent, on average in the sample) which may account for the lack of a statistically significant impact of metal price shocks. The shares of individual base metals are even smaller, at 0.6 percent for copper and 0.4 percent for aluminum. Even for China, the largest consumer of all metals considered here, metals accounted for a small share of imports, with copper the largest of the base metals at around 3 percent of total goods imports. This is a significant difference to oil, which accounts for a much larger share of EMDE imports, for example, it accounts for around 14 percent of China's imports.

FIGURE SF.5 Metal price shocks

In general, metal price jumps occurred in the years prior to global recessions and slowdowns (such as 1973, 1980, and 2006), and in the years following these when global recoveries were underway (such as in 1983, 1999, and 2009). In contrast, price collapses tended to occur in the global recessions and slowdowns (such as in 1974, 1991, and 2008). This is consistent with the greater role of aggregate demand for metals prices than oil prices found in the literature. In general, metal price shocks are more frequent but smaller than oil price shocks.



Source: World Bank.

A.B. Lines show the dates of a metal price jump or collapse, defined as an increase or decrease in prices over a 6-month period of 20 percent or more. Shaded areas indicate period of global recessions or slowdowns.

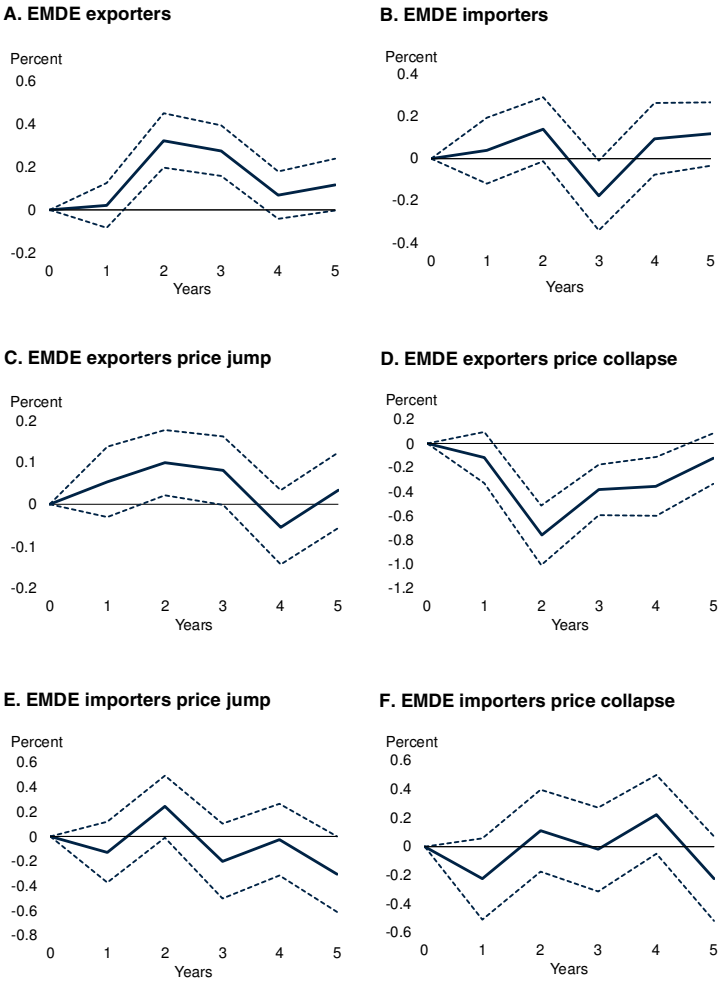
D. Figure shows the average peak-to-trough price change for price jumps and collapses. Price collapses are shown in absolute averages, so a reading of 50 percent would indicate a 50 percent fall in prices.

Asymmetric impacts of metal price shocks. The aggregate results mask asymmetric impacts of metal price jumps and metal price collapses, defined as price changes of more than 20 percent. While price jumps resulted in an increase in economic activity in metal exporters, the effects were small and short-lived (0.1 percent increase in output after two years). Price collapses, however, had much bigger effects—eight times more than

[5] These results are consistent with Di Pace, Juvenal, and Petrella (2020) who find evidence of a positive and statistically significant effect of export price shocks on output growth in EMDEs but find a smaller impact of import price shocks on output.

FIGURE SF.6 Metal price shocks to EMDE metal exporters and importers

Metal price shocks have an asymmetric impact on metal-dependent EMDEs. Price jumps are associated with temporarily higher output in metal exporters, however the response is small and short-lived. However, output tends to fall more strongly after price collapses than it raises after price jumps, and these effects last longer. There is little impact for metal importers.



Source: World Bank.
Note: Cumulative impulse responses to a 20 percent price shock for 153 EMDEs, of which 58 are metal exporters, from a local projections model. Dependent variable is output growth after changes in metal prices. Solid lines are coefficient estimates and dotted lines are 95 percent confidence bands.

in the case of price jumps, reaching 0.76 percent in the second year, and lasting twice as long. The effects for metal importers remained insignificant.

Potential reasons for asymmetric impacts. This disproportionately larger impact of price collapses than price jumps may reflect the procyclicality of fiscal policy in EMDEs (Alesina, Campante, and Tabellini 2008; Frankel 2010). Increased fiscal spending during booms can go toward unproductive purposes such as higher public sector wages, while fiscal consolidation during price collapses can exacerbate the depth of a recession (Frankel 2011; Medas and Zakharova 2009). This can also have lasting negative effects on growth, as public investment, such as infrastructure spending, is typically the first element of public spending to be cut (Richaud et al. 2019). For example, in the aftermath of the 2014-16 oil price collapse the sharp decline in government revenues forced abrupt cuts in government spending that exacerbated the economic slowdown (Stocker et al. 2018).

Impact of copper price shocks. When the model was estimated for individual metals, results were broadly similar for copper. In copper EMDE exporters, economic activity increased statistically significantly after a copper price increase; in copper importers, no significant effect was found, in line with the finding for metals more broadly (figure SF.7). Asymmetric responses were also observed in copper exporters: a copper price jump increased output in copper exporting EMDEs by 0.07 percent after two years, but then the effect dissipated; a copper price collapse lowered output by more than three times as much (0.22 percent) two years after the shock and the effect remained significant for three years.

Impact of aluminum price shocks. In contrast to copper, aluminum price shocks were not followed by statistically significant output changes, neither in EMDE exporters nor importers. These differences may reflect the lower reliance on aluminum exports for aluminum exporters than the copper reliance for copper exporters. In the average aluminum exporter in the sample, aluminum accounted for 15 percent of exports, almost one-third less than the 22 percent export share of copper in copper exporters. In eight of the copper exporters, copper accounted for 20 percent of exporters or more, compared to just three of the aluminum exporters in which aluminum accounted for the same share.

Conclusion and policy implications

Base metals may not (yet) play as big a role for the global economy as oil, at least in terms of their share of global commodity demand. The average metal exporter is also less reliant on metal exports than the average oil exporter is on oil exports.

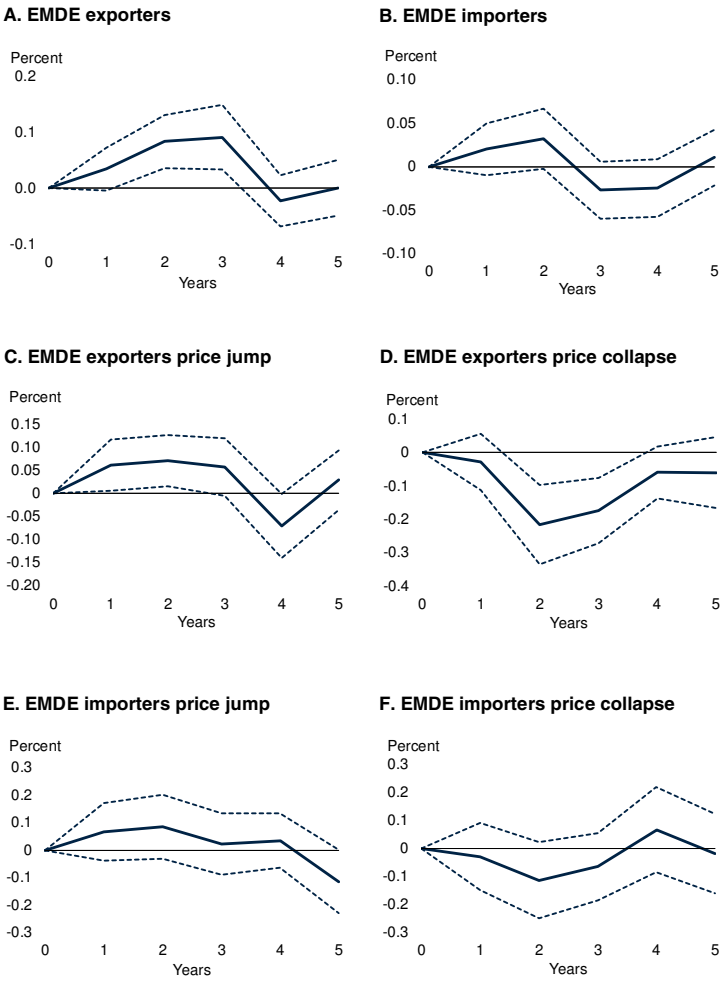
However, in about one-third of EMDEs base metals account for a significant share of total exports. As such, their macroeconomic stability is vulnerable to metal price shocks. Since metal prices are mainly driven by global demand shocks, metal price swings can amplify the impact of global downturns and recessions—or conversely, upturns—for metal exporters. Empirically, this has been particularly the case for copper exporters, which tend to be more reliant on copper for exports than other metal exporters. In copper exporters, copper price collapses have sizable and lasting adverse economic consequences—and copper price jumps had smaller and more fleeting benefits—whereas other metal price jumps or collapses have had largely insignificant effects.

For policymakers in metal exporters, these results indicate the need for counter-cyclical policies to shield the economy from metal price volatility. The temporary nature of price increases suggests that any surplus revenue should be saved such that resources are available to support activity during price collapses. Stronger fiscal frameworks, including fiscal rules, and structural budget rules can help resist pressures to spend revenue windfalls, or reduce non-resource taxes. Making the assumptions behind these rules independent is critical to their success (Frankel 2011). Sovereign wealth funds, including stabilization funds, can also be a useful instrument. Reforms to monetary policy and exchange rate frameworks could help foster resilience to oil price fluctuations and ensure smoother exchange rate adjustments (Frankel 2018; Torvik 2018).

The empirical exercises suggests that greater export diversification may blunt some of the impact of commodity price shocks. Copper exporters are, on average, the most resource reliant of metal exporters and saw large economic impacts from copper price swings, while the impacts of price shocks on other metal exporters were statistically insignificant. For resource-reliant economies, this underscores the need for diversification. Policies to promote human capital accumulation, improve institutions, as well as measures to move into higher value-added activities in resource sectors, can support diversification (World Bank 2015).

FIGURE SF.7 Copper price shocks to EMDE copper exporters and importers

Similar to aggregate metals, copper price shocks have an asymmetric impact on copper-dependent EMDEs. Price jumps are associated with a small and temporary increase in output, while price collapses have a larger and longer impact. There is again little impact for metal importers.



Source: World Bank.

Note: Cumulative impulse responses to a 20 percent price shock for 153 EMDEs, of which 14 are copper exporters, from a local projections model. Dependent variable is output growth after changes in copper prices. Solid lines are coefficient estimates and dotted lines are 95 percent confidence bands.

ANNEX SF Data

The dataset includes annual data for 153 EMDEs for 1970-2019. Comtrade and the Observatory of Economic Complexity were used as the source of commodity import and export data. Annual data on real GDP and the world per capita GDP are available from the World Bank's World Development Indicators. Metal prices data are taken from the World Bank's Commodity Price database (see Appendix A). Nominal Price Indexes are calculated by taking a weighted average of aluminum, copper, lead, nickel, tin, and zinc. The real price is obtained by deflating the nominal metal price with the U.S. consumer price index (CPI) from the Federal Reserve Economic Data (FRED) database maintained by the St. Louis Fed. The real metal price was converted into annual growth rates. The control variables are comprised of global demand and domestic inflation computed as the annual growth rate of CPI for each country. Data on domestic CPI are taken from the IMF World Economic Outlook.

For the purposes of this Special Focus an EMDE is defined as a commodity exporter if its exports of a given commodity are 5 percent or more of total goods exports. Note that this results in a larger number of exporters than the definition in World Bank 2020b, which sets a threshold of 20 percent of total exports. For the identification of metal exporters, all exports of industrial metal ores and refined metal exports were included. Precious metal exports were not included. This identification provides 58 metal exporters, 14 copper exporters, and 10 aluminum exporters.

EMDEs used in this sample are deemed metal-importers if their imports of the specific metal accounted for 0.1 percent or more of total imports. This provided 50 metal importers, 31 copper importers, and 38 aluminum importers. The average concentration of metal imports as a share of total imports is an order of magnitude smaller than that of exporters.

Metal price jumps and collapses were identified using monthly price data. An event was identified as an increase or decrease in prices of 20 percent or more over a 6-month period. For years where multiple events occurred, the largest event was included. Events could not overlap within a 12-month period. Separate events were identified for aggregate metal, copper, and aluminum prices.

Metal price data limitations prevent estimating the local projections model for metal ore exporters and refined metal exporters separately. This is a limitation of the research since metal exporters can pursue different export strategies: export of metal ores; export of refined metals; or production of refined metals used in domestic manufacturing and exported via finished goods. As such, a shock affecting the supply of a metal ore could affect metal ore exporters and refined metal exporters differently.

For example, for the Democratic Republic of Congo, exports of refined copper account for more than 50 percent of total exports while exports of copper ore were around 7 percent. In contrast, for Guinea, exports of bauxite (aluminum ore) accounted for nearly 50 percent of total exports, while exports of alumina (an intermediate product in the refining process) accounted for just under 2 percent of exports, and exports of refined aluminum were negligible. Finally, China's production of lead ore accounts for nearly half of global lead ore production but only a negligible amount of China's exports since most of this ore is used in domestic manufacturing for export (and China accounts for around 0.4 percent of global lead ore exports).

ANNEX TABLE SF.1 Summary of empirical research on supercycles

Author(s)	Data	Main finding
Cuddington and Jerrett (2008)	Six base metals, 1850-2006, deflated by the U.S. CPI and PPI	Four supercycles (the last was ongoing): 1890-1930, 1930-1962, 1962-1998, 1998-
Jerrett and Cuddington (2008)	Three metals, 1850-2006, deflated by the U.S. CPI	Three supercycles: 1850-1925, 1925-1998, 1998-
Cuddington and Zellou (2012)	Crude oil, 1861-2010, deflated by the U.S. CPI and PPI	Three supercycles after WWII which comove with metals: 1861-1884, 1966-1996, 1996-
Erten and Ocampo (20 13)	Prices of 24 commodities and indices, 1865-2010, deflated by the U.S. CPI and MUV index	Four supercycles consistent with the Prebisch-Singer hypothesis: 1890-1930, 1930-1965, 1970-1998, 1998-
Rossen (2015)	Prices of 20 metals, 1910-2011, monthly, deflated by the U.S. CPI	Four supercycles: 1910-1930, 1930-1965, 1970-1998, 1998-
Erdem and Ünalmı (2016)	Crude oil, 1861-2014, deflated by the U.S. CPI	Three supercycles: 1861-1882, 1966-1996, 1996-
Buyuksahin, Mo, and Zmitrowicz (2016)	Bank of Canada commodity index, 1899-2015, deflated by the U.S. PPI	Four supercycles: 1899-1932, 1933-1961, 1962-1995, 1996-
McGregor, Spinola, and Verspagen (2018)	Five price indices, 1960-2016, deflated by the MUV	Two supercycles: 1960-1995, 1996-
Ojeda-Joya, Jaulin-Mendez, and Bustos-Pelaez (2019)	Index, 1865-2013 and 24 commodities, 1962-2010, deflated by the MUV index	Supercycles are synchronized and demand-driven: ***Oil***: 1885-1950, 1965-1995, 1996-; ***Metals***: 1877-1920, 1920-1945, 1945-1995, 1995-; ***Non-oil***: 1895-1937, 1937-1996, 1996-
Jacks (2019)	Indices and 40 commodities, 1900-2015, deflated by the U.S. CPI	Three or four medium-term cycles (depending on the commodity) and modestly increasing trend: 1903-1932, 1965-1996, 1996-
Cordano and Zellou (2020)	Natural gas prices, 1922-2015, deflated by the U.S. CPI	Three supercycles, strongly correlated with oil supercycles: 1948-1970, 1970-1994, 1994-2017

Source: World Bank.
Note: All papers (except Rossen 2015) use annual data and are based on the HP filter, except Erdem and Ünalmiş (2016) who use BP and HP filters. The MUV index (Manufacturing Unit Value) is a measure of dollar-based global manufacturing inflation monitored by the World Bank.

References

Alesina A., F. Campante, and G. Tabellini. 2008. "Why Is Fiscal Policy Often Procyclical." *Journal of the European Economic Association* 6 (5): 1006-1036.

Baffes, J. and A. Kabundi. 2021. "Commodity Price Shocks: Order Within Chaos." World Bank Policy Research Working, forthcoming. World Bank, Washington, DC.

Baffes, J., A. Kabundi, and P. Nagle. 2020. "The Role of Income and Substitution in Commodity Demand." Policy Research Working Paper 9122, World Bank, Washington, DC.

Baffes, J., M. A. Kose, F. Ohnsorge, and M. Stocker. 2015. "The Great Plunge in Oil Prices: Causes, Consequences, and Policy Responses." Policy Research Note 1, World Bank, Washington, DC.

Baumeister, C., and G. Peersman. 2013. "Time-Varying Effects of Oil Supply Shocks on the US Economy." *American Economic Journal: Macroeconomics* 5 (4):1-28.

Bernanke, B. 2016. "The Relationship Between Stocks and Oil Prices." https://www.brookings.edu/blog/benbernanke/2016/02/19/the-relationship-between-stocks-and-oil-prices/

Bilgin, D., and R. Ellwanger. 2017. "A Dynamic Factor Model for Commodity Prices." Staff Analytical Notes 17-12, Bank of Canada.

BP. 2020. "Statistical Review of World Energy." BP, London.

Buyuksahin, B., K. Mo, and K. Zmitrowicz. 2016. "Commodity Price Supercycles: What Are They and What Lies Ahead?" Bank of Canada Review, Autumn: 35-45.

Chiaie, S. D., Ferrara, L., and D. Giannone. 2017. "Common Factors of Commodity Prices." Working Papers 645, Banque de France.

Cordano, A. L. V., and A. M. Zellou. 2020. "Super Cycles in Natural Gas Prices and their Impact on Latin American Energy and Environmental Policies." *Resources Policy*, 65: https://doi.org/10.1016/j.resourpol.2019.101513.

Cuddington, J. T., and D. Jerrett. 2008. "Super Cycles in Real Metal Prices?" *IMF Staff Papers* 55 (4): 541-565.

Cuddington, J. T., and A. Zellou. 2012. "Is There Evidence of Super-cycles in Crude Oil Prices?" *SPE Economics and Management* 4 (3): 171-181

Di Pace, F., L. Juvenal, and I. Petrella. 2021. "Terms-of-Trade Shocks are Not all Alike." Bank of England Working Paper 901, London.

EIA (Energy Information Administration). 2020. "Today in Energy, February 6, 2020." U.S. Energy Information Administration, Washington, DC. https://www.eia.gov/todayinenergy/detail.php?id=42735.

Erdem, F., and I Ünalmış. 2016. "Revisiting Super-Cycles in Commodity Prices." *Central Bank Review* 16 (4): 137-142.

Erten, B., and J. A. Ocampo. 2013. "Super Cycles of Commodity Prices since the Mid-nineteenth Century." *World Development* 44 (C): 14-30.

Frankel, J. 2010. "The Natural Resource Curse: A Survey." NBER Working Paper 15836, National Bureau of Economic Research, Cambridge, MA.

Frankel, J. 2011. "How Can Commodity Exporters Make Fiscal and Monetary Policy Less Procyclical? HKS Faculty Research Working Paper RWP11-015, John F. Kennedy School of Government, Harvard University.

Frankel, J. 2018. "Monetary Regimes to Cope with Volatile Commodity Export Prices: Two Proposals." In *Rethinking the Macroeconomics of Resource-Rich Countries,* edited by A. Arezki, R. Boucekkine, J. Frankel, M. Laksaci, and R. van der Ploeg. VoxEU.org ebook, CEPR's Policy Portal, April 24.

Hamilton, J. 2015. "What's Driving the Price of Oil Down?" https://econbrowser.com/archives/2015/01/whats-driving-the-price-of-oil-down-2.

Helbling, T. 2012. "Commodities in Boom." *Finance and Development.* June. Washington, DC: International Monetary Fund.

Jacks, D.S. 2019. "From Boom to Bust: A Typology of Real Commodity Prices in the Long Term." *Cliometrica* 13: 201-220.

Jacks, D., K. O'Rourke, and J. Williamson. 2011. "Commodity Price Volatility and World Market Integration since 1700." *The Review of Economics and Statistics* 93 (3): 800–813.

Jacks, D., and M. Stuermer. 2020. "What Drives Commodity Price Booms and Busts?" Working Paper 1614, Federal Reserve Bank of Dallas.

Jerrett, D. 2021. "How Super is the Commodity Price Cycle?" *Global Commodities Applied Research Digest* 6 (1): 1-6.

Jerrett, D., and J. T. Cuddington. 2008. "Broadening the Statistical Search for Metal Price Super Cycles to Steel and Related Metals." *Resources Policy* 33 (4): 188–195.

Kilian, L. 2009. "Not All Oil Price Shocks are Alike: Disentangling Demand and Supply Shocks in the Crude Oil Market." *American Economic Review* 99 (3): 1053-69.

Kilian, L., and D. P. Murphy. 2014. "The Role of Inventories and Speculative Trading in the Global Market for Crude Oil." *Journal of Applied Econometrics* 29 (3): 454-478.

Kose, M. A. 2002. "Explaining Business Cycles in Small Open Economies: How much do World Prices Matter?" *Journal of International Economics* 56 (2): 299–327.

Kose, A. M., S. Sugawara, and M. Terrones. 2020. "Global Recessions." Policy Research Working Paper 9172, World Bank, Washington, DC.

Marañon, M., and M. Kumral. 2019. "Dynamics Behind Cycles and Co-movements in Metal Prices: An Empirical Study Using Band-Pass

Filters." *Natural Resources Research* 29 (3): 1487-1519.

Medas, P., and D. Zakharova. 2009. "Primer on Fiscal Analysis in Oil-Producing Countries." IMF Working Paper 56, International Monetary Fund, Washington, DC.

Ojeda-Joya, J. N., O. Jaulin-Mendes, and J.C. Bustos-Pelaez. 2019. "The Interdepend-ence between Commodity Price and GDP Cycles: A Frequency-domain Approach." *Atlantic Economic Journal* 47: 275-292.

Richaud, C., A. Mendes Galego, F. Ayivodji, S. Matta, and S. Essl. 2019. "Fiscal Vulnerabilities in Commodity Exporting Countries and the Role of Fiscal Policy." MTI Discussion Paper 15, World Bank, Washington, DC.

Roberts, M. 2009. "Duration and Characteristics of Metal Price Cycles." *Resources Policy* 34 (3): 87-102.

Rossen A. 2015. "What Are Metal Prices Like? Co -movement, Price Cycles, and Long-Run Trends." *Resources Policy* 45 (September): 255-276.

Schwerhoff, G., and M. Stuermer. 2019. "Non-Renewable Resources, Extraction Technology and Endogenous Growth." Working Paper 1506, Federal Reserve Bank of Dallas.

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

Stuermer, M. 2017. Industrialization and the Demand for Mineral Commodities." *Journal of International Money and Finance* 76 (September): 16-27.

Stuermer, M. 2018. 150 Years of Boom and Bust: What Drives Mineral Commodity Prices? *Macro-economic Dynamics* 22 (3): 702-717.

Torvik, R. 2018. "Oil Prices and Exchange Rate: Optimal Monetary Policy for Oil-Exporting Countries." In *Rethinking the Macroeconomics of Resource-Rich Countries,* edited by A. Arezki, R. Boucekkine, J. Frankel, M. Laksaci, and R. van der Ploeg. VoxEU.org ebook, CEPR's Policy Portal, April 24.

USGS (United States Geological Survey). 2020a. "Bauxite and Alumina Data Sheet – Mineral Commodity Summaries 2020." United States Geological Survey, Virginia.

USGS (United States Geological Survey). 2020b. "Copper Data Sheet—Mineral Commodity Summaries 2020." United States Geological Survey, Virginia.

USGS (United States Geological Survey). 2020c. "Lead Data Sheet—Mineral Commodity Summaries 2020." United States Geological Survey, Virginia.

USGS (United States Geological Survey). 2020d. "Nickel Data Sheet—Mineral Commodity Summaries 2020." United States Geological Survey, Virginia.

USGS (United States Geological Survey). 2020e. "Tin Data Sheet—Mineral Commodity Summaries 2020." United States Geological Survey, Virginia.

USGS (United States Geological Survey). 2020f. "Zinc Data Sheet—Mineral Commodity Summaries 2020." United States Geological Survey, Virginia.

World Bank. 2015. *Global Economic Prospects: The Global Economy in Transition.* June. Washington, DC: World Bank.

World Bank. 2020a. *Commodities Market Outlook: Implications of COVID-19 for Commodities.* April. Washington, DC: World Bank.

World Bank. 2020b. *Commodities Market Outlook: Persistence of Commodity Shocks.* October. Washington, DC: World Bank.

World Bureau of Metal Statistics. 2021. "World Metal Statistics Monthly Report. January" United Kingdom.

Commodity Market Developments and Outlook

Energy

The price of crude oil, natural gas, and coal all rose by around one-third in 2021Q1, with similar increases across the three energy commodities. Crude oil prices recovered from their COVID-19 slump at a record pace, driven by firming demand as well as continued production restraint by OPEC and its partners (OPEC+). However, uncertainty about the evolution of the pandemic and its impact on oil demand continue to weigh on prices. Prices are expected to average $56/bbl in 2021 and $60/bbl in 2022, as demand slowly returns to pre-pandemic levels and OPEC+ gradually raises production. Natural gas and coal prices are also expected to see sharp increases in 2021 as the economic recovery gains momentum. The main risk to the energy price forecasts is a more prolonged pandemic, with a potential breakdown of the OPEC+ production agreement an additional key risk to the oil price forecast.

Crude oil

Recent developments

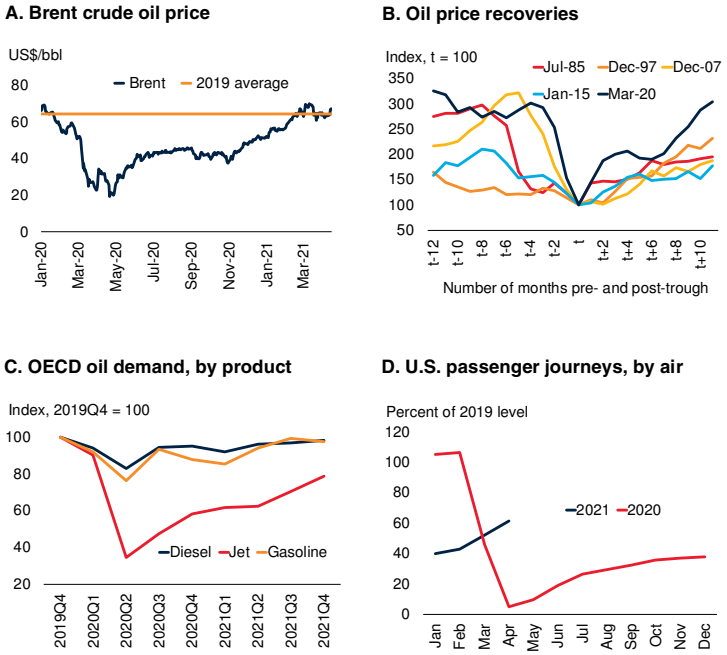
The recovery in **crude oil prices** continued in 2020Q1, with an increase of 36 percent (q/q), bringing prices above their pre-pandemic level (figure 2.A). The speed of the recovery in oil prices exceeds that of any other recorded episode (figure 2.B). Prices have responded to the gradual firming in oil demand and improved optimism about the global recovery, as well as continued production restraint by OPEC and its partners (OPEC+). The price of Brent crude oil briefly reached $70/bbl in early March after OPEC+ announced it would extend production cuts through April. However, prices have eased recently amid rising uncertainty regarding the containment of the pandemic and its impact on future oil demand, as well as OPEC's decision in April to gradually raise production from May. In contrast, neither the attack on a Saudi Arabian oil facility in early March nor the temporary blockage of the Suez Canal at the end of March had a material impact on prices.

Global consumption of crude oil continues to gradually recover from the COVID-19 plunge and was around 6 percent lower in 2021Q1 than in 2019, compared to an overall decline of 9 percent in 2020. However, the recovery remains uneven, with renewed outbreaks of the pandemic and associated lockdowns continuing to affect demand, particularly for transport. The slow recovery in demand is primarily in advanced economies, where it remains nearly 10 percent below its 2019 levels, with pronounced weakness in Europe. In contrast, non-OECD demand is just 2 percent lower, and China was 6 percent above its 2019 level.

Among fuel types, jet fuel remains the most affected, with consumption still one-third below its pre-pandemic level (figure 2.C). However, demand is gradually increasing as air travel picks up. For example, U.S. passenger journeys have

FIGURE 2 Oil market developments

Oil prices continued to increase in 2020Q1, marking their fastest recovery from a major oil price collapse on record. Oil demand continues to gradually pick up, but remains below its pre-pandemic level, with particular weakness in jet fuel. Demand is expected to rise as air travel continues to gradually recover.

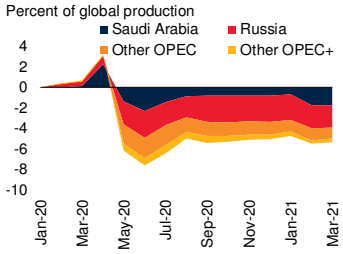


Sources: Bloomberg, International Energy Agency, Transportation Security Administration, World Bank.
B. Figure shows the largest oil price collapses and recoveries since 1980, with 12 months before and after the trough (T-12 and T+12, respectively) of each price collapse, indexed to 100 at the trough.
D. Data show the number of passenger journeys recorded at TSA checkpoints.

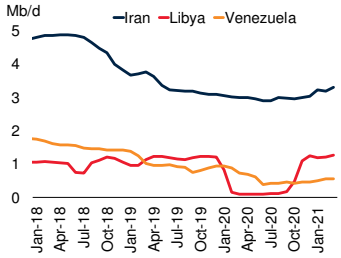
FIGURE 3 Oil supply developments

OPEC and their partners (OPEC+) continue to withhold significant amounts of production. The group's collective cut relative to their January 2020 level increased in February 2021 after Saudi Arabia voluntarily reduced production by an additional 1mb/d (around 1 percent of 2019 production). Among OPEC countries exempt from the agreement, production has risen slightly, particularly in Libya. U.S. production growth remains muted, with oil companies offsetting very weak new drilling activity by completing existing uncompleted wells. As a result of the decline in production and gradual recovery in demand, oil inventories have fallen significantly from their May 2020 highs.

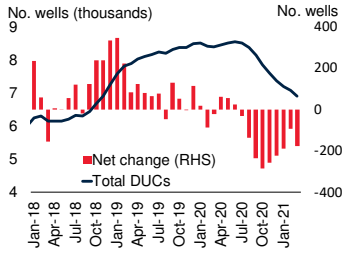
A. OPEC+ oil production cuts



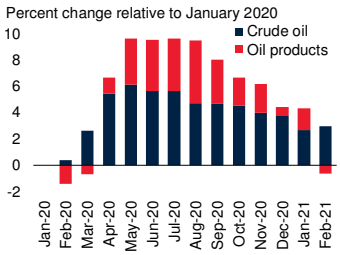
B. Oil price production, select OPEC countries



C. U.S. "drilled but uncompleted" oil well count



D. Change in OECD total oil inventories



Sources: Energy Information Administration, International Energy Agency, World Bank.

A. Percent of global oil production in 2019. "Other OPEC" includes all current OPEC countries except Saudi Arabia and three members that are exempt from production cuts -- Iran, Libya, and Venezuela. "Other OPEC+" includes Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Oman, South Sudan, and Sudan.

C. DUC stands for drilled but uncompleted—an oil well that has been drilled but is not currently producing oil.

D. Change in oil inventories relative to their January 2020 level.

steadily risen over the past few months and are currently around two-thirds of their pre-pandemic level (figure 2.D). Of the other main transport fuels, diesel consumption has been slightly less affected than gasoline, as it is used to transport goods by road and ship, which have seen a broader recovery than personal car travel, especially commuter journeys. Over the forecast horizon, the weakness in jet fuel is expected to persist as air travel remains subdued, while consumption of diesel and gasoline will have mostly recovered by the end of 2021.

Global oil production fell by almost 7 percent in 2020 (around 7mb/d), with OPEC+ accounting for more than four-fifths of the decline (the group accounted for just over half of global oil production in 2019). Since the start of 2021, OPEC+ has increased production at a much slower rate than originally announced, either by prolonging production cuts or raising output by less than planned. Compliance with the cuts has also been high.

At their December meeting, the group increased production by less than previously planned, while in January they agreed to maintain cuts at existing levels into February and March. An exception was made for Kazakhstan and Russia, which were granted small increases in their production quotas; Russia had been pushing for a more aggressive increase in production from the group. In contrast, Saudi Arabia announced it would voluntarily reduce production in February by an additional 1mb/d (more than 10 percent of Saudi Arabia's current production), which brought OPEC+'s total production below its average in 2020H2 (figure 3.A).

The cautious approach to raising production by OPEC+ partly reflects uncertainty about the ongoing impact of the pandemic on oil demand, with growing concern about renewed outbreaks globally and high infection rates in some emerging market and developing economies. It also reflects a rebound in production in Libya, which is exempt from OPEC+ cuts, and saw its production recover from close to zero to more than 1mb/d by the end of 2020 (figure 3.B). Iran, which is also exempt, has seen a modest increase in production since October 2020. Meanwhile, the persistent decline in production in Venezuela (also exempt from the OPEC+ cuts) appears to have bottomed out.

In the United States, crude oil production has started to gradually recover after collapsing from a high of almost 13mb/d in November 2019 to a low of 10mb/d in May 2020 as oil wells were shut -in in response to the plunge in demand. The fall in crude oil demand and oil prices during the pandemic had a major impact on the U.S. shale industry, with more than 60 companies going bankrupt, consolidation among several firms, and

investment in new production falling by more than one-third in 2020. In response, companies have announced intentions to focus on returning capital to shareholders rather than maximizing production—a marked change from their previous strategy.

U.S. shale production has a rapid rate of decline, and requires significant amounts of new drilling to simply maintain production levels: the decline rate was around 0.5mb/d per month in 2019. Following the price collapse and the sharp drop in new drilling activity, the additional production from new wells was well below existing decline rates. However, companies have been offsetting this decline by bringing online "drilled but uncompleted" (DUC) wells (figure 3.C).[1] By fracking these wells, companies can bring onstream new production without incurring the cost of drilling new wells (although it still incurs costs to frack the well). This increase, together with the restart of "shut-in" wells, has resulted in U.S. production averaging close to 11mb/d since July 2020, although production temporarily dipped in October 2020 and February 2021 due to adverse weather.

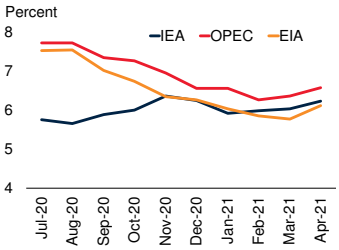
Global oil inventories have fallen as OPEC+ production has remained constrained and consumption has gradually recovered, but remain higher than their pre-pandemic level. OECD on-land inventories, which had risen by nearly 10 percent in 2020H1, have since declined sharply (figure 3.D). Inventories held in floating storage have also fallen to close to their pre-pandemic level. Outside of the OECD, most of the increase in inventories occurred in China, which took advantage of low prices to build both commercial and government stockpiles. The IEA estimates that China accounted for around 60 percent of the global increase in known stocks in 2020H1. These have been slower to decline, potentially reflecting some being held in strategic reserves. Other countries, including India and Australia, also increased strategic reserves.

[1] DUCs are oil wells that have previously been drilled but have not been fracked and therefore do not currently produce oil.

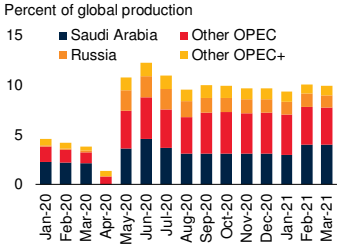
FIGURE 4 Oil market outlook

Oil demand forecasts have declined as the pandemic has had a longer-lasting impact than expected, although forecasts have stabilized in recent months. OPEC+ has significant spare capacity, which provides a downside risk to the oil price forecast. The U.S. rig count has begun to recover, and is in line with previous recoveries from collapses, albeit at a lower level; however, production per rig has risen considerably relative to earlier episodes.

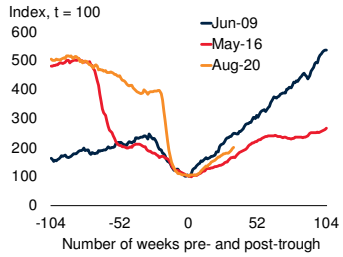
A. Evolution of oil demand growth forecasts for 2021



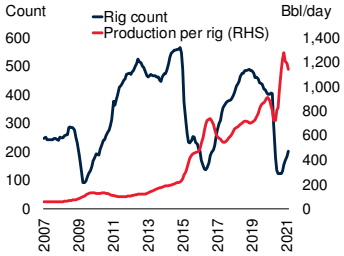
B. OPEC+ spare production capacity



C. U.S. oil rig count recoveries



D. Permian rig count and production per rig



Sources: Energy Information Administration, International Energy Agency, Organization of Petroleum Exporting Countries, World Bank.

A. Evolution of forecasts for oil demand growth in 2021.

B. Spare production capacity estimated as the difference between a country's maximum output over the period January 2018 to April 2020 and their current production level. "Other OPEC" includes all current OPEC countries except Saudi Arabia, and Iran, Libya, and Venezuela which are exempt from production cuts. "Other OPEC+" includes Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Oman, South Sudan, and Sudan.

C. Chart shows historical U.S. oil rig count collapses and recoveries, indexed to the trough in activity (t = 100).

D. Oil rig count and oil production per rig in the Permian basin.

Price forecasts and risks

Outlook. Oil prices are forecast to average $56/bbl in 2021 and rise to $60/bbl in 2022, broadly in line with their 2017-19 average. Demand is expected to firm over 2021 as the economic recovery gains momentum and vaccinations become more widely available, particularly in advanced economies. The forecast is a significant upward revision from the October estimate, primarily reflecting lower-than-expected OPEC+ production and the improved economic outlook.

Oil demand growth estimates have been revised upwards recently amid an improved economic outlook and policy support measures in major economies (figure 4.A).[2, 3, 4] All three major forecasters currently expect oil demand in 2021 to average around 3 percent below 2019 levels, and the IEA expects that oil demand will return to pre-pandemic levels by around 2023.[5] The brighter demand outlook follows consecutive downward revisions during the second half of 2020, which reflected a worse-than-expected and longer-lasting impact of the pandemic on oil demand.

Supply is also set to increase during 2021. OPEC+ intends to increase production by 0.35mb/d in May and June, and by a further 0.45mb/d in July, with Saudi Arabia also gradually unwinding its additional voluntary cut of 1mb/d over this period. The group is likely to gradually increase production through the rest of 2021 but has announced it will reduce production if necessary. In the United States, the EIA expects production to gradually rise over the forecast horizon. While production in 2021 is forecast to be slightly lower than in 2020, it is then anticipated to increase by just under 1mb/d in 2022. Production is also expected to rise in Brazil, Guyana, and Norway, largely driven by increased production from new fields, such as the Johan Sverdrup field in Norway, and the Liza field in Guyana. However, the reduction in investment in 2020 has resulted in the cancellation or delay of many new projects, dampening the rise in global production from 2021 onward.

Risks. The evolution of the pandemic continues to pose the largest risk to the oil demand forecast. To the upside, the rapid pace of vaccine production raises the possibility of faster-than-expected control of the pandemic. Furthermore, the current rollout of vaccines is focused in advanced economies, where the weakness in oil demand is currently concentrated. However, the continued spread of COVID-19 in parts of the world suggests that renewed outbreaks at a global level are still possible, especially with the emergence of new variants. An intensifying third wave and renewed lockdowns could extend the weakness in oil demand, although lockdowns have become less damaging to economic growth and oil demand as governments have fine-tuned restrictions and economic activity has shifted online.

On the supply side, the two main risks arise from the OPEC+ production agreement and the speed of the recovery in U.S. shale production. OPEC+ still holds a significant amount of production off the market, even after the announced increases in production (figure 4.B). The production decisions of the group moving forward will have a critical impact on the path of oil prices. However, a further deterioration in oil demand, perhaps arising from a renewed outbreak of COVID-19, could put considerable pressure on the production agreement. If the coalition were to break apart and result in a sudden increase in global production, oil prices would likely be materially lower than currently expected. A potential breakthrough in negotiations between Iran and the United States on the return to the 2015 nuclear deal and subsequent lifting of sanctions could bring a significant amount of Iranian oil back to global markets—Iranian production fell by nearly 2mb/d as a result of the sanctions.

In the United States, much will depend on the behavior of U.S shale producers. The increase in oil prices provided companies with an opportunity to hedge their production at profitable levels—U.S. shale production is generally profitable at prices above $50/bbl (albeit with wide variation between fields), which is below current WTI prices of around $60/bbl.[6] The rise in oil prices has also helped companies reduce debt, and U.S. energy sector corporate bond yields have fallen sharply since the start of 2021.

[2] "Short-Term Economic Outlook—March 2020." U. S. Energy Information Administration. Washington, DC.

[3] "OPEC Monthly Oil Market Report—March 2021." Organization of the Petroleum Exporting Countries, Vienna.

[4] "Oil Market Report—March 2021." International Energy Agency, Paris.

[5] "Oil 2021: Analysis and Forecast to 2026." International Energy Agency, Paris.

[6] *Commodity Markets Outlook: Implications of COVID-19 for Commodity Prices*, April 2020. World Bank, Washington, DC.

These developments potentially pave the way for a sharper-than-expected increase in U.S. production. The rig count has doubled from its August low, a recovery which is broadly in line with previous episodes of oil price plunges, although it follows a particularly sharp fall (figure 4.C). In addition, the average productivity of rigs has increased significantly over the past decade, thanks to improvements in technology, better practices, and a focus on more productive fields (figure 4.D). While companies are likely to focus more on cash flow than on raising production, the U.S. shale industry has repeatedly proved more resilient and innovative than expected after previous price collapses. Any additional increase in U.S. production would also put further pressure on the OPEC+ agreement.

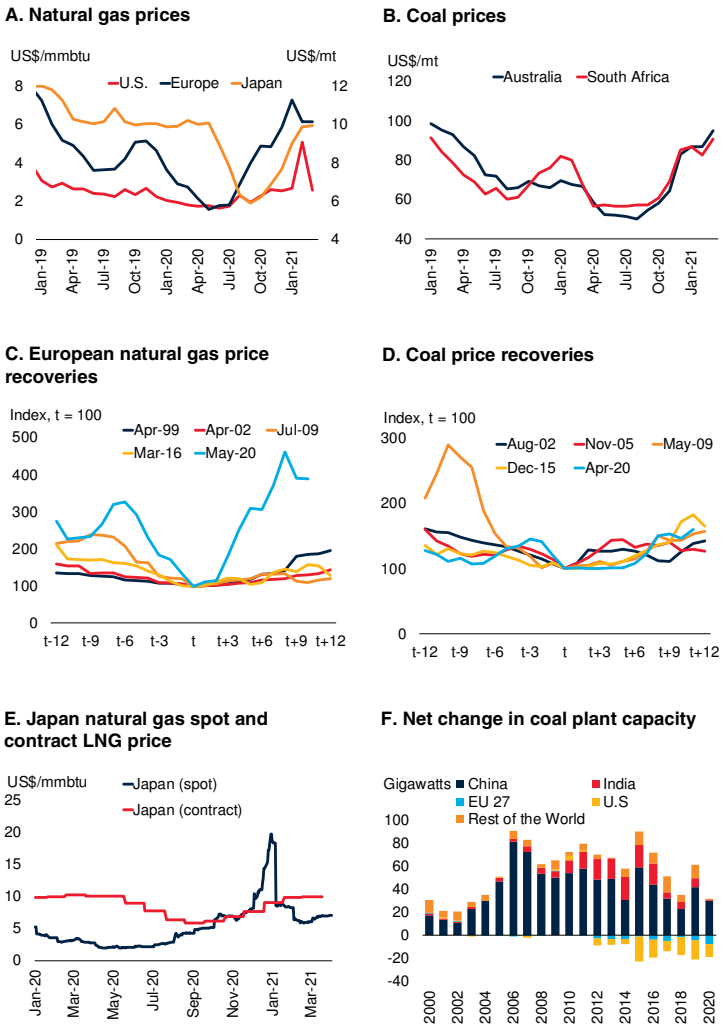
Natural gas and coal

Natural gas prices in the U.S. and Japan rose by nearly 40 percent in 2021Q1 (q/q), while those in Europe increased by 25 percent, albeit with significant fluctuations through the quarter (figure 5.A). Australian coal prices rose 30 percent and South African prices were up by 20 percent (figure 5.B). Similar to most other commodities, natural gas and coal prices are now back to, or above, their pre-pandemic levels. The recovery in natural gas prices was the fastest on record, while that of coal was similar to other post-crash recoveries (figures 5.C and 5.D). Prices have been boosted by rebounding global economic activity, bouts of very cold weather in northeast Asia and the U.S., and several supply disruptions.

Natural gas. Natural gas prices have experienced sharp fluctuations over the past 12 months, with European prices reaching their lowest level on record, U.S. prices hitting a multi-decade low in 2020Q2, and imported prices in Japan reaching a 15-year low. The drop in prices was driven by the global economic recession, which led to a drop in natural gas demand of more than 2 percent (the largest decline on record), as well as abundant supplies of liquefied natural gas (LNG). However, all prices subsequently staged a rapid recovery on strong demand and supply outages, with the speed of the recovery the fastest on record (figure 5.C).

FIGURE 5 Natural gas and coal

After steep pandemic-driven declines in 2020, natural gas and coal prices have rallied sharply, driven by the global economic recovery, cold weather, and supply disruptions. Cold weather and increased demand for natural gas-powered electricity led to a sharp, albeit temporary, increase in Japanese spot LNG prices. While coal-powered electricity generation is being retired in Europe and the U.S., this has been more than offset by increased capacity in China.



Sources: Bloomberg, Global Energy Monitor, World Bank.
A.B. Last observation is March 2021.
C.D. Figures show the largest natural gas (European) and coal price (South African) collapses and recoveries since 1995, with 12 months before and after the trough of each price collapse, indexed to 100 at the trough.
E. Contract prices are longer-term negotiated prices; spot prices are set daily in the market. Contract price shows the monthly price taken from the World Bank's Pink Sheets.
F. Chart shows the net change in global coal-powered electricity generation capacity, (additions of new capacity less retirement of existing capacity). A negative value indicates more coal generation capacity is being retired than is being added.

The rebound in prices was initially driven by a pickup in economic activity, with a further surge in December onward triggered by bouts of very

cold weather and supply disruptions. In Japan, demand for LNG imports rose amid a sudden drop in temperatures, exacerbated by the temporary closure of several nuclear reactors which increased demand for natural gas-powered electricity. However, shipments of LNG were hampered by a lack of tankers, LNG supply disruptions in Indonesia and Australia, and some congestion delays at the Panama Canal, which collectively resulted in the spot price of natural gas in Japan reaching a record high, well above the contract price (figure 5.E). The spike in U.S. prices in February was due to record freezing temperatures in Texas resulting from a winter storm, which both increased demand for natural gas and caused significant reductions in supply, as wells and pipelines were shut. However, these spikes proved temporary, and spot prices have since fallen back, especially in the U.S. and Japan.

Coal. Demand for coal fell by nearly 5 percent in 2020 as a result of the economic slowdown, increasing renewable generation, and a significant increase in the conversion of coal-fired plants to natural gas (driven by very low natural gas prices). For example, in the United States, natural gas-powered electricity rose by 3 percent in 2020, while coal-powered generation fell 19 percent. Demand in Europe was also curtailed by higher EU carbon emissions prices. In 2020 overall, 37 gigawatts of coal generating capacity (just under 2 percent of total coal generating capacity) were retired, primarily in the U.S. and Europe, with Spain retiring around half of its total capacity (figure 5.F).[7] However, these reductions were more than offset by increased capacity in China and India.

The sharp recovery in coal prices over the past two quarters was partly due to the global recovery, but was also driven by the cold weather in northeast Asia and several supply issues. China's imports of coal surged alongside higher demand in December as a major sandstorm reduced domestic production. China has banned imports of Australian coal, leading to an increase in imports from other suppliers, including Indonesia, South Africa, Russia, and the United States. Despite China's import ban, the price of Australian coal has also risen sharply. This is due to a rebalancing of trade flows, as other importers (e.g., India) switched to importing coal from Australia rather than Indonesia or South Africa. Prices also rose as a result of flooding in Australia, which disrupted coal production.

Outlook. Natural gas prices are forecast to remain close to current levels over the rest of 2021. This implies that prices will average around one-third higher in 2021 compared to 2020, with steeper increases in European prices and a small decline in Japanese contract prices. Price differentials between the three benchmarks are expected to continue to shrink as a result of the growing availability of LNG. Coal prices are expected to rise by around 30 percent. Demand for both natural gas and coal is anticipated to increase slightly in 2021 in line with the economic recovery, driven by rising demand in Asia, while supply growth will remain modest. The EIA expects flat natural gas production in the United States, while production elsewhere will rise as supply constraints ease.[8]

Both natural gas and coal prices are expected to broadly stabilize in 2022. As with oil, a key risk for both coal and natural gas forecasts is the evolution of the pandemic, which could have a significant impact on demand. Further increases in renewable energy will also likely dampen demand prospects for both coal and natural gas, with renewable energy increasingly the lowest-cost source of new electricity generation. In addition, China has announced it will strictly limit any increase in its coal consumption over the next five years, and will begin reducing coal use from 2026 onwards.

[7] "Boom and Bust 2021: Tracking the Global Coal Plant Pipeline." Global Energy Monitor, San Francisco.

[8] "Short-Term Economic Outlook—March 2020." U. S. Energy Information Administration. Washington, DC.

Agriculture

The World Bank's Agricultural Price Index increased more than 9 percent in 2021Q1 (q/q), building on the previous quarter's momentum. Prices have risen 20 percent over the past year and are close to a seven-year high. Price gains have been driven by supply shortfalls for some food commodities, especially maize and soybeans, strong demand for feed commodities by China, and U.S. dollar depreciation. The largest price increase in the quarter was for grains due to production shortfalls, followed by oils and meals. Beverage prices made modest gains while raw materials remained broadly stable as supply disruptions due to the pandemic were resolved. Agricultural prices are expected to average 14 percent higher in 2021 compared to 2020, followed by a small rise in 2022—both upward revisions from the October forecast. Risks to the forecasts arise from the path of energy costs, macroeconomic uncertainties and, in the longer term, biofuel policies in response to global efforts to diversify energy away from fossil fuel (energy transition).

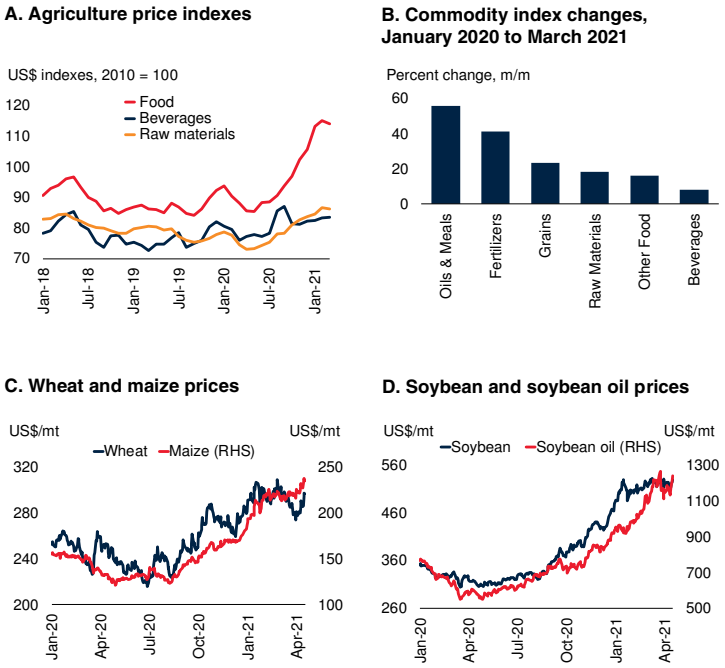
Grains, oils, and meals

Recent developments

The World Bank's *Grain Price Index* jumped more than 17 percent in the first quarter of 2021 and stands 25 percent higher than a year ago, pushing the *Food Price Index* to a seven-year high (figure 6). Production shortfalls and stronger-than-expected feed demand fueled the rally. Maize experienced the largest production shortfalls, resulting in prices increasing more than 25 percent in 2021Q1 (q/q). Rice and wheat prices gained around 10 percent each in the quarter. According to the U.S. Department of Agriculture's April assessment, global production of the three main grains—wheat, maize, and rice—is set to grow by 1.7 percent this season (September 2020 to August 2021), resulting in a one percentage point decline in stocks-to-use ratio (a rough measure of supply relative to demand). Despite the decline, these ratios remain at historically elevated levels for most food commodities, which lowers the risks of further price increases in the event of adverse weather conditions.

FIGURE 6 Agricultural price developments

Most agricultural commodity prices stabilized in 2021Q1 on news of higher planting intentions next season. However, the food price index is 35 percent higher compared to its April 2020 trough, reflecting supply shortfalls for some food commodities, especially maize and soybeans, strong demand for feed commodities by China, and depreciation of the U.S. dollar.

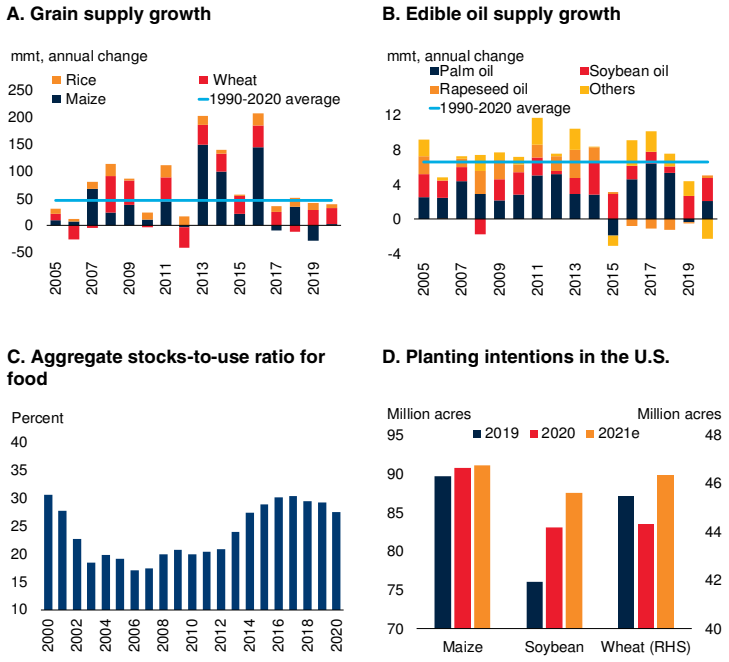


Sources: Bloomberg, World Bank.
A.B. Last observation is March 2021.
C.D. Last observation is April 16, 2021.

Wheat prices continued their upward momentum in early 2021. This follows gains during the last quarter of 2020 caused by weather problems in key exporters, including Ukraine and Argentina. While prices stabilized in March and early April, the 2021Q1 average is more than 15 percent higher than a year ago. Production during the ongoing season is expected to reach a new record, with good crops in Canada, the EU, and Ukraine. Weather problems, including dry conditions in Russia, rainfall deficits in Turkey, and dryness throughout the U.S. Great Plains, are not severe enough to alter the outlook. Global production of wheat is expected to reach 776 million metric tons (mmt) this season, 1.7 percent higher than last season's crop. However, global consumption is projected to grow at 4.4 percent, reducing the stocks-to-use ratio to 38 percent, 2 percentage

FIGURE 7 Supply conditions for grains and edible oils

Despite tightness in some markets, supply growth of most grains and edible oils this season is in line with historical norms. The aggregate stocks-to-use ratio, an approximate measure of supply relative to demand, has declined slightly during the past three crop seasons but is still high by historical norms. An initial glimpse of the next crop season, 2021-22, shows that area allocated to maize, soybeans, and wheat in the U.S. will increase.



Sources: USDA, World Bank.
A.B. Years represent crop season (for example, 2019 refers to 2019-20). Supply is the sum of beginning stocks and production. Data updated on April 9, 2021.
C. The aggregate stocks-to-use ratio comprises of 12 grains and edible oils and has been aggregated according to calorific content. Data updated on April 9, 2021.
D. Data taken from the Plantings Intentions Survey, released March 31, 2021.

points lower than last season but still the second highest ratio in 20 years.

Maize prices increased sharply for six consecutive months to reach an average of $245 per metric tons (mt) in February, its highest level since July 2013, and remained steady in March. Maize prices have been supported by recent downward revisions to global supplies and strong demand for animal feed by China (and healthy demand in Latin America). While global maize production is expected to grow almost 2 percent this season compared to 2019-20, the stocks-to-use ratio will drop to 25 percent (2 percentage points lower than last season) because of higher consumption growth.

Rice prices averaged $540/mt in 2021Q1, up 10 percent from the previous quarter and nearly 17 percent higher than a year ago. Prices retreated slightly in March from a seven-year high in February. The price strength reflects weather-related supply issues in key East Asian producers, including Indonesia, the Philippines, and Thailand (the world's second largest exporter after India). Export restrictions announced last year may have also played a role, but most of these policy restrictions never came into effect. Global rice production is expected to grow just over 1 percent in the current season, with a similar increase in consumption. This would leave the stocks-to-use ratio largely unchanged at 0.36, a 20-year high.

The *Oil and Meal Price Index* rose 12 percent in 2021Q1, up 46 percent from a year earlier, and reached an almost nine-year high in February. Soybean prices averaged 58 percent higher in March (y/y) due to production shortfalls in South America (linked to La Niña), while palm oil prices averaged 62 percent higher due to poor weather in Southeast Asia. Yield problems with sunflower and rapeseed oils also lifted prices, along with strong demand for animal feed as China recovers from African Swine Fever.

The outlook for edible oil supply for the current season is for a marginal decline relative to last season (figure 7). Global supplies—the sum of beginning stocks and production—of the eight major edible oils (including palm, soybean, and rapeseed, which together account for two-thirds of global edible oil output) is expected to grow by 2.9 mmt this season, down from 3.4 mmt last season. However, this is less than half of the 20-year average annual growth of 6.6 mmt. Most of the supply growth is expected to come from soybean and palm oil (up 2.7 and 2.5 mmt, respectively).

Global supplies of the seven major oilseeds is projected to increase by 24 mmt (or 4 percent) in 2020-21, most of which will come from soybeans. While soybean yields declined due to weather problems in South America, production growth reflects area expansion in the United States, which is rebounding from last season's contraction following a China-U.S. soybean trade dispute.

The latest assessment by the U.S. Department of Agriculture estimates that land allocated to soybeans in the United States will expand by an additional 5.4 percent next season.

Price forecasts and risks

The *Grain Price Index* is expected to average 14 percent higher in 2021, followed by a small gain in 2022. The *Oils and Meals Index* is projected to increase nearly 30 percent in 2021, before stabilizing in 2022. Both are sharp upward revisions from the October outlook and reflect supply shortfalls and, to a lesser degree, stronger-than-expected consumption. The outlook and risks for the 2021-22 season are becoming clearer as the current production cycle winds down and the unpredictable La Niña weather pattern (which was a key risk in the October assessment) shows signs of weakness. In its March Planting Intention Survey (the first assessment for next season), the U.S. Department of Agriculture reported that area allocated to maize, soybean, and wheat in the United States is expected to increase by 0.4, 5.4, and 4.5 percent, respectively. Given the global role of the United States in these commodities, this projected increase in supply should help stabilize markets. These forecasts are subject to risks around the path of input prices, especially energy and fertilizers, macroeconomic uncertainties, and biofuel policies. The latter is a key risk in the medium term with regard to helping facilitate the energy transition.

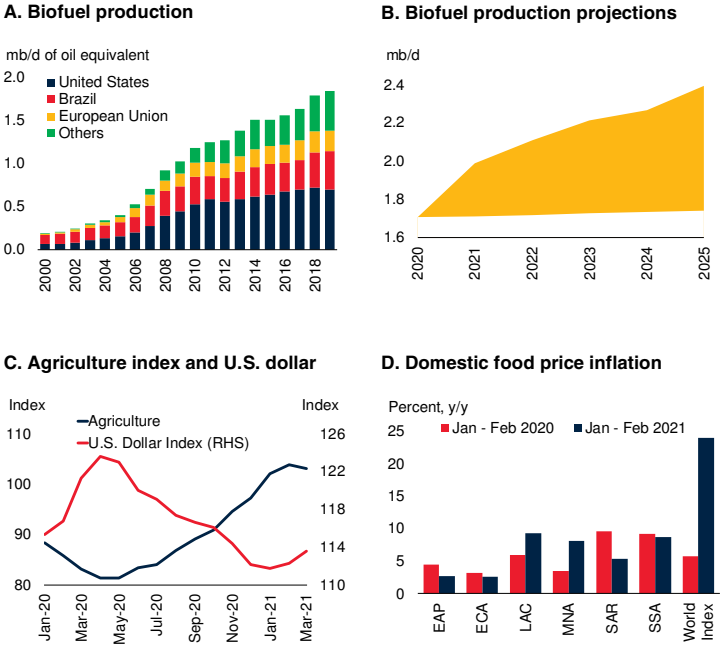
Energy costs. Energy is an important cost component to most crops, with both direct channels (oil prices) and indirect channels (chemical and fertilizer prices). Energy prices are expected to average 36 percent higher in 2021 and increase 9 percent in 2022, while fertilizer prices are expected to average 27 percent higher in 2021 and increase 3 percent in 2022. These follow declines in 2020 of 33 percent and 10 percent, respectively. If energy and fertilizer prices increase more than expected, food prices would be subject to upward pressures.

Macroeconomic conditions. Prices of most agricultural commodities, especially those highly traded and invoiced in U.S. dollars (including maize, wheat, and most edible oils), may come under downward pressure if the U.S. dollar appreciates. The dollar fell almost 10 percent against a broad index of currencies between April 2020 and January 2021 (figure 8). That lowered commodity prices in domestic currencies (compared to dollar terms), which induced supply contractions and demand increases, depending on the degree of the relevant currency movement for particular commodities. When the U.S. dollar reversed course recently, most agricultural commodity prices followed suit.

Biofuels. The outlook for biofuels assumes much slower growth in demand compared to the past 15 years, which could impact several food

FIGURE 8 Risks to the food commodity outlook

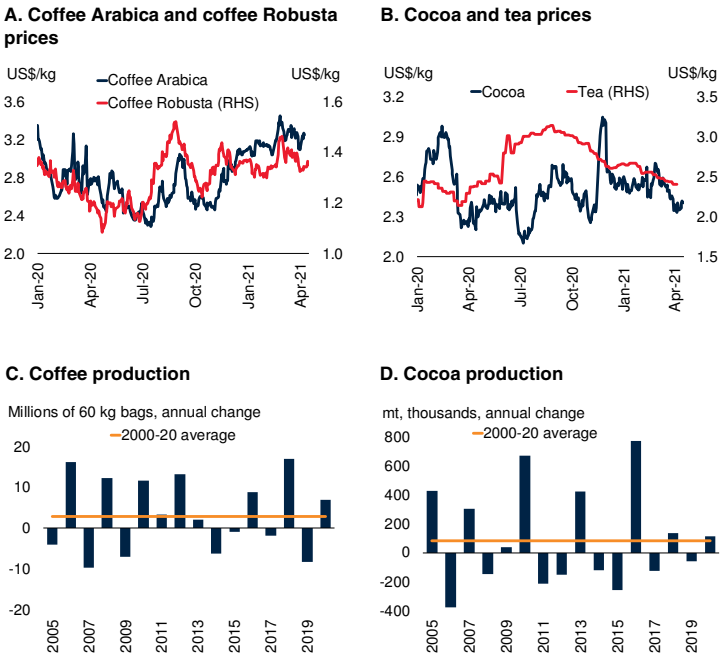
Key risks to the price outlook emanate from energy costs, biofuel policies, and how the U.S. dollar moves against other currencies. Biofuels policies could be a longer term risk as the energy transition intensifies. Domestic food prices could also increase in some regions if current world food prices remain elevated.



Sources: Bloomberg, USDA, World Bank.
A. Shaded area (2021-2025) represents biofuel production scenarios from IEA, OECD, and various investment banks.
C. Last observation is March 2021. January 2006=100 for U.S. Dollar Index.
D. EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa. The World Index represents the World Bank's Food Price Index.

FIGURE 9 Beverage commodity market developments

Prices of coffee and cocoa have stabilized during 2021Q1 as supplies for the current season aligned with historical trends and demand recovered. Tea prices came down as plucking returned to normal, following disruptions related to the pandemic in several tea producing regions, especially India.



Sources: Bloomberg, ICO, ICCO, USDA, World Bank.
A.B. Last observation is April 16, 2021.
C.D. Years represent crop season (for example, 2019 refers to 2019-20). Data updated on April 9, 2021.

commodities, notably sugarcane and maize (for ethanol production) and edible oils (for biodiesel production). Currently, Brazil, the European Union, and the United States account for nearly two-thirds of global biofuel production. Recently, however, several countries announced their intention to increase biofuel production as part of efforts to meet climate change targets. China, for example, is expected to more than double its ethanol production over the next five years. Other countries have also set ambitious targets, including India, Indonesia, and Malaysia. According to some estimates, biofuel production could increase as much as 40 percent by 2026. However, the results may be mixed. One the one hand, with 3-4 percent of the world's land allocated to food commodities currently diverted to biofuels, a substantial increase of biofuel production may exert upward pressure on food prices. On the other hand, the net environmental benefits of such an increase in biofuels may be limited by the energy intensive process to produce these crops.

Domestic food price inflation. Following the easing of lockdowns and fading supply chain disruptions, food availability has improved in most EMDEs. However, numerous countries face persistent food price inflation, especially in Latin America, the Middle East, and Africa. Food price inflation in these regions averaged nearly 9 percent during January-February 2021 (y/y). Furthermore, there is a risk of higher price inflation if the recent spikes in world food prices, which increased 24 percent during this period, transmit into domestic markets.

Beverages

The World Bank's *Beverage Price Index* remained broadly stable in 2021Q1, but it is nearly 6 percent higher than a year ago. Movements in the index reflect a strengthening in the price of Arabica coffee and, to a lesser extent, gains in Robusta and tea—although the latter has been the most volatile. The index is expected to post small gains in 2021 and 2022.

Arabica and *Robusta coffee* prices were fairly stable during 2021Q1, following volatility in the second half of 2020 due to pandemic-related supply chain disruptions and the likelihood that Brazil's crop would be affected by frost (figure 9). However, global coffee production for the current crop year is likely to grow 6 percent which, combined with an estimated 1.3 percent increase in consumption, would result in a surplus of nearly 9 million bags. Early indications of the 2021-22 crop season, however, point to a sharp reduction global supplies due to a sharp downward revision to Brazil's crop—Brazil's coffee production may decline by as much as 30 percent next season because of adverse weather according to some estimates. Both Arabica and Robusta prices are expected to sustain their early 2021 gains, thus averaging more than 5 percent in 2021 compared to last year, to be followed by smaller increases in 2022.

Apart from a brief spike in November, *cocoa* prices have been broadly stable during the past eight months. Global cocoa production for the current

crop season is projected to be nearly 5 percent higher than 2019-20 due to good weather conditions in West Africa, especially Côte d'Ivoire, the world's largest supplier. Global grindings, a measure of demand, which picked up recently following a slump in the early stages of the pandemic, is projected to increase less than 3 percent this season, pushing up stocks by about 10 percent. Cocoa prices are expected to remain fairly stable in 2021 and 2022, as the global market appears adequately supplied.

In contrast to most commodities, tea prices declined 9 percent in 2021Q1 but they are almost 10 percent higher than a year ago. Tea prices surged during the pandemic as lockdowns disrupted tea plucking in some regions, especially in India. As restrictions on labor movement eased, tea production increased, in turn pushing tea price down. Prices have been also affected by better-than-expected supplies from East Africa due to exceptional weather conditions. As supply recovers further, tea prices are expected to decline 7 percent in 2021 before making a small gain in 2022.

Agricultural raw materials

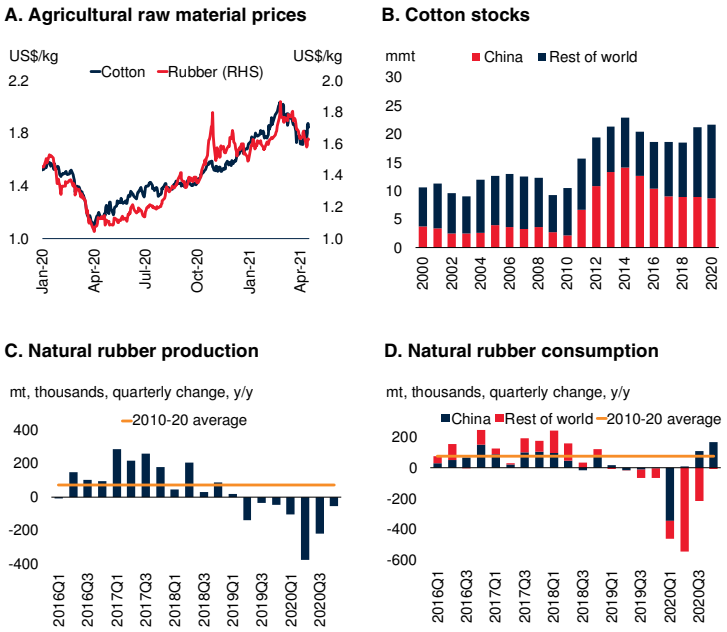
The World Bank's *Raw Material Price Index* rose 4 percent in 2021Q1 (q/q), led by a sharp increase in cotton prices. The index stands nearly 12 percent higher than a year ago. Raw material prices are expected to average 10 percent higher this year compared to 2020 before stabilizing in 2022.

Cotton prices surged 16 percent in the first quarter of 2021 following a strong gain in 2020Q4. Although prices retreated in April, they are still 40 percent higher than their trough in April 2020 (figure 10). The overall price strength reflects upward revisions to the outlook for global consumption, which is expected to average 24.5 mmt in the current season, almost 8 percent higher than 2019-2020. Most of the increase is expected to take place in China and India (up 12 and 22 percent, respectively) as the textile production in both countries rebounds. Prices have also been supported by lower supplies. Global production is projected to fall 8 percent this season, led by declines in the U.S., India, and Pakistan, mostly due to reduced plantings. Cotton prices are expected to average 23 percent higher in 2021, compared to 2020, followed by a small increase in 2022.

Natural rubber prices averaged 2.53/kg during 2021Q1, nearly 75 percent higher than their April 2020 lows. Demand for natural rubber, which collapsed during the early stages of the pandemic as numerous tire manufacturing facilities closed, has staged a strong recovery. Global consumption grew by 160,000 mt in 2020Q4 (y/y) or 5 percent, led by recovery in China's tire manufacturing—two thirds of natural rubber goes into tire manufacturing. On the supply side, there are still problems with labor availability in some countries (e.g., Thailand) due to border restrictions on labor movements. Natural rubber prices are projected to average 30 percent higher in 2021 compared to 2020, before stabilizing in 2022.

FIGURE 10 Agricultural raw materials market developments

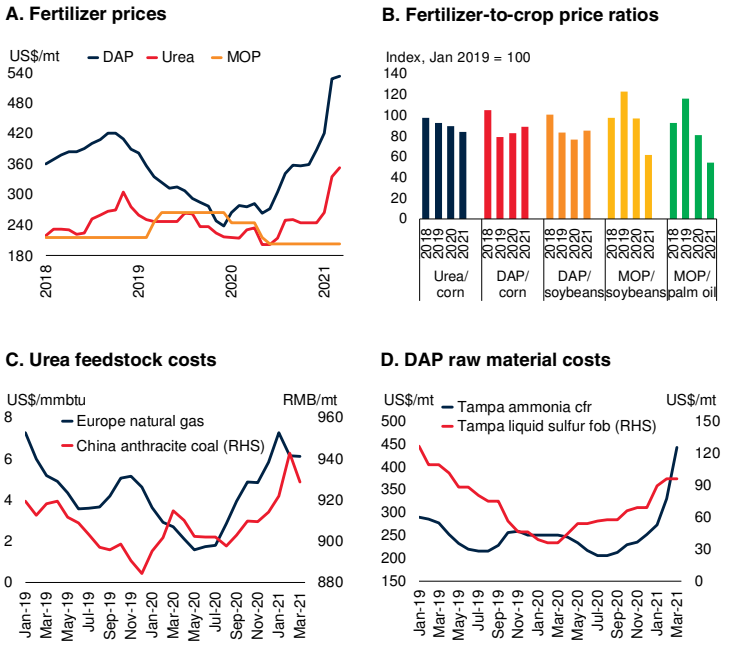
Following continues price increases since the emergence of the pandemic, natural rubber and cotton prices weakened recently as supplies for both commodities increased



Sources: Bloomberg, ICAC, IRSG, World Bank.
A. Last observation is April 16, 2021.
B. Years represent crop season (for example, 2020 refers to 2020-21 crop season).
C.D. Last observation is 2020Q4.

FIGURE 11 Fertilizer market developments

Phosphates and urea prices surged in the first quarter of 2021, reflecting strong demand, supply constraints, and higher input costs. Increased fertilizer use has been buoyed by improved farm incomes, government support schemes, favorable growing conditions, and weakening of domestic currencies. Potash prices, on the other hand, remained unchanged.



Sources: Bloomberg; International Fertilizer Association, U.S. Department of Agriculture, World Bank.
A. DAP = diammonium phosphate. MOP = muriate of potash. Last observation is March 2021.
B. A lower index indicates higher fertilizer affordability, and vice versa. Data for 2021 is the average of January to March prices.
D. cfr = cost and freight; fob = free on board.

Fertilizers

The World Bank's Fertilizer Price Index jumped by 24 percent in the first quarter of 2021 (q/q), led by phosphates and urea and driven by strong demand and higher input costs. Potash prices remained broadly unchanged on ample supply. Fertilizer prices are projected to average 27 percent higher in 2021 but recede in 2022 as demand moderates and production capacity increases. Upside risks to the forecasts include supply shortfalls due to geopolitical tensions and delays in capacity expansions, while downside risks include lower input costs and environmental policies restricting fertilizer use.

DAP (diammonium phosphate) prices surged by more than 34 percent in 2021Q1, while TSP (triple superphosphate) prices leapt 38 percent. The gains were buoyed by strong demand from key crop-growing regions on healthy farm incomes and government support schemes. China's livestock feed demand has increased as the country rebuilds its hog herd following an outbreak of African swine fever. On the supply side, countervailing duties imposed by the United States on fertilizer imports from Morocco and Russia disrupted imports and trade flows. Prices have also been bolstered by higher input costs such as ammonia and sulfur. DAP prices are expected to remain elevated until new supplies from Morocco, Saudi Arabia, and elsewhere come online. Prices are forecast to be 44 percent higher in 2021 and decrease by 6 percent in 2022.

Nitrogen (urea) prices jumped nearly 30 percent in 2021Q1 and, similar to DAP, reflected strong demand due to improved profitability, supply shortfalls from earlier pandemic closures, and higher input costs. Gas prices rallied in early 2021 due to unusually cold weather, with spot Asian LNG as well as European and Western U.S. natural gas prices hitting record highs. In China, prices of anthracite and bituminous coal, the main feedstocks for Chinese urea producers, have risen in recent months. New urea capacity is expected to come on stream over the next few years in Azerbaijan, Brunei, India, Islamic Republic of Iran, Nigeria, Russia, and Uzbekistan. Urea prices are projected to increase by 31 percent in 2021, and fall by 8 percent in 2022.

MOP (muriate of potash, or potassium chloride) prices have been broadly unchanged since June 2020 when the Vancouver f.o.b. benchmark fell to a 13-year low. Last April, high inventories in China gave buyers significant room to reach a price deal with Belarusian Potash Company (BPC) that was significantly lower than the previous contract. BPC reached a similar contract with India in early 2021, but a higher price was negotiated this April, signaling a stronger outlook for potash producers. New large capacity additions in Belarus and Russia are likely to keep pressure on prices, but ongoing geopolitical tensions in the region may provide some upside. Potash prices are forecast to be about 6 percent lower in 2021, before increasing 3 percent in 2022.

Metals and Minerals

The World Bank's Metals and Minerals Price Index continued its upward trajectory, rising 16 percent in the first quarter of 2021 (q/q). Metal prices in March 2021 were almost 70 percent higher than their troughs in April 2020, with copper, tin, and iron ore prices reaching 10-year highs. Prices have been boosted by strong demand in China, the ongoing global economic recovery, supply disruptions, and a weaker U.S. dollar. Metal prices are projected to average 30 percent higher in 2021 than last year—a sharp upward revision from October's forecasts—before easing in 2022. Upside risks to this outlook include further stimulus programs and an intensified drive toward decarbonization. Downside risks include a resurgence of COVID-19 infections and a sooner-than-expected withdrawal of stimulus measures in China.

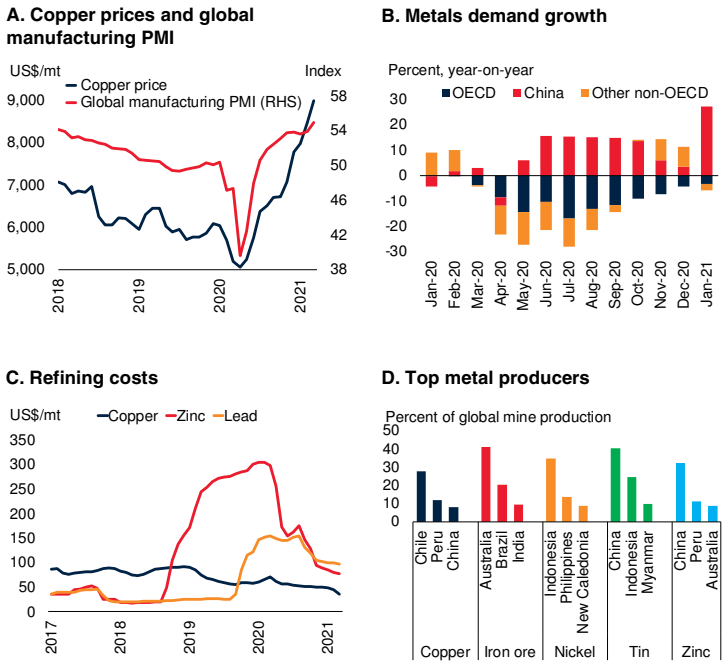
Aluminum prices increased by 9 percent in the first quarter and were up 50 percent in March from April 2020. The price gains reflected surging demand for vehicles and other manufactured goods and a pickup in construction activity. On the supply side, local authorities in China have mandated curtailment of capacity expansion due to environmental concerns, such as in Inner Mongolia, which accounts for about 15 percent of the country's aluminum smelting capacity and where 90 percent of smelters in the region burn coal to generate electricity. New capacity is ramping up quickly, but China could run up against its maximum capacity target of 45 million tons (mt) next year. Its overall targets of peak emissions before 2030 and net zero carbon by 2060 are also fueling expectations of dwindling supply growth due to the energy-intensive nature of converting alumina into metal. Aluminum prices are projected to increase by about 29 percent in 2021, before falling 7 percent in 2022.

Copper prices jumped 18 percent in the first quarter, averaging almost $9,000/mt in March—a level not seen in almost a decade (figure 12). A surge in demand has been led by China with strong investment in infrastructure and construction, augmented by an extraordinary global uptake in consumer goods. Going forward, copper demand is set to gain from the energy transition, notably for electric vehicles (EVs) and renewable power generation. On the supply side, falling inventories and threats of strikes in Chile and Peru elevated mine production risks and lifted prices. Major new projects and expansions are expected to come online over the next few years in Chile, the Democratic Republic of Congo, Indonesia, Mongolia, Panama, and Peru. Copper prices are projected to average 38 percent higher in 2021 compared to last year. However, they are expected to drop 12 percent in 2022 as new supplies materialize.

Iron ore prices surged 25 percent in 2021Q1, and prices in March were almost double those of April 2020. The surge largely reflected robust demand

FIGURE 12 Metals and minerals market developments

Metal prices continued to climb higher in the first quarter of 2021 and have surpassed pre-pandemic levels, reflecting strong demand in China, the ongoing global recovery, supply disruptions, and a weaker U.S. dollar. Copper, tin, and iron ore prices reached 10-year highs in March. The proposed massive infrastructure bill in the United States and the global energy transition towards decarbonization may generate additional upward pressure on prices.



Sources: British Geological Survey, Haver Analytics, London Metal Exchange, U.S. Geological Survey, World Bank, World Bureau of Metal Statistics.
A. The PMI (purchasing managers' index) is a leading indicator of global manufacturing. Readings above (below) 50 indicate an expansion (contraction). Last observation is March 2021.
C. Refining costs refer to smelting fees to turn concentrates into refined metal (treatment charges). Falling treatment charges indicate a tightening availability of concentrate to smelters. Prices shown are spot treatment charges in China. Last observation is March 2021.
D. Mine production data for 2019, except for iron ore (2017).

for steel production in China, whose iron ore imports account for two-thirds of seaborne trade. The country has hinted at a steel production cap to curb emissions, and the city of Tangshan ordered significant production cuts this year to reduce pollution. Flat or falling China ore imports is a headwind for iron ore exporters. Following supply disruptions from 2018 to 2020, Brazil's Vale is ramping up production, and high prices are driving supply investments in Australia, Brazil, Canada, and Liberia. Iron ore prices are projected to increase by 24 percent in 2021 before dropping considerably in 2022 as Chinese demand stabilizes and new supply comes on stream.

Lead prices gained almost 6 percent in the first quarter, benefitting from the rebound in global automobile manufacturing, where the metal is primarily used in lead-acid batteries in conventional fuel car batteries and EVs for auxiliary power such as ignition and lighting instead of its more expensive core lithium-ion batteries. Refined lead production has been supported by a rise in battery recycling: older batteries were replaced (and recycled) due to harsh weather conditions and due to non-use following lockdown restrictions. Prices have also been supported by covid-19 related supply shutdowns, especially in Latin America. Lead prices are expected to increase by 7 percent in 2021, before easing in 2022.

Nickel prices rose by more than 10 percent in 2021Q1, following double-digit growth in the preceding two quarters, driven largely by strong demand from the stainless steel sector in China and rapid recovery of nickel use in batteries for EVs. Prices were also supported by production shortages in the Philippines, as the rainy season hampered ore exports to feed nickel pig iron (NPI) facilities in China, and by outages at Russia's Nornickel, the world's second largest nickel producer. Nickel prices retraced markedly in March following an announcement by Tsingshan—the world's largest nickel producer—that it would convert of some its NPI to nickel matte to produce battery-grade nickel sulphate for EVs. Nickel prices are expected to remain elevated until new production begins, but this development has alleviated supply concerns. Nickel prices are projected to average almost 20 percent higher in 2021, before easing in 2022.

Tin prices surged by more than 33 percent in the first quarter, reaching a 10-year high in March. Prices were lifted by buoyant demand for tin-solder in consumer electronics, as well as supply disruptions due to lockdowns in Bolivia, Peru, and Malaysia, voluntary production cuts in Brazil and Indonesia, and political turmoil in Myanmar. However, the price rally is expected to subside as elevated prices incentivize producers to ramp up output. The outlook for tin demand is promising for use in semiconductors, photovoltaics, autos, and lithium-ion batteries. Tin prices are forecast to increase by 46 percent in 2021 before experiencing a moderate decline in 2022.

Zinc prices rose more than 4 percent in 2021Q1, following double-digit increases in the previous two quarters. The price increase has been supported by robust Chinese infrastructure demand, rebounding global auto output, and surging demand for consumer durables (zinc is used to galvanize steel). On the supply side, zinc mines have been hit hard by COVID-19 related disruptions, especially in South America. Seasonal suspensions of several mines in Northern China impacted supplies, as did a temporary halt to operations in South Africa due to a mine accident, that have added to a tight concentrate market. China's future mine and smelter growth is at risk from safety and environmental protections. Zinc prices are forecast to increase 19 percent in 2021, before falling 11 percent in 2022 as production picks up and Chinese demand tapers as stimulus measures are scaled back.

These forecasts represent substantial upward revisions relative to October's outlook. There are still upside risks in the near term, which include the proposed $2 trillion infrastructure spending bill in the U.S. and the global energy transition towards green growth, which will support prices across the metals complex, particularly aluminum, copper, and nickel. The main downside risks are renewed COVID-19 outbreaks, compounded by emergence of new variants or vaccine hesitancy, and a faster-than-expected moderation of Chinese stimulus and credit.

Precious Metals

The World Bank's Precious Metals Index fell by 2 percent in the first quarter of 2021 (q/q), led by a decline in gold prices and driven by a slump in investment demand as long-term interest rates rose. By contrast, silver and platinum prices recorded significant gains, reflecting the ongoing recovery in industrial demand and supply disruptions. Silver and platinum prices are anticipated to continue to outperform gold in 2021, given the metals' wider use in industry. Precious metals prices are forecast to fall in 2022 as investment demand recedes. However, higher inflationary expectations could push prices higher, while an unexpected resurgence in the U.S. dollar and intensified selling of safe-haven assets could put downward pressure.

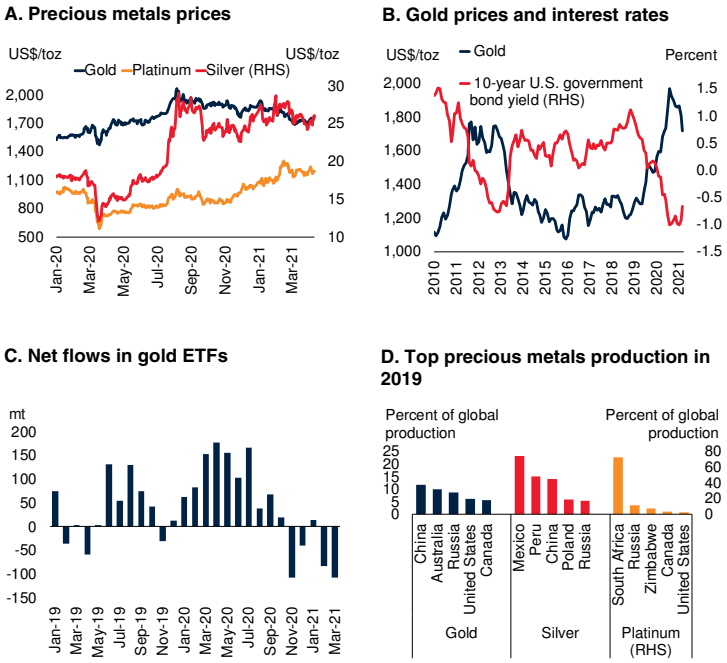
Gold prices fell by 4 percent in 2021Q1, driven by a drop in financial investment demand due to rising U.S. real yields. The yield on 10-year Treasury Inflation-Protected Securities rose from -1 percent in January to -0.66 percent in March—its highest level since June 2020. Higher real yields make gold less attractive to investors. Gold-backed exchange-traded funds holdings have also fallen sharply in recent months, and central banks have reduced gold purchases. Physical demand is recovering from a substantial decline in 2020 but remains well below pre-pandemic levels. On the supply side, mine production is rebounding from Covid-19 shutdowns, and is expected to expand through 2022 as prices are well above production costs. Gold prices are expected to average 4 percent lower in 2021, and ease further in 2022.

Silver prices, in contrast, rose by 8 percent in 2021Q1 to their highest level in eight years, and were 60 percent higher than a year earlier. Prices were lifted by a rebound in industrial demand (electronics, autos, and solar power), which accounts for more than half of silver consumption (compared to less than 10 percent for gold). Investment demand has also been robust, with investors holding net-long positions since mid-2019. Mine supply disruptions, particularly in South America, also supported prices but supply is expected to grow strongly in Canada, Mexico, and Peru. Silver prices are expected to rise by about 22 percent in 2021 but decline in 2022 as silver faces similar headwinds to gold (rising yields) and substitution in industrial applications.

Platinum prices jumped by 24 percent in 2021Q1, buoyed by strong investment demand, a rebound in consumer and industrial demand, and supply disruptions. Jewelry demand bounced back, while demand from the auto sector was bolstered by a strong recovery in auto manufacturing. The implementation of tighter emissions standards in China and Europe boosted platinum use in autocatalytic converters. On the supply side, flooding at two mines in Russia and a slow recovery in South Africa's mine output from COVID-19 restrictions helped lift prices. Platinum prices are forecast to average 25 percent higher in 2021 and increase marginally in 2022.

FIGURE 13 Precious metals market developments

Precious metal prices followed different trajectories in 2021Q1. Gold prices declined slightly as higher real interest rate yields led to investment outflows in gold-backed exchange traded funds. By contrast, silver and platinum prices made significant gains thanks to the ongoing global economic recovery, reflecting the metals' wider use in industry. Supply disruptions in Russia and South Africa also lifted platinum prices.



Sources: Bloomberg, British Geological Survey, Federal Reserve Bank of St. Louis; Silver Institute, U.S. Geological Survey, World Bank, World Gold Council, World Platinum Investment Council.

A. Last observation is March 31, 2021.

B. Interest rate is the 10-year U.S. Treasury inflation-indexed security with constant maturity (not seasonally adjusted). Last observation is March 2021.

C. Monthly tonnage changes in gold-backed exchange-traded funds (ETFs).

APPENDIX A

Historical commodity prices
Price forecasts

TABLE A.1 Commodity prices

Commodity	Unit		2019	2020	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Jan 2021	Feb 2021	Mar 2021
Energy												
Coal, Australia	$/mt	*	77.9	60.8	68.0	54.4	52.1	68.6	89.5	86.8	86.7	94.9
Coal, South Africa	$/mt		71.9	65.7	76.7	56.9	57.2	71.9	86.8	86.9	82.8	90.7
Crude oil, average	$/bbl		61.4	41.3	49.1	30.3	42.0	43.6	59.3	53.6	60.5	63.8
Crude oil, Brent	$/bbl	*	64.0	42.3	50.5	31.4	42.7	44.5	60.6	54.6	62.0	65.2
Crude oil, Dubai	$/bbl	*	63.2	42.2	50.7	31.7	42.5	43.8	59.5	54.2	60.4	64.0
Crude oil, WTI	$/bbl	*	57.0	39.3	46.0	27.8	40.9	42.6	57.8	52.1	59.1	62.4
Natural gas, Index	2010=100		61.1	45.5	44.7	35.9	42.3	59.2	79.2	73.0	97.5	67.0
Natural gas, Europe	$/mmbtu	*	4.80	3.24	3.09	1.82	2.87	5.19	6.52	7.27	6.16	6.13
Natural gas, U.S.	$/mmbtu	*	2.57	2.01	1.91	1.70	1.99	2.46	3.43	2.67	5.07	2.56
Liquefied natural gas, Japan	$/mmbtu	*	10.56	8.31	10.00	9.69	6.67	6.90	9.60	9.00	9.88	9.93
Non-Energy												
Agriculture												
Beverages												
Cocoa	$/kg	**	2.34	2.37	2.55	2.27	2.30	2.35	2.42	2.39	2.41	2.46
Coffee, Arabica	$/kg	**	2.88	3.32	3.13	3.28	3.50	3.38	3.63	3.54	3.67	3.68
Coffee, Robusta	$/kg	**	1.62	1.52	1.51	1.42	1.57	1.56	1.60	1.56	1.62	1.63
Tea, average	$/kg		2.56	2.70	2.33	2.57	3.09	2.81	2.56	2.68	2.56	2.45
Tea, Colombo	$/kg	**	3.10	3.40	3.23	3.57	3.35	3.46	3.34	3.39	3.32	3.31
Tea, Kolkata	$/kg	**	2.38	2.69	1.63	2.15	3.97	3.02	2.32	2.62	2.33	2.02
Tea, Mombasa	$/kg	**	2.21	2.00	2.14	1.98	1.94	1.97	2.02	2.03	2.02	2.02
Food												
Oils and Meals												
Coconut oil	$/mt	**	736	1,010	895	861	968	1,317	1,494	1,463	1,442	1,578
Fishmeal	$/mt		1,448	1,433	1,380	1,412	1,479	1,460	1,486	1,497	1,478	1,481
Groundnuts	$/mt		1,338	1,839	1,753	2,050	1,859	1,692	1,824	1,893	1,875	1,704
Groundnut oil	$/mt	**	1,407	1,698	1,393	1,609	1,878	1,878	…	…	…	…
Palm oil	$/mt	**	601	752	725	614	750	918	1,014	990	1,020	1,031
Palm kernel oil	$/mt		665	824	821	710	730	1,035	1,401	1,368	1,354	1,482
Soybean meal	$/mt	**	347	394	362	349	380	486	532	562	549	486
Soybean oil	$/mt	**	765	838	808	707	865	972	1,129	1,101	1,121	1,164
Soybeans	$/mt	**	369	407	378	363	396	488	581	576	578	588
Grains												
Barley	$/mt	**	128.1	92.5	114.8	91.9	80.4	…	…	…	…	…
Maize	$/mt	**	170.1	165.5	167.6	146.3	156.0	192.0	241.6	234.5	245.2	245.2
Rice, Thailand 5%	$/mt	**	418.0	496.8	465.0	531.3	497.3	493.3	542.3	545.0	557.0	525.0
Rice, Thailand 25%	$/mt		410.4	481.8	453.0	510.3	480.3	483.7	528.3	528.0	542.0	515.0
Rice, Thailand A1	$/mt		393.5	474.6	440.7	510.1	474.5	473.2	517.6	517.8	531.0	504.1
Rice, Vietnam 5%	$/mt		351.9	428.0	359.6	431.7	451.9	468.7	496.6	491.0	500.5	498.4
Sorghum	$/mt		161.5	177.8	164.9	171.2	182.2	…	…	…	…	…
Wheat, U.S. HRW	$/mt	**	201.7	211.3	216.3	207.7	…	…	…	…	…	…
Wheat, U.S. SRW	$/mt		211.3	227.7	238.4	210.7	213.8	248.1	275.2	276.4	276.6	272.6
Other Food												
Bananas, EU	$/kg		0.88	0.90	0.89	0.90	0.89	0.90	0.95	0.94	0.95	0.95
Bananas, U.S.	$/kg	**	1.14	1.22	1.18	1.29	1.25	1.14	1.23	1.24	1.22	1.23
Meat, beef	$/kg	**	4.76	4.67	4.74	4.87	4.64	4.41	4.61	4.46	4.66	4.72
Meat, chicken	$/kg	**	2.00	1.63	1.91	1.45	1.50	1.67	1.83	1.81	1.81	1.89
Meat, sheep	$/kg		…	…	…	…	…	…	…	…	…	…
Oranges	$/kg	**	0.56	0.60	0.53	0.63	0.63	0.63	0.61	0.63	0.58	0.60
Shrimp	$/kg		12.60	12.67	14.00	12.86	12.31	11.52	11.99	11.75	11.93	12.28
Sugar, EU	$/kg	**	0.37	0.37	0.36	0.36	0.38	0.39	0.39	0.40	0.40	0.39
Sugar, U.S.	$/kg	**	0.58	0.59	0.59	0.57	0.59	0.63	0.65	0.63	0.66	0.67
Sugar, World	$/kg	**	0.28	0.28	0.30	0.24	0.28	0.31	0.35	0.34	0.36	0.34

TABLE A.1 Commodity prices (*continued*)

Commodity	Unit		2019	2020	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Jan 2021	Feb 2021	Mar 2021
Raw Materials												
Timber												
Logs, Africa	$/cum		391.9	399.5	385.9	385.3	409.3	417.4	422.0	426.1	423.4	416.6
Logs, S.E. Asia	$/cum	**	273.1	278.9	273.3	276.9	280.5	285.0	281.1	287.0	282.5	273.8
Plywood	¢/sheets		500.9	511.6	501.3	507.9	514.6	522.8	515.6	526.4	518.2	502.3
Sawnwood, Africa	$/cum		611.8	615.2	613.7	594.8	619.3	632.8	660.7	653.8	664.0	664.2
Sawnwood, S.E. Asia	$/cum	**	695.9	699.7	698.1	676.5	704.4	719.8	751.5	743.6	755.3	755.5
Other Raw Materials												
Cotton	$/kg	**	1.72	1.59	1.64	1.45	1.54	1.72	1.99	1.92	2.05	2.02
Rubber, RSS3	$/kg	**	1.64	1.73	1.60	1.36	1.68	2.27	2.34	2.30	2.35	2.37
Rubber, TSR20	$/kg		1.41	1.33	1.34	1.13	1.30	1.55	1.67	1.59	1.68	1.74
Fertilizers												
DAP	$/mt		306.4	312.4	273.5	272.7	335.1	368.4	494.8	421.3	528.9	534.1
Phosphate rock	$/mt	**	88.0	76.1	72.3	72.9	77.1	81.9	89.8	85.0	88.1	96.3
Potassium chloride	$/mt	**	255.5	217.8	245.0	221.2	202.5	202.5	202.5	202.5	202.5	202.5
TSP	$/mt	**	294.5	265.0	243.0	242.7	273.7	300.8	416.5	337.6	453.8	458.0
Urea, E. Europe	$/mt	**	245.3	229.1	220.3	213.0	238.1	245.0	317.6	265.0	335.0	352.9
Metals and Minerals												
Aluminum	$/mt	**	1,794	1,704	1,691	1,498	1,708	1,919	2,091	2,004	2,079	2,190
Copper	$/mt	**	6,010	6,174	5,634	5,351	6,525	7,185	8,477	7,972	8,471	8,988
Iron ore	$/dmt	**	93.8	108.9	90.8	93.9	117.8	133.2	167.2	169.6	163.8	168.2
Lead	$/mt	**	1,997	1,825	1,844	1,676	1,876	1,904	2,014	2,015	2,080	1,948
Nickel	$/mt	**	13,914	13,787	12,690	12,237	14,266	15,957	17,618	17,863	18,584	16,407
Tin	$/mt	**	18,661	17,125	16,267	15,731	17,690	18,810	25,099	21,920	26,316	27,061
Zinc	$/mt	**	2,550	2,266	2,124	1,968	2,343	2,631	2,747	2,705	2,745	2,792
Precious Metals												
Gold	$/toz	***	1,392	1,770	1,583	1,710	1,912	1,875	1,798	1,867	1,808	1,718
Platinum	$/toz	***	864	883	902	788	904	939	1,160	1,091	1,207	1,181
Silver	$/toz	***	16.2	20.5	16.9	16.3	24.5	24.4	26.3	25.9	27.3	25.6
Commodity Price Indexes (2010=100)												
Energy			76.0	51.9	60.5	38.8	52.0	56.3	76.2	69.3	79.3	80.0
Non-energy			81.7	84.1	81.3	77.5	84.9	92.8	103.8	101.6	104.5	105.4
Agriculture			83.3	87.1	85.7	82.0	86.6	94.2	103.0	102.1	103.8	103.0
Beverages			76.1	80.4	78.7	77.5	83.7	81.6	83.2	82.6	83.4	83.6
Food			87.0	92.5	90.8	86.5	91.0	101.7	114.2	113.3	115.2	114.0
Oils and Meals			77.5	89.8	84.0	77.7	88.8	108.7	122.7	123.2	123.6	121.3
Grains			89.0	93.1	92.7	90.6	89.9	99.1	116.1	113.9	117.9	116.6
Other Food			97.7	95.5	98.1	94.3	94.8	94.7	101.2	99.9	101.6	102.1
Raw Materials			78.0	77.5	77.0	73.5	77.3	82.4	85.9	84.7	86.7	86.3
Timber			85.6	86.4	85.8	84.1	87.0	88.7	91.3	91.1	91.8	91.1
Other Raw Materials			69.8	67.9	67.3	61.9	66.6	75.5	79.9	77.7	81.1	81.0
Fertilizers			81.4	73.2	71.7	69.3	74.2	77.5	95.7	83.0	100.1	104.2
Metals and minerals			78.4	79.1	73.1	69.1	82.6	91.8	106.5	102.8	106.4	110.2
Base Metals		****	81.6	80.2	75.7	70.2	83.0	91.9	104.6	99.7	105.0	109.0
Precious Metals			105.4	133.5	118.3	125.6	146.3	144.0	141.2	145.1	142.9	135.6

Source: See Appendix C.
Note: (*) Included in the energy index; (**) Included in the non-energy index; (***) Included in the precious metals index; (****) Metals and Minerals excluding iron ore.
Monthly updates posted at https://www.worldbank.org/commodities.
Download Table A.1 data.

TABLE A.2 Commodity prices forecasts in nominal U.S. dollars

Commodity	Unit	2019	2020	Forecasts 2021	2022	2023	2024	2025	2030	2035
Energy										
Coal, Australia	$/mt	77.9	60.8	78.0	76.1	74.2	72.4	70.6	62.3	55.0
Crude oil, avg	$/bbl	61.4	41.3	56.0	60.0	61.0	61.9	62.9	68.2	70.0
Natural gas, Europe	$/mmbtu	4.8	3.2	5.5	5.6	5.6	5.7	5.8	6.1	6.5
Natural gas, U.S.	$/mmbtu	2.6	2.0	2.8	2.9	2.9	3.0	3.1	3.5	4.0
Liquefied natural gas, Japan	$/mmbtu	10.6	8.3	8.0	8.0	7.9	7.9	7.9	7.7	7.5
Non-Energy										
Agriculture										
Beverages										
Cocoa	$/kg	2.34	2.37	2.40	2.43	2.47	2.50	2.53	2.71	2.90
Coffee, Arabica	$/kg	2.88	3.32	3.50	3.55	3.60	3.66	3.71	4.00	4.30
Coffee, Robusta	$/kg	1.62	1.52	1.60	1.63	1.66	1.70	1.73	1.91	2.10
Tea, average	$/kg	2.56	2.70	2.50	2.55	2.60	2.65	2.71	2.99	3.30
Food										
Oils and Meals										
Coconut oil	$/mt	736	1,010	1,400	1,420	1,439	1,459	1,480	1,586	1,700
Groundnut oil	$/mt	1,407	1,698	1,900	1,914	1,927	1,941	1,955	2,026	2,100
Palm oil	$/mt	601	752	975	983	992	1,001	1,009	1,054	1,100
Soybean meal	$/mt	347	394	500	503	507	510	514	532	550
Soybean oil	$/mt	765	838	1,025	1,037	1,048	1,060	1,072	1,134	1,200
Soybeans	$/mt	369	407	550	555	561	566	572	600	630
Grains										
Barley	$/mt	128	93	98	101	103	106	109	123	140
Maize	$/mt	170	165	210	212	214	216	218	229	240
Rice, Thailand, 5%	$/mt	418	497	510	512	514	516	518	529	540
Wheat, U.S., HRW	$/mt	202	211	230	233	235	238	241	255	270
Other Food										
Bananas, U.S.	$/kg	1.14	1.22	1.23	1.23	1.24	1.24	1.25	1.27	1.30
Meat, beef	$/kg	4.76	4.67	4.60	4.63	4.66	4.68	4.71	4.85	5.00
Meat, chicken	$/kg	2.00	1.63	1.80	1.82	1.84	1.86	1.88	1.99	2.10
Oranges	$/kg	0.56	0.60	0.60	0.61	0.63	0.64	0.65	0.72	0.80
Shrimp	$/kg	12.60	12.67	12.00	12.13	12.27	12.40	12.54	13.25	14.00
Sugar, World	$/kg	0.28	0.28	0.34	0.35	0.35	0.36	0.36	0.39	0.42
Raw Materials										
Timber										
Logs, Africa	$/cum	392	399	420	422	424	426	428	439	450
Logs, S.E. Asia	$/cum	273	279	280	283	287	290	293	311	330
Sawnwood, S.E. Asia	$/cum	696	700	750	758	767	775	784	828	875
Other Raw Materials										
Cotton A, Index	$/kg	1.72	1.59	1.95	1.97	2.00	2.02	2.04	2.17	2.30
Rubber, RSS3	$/kg	1.64	1.73	2.25	2.25	2.26	2.26	2.26	2.28	2.30
Tobacco	$/mt	4,579	4,332	4,350	4,367	4,385	4,402	4,420	4,509	4,600
Fertilizers										
DAP	$/mt	306	312	450	425	400	375	350	383	420
Phosphate rock	$/mt	88	76	90	92	94	96	98	108	120
Potassium chloride	$/mt	256	218	205	211	216	222	229	262	300
TSP	$/mt	295	265	410	380	360	340	320	349	380
Urea, E. Europe	$/mt	245	229	300	275	260	265	271	299	330
Metals and Minerals										
Aluminum	$/mt	1,794	1,704	2,200	2,050	2,100	2,150	2,200	2,298	2,400
Copper	$/mt	6,010	6,174	8,500	7,500	7,000	7,500	7,544	7,769	8,000
Iron ore	$/dmt	93.8	108.9	135.0	100.0	80.0	75.0	70.0	74.8	80.0
Lead	$/mt	1,997	1,825	1,950	1,900	1,910	1,920	1,930	1,982	2,100
Nickel	$/mt	13,914	13,787	16,500	16,000	16,146	16,293	16,441	17,203	18,000
Tin	$/mt	18,661	17,125	25,000	23,000	23,148	23,297	23,447	24,211	25,000
Zinc	$/mt	2,550	2,266	2,700	2,400	2,300	2,316	2,332	2,415	2,500
Precious Metals										
Gold	$/toz	1,392	1,770	1,700	1,600	1,550	1,525	1,500	1,549	1,600
Silver	$/toz	16.2	20.5	25.0	22.0	20.0	19.0	18.0	19.0	20.0
Platinum	$/toz	864	883	1,100	1,110	1,120	1,131	1,141	1,194	1,250

Source and *Note*: See Appendix C. Next update: October 2021.
Download forecast data (Tables A.2 - A.4).

TABLE A.3 Commodity prices forecasts in constant U.S. dollars (2010=100)

Commodity	Unit	2019	2020	Forecasts 2021	2022	2023	2024	2025	2030	2035
Energy										
Coal, Australia	$/mt	78.3	61.4	77.6	74.4	71.3	68.4	65.5	52.6	46.4
Crude oil, avg	$/bbl	61.7	41.7	55.7	58.7	58.6	58.5	58.4	57.5	59.0
Natural gas, Europe	$/mmbtu	4.8	3.3	5.5	5.4	5.4	5.4	5.4	5.2	5.5
Natural gas, U.S.	$/mmbtu	2.6	2.0	2.8	2.8	2.8	2.9	2.9	3.0	3.4
Liquefied natural gas, Japan	$/mmbtu	10.6	8.4	8.0	7.8	7.6	7.5	7.3	6.5	6.3
Non-Energy										
Agriculture										
Beverages										
Cocoa	$/kg	2.35	2.39	2.39	2.38	2.37	2.36	2.35	2.29	2.45
Coffee, Arabica	$/kg	2.89	3.36	3.48	3.47	3.46	3.45	3.44	3.37	3.63
Coffee, Robusta	$/kg	1.63	1.53	1.59	1.60	1.60	1.60	1.60	1.61	1.77
Tea, average	$/kg	2.58	2.73	2.49	2.49	2.50	2.51	2.51	2.52	2.78
Food										
Oils and Meals										
Coconut oil	$/mt	740	1,021	1,392	1,388	1,384	1,378	1,373	1,338	1,434
Groundnut oil	$/mt	1,415	1,715	1,889	1,871	1,853	1,833	1,813	1,709	1,771
Palm oil	$/mt	605	759	969	962	954	945	936	889	928
Soybean meal	$/mt	349	398	497	492	487	482	477	448	464
Soybean oil	$/mt	769	846	1,019	1,014	1,008	1,001	994	957	1,012
Soybeans	$/mt	371	411	547	543	539	535	530	506	531
Grains										
Barley	$/mt	129	93	97	98	99	100	101	104	118
Maize	$/mt	171	167	209	207	206	204	202	193	202
Rice, Thailand, 5%	$/mt	420	502	507	501	494	488	481	446	455
Wheat, U.S., HRW	$/mt	203	213	229	228	226	225	223	215	228
Other Food										
Bananas, U.S.	$/kg	1.15	1.23	1.22	1.21	1.19	1.18	1.16	1.08	1.10
Meat, beef	$/kg	4.79	4.71	4.57	4.53	4.47	4.42	4.37	4.09	4.22
Meat, chicken	$/kg	2.01	1.65	1.79	1.78	1.77	1.76	1.74	1.68	1.77
Oranges	$/kg	0.56	0.61	0.60	0.60	0.60	0.60	0.60	0.61	0.67
Shrimp	$/kg	12.67	12.80	11.93	11.87	11.79	11.71	11.63	11.18	11.81
Sugar, World	$/kg	0.28	0.29	0.34	0.34	0.34	0.34	0.33	0.33	0.35
Raw Materials										
Timber										
Logs, Africa	$/cum	394	404	418	413	408	403	397	370	380
Logs, S.E. Asia	$/cum	275	282	278	277	276	274	272	262	278
Sawnwood, S.E. Asia	$/cum	700	707	746	742	737	732	727	698	738
Other Raw Materials										
Cotton A	$/kg	1.73	1.60	1.94	1.93	1.92	1.91	1.90	1.83	1.94
Rubber, RSS3	$/kg	1.65	1.75	2.24	2.20	2.17	2.13	2.10	1.92	1.94
Tobacco	$/mt	4,603	4,376	4,325	4,271	4,215	4,158	4,100	3,803	3,880
Fertilizers										
DAP	$/mt	308	316	447	416	385	354	325	323	354
Phosphate rock	$/mt	88	77	89	90	90	90	91	91	101
Potassium chloride	$/mt	257	220	204	206	208	210	212	221	253
TSP	$/mt	296	268	408	372	346	321	297	294	321
Urea, E. Europe	$/mt	247	231	298	269	250	250	251	252	278
Metals and Minerals										
Aluminum	$/mt	1,804	1,721	2,188	2,005	2,019	2,031	2,041	1,938	2,024
Copper	$/mt	6,042	6,237	8,452	7,335	6,729	7,083	6,997	6,553	6,748
Iron ore	$/dmt	94.3	110.0	134.2	97.8	76.9	70.8	64.9	63.1	67.5
Lead	$/mt	2,007	1,844	1,939	1,858	1,836	1,813	1,790	1,672	1,771
Nickel	$/mt	13,987	13,928	16,406	15,647	15,520	15,387	15,249	14,510	15,182
Tin	$/mt	18,759	17,299	24,858	22,493	22,251	22,002	21,747	20,421	21,086
Zinc	$/mt	2,564	2,290	2,685	2,347	2,211	2,187	2,163	2,037	2,109
Precious Metals										
Gold	$/toz	1,400	1,788	1,690	1,565	1,490	1,440	1,391	1,307	1,350
Silver	$/toz	16.3	20.7	24.9	21.5	19.2	17.9	16.7	16.0	16.9
Platinum	$/toz	869	892	1,094	1,086	1,077	1,068	1,058	1,007	1,054

Source and *Note*: See Appendix C. Next update: October 2021.
Download forecast data (Tables A.2 - A.4).

TABLE A.4 Commodity price index forecasts (2010=100)

Commodity		2019	2020	Forecasts 2021	2022	2023	2024	2025	2030	2035
Nominal U.S. dollars (2010=100)										
Energy		76.0	51.9	70.7	75.0	76.0	77.1	78.2	84.2	86.6
Non-energy commodities		81.7	84.1	100.1	96.6	95.6	97.1	97.9	102.6	107.7
Agriculture		83.3	87.1	98.9	99.9	100.8	101.8	102.8	107.9	113.3
Beverages		76.1	80.4	81.5	82.8	84.1	85.4	86.8	93.9	101.7
Food		87.0	92.5	108.3	109.2	110.2	111.2	112.2	117.4	122.9
Oils and Meals		77.5	89.8	115.8	116.8	117.9	118.9	120.0	125.4	131.0
Grains		89.0	93.1	105.9	106.8	107.8	108.7	109.7	114.6	119.8
Other food		97.7	95.5	100.5	101.4	102.4	103.4	104.3	109.4	114.9
Raw materials		78.0	77.5	85.1	85.9	86.6	87.3	88.1	92.0	96.1
Timber		85.6	86.4	91.1	92.1	93.2	94.2	95.3	100.8	106.6
Other Raw Materials		69.8	67.9	78.6	79.0	79.4	79.8	80.2	82.4	84.7
Fertilizers		81.4	73.2	93.0	88.4	85.8	86.0	86.4	95.7	106.2
Metals and minerals	*	78.4	79.1	103.2	90.7	86.1	88.7	89.0	92.6	96.3
Base Metals	**	81.6	80.2	105.7	95.9	93.4	97.4	98.6	102.2	105.9
Precious Metals		105.4	133.5	133.7	124.6	119.5	117.0	114.5	118.7	123.0
Constant 2010 U.S. dollars (2010=100), deflated by the MUV Index										
Energy		76.4	52.4	70.3	73.3	73.1	72.8	72.6	71.0	73.0
Non-energy commodities		82.1	85.0	99.5	94.4	91.9	91.7	90.8	86.6	90.8
Agriculture		83.7	88.0	98.4	97.7	96.9	96.2	95.4	91.0	95.6
Beverages		76.5	81.2	81.0	80.9	80.8	80.7	80.5	79.2	85.7
Food		87.4	93.4	107.6	106.8	105.9	105.0	104.1	99.0	103.6
Oils and Meals		77.9	90.7	115.1	114.2	113.3	112.3	111.3	105.7	110.5
Grains		89.4	94.0	105.3	104.5	103.6	102.7	101.7	96.7	101.1
Other food		98.2	96.5	99.9	99.2	98.4	97.6	96.8	92.3	96.9
Raw materials		78.5	78.3	84.6	84.0	83.2	82.5	81.7	77.6	81.1
Timber		86.0	87.3	90.6	90.1	89.6	89.0	88.4	85.0	89.9
Other Raw Materials		70.2	68.6	78.1	77.2	76.3	75.4	74.4	69.5	71.4
Fertilizers		81.8	73.9	92.5	86.4	82.4	81.3	80.1	80.8	89.6
Metals and minerals	*	78.8	80.0	102.6	88.7	82.8	83.8	82.6	78.1	81.2
Base Metals	**	82.0	81.0	105.1	93.8	89.8	92.0	91.4	86.2	89.4
Precious Metals		106.0	134.9	132.9	121.8	114.9	110.5	106.2	100.1	103.7
Inflation indexes, 2010=100										
MUV index	***	99.5	99.0	100.6	102.3	104.0	105.9	107.8	118.6	118.6
% change per annum		(2.3)	(0.5)	1.6	1.7	1.7	1.8	1.8	2.0	2.0
U.S. GDP deflator		116.0	118.1	120.5	122.9	125.4	127.9	130.4	144.0	144.0
% change per annum		1.5	1.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0

Source: See Appendix C.
Note: (*) Base metals plus iron ore; (**) Includes aluminum, copper, lead, nickel, tin and zinc; (***) MUV is the unit value index of manufacture exports. Next update: October 2021. For other notes see Appendix C.
Download forecast data (Tables A.2 - A.4).

APPENDIX B

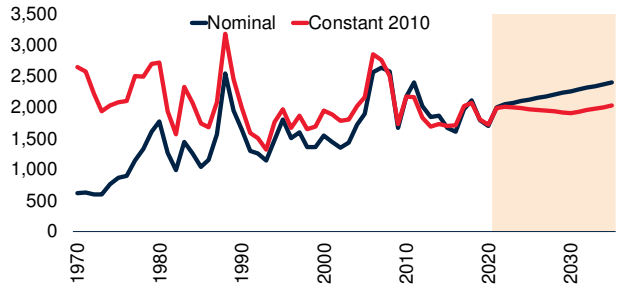
Supply-Demand balances

Aluminum

Monthly Prices (US$/mt)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/mt)



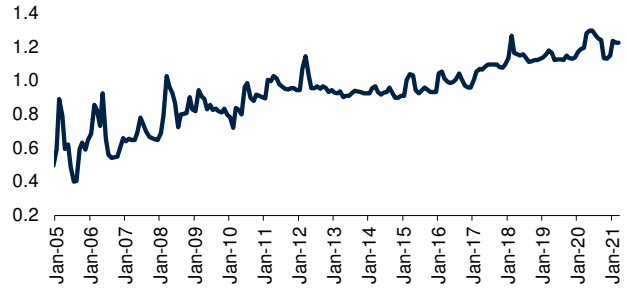
Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970	1980	1990	2000	2010	2017	2018	2019	2020
				(thousand metric tons)					
Bauxite Production									
Australia	9,256	27,179	41,391	53,801	68,535	89,421	96,500	105,544	105,624
Guinea	2,600	13,911	16,150	17,992	17,633	51,702	59,574	70,173	87,766
China	500	1,700	3,655	7,900	36,837	68,393	70,751	70,751	69,600
Brazil	510	4,632	9,749	14,379	32,028	38,242	32,377	31,938	29,572
Indonesia	1,223	1,249	1,164	1,151	27,410	2,900	13,243	16,593	21,341
India	1,370	1,785	4,853	7,562	12,662	22,776	23,229	22,307	20,769
Jamaica	12,010	11,978	10,965	11,127	8,540	8,245	10,058	9,022	7,616
Russia	n/a	n/a	n/a	5,000	5,475	5,524	5,650	5,572	5,571
Saudi Arabia	5	n/a	n/a	n/a	n/a	4,117	4,623	4,830	4,601
Kazakhstan	989	n/a	n/a	3,729	5,310	4,843	6,104	3,812	4,000
Vietnam	n/a	n/a	n/a	16	80	2,700	3,570	3,600	2,550
Turkey	n/a	n/a	n/a	459	1,311	1,719	678	2,255	2,244
Greece	2,292	3,259	2,511	1,991	1,902	1,927	1,559	1,379	1,368
Others	*n/a*	*n/a*	*n/a*	*13,784*	*11,078*	*10,400*	*9,754*	*10,228*	*7,687*
World	**57,280**	**93,268**	**115,099**	**138,889**	**228,802**	**312,908**	**337,671**	**358,004**	**370,310**
Refined Aluminum Production									
China	127	350	854	2,647	16,244	35,189	36,447	36,447	37,080
Russia	n/a	n/a	n/a	3,258	3,947	3,742	3,621	3,896	3,856
India	963	1,068	1,567	647	1,610	3,062	2,934	3,524	3,583
Canada	963	1,068	1,567	2,373	2,963	3,212	2,923	2,854	3,113
United Arab Emirates	n/a	35	174	536	1,400	2,600	2,640	2,579	2,248
Australia	206	303	1,234	1,761	1,928	1,488	1,574	1,570	1,583
Bahrain	n/a	126	213	509	851	981	1,011	1,365	1,549
Vietnam	n/a	n/a	n/a	0	12	501	1,310	1,374	1,395
Norway	530	653	867	1,026	1,090	1,253	1,295	1,279	1,302
United States	3,607	4,654	4,048	3,668	1,728	741	897	1,126	1,027
Saudi Arabia	5	n/a	n/a	0	0	916	932	967	1,007
Malaysia	1	n/a	n/a	0	60	760	760	760	751
South Africa	n/a	86	158	683	806	716	714	717	717
Others	*n/a*	*n/a*	*n/a*	*7,196*	*8,881*	*7,727*	*7,553*	*7,193*	*7,120*
World	**9,645**	**16,099**	**19,275**	**24,304**	**41,520**	**62,886**	**64,611**	**65,650**	**66,329**
Refined Aluminum Consumption									
China	225	550	861	3,352	15,854	31,908	35,521	36,648	39,005
United States	3,488	4,454	4,330	6,161	4,242	5,615	4,630	4,926	4,332
Germany	825	1,272	1,379	1,632	1,912	2,160	2,139	1,988	1,767
India	162	234	433	601	1,475	2,253	1,750	1,829	1,685
Vietnam	n/a	n/a	n/a	21	102	200	1,253	1,405	1,641
Japan	911	1,639	2,414	2,223	2,025	1,950	1,979	1,765	1,433
Korea, Rep.	15	68	369	823	1,255	1,420	1,151	1,157	1,062
Turkey	14	45	152	211	703	961	954	971	1,062
Malaysia	n/a	n/a	59	106	329	288	364	569	870
Others	*4,387*	*7,037*	*9,255*	*9,874*	*12,666*	*13,434*	*13,763*	*13,282*	*11,936*
World	**10,027**	**15,298**	**19,252**	**25,004**	**40,563**	**60,188**	**63,504**	**64,541**	**64,793**

Sources: British Geological Survey, Metallgesellschaft, U.S. Geological Survey, World Bureau of Metals Statistics, World Bank.
Note: n/a implies data not available.

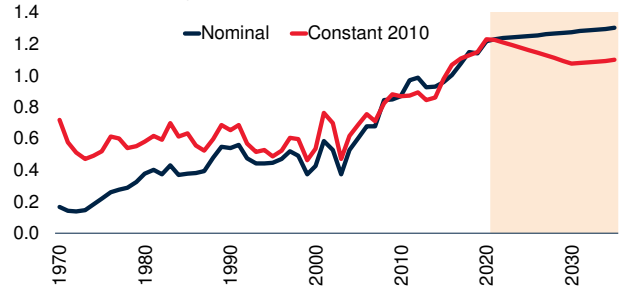
Bananas

Monthly Prices (US$/kg)



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/kg)



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970	1980	1990	2000	2010	2016	2017	2018	2019
				(thousand metric tonnes)					
Exports									
Ecuador	1,246	1,291	2,157	3,994	5,156	5,974	6,415	6,554	6,668
Guatemala	200	371	360	802	1,388	2,238	2,343	2,360	2,586
Philippines	107	923	840	1,600	1,590	1,397	2,668	3,388	2,420
Costa Rica	856	973	1,434	2,079	1,909	2,365	2,525	2,484	2,382
Colombia	262	692	1,148	1,564	1,692	1,842	1,885	1,748	1,896
Netherlands	1	7	43	49	136	506	684	804	925
Belgium	n/a	n/a	n/a	967	1,219	1,130	1,284	1,156	924
United States	191	205	337	400	503	573	594	584	594
Honduras	799	973	781	375	471	659	605	633	593
Mexico	1	16	154	81	176	448	561	552	572
Côte d'Ivoire	140	122	94	243	266	364	387	377	411
Myanmar	n/a	n/a	n/a	n/a	n/a	109	233	176	410
Dominican Republic	4	10	11	79	340	383	499	125	374
Panama	600	504	745	489	271	250	288	298	341
Vietnam	3	8	3	5	32	36	51	78	291
Germany	5	3	29	105	384	357	343	247	284
Turkey	n/a	n/a	0	0	0	0	0	0	242
Peru	n/a	n/a	n/a	n/a	1	202	203	232	222
France	0	3	26	242	322	253	250	250	205
Others	*1,103*	*672*	*867*	*1,262*	*1,633*	*2,109*	*2,154*	*2,332*	*2,420*
World	**5,519**	**6,772**	**9,030**	**14,336**	**17,491**	**21,197**	**23,974**	**24,379**	**24,760**
Imports									
United States	1,846	2,423	3,099	4,031	4,115	4,597	4,814	4,778	4,677
China	29	21	48	647	739	958	1,113	1,619	2,012
Russia	n/a	n/a	n/a	503	1,068	1,356	1,544	1,556	1,512
Germany	548	614	1,232	1,115	1,234	1,391	1,417	1,256	1,303
Netherlands	81	114	142	160	222	771	909	1,073	1,262
Belgium	n/a	n/a	n/a	1,027	1,351	1,282	1,406	1,327	1,146
Japan	844	726	758	1,079	1,109	956	986	1,003	1,045
United Kingdom	335	322	470	743	979	1,148	1,133	1,021	1,011
Italy	288	279	429	605	658	712	758	777	731
France	435	446	497	341	550	560	669	725	671
Canada	199	246	341	399	496	570	579	572	581
Poland	3	47	8	285	245	305	446	460	444
Argentina	164	195	73	340	351	433	488	449	433
Turkey	n/a	n/a	62	124	201	209	208	155	373
Korea, Rep.	3	15	22	184	338	365	437	427	368
Spain	n/a	n/a	n/a	143	158	274	308	365	359
Ukraine	n/a	n/a	n/a	60	152	192	238	251	247
Chile	76	87	63	193	176	207	222	219	246
Iraq	3	16	1	0	1	107	279	306	228
Greece	12	0	46	82	120	152	180	219	209
Algeria	11	0	0	0	58	197	96	60	207
Others	*707*	*1,127*	*1,591*	*2,377*	*3,610*	*3,596*	*3,956*	*3,864*	*3,927*
World	**5,584**	**6,678**	**8,879**	**14,435**	**17,932**	**20,337**	**22,186**	**22,484**	**22,992**

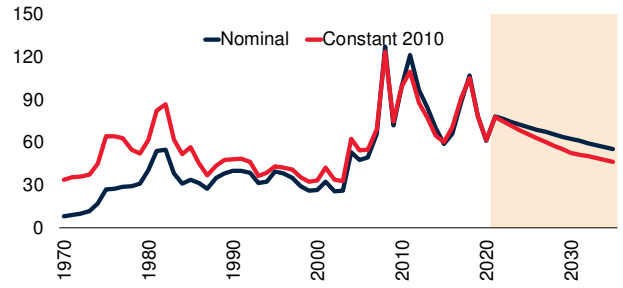
Source: Food and Agriculture Organization.
Note: FAOSTAT (February 9, 2021 update).

Coal

Monthly Prices (US$/mt)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/mt)



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1981	1990	2000	2005	2010	2016	2017	2018	2019
	(million metric tonnes oil equivalent)								
Production									
China	311	540	707	1242	1665	1691	1748	1829	1906
Indonesia	0	6	45	90	162	269	272	329	359
United States	440	538	544	555	528	351	374	368	342
Australia	68	115	172	215	251	306	299	312	314
India	64	106	152	190	252	284	286	306	304
Russia	n/a	186	122	136	151	194	206	220	220
South Africa	75	100	127	138	144	144	143	143	144
Colombia	3	14	26	41	51	62	62	58	57
Kazakhstan	n/a	57	32	37	47	44	48	51	50
Poland	103	100	72	69	55	52	50	47	45
Germany	149	125	61	57	46	40	39	38	30
Canada	23	40	39	35	35	33	32	28	27
Mongolia	2	3	2	3	11	16	23	25	26
Vietnam	3	3	6	19	25	22	21	23	26
Turkey	7	12	12	11	18	15	15	17	17
Ukraine	n/a	87	36	35	32	18	14	14	14
Czech Republic	43	36	25	24	21	16	15	15	13
Serbia	n/a	n/a	n/a	n/a	7	7	7	7	7
Mexico	2	3	5	6	7	6	7	7	6
Bulgaria	5	5	4	4	5	5	6	5	5
Romania	9	8	6	6	6	4	4	4	4
Thailand	0	4	5	6	5	4	4	4	4
Greece	3	7	8	9	7	4	5	4	3
Others	*n/a*	*168*	*93*	*86*	*69*	*73*	*74*	*90*	*81*
World	**1,845**	**2,264**	**2,304**	**3,014**	**3,602**	**3,662**	**3,754**	**3,942**	**4,002**
Consumption									
China	303	527	706	1325	1749	1889	1894	1907	1951
India	64	110	164	211	290	403	417	443	445
United States	381	459	541	546	499	341	331	317	271
Japan	65	78	95	115	116	120	122	119	117
South Africa	51	67	75	80	93	90	89	90	91
Russia	n/a	182	106	95	91	89	84	87	87
Korea, Rep.	15	24	43	55	77	81	86	87	82
Indonesia	0	3	13	24	39	53	57	68	81
Germany	144	132	85	81	77	77	72	69	55
Vietnam	3	2	5	9	15	28	28	38	49
Poland	91	78	56	55	55	49	50	50	46
Australia	29	38	51	55	52	46	45	44	43
Turkey	7	16	22	22	31	38	39	41	41
Kazakhstan	n/a	39	18	27	33	34	36	41	40
Taiwan, China	4	11	27	36	38	40	41	41	39
Others	*n/a*	*459*	*350*	*374*	*355*	*335*	*337*	*352*	*334*
World	**1,819**	**2,227**	**2,357**	**3,110**	**3,611**	**3,714**	**3,728**	**3,793**	**3,770**

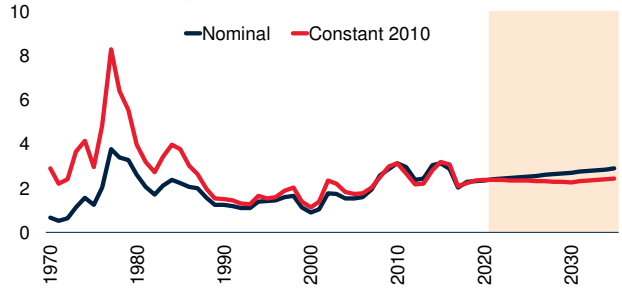
Source: BP Statistical Review (June 2020 update).
Note: n/a implies data not available. Commercial solid fuels only, i.e., bituminous coal and anthracite (hard coal), and lignite and brown (sub-bituminous) coal, and other commercial solid fuels.

Cocoa

Monthly Prices (US$/kg)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/kg)

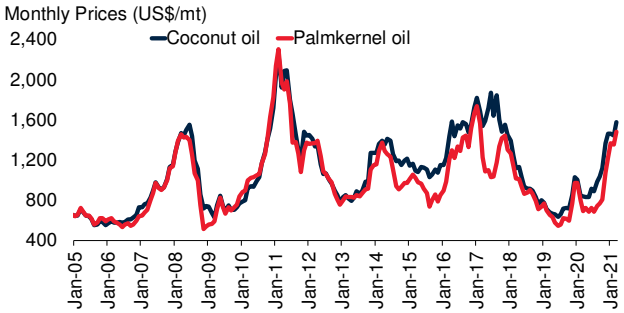


Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

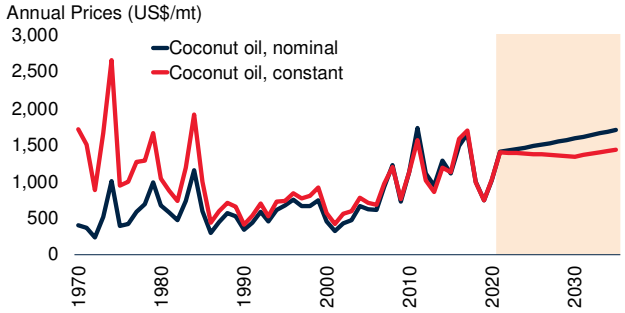
	1970/71	1980/81	1990/91	2000/01	2010/11	2017/18	2018/19	2019/20	2020/21
	(thousand metric tons)								
Production									
Côte d'Ivoire	180	417	804	1,212	1,511	1,964	2,154	2,105	2,150
Ghana	406	258	293	395	1,025	905	812	800	850
Ecuador	72	87	111	89	161	287	322	328	340
Cameroon	112	117	115	133	229	250	280	280	280
Nigeria	305	156	160	180	240	250	270	250	270
Indonesia	2	12	150	385	440	240	220	200	200
Brazil	182	353	368	163	200	204	176	201	180
Peru	2	7	11	17	54	134	136	153	150
Dominican Republic	35	35	42	45	54	85	75	75	75
Others	*233*	*252*	*452*	*233*	*396*	*327*	*339*	*334*	*348*
World	**1,528**	**1,694**	**2,507**	**2,852**	**4,309**	**4,646**	**4,784**	**4,726**	**4,843**
Grindings									
Côte d'Ivoire	35	60	118	285	361	559	605	614	610
Netherlands	116	140	268	452	540	585	600	600	600
Indonesia	1	10	32	83	190	483	487	480	485
Germany	151	180	294	227	439	448	445	430	430
United States	279	186	268	445	401	385	400	380	385
Malaysia	n/a	n/a	n/a	n/a	n/a	236	327	318	322
Ghana	48	27	30	70	212	310	320	292	300
Others	*801*	*964*	*1,315*	*1,480*	*1,796*	*1,578*	*1,600*	*1,555*	*1,561*
World	**1,431**	**1,566**	**2,325**	**3,041**	**3,938**	**4,585**	**4,784**	**4,669**	**4,693**
Exports									
Côte d'Ivoire	138	406	688	903	1,079	1,531	1,567	1,630	n/a
Ghana	348	182	245	307	694	525	649	522	n/a
Ecuador	46	19	56	57	136	288	314	314	n/a
Cameroon	75	96	96	102	204	178	273	230	n/a
Nigeria	216	76	142	149	219	218	347	83	n/a
Malaysia	3	40	148	17	21	104	109	77	n/a
Peru	n/a	n/a	n/a	n/a	n/a	66	64	54	n/a
Others	*294*	*282*	*362*	*451*	*643*	*274*	*298*	*186*	*n/a*
World	**1,119**	**1,100**	**1,737**	**1,987**	**2,996**	**3,183**	**3,621**	**3,095**	**n/a**
Imports									
Netherlands	116	167	267	549	806	827	1,181	842	n/a
Germany	155	187	300	228	434	411	462	387	n/a
United States	269	246	320	355	472	340	373	365	n/a
Malaysia	1	n/a	1	110	320	314	364	340	n/a
Belgium	18	28	50	101	194	211	257	303	n/a
Indonesia	n/a	n/a	n/a	n/a	n/a	259	259	183	n/a
France	42	59	74	157	149	153	139	130	n/a
Turkey	1	2	6	39	71	94	111	120	n/a
Singapore	n/a	n/a	n/a	n/a	n/a	72	96	92	n/a
Others	*537*	*509*	*744*	*870*	*911*	*791*	*790*	*729*	*n/a*
World	**1,139**	**1,198**	**1,761**	**2,409**	**3,357**	**3,472**	**4,032**	**3,491**	**n/a**

Source: Quarterly Bulletin of Cocoa Statistics (Cocoa year 2020/21 Volume XLVII No. 1 update).
Note: n/a implies data not available. 1970/71 data are average of 1968-1972.

Coconut oil and Palm kernel oil



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

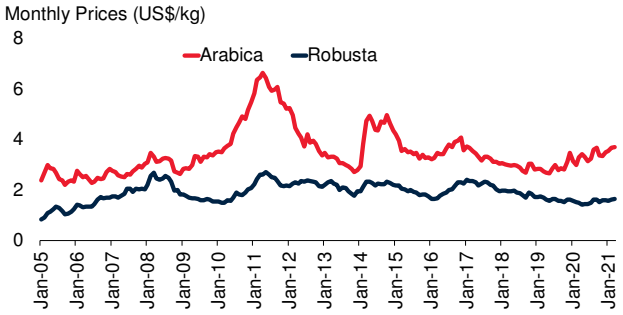


Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

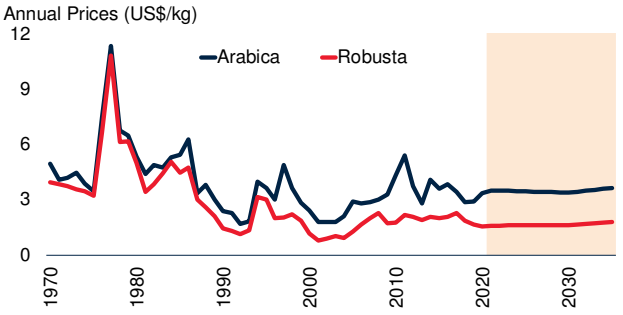
	1970/1971	1980/1981	1990/1991	2000/2001	2010/2011	2017/2018	2018/2019	2019/2020	2020/2021
				(thousand metric tons)					
Coconut oil production									
Philippines	620	1,256	1,263	1,753	1,820	1,698	1,700	1,615	1,575
Indonesia	373	740	795	833	943	1,018	975	937	955
India	223	207	250	448	376	481	474	474	474
Vietnam	13	25	77	149	89	174	180	184	192
Mexico	85	82	77	127	132	129	138	139	128
Bangladesh	n/a	n/a	n/a	17	15	14	83	69	69
Sri Lanka	131	78	67	62	43	29	71	54	42
Others	*820*	*459*	*398*	*212*	*189*	*122*	*135*	*130*	*130*
World	**2,265**	**2,847**	**2,927**	**3,601**	**3,607**	**3,665**	**3,756**	**3,602**	**3,565**
Coconut oil consumption									
Philippines	214	204	348	375	728	655	665	691	675
European Union	n/a	n/a	n/a	739	710	615	640	600	585
India	223	278	255	454	380	470	470	465	470
United States	397	474	407	446	486	437	420	480	450
Indonesia	372	742	585	336	378	367	374	380	375
Vietnam	14	25	72	142	95	170	178	178	193
China	29	24	20	189	197	140	177	148	180
Mexico	85	83	107	138	135	150	139	143	129
Bangladesh	n/a	9	30	24	19	17	69	74	80
Others	*n/a*	*n/a*	*n/a*	*383*	*440*	*419*	*417*	*486*	*438*
World	**2,186**	**2,916**	**2,840**	**3,226**	**3,568**	**3,440**	**3,549**	**3,645**	**3,575**
Palmkernel oil production									
Indonesia	n/a	48	305	1,050	2,680	4,545	4,724	4,870	4,958
Malaysia	49	235	784	1,520	2,072	2,225	2,325	2,158	2,033
Thailand	n/a	2	19	77	245	368	395	410	415
Nigeria	31	75	122	127	305	335	330	330	330
Colombia	4	8	20	48	75	142	142	133	125
Papua New Guinea	n/a	6	14	31	54	77	80	73	74
Guatemala	n/a	n/a	n/a	17	22	79	89	69	69
Others	*291*	*172*	*170*	*208*	*370*	*499*	*493*	*485*	*492*
World	**375**	**546**	**1,434**	**3,078**	**5,823**	**8,270**	**8,578**	**8,528**	**8,496**
Palmkernel oil consumption									
Indonesia	n/a	42	125	559	1,120	2,700	2,950	3,025	3,100
Malaysia	44	n/a	154	778	1,401	1,504	1,570	1,371	1,320
China	n/a	1	15	103	421	701	890	783	800
European Union	n/a	n/a	n/a	446	547	690	695	700	710
United States	43	83	164	116	282	387	321	378	379
Thailand	n/a	12	19	20	160	283	295	365	370
Nigeria	5	30	132	128	310	344	345	340	340
Brazil	n/a	n/a	15	47	186	253	260	278	262
India	n/a	18	1	57	155	125	156	122	149
Others	*n/a*	*n/a*	*n/a*	*383*	*678*	*842*	*853*	*856*	*873*
World	**425**	**592**	**1,346**	**2,637**	**5,260**	**7,829**	**8,335**	**8,218**	**8,303**

Source: U.S. Department of Agriculture (April 9, 2021 update).
Note: All quantities are for the crop year (beginning October 1). For example, 2001/02 refers to October 2001 to September 2002. European Union includes EU-15 for 1970-1991.

Coffee



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.



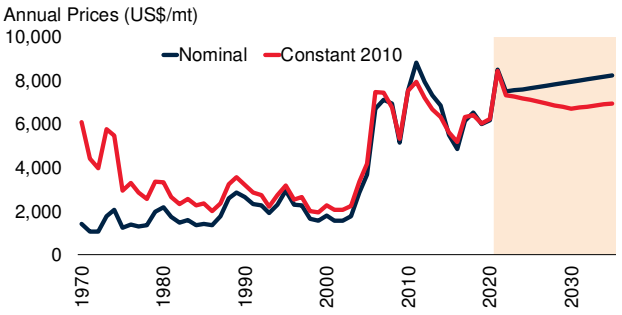
Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970/1971	1980/1981	1990/1991	2000/2001	2010/2011	2017/2018	2018/2019	2019/2020	2020/2021
					(thousand 60kg bags)				
Production									
Brazil	11,000	21,500	31,000	34,100	54,500	52,100	66,500	60,500	67,900
Vietnam	56	77	1,200	15,333	19,415	29,300	30,400	31,300	29,000
Colombia	8,000	13,500	14,500	10,500	8,525	13,825	13,870	14,100	14,100
Indonesia	2,330	5,365	7,480	6,495	9,325	10,400	10,600	10,700	10,700
Ethiopia	2,589	3,264	3,500	2,768	6,125	7,055	7,350	7,450	7,500
Honduras	545	1,265	1,685	2,821	3,975	7,600	7,515	5,400	6,125
India	1,914	1,977	2,970	5,020	5,035	5,266	5,325	4,967	5,250
Uganda	2,667	2,133	2,700	3,097	3,212	4,350	4,800	4,250	4,800
Peru	1,114	1,170	1,170	2,824	4,100	4,375	4,480	4,550	4,450
Mexico	3,200	3,862	4,550	4,800	4,000	4,000	3,550	3,700	3,900
Guatemala	1,965	2,702	3,282	4,564	3,960	3,780	3,770	3,450	3,650
Nicaragua	641	971	460	1,610	1,740	2,730	2,850	2,680	2,580
China	n/a	n/a	n/a	n/a	827	1,925	2,000	1,900	2,000
Malaysia	66	88	75	700	1,100	2,100	2,100	1,900	2,000
Cote d'Ivoire	3,996	6,090	3,300	5,100	1,600	1,250	2,000	1,725	1,800
Costa Rica	1,295	2,140	2,565	2,502	1,575	1,525	1,250	1,472	1,500
Tanzania	909	1,060	763	809	1,050	1,150	1,300	1,250	1,350
Papua New Guinea	401	880	964	1,041	865	810	965	855	900
Kenya	999	1,568	1,455	864	710	715	775	725	650
Others	*15,515*	*16,562*	*16,562*	*12,269*	*9,770*	*5,589*	*5,364*	*5,624*	*5,325*
World	**59,202**	**86,174**	**100,181**	**117,217**	**141,409**	**159,845**	**176,764**	**168,498**	**175,480**
Consumption									
European Union	n/a	n/a	n/a	n/a	41,350	45,700	46,155	45,475	45,800
United States	305	297	229	183	22,383	25,557	27,140	26,030	26,587
Brazil	8,890	7,975	9,000	13,100	19,420	22,420	23,200	23,530	23,530
Japan	n/a	n/a	n/a	n/a	7,015	8,231	7,897	7,610	7,997
Philippines	496	432	810	900	2,825	6,550	6,125	6,120	6,125
Canada	n/a	n/a	n/a	n/a	4,245	4,750	4,885	4,830	5,000
Russia	n/a	n/a	n/a	n/a	4,355	4,465	4,945	4,625	4,875
Indonesia	888	1,228	1,295	1,335	1,650	3,560	4,300	4,900	4,450
Ethiopia	1,170	1,600	1,900	1,667	2,860	3,150	3,193	3,140	3,400
China	n/a	n/a	n/a	n/a	1,106	3,085	3,040	3,255	3,350
Vietnam	31	35	100	417	1,337	2,880	2,940	3,100	3,250
Korea, South	n/a	n/a	n/a	n/a	1,910	2,645	2,770	2,980	3,025
Mexico	1,512	1,500	1,400	978	2,620	2,295	2,580	2,650	2,730
Algeria	n/a	n/a	n/a	n/a	1,815	2,300	2,340	2,040	2,240
Australia	n/a	n/a	n/a	n/a	1,445	1,900	2,040	1,960	2,100
Colombia	1,349	1,825	1,615	1,530	1,120	1,650	1,950	1,800	1,900
Switzerland	n/a	n/a	n/a	n/a	1,570	1,525	1,460	1,470	1,500
Ukraine	n/a	n/a	n/a	n/a	1,685	1,105	1,145	1,270	1,275
Turkey	n/a	n/a	n/a	n/a	340	860	1,210	1,215	1,210
Others	*n/a*	*n/a*	*n/a*	*n/a*	13,444	15,122	15,641	14,841	15,054
World	**19,408**	**20,438**	**22,265**	**26,303**	**134,495**	**159,750**	**164,956**	**162,841**	**165,398**

Source: U.S. Department of Agriculture (December 11, 2020 update).
Note: n/a implies data not available. European Union includes EU-15 for 1970-1991.

Copper

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970	1980	1990	2000	2010	2017	2018	2019	2020
					(thousand metric tons)				
Mine Production									
Chile	686	1068	1588	4,602	5,419	5,504	5,832	5,787	5,732
Peru	220	367	323	553	1,247	2,446	2,437	2,455	2,149
China	n/a	165	300	549	1,180	1,656	1,507	1,601	1,855
Congo, Dem. Rep.	386	n/a	n/a	33	378	1,095	1,225	1,433	1,400
United States	1560	1181	1588	1,440	1,129	1,258	1,216	1,257	1,196
Australia	158	244	330	832	870	849	911	934	896
Zambia	684	610	546	249	732	794	854	790	861
Russia	n/a	n/a	n/a	580	703	722	773	791	791
Mexico	61	175	299	365	270	742	751	770	750
Kazakhstan	n/a	n/a	n/a	433	404	745	621	711	721
Canada	610	716	794	634	522	597	548	561	585
Indonesia	0	59	162	1,006	871	666	651	400	492
Poland	83	343	370	454	425	419	401	449	442
Others	*1,755*	*2,811*	*3,027*	*1,486*	*1,988*	*2,700*	*2,678*	*2,841*	*2,767*
World	**6,202**	**7,739**	**9,327**	**13,217**	**16,139**	**20,193**	**20,404**	**20,781**	**20,638**
Refined Production									
China	120	295	558	1,312	4,540	8,889	8,949	9,447	10,021
Chile	647	811	1,192	2,669	3,244	2,430	2,461	2,269	2,329
Japan	603	1,014	1,008	1,437	1,549	1,488	1,595	1,495	1,583
Russia	n/a	n/a	n/a	824	900	949	1,020	1,028	1,028
United States	1,489	1,730	2,017	1,802	1,093	1,079	1,111	1,030	905
Congo, Dem. Rep.	683	n/a	n/a	29	254	699	821	842	850
Germany	134	425	532	709	704	695	670	600	656
Korea, Rep.	5	88	192	471	556	664	665	638	638
Poland	69	357	346	486	547	522	502	566	561
Kazakhstan	n/a	n/a	n/a	395	323	429	443	477	483
Mexico	n/a	n/a	n/a	399	247	411	422	448	412
Spain	n/a	n/a	n/a	316	347	420	429	383	387
Australia	n/a	n/a	n/a	484	424	386	377	426	381
Others	*2,978*	*4,755*	*4,829*	*3,429*	*4,484*	*4,420*	*4,188*	*3,828*	*3,583*
World Total	**6,729**	**9,475**	**10,675**	**14,761**	**19,214**	**23,479**	**23,652**	**23,477**	**23,818**
Refined Consumption									
China	180	286	512	1,869	7,385	11,790	12,482	12,800	14,528
United States	1,860	1,868	2,150	2,979	1,760	1,771	1,814	1,829	1,758
Germany	788	870	1,028	1,309	1,312	1,180	1,200	1,017	1,057
Japan	821	1,158	1,577	1,351	1,060	998	1,039	1,011	891
Korea, Rep.	10	85	324	862	856	767	717	633	619
Italy	274	388	475	674	619	635	552	556	470
Turkey	14	33	103	248	369	445	482	464	438
India	55	77	135	246	514	486	512	527	432
Mexico	54	117	127	464	274	361	407	442	405
Others	*3,236*	*4,502*	*4,349*	*5,094*	*5,197*	*4,902*	*4,719*	*4,583*	*4,309*
World	**7,291**	**9,385**	**10,780**	**15,096**	**19,347**	**23,335**	**23,926**	**23,860**	**24,907**

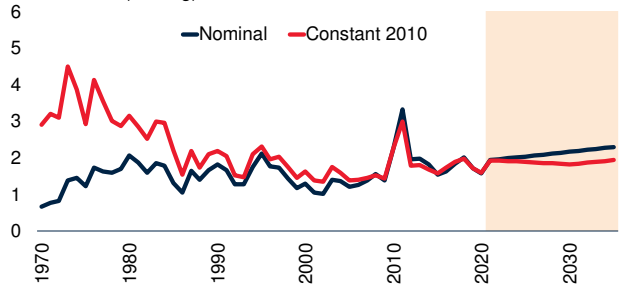
Sources: British Geological Survey, Metallgesellschaft, U.S. Geological Survey, World Bureau of Metals Statistics, World Bank.
Note: n/a implies data not available. Refined production and consumption include significant recycled material.

Cotton

Monthly Prices (US$/kg)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/kg)



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970/71	1980/81	1990/91	2000/01	2010/11	2017/18	2018/19	2019/20	2020/21
					(thousand metric tons)				
Production									
India	909	1,322	1,989	2,380	5,865	6,350	5,661	6,205	6,307
China	1,995	2,707	4,508	4,505	6,600	5,890	6,040	5,800	5,910
United States	2,219	2,422	3,376	3,742	3,942	4,555	3,999	4,336	3,201
Brazil	594	623	717	939	1,960	2,006	2,779	3,002	2,523
Pakistan	543	714	1,638	1,816	1,948	1,795	1,670	1,320	890
Turkey	400	500	655	880	817	882	977	815	656
Australia	19	99	433	804	926	1,058	485	134	562
Uzbekistan	n/a	1,671	1,593	975	910	800	641	716	552
Greece	110	115	213	421	180	258	277	355	321
Benin	14	6	59	141	60	257	295	311	294
Turkmenistan	n/a	n/a	437	187	385	304	283	283	289
Others	*4,936*	*3,652*	*3,334*	*2,738*	*2,276*	*2,643*	*2,865*	*3,067*	*2,605*
World	**11,740**	**13,831**	**18,951**	**19,527**	**25,869**	**26,798**	**25,972**	**26,344**	**24,110**
Stocks									
China	412	476	1,589	3,755	2,167	9,033	8,885	8,938	8,938
India	376	491	539	922	1,886	1,989	1,878	3,430	3,430
Brazil	321	391	231	755	1,400	1,598	2,340	2,787	2,959
Turkey	24	112	150	292	542	1,064	1,115	1,373	1,373
United States	915	581	510	1,306	566	819	826	1,314	640
Bangladesh	n/a	14	37	50	176	422	422	458	475
Argentina	65	61	123	114	232	347	320	437	437
Others	*2,492*	*3,024*	*3,581*	*3,429*	*3,534*	*3,510*	*2,778*	*2,624*	*2,687*
World	**4,605**	**5,151**	**6,761**	**10,622**	**10,503**	**18,782**	**18,564**	**21,361**	**20,939**
Exports									
United States	848	1,290	1,697	1,467	3,130	3,639	3,365	3,381	3,375
Brazil	220	21	167	68	435	909	1,310	1,946	1,742
India	34	140	255	24	1,086	1,132	765	696	1,144
Greece	72	13	86	270	147	234	295	319	352
Benin	14	8	58	140	64	196	292	224	304
Australia	4	53	329	849	545	852	791	295	260
Burkina Faso	9	22	73	112	136	236	200	154	256
Others	*2,675*	*2,866*	*2,403*	*2,866*	*2,090*	*2,057*	*2,238*	*2,008*	*2,053*
World	**3,875**	**4,414**	**5,069**	**5,797**	**7,634**	**9,256**	**9,256**	**9,023**	**9,486**
Imports									
China	108	773	480	52	2,609	1,320	2,100	1,554	2,220
Vietnam	33	40	31	84	350	1,521	1,510	1,459	1,482
Bangladesh	n/a	45	80	248	896	1,671	1,544	1,374	1,383
Pakistan	1	1	0	101	314	608	406	555	1,103
Turkey	1	n/a	46	381	729	956	786	1,017	961
Indonesia	36	106	324	570	471	762	685	547	602
India	155	n/a	n/a	350	87	365	392	496	287
Others	*3,862*	*4,363*	*4,739*	*4,031*	*4,957*	*3,118*	*3,731*	*2,810*	*3,668*
World	**4,086**	**4,555**	**5,220**	**5,764**	**7,804**	**9,001**	**9,054**	**8,258**	**9,486**

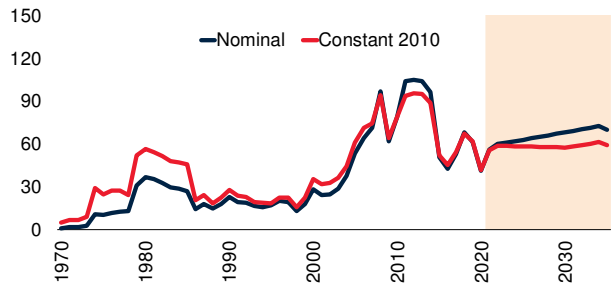
Source: International Cotton Advisory Committee (Apriil 15, 2021 update).
Note: n/a implies data not available.

Crude oil

Monthly Prices (US$/mt)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/bbl)



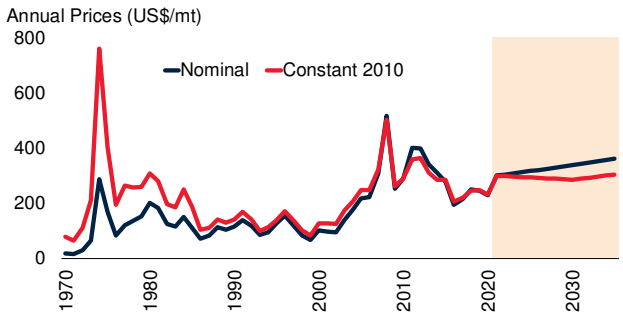
Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970	1980	1990	2000	2010	2016	2017	2018	2019
				(thousand barrels per day)					
Production									
United States	11,297	10,170	8,914	7,733	7,558	12,349	13,135	15,360	17,045
Saudi Arabia	3,851	10,270	7,106	9,121	9,865	12,406	11,892	12,261	11,832
Russia	n/a	n/a	10,342	6,583	10,379	11,269	11,255	11,438	11,540
Canada	1,473	1,764	1,968	2,884	3,457	4,655	5,037	5,501	5,651
Iraq	1,549	2,658	2,149	2,613	2,469	4,423	4,538	4,632	4,779
United Arab Emirates	780	1,735	1,985	2,599	2,937	4,038	3,910	3,912	3,998
China	616	2,122	2,778	3,257	4,077	3,999	3,846	3,798	3,836
Iran	3,848	1,479	3,270	3,850	4,421	4,578	5,007	4,801	3,535
Kuwait	3,036	1,757	964	2,244	2,564	3,150	3,009	3,050	2,996
Brazil	167	188	651	1,276	2,125	2,591	2,721	2,679	2,877
Nigeria	1,083	2,058	1,787	2,174	2,533	1,900	1,969	2,007	2,109
Kazakhstan	n/a	n/a	571	740	1,676	1,655	1,838	1,927	1,931
Mexico	487	2,129	2,941	3,456	2,959	2,456	2,224	2,068	1,918
Qatar	363	476	434	851	1,630	1,938	1,882	1,900	1,883
Norway	n/a	528	1,716	3,326	2,133	1,991	1,965	1,845	1,731
Algeria	1,054	1,134	1,367	1,549	1,689	1,577	1,540	1,511	1,486
Angola	103	150	475	746	1,812	1,745	1,671	1,519	1,417
Libya	3,357	1,862	1,424	1,475	1,799	412	929	1,165	1,227
United Kingdom	4	1,676	1,933	2,710	1,358	1,015	1,005	1,092	1,118
Oman	332	285	695	955	865	1,004	971	978	971
Venezuela	3,754	2,228	2,244	3,112	2,842	2,347	2,096	1,475	918
Colombia	226	131	446	687	786	886	854	865	886
India	140	193	715	726	901	874	885	869	826
Others	*n/a*	*n/a*	*8,150*	*10,052*	*10,575*	*8,815*	*8,618*	*8,601*	*8,683*
World	**48,075**	**62,942**	**65,022**	**74,718**	**83,409**	**92,072**	**92,798**	**95,254**	**95,192**
Consumption									
United States	14,710	17,062	16,939	19,594	18,324	18,618	18,883	19,428	19,400
China	554	1,707	2,297	4,697	9,390	12,248	12,842	13,375	14,056
India	390	643	1,210	2,258	3,378	4,632	4,860	5,112	5,271
Japan	3,876	4,989	5,240	5,542	4,434	4,006	3,971	3,855	3,812
Saudi Arabia	435	592	1,136	1,627	3,206	3,875	3,838	3,769	3,788
Russia	n/a	n/a	5,042	2,540	2,878	3,219	3,195	3,282	3,317
Korea, Rep.	162	476	1,041	2,260	2,370	2,771	2,801	2,781	2,760
Canada	1,472	1,898	1,747	2,043	2,333	2,393	2,393	2,443	2,403
Brazil	513	1,080	1,229	1,843	2,271	2,436	2,481	2,377	2,398
Germany	2,765	3,014	2,685	2,741	2,373	2,307	2,374	2,260	2,281
Iran	224	570	1,004	1,404	1,788	1,764	1,808	1,835	2,018
Mexico	441	1,072	1,611	1,952	2,040	1,950	1,883	1,821	1,733
Indonesia	138	386	652	1,148	1,411	1,572	1,660	1,724	1,732
United Kingdom	2,031	1,649	1,751	1,713	1,604	1,597	1,610	1,584	1,545
France	1,860	2,220	1,895	1,986	1,703	1,529	1,539	1,538	1,530
Others	*n/a*	*n/a*	*20,886*	*23,138*	*27,352*	*29,485*	*29,872*	*30,166*	*30,230*
World	**45,313**	**61,408**	**66,364**	**76,485**	**86,856**	**94,404**	**96,013**	**97,348**	**98,272**

Source: BP Statistical Review (June 2020 update).
Note: n/a implies data not available. Production includes crude oil and natural gas liquids but excludes liquid fuels from other sources such as biomass and derivatives of coal and natural gas include in consumption.

Fertilizers—Nitrogen

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

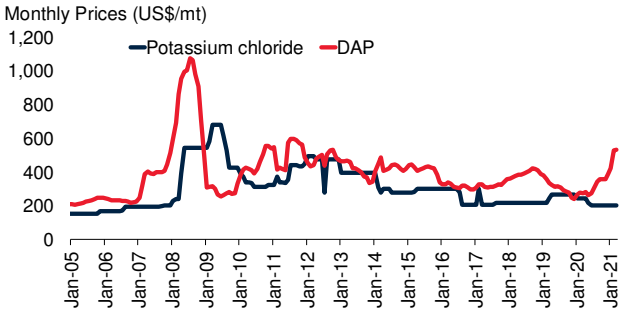


Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

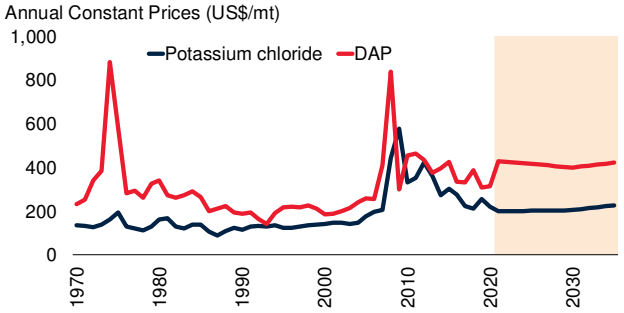
	1970	1980	1990	2000	2010	2015	2016	2017	2018
				(thousand tonnes nutrients)					
Production									
China	1,200	9,993	14,637	22,175	35,678	39,073	33,356	30,003	28,943
United States	8,161	12,053	10,816	8,352	9,587	9,011	10,327	11,579	13,617
India	838	2,164	6,993	10,943	12,178	13,476	13,377	13,423	13,337
Russia	n/a	n/a	n/a	5,452	6,544	7,864	8,574	9,116	9,430
Indonesia	45	958	2,462	2,853	3,207	3,475	3,223	3,417	3,660
Egypt	118	401	678	1,441	2,761	1,622	2,672	3,442	3,423
Canada	726	1,755	2,683	3,797	3,364	3,688	3,702	3,386	3,369
Pakistan	140	572	1,120	2,054	2,629	2,888	3,198	2,978	2,973
Iran	31	72	376	726	1,524	1,802	2,181	2,417	2,770
Saudi Arabia	n/a	138	568	1,278	1,680	2,320	2,578	2,526	2,761
Qatar	n/a	295	350	748	1,556	2,518	2,505	2,562	2,507
Poland	1,030	1,290	1,233	1,497	1,509	1,898	1,744	1,765	1,744
Netherlands	957	1,624	1,928	1,300	1,175	1,573	1,594	1,684	1,552
Algeria	22	24	80	91	21	774	1,035	699	1,529
Germany	1,900	2,380	1,165	1,558	1,289	1,225	1,334	1,330	1,398
Morocco	13	33	344	302	553	561	918	1,223	1,135
Vietnam	n/a	15	18	227	479	1,124	955	1,112	1,065
Ukraine	n/a	n/a	3,004	2,130	2,312	1,569	1,731	1,135	1,029
Turkey	82	600	1,026	400	747	867	775	902	999
Others	*n/a*	*n/a*	*n/a*	*19,301*	*19,326*	*19,870*	*20,586*	*21,573*	*20,264*
World	**32,690**	**62,951**	**71,964**	**86,624**	**108,118**	**117,198**	**116,363**	**116,270**	**117,504**
Consumption									
China	2,987	11,787	19,233	22,720	27,703	29,306	26,522	24,581	23,316
India	1,310	3,522	7,566	10,911	16,558	17,372	16,735	16,959	17,638
United States	7,363	10,818	10,239	10,467	11,737	11,683	11,751	11,815	11,298
Brazil	276	886	797	1,998	2,855	3,533	4,366	4,377	4,287
Indonesia	184	851	1,610	1,964	3,045	3,532	3,255	3,509	3,594
Pakistan	264	843	1,472	2,265	3,143	2,672	3,730	3,435	3,267
Canada	323	946	1,158	1,592	1,990	2,537	2,390	2,614	2,613
Russia	n/a	n/a	4,344	960	1,483	1,807	2,149	2,003	2,197
France	1,425	2,146	2,493	2,317	2,337	2,212	2,241	2,243	2,137
Vietnam	166	129	425	1,332	1,250	1,795	1,597	1,648	1,602
Turkey	243	782	1,200	1,276	1,344	1,487	1,896	1,788	1,548
Ukraine	n/a	n/a	1,836	350	650	985	1,197	1,365	1,533
Mexico	406	878	1,346	1,342	1,166	1,372	1,561	1,581	1,500
Germany	1,642	2,303	1,787	1,848	1,786	1,713	1,658	1,497	1,342
Bangladesh	99	266	609	996	1,237	1,258	1,209	1,251	1,321
Australia	123	248	439	951	982	1,347	1,514	1,534	1,263
Egypt	331	554	745	1,084	1,159	1,219	1,281	1,315	1,245
Thailand	50	136	577	922	1,311	1,240	1,225	1,178	1,197
Argentina	41	71	101	481	781	602	992	970	1,154
Others	*n/a*	*n/a*	*18,801*	*16,291*	*17,040*	*18,526*	*19,352*	*20,177*	*19,655*
World	**31,423**	**60,493**	**76,777**	**82,065**	**99,556**	**106,197**	**106,621**	**105,839**	**103,705**

Source: International Fertilizer Association (September 2019 update).
Note: n/a implies data not available. The statistics are based on the nutrient content. All production statistics are expressed on a calendar-year basis, while consumption statistics are expressed either on a calendar- or on a fertilizer-year basis (see https://www.ifastat.org/faq for details).

Fertilizers—Phosphate and Potash



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970	1980	1990	2000	2010	2015	2016	2017	2018
					(thousand tonnes nutrients)				
Phosphate: Production									
China	907	2,607	4,114	6,759	15,998	18,633	17,964	17,736	17,605
United States	4,903	7,437	8,105	7,337	6,297	6,346	6,698	6,509	4,600
India	228	854	2,077	3,751	4,378	4,429	4,560	4,724	4,591
Russia	n/a	n/a	4,943	2,320	2,926	3,018	3,135	3,667	3,760
Morocco	99	174	1,180	1,122	1,875	2,092	3,089	4,023	3,715
Brazil	169	1,623	1,091	1,496	2,004	2,171	2,133	2,111	2,132
Saudi Arabia	n/a	n/a	n/a	159	119	1,328	1,343	1,572	1,477
Others	*14,279*	*20,982*	*14,908*	*9,800*	*8,960*	*8,629*	*8,889*	*9,178*	*8,758*
World	**20,585**	**33,677**	**36,417**	**32,744**	**42,558**	**46,645**	**47,810**	**49,521**	**46,638**
Phosphate: Consumption									
China	907	2,952	5,770	8,664	12,988	13,973	12,682	12,100	12,029
India	305	1,091	3,125	4,248	8,050	6,979	6,705	6,854	6,910
Brazil	416	1,965	1,202	2,544	3,384	4,401	4,974	5,126	5,157
United States	4,345	4,926	3,811	3,862	3,890	3,920	4,091	4,297	3,757
Indonesia	45	274	581	263	755	1,261	1,022	1,338	1,258
Pakistan	31	227	389	675	767	1,007	1,269	1,279	1,153
Canada	326	634	578	634	723	1,025	947	1,080	1,133
Australia	757	853	579	1,107	817	953	880	999	957
Vietnam	77	23	106	501	650	821	767	798	821
Others	*13,666*	*18,967*	*19,782*	*10,313*	*9,822*	*11,012*	*11,740*	*12,509*	*12,394*
World	**20,875**	**31,912**	**35,920**	**32,811**	**41,846**	**45,352**	**45,077**	**46,380**	**45,569**
Potash: Production									
Canada	3,179	7,337	7,005	9,174	10,289	11,500	10,938	12,696	13,990
Belarus	n/a	n/a	4,992	3,372	5,223	6,402	6,110	7,026	7,260
Russia	n/a	n/a	n/a	3,716	6,128	6,840	6,480	7,204	7,050
China	n/a	20	46	275	3,101	5,770	5,710	5,490	5,410
Israel	576	797	1,296	1,748	1,944	2,518	3,168	2,865	2,927
Germany	4,824	6,123	4,967	3,409	2,962	3,055	2,694	2,907	2,702
Jordan	n/a	n/a	842	1,162	1,166	1,413	1,202	1,393	1,486
Chile	21	23	41	408	850	1,229	1,203	1,102	953
United States	2,259	2,052	1,008	916	941	729	489	506	349
Others	*n/a*	*n/a*	*2,641*	*1,962*	*1,246*	*2,100*	*2,404*	*2,317*	*1,752*
World	**17,471**	**27,608**	**22,838**	**26,141**	**33,850**	**41,555**	**40,397**	**43,505**	**43,878**
Potash: Consumption									
China	25	527	1,761	3,364	5,853	10,018	9,911	10,151	9,344
Brazil	307	1,267	1,210	2,760	3,894	5,162	5,728	5,853	6,064
United States	3,827	5,733	4,537	4,469	4,165	4,473	4,872	4,877	4,175
India	199	618	1,309	1,565	3,514	2,402	2,508	2,780	2,680
Indonesia	18	91	310	266	1,250	1,635	1,600	2,006	2,273
Malaysia	61	250	494	650	1,150	1,154	1,249	1,339	1,431
Thailand	10	40	149	251	310	486	510	594	624
Others	*11,317*	*15,301*	*14,552*	*8,745*	*8,059*	*9,347*	*9,834*	*10,245*	*10,677*
World	**15,764**	**23,826**	**24,320**	**22,070**	**28,196**	**34,677**	**36,212**	**37,845**	**37,268**

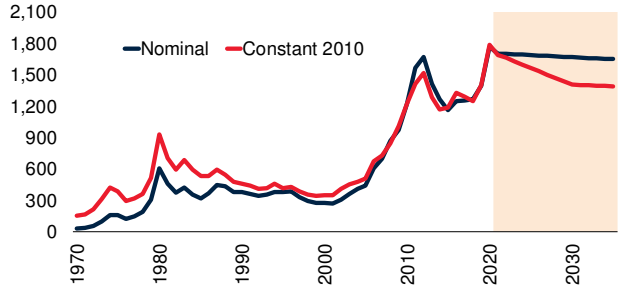
Source: International Fertilizer Association (September 2019 update).
Note: n/a implies data not available. The statistics are based on the nutrient content. All production statistics are expressed on a calendar-year basis, while consumption statistics are expressed either on a calendar- or on a fertilizer-year basis (see https://www.ifastat.org/faq for details).

Gold

Monthly Prices (US$/toz)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/toz)



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1990	2000	2005	2010	2016	2017	2018	2019	2020
					(metric tons)				
Production									
China	100	175	209	341	453	426	401	380	365
Australia	242	296	263	260	291	292	313	326	326
Russia	n/a	144	163	201	253	270	280	305	305
United States	294	353	256	231	222	237	226	200	188
Canada	169	156	121	91	164	171	194	183	170
Ghana	17	72	67	93	129	130	149	142	150
Kazakhstan	n/a	27	18	30	75	85	97	103	118
Uzbekistan	n/a	88	84	90	100	102	102	102	102
Mexico	9	24	30	79	132	127	118	109	102
South Africa	605	428	297	191	142	137	117	105	97
Sudan	0	6	5	2	93	107	94	94	94
Peru	9	134	206	164	153	152	140	128	87
Indonesia	11	125	158	106	81	99	112	109	86
Brazil	102	61	38	62	80	80	85	78	78
Argentina	1	26	28	64	57	61	58	59	59
Burkina Faso	3	1	1	23	39	46	53	51	55
Papua New Guinea	34	73	67	67	62	65	68	74	54
Mali	2	29	44	39	47	48	61	48	49
Colombia	n/a	37	36	54	63	43	36	37	48
Others	*n/a*	*305*	*413*	*583*	*585*	*572*	*555*	*698*	*704*
World	**2,133**	**2,560**	**2,504**	**2,771**	**3,222**	**3,252**	**3,259**	**3,332**	**3,237**
Fabrication									
China	46	213	277	523	788	771	785	n/a	n/a
India	241	704	695	783	506	783	701	n/a	n/a
United States	215	277	219	179	172	150	156	n/a	n/a
Japan	205	161	165	158	99	100	100	n/a	n/a
Turkey	133	228	303	109	101	122	98	n/a	n/a
Italy	396	522	290	126	88	89	84	n/a	n/a
Korea, Rep.	67	107	83	93	78	80	81	n/a	n/a
South Africa	18	14	10	25	38	50	71	n/a	n/a
Iran	n/a	46	41	72	35	42	63	n/a	n/a
Indonesia	84	99	87	45	45	45	49	n/a	n/a
Russia	n/a	34	61	61	47	47	47	n/a	n/a
Germany	78	64	52	41	37	41	44	n/a	n/a
United Arab Emirates	14	50	55	33	45	56	43	n/a	n/a
Switzerland	54	54	56	41	34	33	36	n/a	n/a
Saudi Arabia	70	153	125	59	40	34	34	n/a	n/a
Malaysia	45	86	74	45	34	30	30	n/a	n/a
Singapore	31	26	30	28	27	28	28	n/a	n/a
Canada	46	25	27	44	41	29	25	n/a	n/a
Thailand	86	79	69	27	24	24	25	n/a	n/a
Others	*n/a*	*819*	*608*	*400*	*315*	*310*	*318*	*n/a*	*n/a*
World	**3,294**	**3,761**	**3,325**	**2,891**	**2,592**	**2,861**	**2,817**	**n/a**	**n/a**

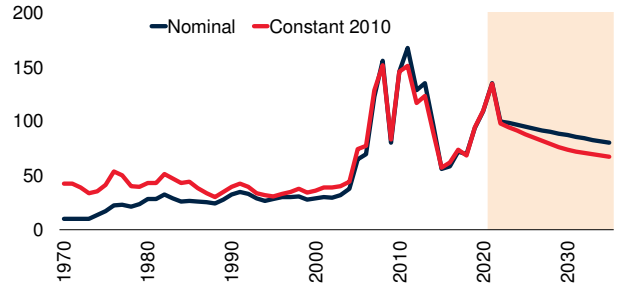
Source: British Geological Survey, GFMS Gold Survey 2019, Thomson Reuters, U.S. Geological Survey, World Bureau of Metals Statistics, World Bank.
Note: n/a implies data not available. Fabrication includes the use of scrap. Fabrication of "Saudi Arabia" includes Saudi Arabia and Yemen in 2000.

Iron Ore

Monthly Prices (US$/dmt)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/dmt)



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1971	1980	1990	2000	2010	2016	2017	2018	2019
					(million metric tons)				
Iron Ore Production									
Australia	62	99	109	176	433	858	885	900	n/a
Brazil	38	113	152	209	372	421	454	460	n/a
China	55	113	148	105	357	366	345	335	n/a
India	34	41	54	75	209	185	202	205	n/a
Russia	n/a	n/a	n/a	87	99	101	95	96	n/a
South Africa	10	n/a	30	34	55	66	75	74	n/a
Ukraine	n/a	n/a	n/a	56	79	63	61	60	n/a
Canada	43	49	37	36	38	47	50	52	n/a
United States	82	71	55	63	50	42	48	50	n/a
Kazakhstan	n/a	n/a	n/a	15	18	36	39	42	n/a
Iran	n/a	n/a	2	12	33	46	34	36	n/a
Sweden	34	27	20	21	25	27	32	36	n/a
Mexico	5	8	9	11	14	19	19	22	n/a
Peru	9	6	3	4	9	11	13	14	n/a
Chile	11	9	8	8	10	15	15	14	n/a
Mauritania	8	9	11	11	11	13	12	11	n/a
Turkey	2	3	6	4	6	7	10	10	n/a
Mongolia	n/a	n/a	n/a	n/a	3	5	8	6	n/a
Korea, Dem. People's Rep.	9	8	10	1	5	5	6	6	n/a
Vietnam	0	0	0	0	2	6	6	5	n/a
Liberia	23	18	4	n/a	n/a	1	2	4	n/a
Others	*n/a*	*n/a*	*n/a*	*31*	*45*	*30*	*31*	*22*	*n/a*
World	**781**	**931**	**984**	**959**	**1,874**	**2,370**	**2,440**	**2,460**	**n/a**
Crude steel production									
China	21	37	66	129	639	808	871	928	996
India	6	10	15	27	69	95	101	109	111
Japan	89	111	110	106	110	105	105	104	99
United States	109	101	90	102	80	78	82	87	88
Russia	n/a	n/a	n/a	59	67	70	71	72	72
Korea, Rep.	0	9	23	43	59	69	71	72	71
Germany	40	44	38	46	44	42	43	42	40
Turkey	1	3	9	14	29	33	38	37	34
Brazil	6	15	21	28	33	32	35	35	33
Iran	n/a	1	1	7	12	18	21	25	26
Italy	17	27	25	27	26	23	24	24	23
Taiwan, China	0	3	10	17	20	22	22	23	22
Ukraine	n/a	n/a	n/a	32	33	24	21	21	21
Mexico	4	7	9	16	17	19	20	20	18
Vietnam	n/a	n/a	n/a	0	4	8	11	15	17
France	23	23	19	21	15	14	16	15	14
Spain	8	13	13	16	16	14	14	14	14
Others	*n/a*	*n/a*	*n/a*	*160*	*160*	*159*	*169*	*179*	*176*
World	**583**	**716**	**770**	**849**	**1,433**	**1,633**	**1,736**	**1,825**	**1,875**

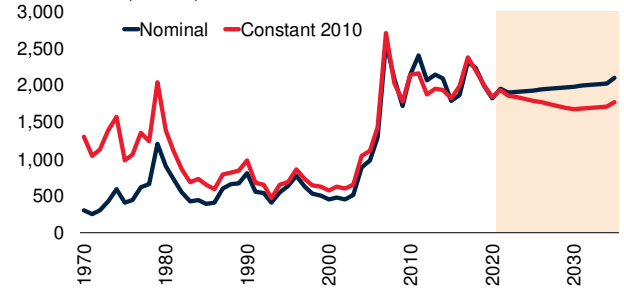
Sources: U.S. Geological Survey, World Steel Association.
Note: n/a implies data not available. Crude steel production includes all qualities: carbon, stainless, and other alloy.

Lead

Monthly Prices (US$/mt)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/mt)



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970	1980	1990	2000	2010	2017	2018	2019	2020
					(thousand metric tons)				
Mine Production									
China	100	160	364	660	1,981	1,852	1,892	2,405	2,996
Australia	457	398	570	678	711	395	446	510	496
United States	519	562	493	447	356	313	260	274	297
Mexico	177	146	174	138	192	241	235	259	244
Peru	157	189	188	271	262	307	289	308	241
Russia	n/a	n/a	n/a	13	97	210	220	220	200
India	2	15	26	38	89	176	185	201	184
Bolivia	n/a	16	20	10	73	111	112	88	111
Turkey	6	8	18	16	39	75	76	72	75
Tajikistan	n/a	n/a	n/a	2	4	69	59	65	66
Sweden	78	72	84	107	68	71	65	69	66
Iran	n/a	12	9	17	32	48	44	44	52
Uzbekistan	n/a	n/a	n/a	0	0	40	50	50	50
Others	*n/a*	*n/a*	*n/a*	*685*	*463*	*533*	*521*	*561*	*494*
World	**3,350**	**3,548**	**3,143**	**3,080**	**4,367**	**4,441**	**4,453**	**5,126**	**5,572**
Refined Production									
China	100	175	297	1,100	4,157	4,726	4,943	5,797	6,443
United States	605	1,150	1,290	1,431	1,255	1,127	1,136	1,170	1,150
India	2	26	39	57	366	563	595	645	852
Korea, Rep.	n/a	15	63	222	321	807	801	813	850
Mexico	180	184	235	332	270	423	433	447	410
United Kingdom	44	325	329	328	301	309	303	300	356
Germany	138	392	394	387	405	356	313	332	323
Japan	175	305	327	312	267	239	238	237	238
Brazil	19	85	57	86	115	180	195	195	186
Canada	186	235	184	284	273	274	250	250	185
Russia	n/a	n/a	n/a	50	96	206	201	190	180
Poland	n/a	82	65	69	120	157	159	159	178
Australia	n/a	234	229	223	210	211	196	124	170
Others	*1,971*	*2,238*	*2,010*	*1,826*	*1,663*	*1,678*	*1,794*	*1,263*	*1,186*
World Total	**3,419**	**5,446**	**5,518**	**6,707**	**9,820**	**11,257**	**11,557**	**11,923**	**12,706**
Refined Consumption									
China	n/a	210	244	660	4,171	4,805	5,065	5,915	6,476
United States	n/a	1,094	1,275	1,660	1,430	1,758	1,613	1,637	1,517
India	n/a	33	147	56	420	551	569	610	837
Korea, Rep.	n/a	54	80	309	382	624	615	623	692
Germany	n/a	433	448	390	343	413	389	390	373
Mexico	n/a	85	132	288	201	313	318	330	315
Japan	n/a	393	416	343	224	287	271	252	272
Spain	n/a	111	115	219	262	263	273	290	260
United Kingdom	n/a	296	302	301	211	250	226	230	226
Others	*n/a*	*2,640*	*2,189*	*2,265*	*2,146*	*2,664*	*2,697*	*2,661*	*2,574*
World Total	**n/a**	**5,348**	**5,348**	**6,491**	**9,790**	**11,929**	**12,038**	**12,939**	**13,540**

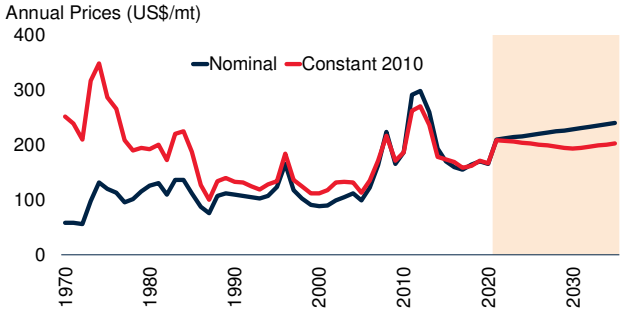
Sources: British Geological Survey, Metallgesellschaft, U.S. Geological Survey, World Bureau of Metals Statistics, World Bank.
Note: n/a implies data not available. Refined production and consumption include significant recycled material.

Maize

Monthly Prices (US$/mt)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/mt)



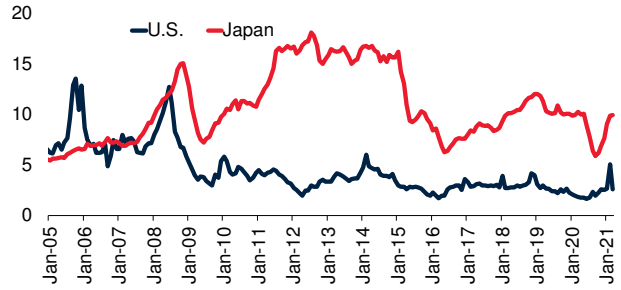
Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970/1971	1980/1981	1990/1991	2000/2001	2010/2011	2017/2018	2018/2019	2019/2020	2020/2021
	(million metric tons)								
Production									
United States	105.5	168.6	201.5	251.9	315.6	371.1	364.3	346.0	360.3
China	33.0	62.6	96.8	106.0	190.8	259.1	257.2	260.8	260.7
Brazil	14.1	22.6	24.3	41.5	57.4	82.0	101.0	102.0	109.0
European Union	16.4	21.6	23.4	51.8	58.6	62.0	64.4	66.8	64.0
Argentina	9.9	12.9	7.7	15.4	25.2	32.0	51.0	51.0	47.0
India	7.5	7.0	9.0	12.0	21.7	28.8	27.7	28.8	30.2
Ukraine	n/a	n/a	4.7	3.8	11.9	24.1	35.8	35.9	29.5
Mexico	8.9	10.4	14.1	17.9	21.1	27.6	27.7	26.7	27.8
South Africa	8.6	14.9	8.6	8.0	10.9	13.1	11.8	15.8	17.0
Russia	n/a	n/a	2.5	1.5	3.1	13.2	11.4	14.3	13.9
Canada	2.6	5.8	7.1	7.0	12.0	14.1	13.9	13.4	13.6
Indonesia	2.8	4.0	5.0	5.9	6.8	11.9	12.0	12.0	11.8
Nigeria	1.3	1.7	5.8	4.0	7.7	10.4	11.0	11.0	11.5
Others	*57.4*	*76.7*	*71.2*	*64.7*	*106.7*	*129.5*	*135.8*	*132.2*	*140.9*
World	**268.1**	**408.7**	**481.8**	**591.5**	**849.5**	**1078.9**	**1124.9**	**1116.5**	**1137.1**
Stocks									
China	8.9	42.8	82.8	102.4	43.2	222.5	210.2	200.5	196.2
United States	16.8	35.4	38.6	48.2	28.6	54.4	56.4	48.8	34.3
European Union	2.2	4.3	1.4	3.2	5.2	9.2	7.7	7.2	7.2
Brazil	2.0	1.3	0.8	2.7	6.3	9.3	5.3	5.2	6.2
Mexico	0.5	2.0	1.8	2.8	1.1	5.6	5.2	3.5	3.1
Others	*5.7*	*16.7*	*16.0*	*15.8*	*30.8*	*40.0*	*36.4*	*37.7*	*36.8*
World	**36.1**	**102.5**	**141.4**	**175.1**	**115.3**	**341.0**	**321.1**	**303.0**	**283.9**
Exports									
United States	12.9	60.7	43.9	49.3	46.5	61.9	52.5	45.2	67.9
Brazil	0.9	0.0	n/a	6.3	8.4	24.1	39.7	35.2	39.0
Argentina	6.4	9.1	4.0	9.7	16.3	22.5	37.2	36.3	34.0
Ukraine	n/a	n/a	0.4	0.4	5.0	18.0	30.3	28.9	23.0
Serbia	n/a	n/a	n/a	n/a	2.0	0.8	2.8	3.1	3.5
South Africa	2.6	5.0	0.9	1.3	2.4	2.1	1.4	2.6	3.2
Russia	n/a	n/a	0.4	0.0	0.0	5.5	2.8	4.1	3.1
Others	*n/a*	*n/a*	*8.9*	*9.8*	*10.8*	*13.6*	*14.9*	*16.3*	*13.5*
World	**32.2**	**80.3**	**58.4**	**76.7**	**91.6**	**148.6**	**181.7**	**171.7**	**187.3**
Imports									
China	n/a	0.8	n/a	0.1	1.0	3.5	4.5	7.6	24.0
Mexico	0.1	3.8	1.9	6.0	8.3	16.1	16.7	16.5	16.5
Japan	5.2	14.0	16.3	16.3	15.6	15.7	16.1	15.9	15.6
European Union	18.0	20.5	3.1	3.7	7.4	18.5	25.3	18.6	15.5
Vietnam	0.1	0.1	n/a	0.1	1.3	8.6	10.1	10.6	12.0
Korea, Rep.	0.3	2.4	5.6	8.7	8.1	10.0	10.9	11.9	11.5
Egypt	0.1	1.0	1.9	5.3	5.8	9.5	9.4	10.4	10.3
Others	*4.6*	*31.7*	*29.6*	*34.8*	*46.0*	*69.2*	*71.7*	*73.8*	*74.6*
World	**28.4**	**74.3**	**58.5**	**75.0**	**93.4**	**151.0**	**164.4**	**165.4**	**180.0**

Source: U.S. Department of Agriculture (April 9, 2021 update).
Note: The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971. European Union includes EU-15 for 1970-1991.

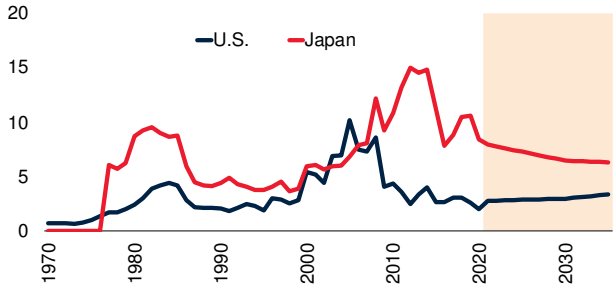
Natural gas

Monthly Prices (US$/mmbtu)



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Constant Prices (US$/mmbtu)



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970	1980	1990	2000	2010	2016	2017	2018	2019
				(billion cubic meters)					
Production									
United States	571	525	483	519	575	727	746	836	921
Russia	n/a	n/a	600	537	598	589	636	669	679
Iran	3	5	25	56	144	199	220	238	244
Qatar	1	5	7	26	123	174	169	176	178
China	3	14	15	27	97	138	149	162	178
Canada	54	71	103	176	150	172	176	179	173
Australia	2	11	21	31	54	96	113	130	153
Norway	0	25	25	49	106	116	123	121	114
Saudi Arabia	2	9	32	47	83	105	109	112	114
Algeria	2	15	52	92	77	91	93	94	86
Malaysia	0	3	18	50	65	77	78	77	79
Indonesia	1	19	45	71	87	75	73	73	68
Egypt	0	2	8	20	59	40	49	59	65
Turkmenistan	n/a	n/a	79	42	40	63	59	62	63
United Arab Emirates	1	7	20	37	50	60	62	61	63
Uzbekistan	n/a	n/a	37	51	57	53	53	57	56
Nigeria	0	2	4	11	31	43	47	48	49
Argentina	6	8	17	36	39	37	37	39	42
United Kingdom	11	36	48	113	58	42	42	41	40
Oman	0	1	2	10	26	31	32	36	36
Thailand	0	0	7	21	34	37	36	35	36
Trinidad & Tobago	2	3	5	14	40	31	32	34	35
Mexico	11	25	26	33	51	44	38	35	34
Others	*n/a*	*n/a*	*292*	*329*	*501*	*498*	*501*	*483*	*484*
World	**976**	**1,428**	**1,971**	**2,401**	**3,146**	**3,540**	**3,673**	**3,858**	**3,989**
Consumption									
United States	575	534	517	628	648	749	740	820	847
Russia	n/a	n/a	414	366	424	421	431	454	444
China	3	14	15	25	109	209	240	283	307
Iran	3	5	23	59	144	196	209	224	224
Canada	35	50	64	89	88	106	109	118	120
Saudi Arabia	2	9	32	47	83	105	109	112	114
Japan	4	25	50	76	100	116	117	116	108
Mexico	10	22	27	36	66	83	86	88	91
Germany	16	61	64	83	88	85	88	86	89
United Kingdom	12	47	55	101	98	81	79	79	79
United Arab Emirates	1	5	16	31	59	73	75	74	76
Italy	12	26	45	68	79	68	72	69	71
India	1	1	12	25	59	51	54	58	60
Egypt	0	2	8	19	43	49	56	60	59
Korea, Rep.	0	0	3	20	45	48	50	58	56
Others	*n/a*	*n/a*	*603*	*726*	*1,025*	*1,119*	*1,144*	*1,152*	*1,186*
World	**961**	**1,424**	**1,948**	**2,400**	**3,161**	**3,559**	**3,659**	**3,852**	**3,929**

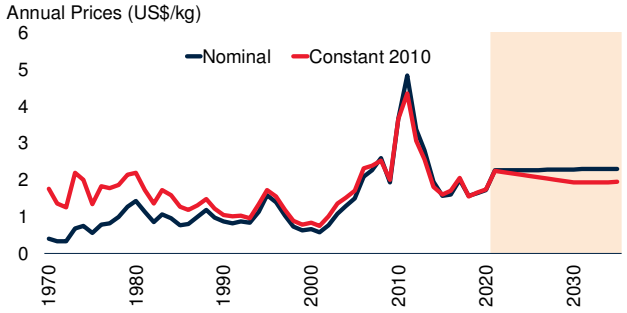
Source: BP Statistical Review (June 2020 update).
Note: n/a implies data not available.

Natural Rubber

Monthly Prices (US$/kg)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/kg)



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970	1980	1990	2000	2010	2017	2018	2019	2020
				(thousand metric tons)					
Production									
Thailand	287	501	1,275	2,346	3,252	4,775	5,145	4,900	4,506
Indonesia	815	822	1,261	1,501	2,736	3,499	3,486	3,100	2,800
Vietnam	28	46	94	291	752	1,094	1,142	1,222	1,248
Côte d'Ivoire	11	23	69	123	231	604	624	808	931
China	46	113	264	445	687	798	811	774	688
India	90	155	324	629	851	713	660	702	679
Malaysia	1,269	1,530	1,291	928	939	741	603	640	514
Cambodia	n/a	n/a	n/a	n/a	42	193	220	288	337
Myanmar	10	16	15	36	128	242	280	289	265
Others	*584*	*644*	*392*	*82*	*784*	*882*	*934*	*979*	*978*
World	**3,140**	**3,850**	**4,985**	**6,380**	**10,403**	**13,540**	**13,905**	**13,701**	**12,945**
Consumption									
China	250	340	600	1,150	3,622	5,301	5,504	5,497	5,440
India	86	171	358	638	944	1,082	1,220	1,144	1,038
European Union	991	1,007	1,012	1,293	1,136	1,236	1,231	1,191	1,033
United States	568	585	808	1,195	926	958	987	1,003	810
Thailand	8	28	99	243	487	685	752	800	764
Indonesia	25	46	108	139	421	608	618	625	574
Japan	283	427	677	752	749	679	706	714	570
Malaysia	20	45	184	364	458	489	515	501	517
Brazil	37	81	124	227	378	395	398	402	365
Others	*822*	*1,050*	*1,099*	*1,307*	*1,638*	*1,784*	*1,835*	*1,763*	*1,591*
World	**3,090**	**3,780**	**5,068**	**7,306**	**10,759**	**13,217**	**13,767**	**13,640**	**12,702**
Exports									
Thailand	279	457	1,151	2,166	2,866	4,427	4,492	3,962	3,768
Indonesia	790	976	1,077	1,380	2,369	3,249	2,961	2,579	2,447
Vietnam	23	33	80	273	782	1,380	1,500	1,698	1,750
Malaysia	1,304	1,482	1,322	978	1,245	1,189	1,096	1,023	1,058
Cote d'Ivoire	11	23	69	121	226	591	622	767	920
Cambodia	7	15	24	33	43	189	218	282	337
Myanmar	n/a	n/a	n/a	n/a	67	147	162	200	194
Others	*406*	*284*	*239*	*326*	*448*	*988*	*1,027*	*1,100*	*1,066*
World	**2,820**	**3,270**	**3,962**	**5,277**	**8,047**	**12,160**	**12,078**	**11,612**	**11,539**
Imports									
China	178	242	340	820	2,888	5,277	5,211	4,746	5,442
European Union	1,071	1,068	1,072	1,474	1,426	1,571	1,598	1,557	1,279
Malaysia	45	43	136	548	706	1,096	1,014	1,083	1,222
United States	543	576	820	1,192	931	972	997	1,010	804
Vietnam	n/a	n/a	n/a	n/a	127	526	583	674	644
Japan	292	458	663	801	747	699	694	731	558
India	3	1	61	11	187	398	586	486	377
Others	*678*	*847*	*1,677*	*1,534*	*1,667*	*1,706*	*1,743*	*1,684*	*1,466*
World	**2,810**	**3,235**	**4,769**	**6,380**	**8,680**	**12,246**	**12,425**	**11,970**	**11,792**

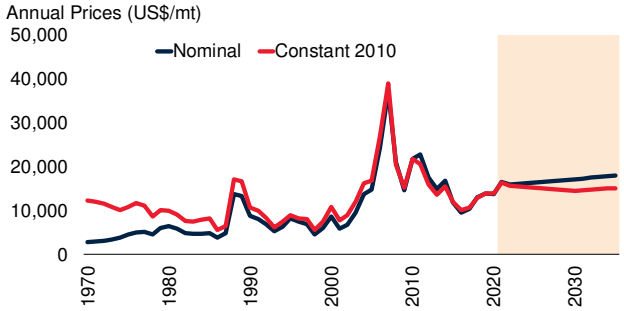
Source: Rubber Statistical Bulletin; International Rubber Study Group (January-March 2021 update), World Bank.
Note: n/a implies data not available.

Nickel

Monthly Prices (US$/mt)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/mt)



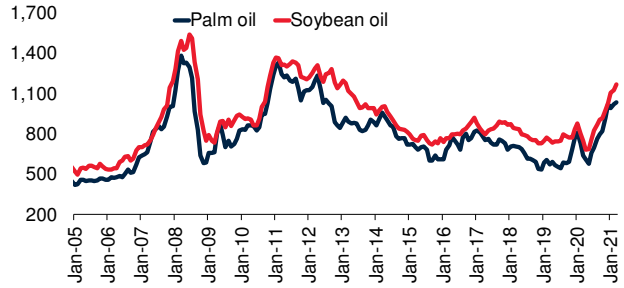
Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970	1980	1990	2000	2010	2017	2018	2019	2020
					(thousand metric tons)				
Mine Production									
Indonesia	11	41	69	117	216	357	651	918	655
Philippines	0	47	16	17	184	379	390	341	334
Russia	n/a	n/a	n/a	266	274	215	218	226	233
New Caledonia	139	87	85	129	130	215	216	208	199
Australia	30	74	70	170	168	185	160	159	168
Canada	277	185	196	191	160	214	186	187	158
China	n/a	11	27	51	80	102	108	105	105
Brazil	3	6	24	32	54	69	65	56	65
Guatemala	n/a	7	0	0	0	56	39	32	54
Cuba	37	38	39	71	65	49	49	52	50
Finland	5	7	11	3	12	36	44	39	42
Colombia	n/a	0	23	28	49	41	43	41	36
South Africa	12	26	28	37	40	48	43	43	35
Others	*n/a*	*n/a*	*n/a*	*79*	*84*	*194*	*189*	*188*	*185*
World	**663**	**758**	**906**	**1,191**	**1,518**	**2,162**	**2,402**	**2,594**	**2,320**
Refined Production									
China	n/a	11	28	52	314	621	733	852	728
Indonesia	n/a	4	5	10	19	187	280	361	539
Japan	n/a	109	100	161	166	187	187	183	170
Russia	n/a	n/a	n/a	242	263	157	150	154	154
Canada	n/a	142	135	134	105	155	137	125	124
Australia	n/a	35	45	112	102	109	115	106	121
Norway	n/a	37	58	59	92	87	91	92	91
New Caledonia	n/a	33	32	44	40	104	108	88	72
Finland	n/a	13	17	54	49	60	61	62	63
Brazil	n/a	3	13	23	28	69	65	54	60
Korea, Rep.	n/a	n/a	8	0	23	47	46	44	41
Colombia	n/a	0	18	28	49	41	43	41	36
United Kingdom	n/a	19	27	38	32	37	38	35	32
Others	*n/a*	*n/a*	*n/a*	*154*	*155*	*196*	*191*	*207*	*184*
World	**n/a**	**739**	**904**	**1,110**	**1,437**	**2,056**	**2,244**	**2,404**	**2,417**
Refined Consumption									
China	n/a	18	28	58	489	982	1,096	1,304	1,310
Indonesia	n/a	n/a	n/a	1	1	61	176	182	220
Japan	99	122	159	192	177	163	175	155	149
United States	149	143	127	153	119	144	136	106	98
Taiwan, China	n/a	n/a	18	106	73	84	88	84	84
Korea, Rep.	n/a	n/a	24	91	101	104	114	113	80
India	2	12	14	23	27	82	72	58	64
Germany	40	78	93	102	100	64	61	57	49
Italy	20	27	27	53	62	60	58	45	39
Others	*266*	*317*	*351*	*373*	*276*	*350*	*365*	*327*	*282*
World	**576**	**717**	**842**	**1,150**	**1,426**	**2,095**	**2,342**	**2,432**	**2,374**

Sources: British Geological Survey, Metallgesellschaft, U.S. Geological Survey, World Bureau of Metals Statistics, World Bank.
Note: n/a implies data not available.

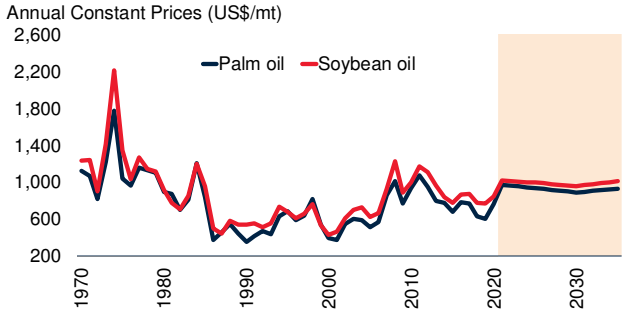
Palm oil and Soybean oil

Monthly Prices (US$/mt)



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Constant Prices (US$/mt)



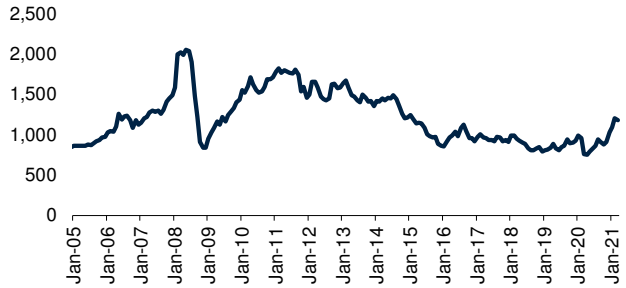
Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970/1971	1980/1981	1990/1991	2000/2001	2010/2011	2017/2018	2018/2019	2019/2020	2020/2021
					(thousand metric tons)				
Palm oil Production									
Indonesia	248	752	2,650	8,300	23,600	39,500	41,500	42,500	43,500
Malaysia	589	2,692	6,031	11,937	18,211	19,683	20,800	19,255	19,000
Thailand	n/a	19	200	580	1,832	2,780	3,000	2,800	3,100
Colombia	36	80	252	520	753	1,627	1,631	1,529	1,559
Nigeria	432	520	600	730	971	1,025	1,130	1,220	1,280
Guatemala	n/a	n/a	6	124	231	852	862	862	865
Honduras	n/a	18	64	148	320	580	580	580	580
Papua New Guinea	n/a	45	145	336	488	680	705	555	561
Brazil	5	17	70	110	270	500	525	540	540
Others	*612*	*753*	*1,016*	*1,464*	*2,502*	*3,310*	*3,402*	*3,360*	*3,508*
World	**1,922**	**4,896**	**11,034**	**24,249**	**49,178**	**70,537**	**74,135**	**73,201**	**74,493**
Palm oil Consumption									
Indonesia	29	561	1,330	3,263	6,234	11,565	13,721	14,645	15,050
India	1	431	259	3,160	5,910	9,170	9,295	8,078	8,680
European Union	n/a	n/a	n/a	2,790	4,750	6,950	6,960	6,900	7,100
China	53	16	1,194	2,028	5,797	5,100	7,012	6,433	6,920
Malaysia	8	420	914	1,571	2,204	3,238	3,522	3,573	3,475
Pakistan	1	231	800	1,245	2,093	3,145	3,245	3,290	3,400
Thailand	n/a	43	208	508	1,304	2,343	2,640	2,650	2,750
Others	*n/a*	*n/a*	*n/a*	*7,946*	*17,504*	*25,382*	*25,856*	*26,181*	*27,013*
World	**1,799**	**4,763**	**11,155**	**22,511**	**45,796**	**66,893**	**72,251**	**71,750**	**74,388**
Soybean oil production									
China	181	183	599	3,240	9,856	16,128	15,232	16,397	17,382
United States	3,749	5,112	6,082	8,355	8,568	10,783	10,976	11,299	11,573
Brazil	n/a	2,601	2,669	4,333	6,970	8,485	8,180	8,850	9,000
Argentina	n/a	158	1,179	3,190	7,181	7,236	8,044	7,676	7,950
European Union	n/a	n/a	n/a	3,033	2,343	2,841	2,964	3,107	3,231
India	2	69	425	810	1,683	1,386	1,728	1,512	1,730
Mexico	52	255	330	795	648	937	1,100	1,110	1,145
Egypt	n/a	15	22	47	294	582	637	855	855
Russia	n/a	n/a	75	62	367	824	834	834	805
Others	*n/a*	*n/a*	*n/a*	*2,953*	*3,564*	*5,920*	*6,287*	*6,683*	*6,927*
World	**6,199**	**12,575**	**15,765**	**26,818**	**41,474**	**55,122**	**55,982**	**58,323**	**60,598**
Soybean oil consumption									
China	179	256	1,055	3,542	11,400	16,500	15,885	17,093	18,332
United States	2,854	4,134	5,506	7,401	7,506	9,698	10,376	10,121	10,659
Brazil	n/a	1,490	2,075	2,932	5,205	6,940	7,165	7,765	8,010
India	79	708	445	1,750	2,550	4,670	4,750	5,100	5,465
European Union	n/a	n/a	n/a	2,186	2,400	2,225	2,455	2,540	2,740
Argentina	n/a	56	101	247	2,520	2,981	2,624	2,175	1,895
Bangladesh	40	28	235	503	404	1,085	1,170	1,250	1,310
Others	*n/a*	*n/a*	*n/a*	*7,582*	*8,447*	*10,362*	*10,687*	*11,155*	*11,579*
World	**5,958**	**12,417**	**15,441**	**26,143**	**40,432**	**54,461**	**55,112**	**57,199**	**59,990**

Source: U.S. Department of Agriculture (April 9, 2021 update).
Note: The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971. European Union includes EU-15 for 1970-1991.

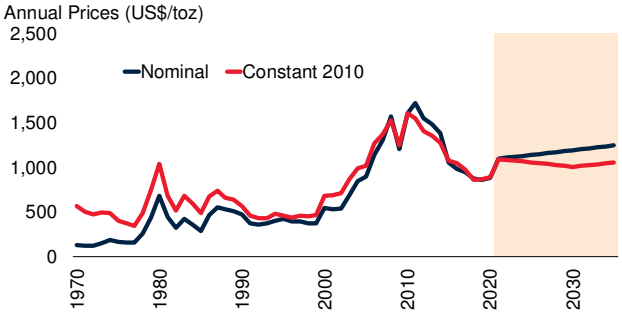
Platinum

Monthly Prices (US$/toz)



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/toz)



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	2003	2005	2008	2010	2016	2017	2018	2019
				(metric tons)				
Mine Production								
South Africa	148.3	163.7	146.1	147.8	133.2	131.2	137.1	133.0
Russia	28.0	29.0	25.0	25.0	22.0	22.0	22.0	24.0
Zimbabwe	4.3	4.8	5.6	8.8	15.1	14.3	15.0	13.5
Canada	7.0	6.1	8.5	3.6	8.4	7.6	7.4	7.8
United States	4.2	3.9	3.6	3.5	3.9	4.0	4.2	4.2
Others	*3.2*	*3.5*	*4.1*	*3.4*	*5.4*	*4.9*	*4.4*	*3.5*
World	**195.0**	**211.0**	**193.0**	**192.0**	**188.0**	**184.0**	**190.0**	**186.0**
Autocatalyst scrap								
Europe	3.9	5.4	9.2	9.3	12.7	13.4	13.9	15.7
North America	15.1	15.6	17.3	14.0	14.0	14.3	15.0	15.2
Japan	2.1	1.7	2.1	2.6	4.0	3.9	4.0	4.3
China	n/a	0.1	0.2	0.4	1.7	2.0	2.3	2.6
Others	*1.8*	*2.3*	*2.5*	*2.5*	*5.0*	*5.7*	*6.1*	*6.7*
World	**22.9**	**25.1**	**31.3**	**28.8**	**37.4**	**39.3**	**41.3**	**44.5**
Old jewelry scrap								
China	0.9	5.1	10.4	11.7	15.0	14.3	17.2	18.2
Japan	4.0	6.0	18.0	8.7	6.2	5.7	5.5	5.7
North America	0.1	0.2	1.3	0.4	0.2	0.2	0.2	0.2
Europe	0.1	0.1	0.4	0.3	0.2	0.2	0.2	0.2
Others	*0.1*	*0.1*	*0.0*	*0.1*	*0.0*	*0.1*	*0.1*	*0.1*
World	**5.2**	**11.5**	**30.1**	**21.2**	**21.6**	**20.5**	**23.2**	**24.4**
TOTAL SUPPLY	**215.5**	**242.6**	**252.9**	**242.3**	**244.6**	**245.4**	**249.9**	**250.0**
Autocatalyst demand								
Europe	41.3	56.1	56.9	44.5	45.9	43.8	40.2	38.4
North America	26.8	23.3	17.5	12.5	13.1	13.8	14.3	15.6
Japan	16.6	18.1	17.0	13.5	9.9	10.1	10.0	9.8
China	4.7	5.5	5.7	6.7	8.0	9.1	9.2	9.6
Others	*8.0*	*12.5*	*14.1*	*17.0*	*21.6*	*22.3*	*24.5*	*26.4*
World	**97.4**	**115.5**	**111.2**	**94.2**	**98.5**	**99.1**	**98.2**	**99.8**
Jewelry demand								
China	46.1	35.0	34.5	47.6	43.4	40.2	35.8	33.8
Japan	21.3	20.5	7.7	8.1	9.9	9.8	10.0	9.9
North America	9.9	8.1	6.4	6.6	7.7	7.6	7.6	7.7
Europe	8.5	7.9	7.4	6.8	6.6	6.2	6.3	6.4
Others	*2.4*	*1.2*	*1.4*	*2.1*	*5.1*	*5.7*	*6.4*	*6.9*
World	**88.2**	**72.7**	**57.4**	**71.2**	**72.7**	**69.5**	**66.1**	**64.7**
Other demand								
China	n/a	4.7	9.1	10.1	15.1	15.3	23.0	18.2
North America	15.8	15.8	14.2	11.5	17.2	17.0	15.9	16.2
Europe	11.1	9.5	9.8	9.8	12.3	11.6	11.1	11.1
Japan	9.9	13.2	17.9	10.4	16.7	10.0	11.5	11.0
Others	*14.0*	*14.0*	*18.7*	*21.3*	*15.1*	*17.7*	*19.2*	*21.5*
World	**50.8**	**57.2**	**69.7**	**63.1**	**76.4**	**71.6**	**80.7**	**78.0**
TOTAL DEMAND	**236.4**	**245.4**	**238.3**	**228.5**	**247.7**	**240.2**	**245.0**	**242.6**

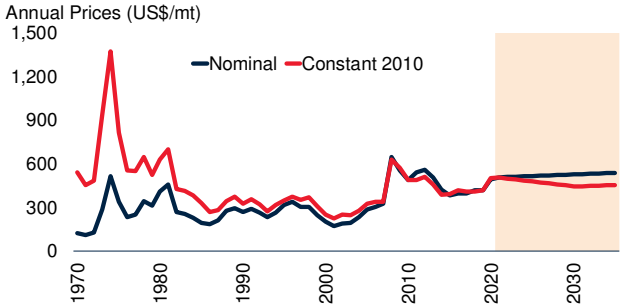
Sources: GFMS Platinum Group Metals Survey 2019, Thomson Reuters, U.S. Geological Survey.
Note: Other demand includes chemical, electronics, glass, petroleum, retail investment, and other industrial demand.

Rice

Monthly Prices (US$/mt)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/mt)



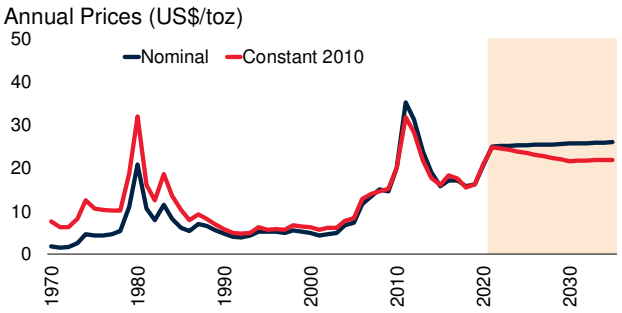
Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970/1971	1980/1981	1990/1991	2000/2001	2010/2011	2017/2018	2018/2019	2019/2020	2020/2021
	(million metric tons)								
Production									
China	77.0	97.9	132.5	131.5	138.1	148.9	148.5	146.7	148.3
India	42.2	53.6	74.3	85.0	96.0	112.8	116.5	118.9	121.0
Indonesia	13.1	22.3	29.0	33.0	35.5	37.0	34.2	34.7	35.2
Bangladesh	11.1	13.9	17.9	25.1	31.7	32.7	34.9	35.9	34.8
Vietnam	6.4	7.7	12.4	20.5	26.4	27.7	27.3	27.1	27.1
Thailand	9.0	11.5	11.3	17.1	20.3	20.6	20.3	17.7	18.8
Myanmar	5.1	6.7	7.9	10.8	11.1	13.2	13.2	12.7	12.6
Philippines	3.4	5.0	6.4	8.1	10.5	12.2	11.7	11.9	12.4
Pakistan	2.2	3.1	3.3	4.8	4.8	7.5	7.3	7.2	7.6
Japan	11.5	8.9	9.6	8.6	7.9	7.8	7.7	7.6	7.6
Brazil	3.7	5.9	6.8	6.9	9.3	8.2	7.1	7.6	7.5
United States	2.8	4.8	5.1	5.9	7.6	5.7	7.1	5.9	7.2
Cambodia	2.5	1.1	1.6	2.5	4.4	5.6	5.7	5.7	5.8
Others	*22.9*	*27.6*	*33.3*	*39.3*	*48.1*	*54.8*	*55.7*	*58.1*	*58.2*
World	**213.0**	**269.9**	**351.4**	**399.2**	**451.6**	**494.4**	**497.3**	**497.7**	**504.2**
Stocks									
China	11.0	28.0	94.0	93.0	44.5	109.0	115.0	116.5	116.4
India	6.0	6.5	14.5	25.0	23.5	22.6	29.5	29.9	28.9
Thailand	1.2	2.0	0.9	2.2	5.6	2.9	4.1	4.0	4.3
Philippines	0.6	1.5	1.8	2.8	2.5	2.3	3.5	3.6	3.6
Indonesia	0.6	3.0	2.1	4.6	7.1	5.6	4.1	3.3	3.4
Others	*9.4*	*11.6*	*13.3*	*19.0*	*18.7*	*21.4*	*20.3*	*20.6*	*21.1*
World	**28.8**	**52.6**	**126.6**	**146.7**	**101.9**	**163.7**	**176.5**	**177.9**	**177.7**
Exports									
India	0.0	0.9	0.7	1.7	2.8	12.0	10.4	12.5	15.5
Vietnam	0.0	0.0	1.0	3.5	7.0	6.6	6.6	6.2	6.4
Thailand	1.6	3.0	4.0	7.5	10.6	11.2	7.6	5.7	6.2
Pakistan	0.2	1.2	1.3	2.4	3.4	4.0	4.5	3.8	4.1
United States	1.5	3.1	2.3	2.6	3.5	2.8	3.0	3.0	2.9
China	1.3	0.5	0.7	1.8	0.5	1.4	2.8	2.6	2.4
Myanmar	0.8	0.7	0.2	0.7	1.1	2.8	2.7	2.3	2.1
Others	*3.1*	*3.0*	*1.9*	*3.7*	*6.3*	*6.8*	*6.4*	*6.9*	*6.4*
World	**8.5**	**12.4**	**12.1**	**24.0**	**35.2**	**47.6**	**43.9**	**43.0**	**46.0**
Imports									
China	0.0	0.2	0.1	0.3	0.5	5.5	3.2	2.6	3.0
European Union	0.7	0.3	0.5	1.2	1.4	2.0	2.2	2.4	2.4
Philippines	0.0	0.0	0.4	1.4	1.3	1.3	3.6	2.5	2.0
Nigeria	0.0	0.4	0.2	1.3	2.4	2.0	1.9	1.4	1.8
Saudi Arabia	0.2	0.4	0.5	1.0	1.1	1.3	1.4	1.6	1.5
Cote d'Ivoire	0.1	0.3	0.3	0.5	0.9	1.4	1.4	1.1	1.2
Iran	0.1	0.6	0.6	0.8	2.0	1.2	1.3	1.2	1.2
Others	*6.7*	*9.2*	*8.0*	*15.7*	*23.5*	*32.5*	*29.0*	*29.6*	*30.6*
World	**7.7**	**11.3**	**10.6**	**22.1**	**33.0**	**47.2**	**44.0**	**42.3**	**43.7**

Source: U.S. Department of Agriculture (April 9, 2021 update).
Note: The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971. European Union includes EU-15 for 1970-1991.

Silver

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1990	2000	2005	2010	2016	2017	2018	2019	2020
					(metric tons)				
Production									
Mexico	2,453	2,483	2,894	4,411	5,409	5,394	6,049	5,840	5,541
China	896	1,600	2,500	3,085	3,754	3,602	3,421	3,443	3,443
Peru	1,927	2,418	3,193	3,640	4,376	4,418	4,161	3,860	2,991
Bolivia	358	434	420	1,259	1,353	1,196	1,191	1,153	1,589
Chile	n/a	1,245	1,400	1,276	1,501	1,319	1,370	1,309	1,474
Poland	832	1,164	1,262	1,183	1,482	1,438	1,409	1,469	1,437
Australia	1,173	2,060	2,417	1,879	1,418	1,120	1,255	1,325	1,375
Russia	0	400	1,350	1,145	1,449	1,306	1,341	1,319	1,320
United States	n/a	2,017	1,230	1,280	1,150	1,026	925	971	1,099
Kazakhstan	0	927	883	552	1,180	1,029	969	1,022	1,035
India	35	40	32	165	445	527	658	582	633
Argentina	83	78	264	723	933	648	1,024	1,000	571
Indonesia	66	310	327	335	185	328	335	485	512
Sweden	224	329	310	302	515	488	471	424	421
Canada	1,381	1,204	1,124	591	385	393	404	410	290
Uzbekistan	0	150	60	59	230	232	224	260	260
Turkey	28	110	80	364	175	151	197	242	242
Morocco	185	290	186	243	237	237	152	189	192
Papua New Guinea	10 7	73	51	84	100	66	93	147	147
Others	*6,674*	*861*	*715*	*873*	*1,813*	*1,332*	*1,059*	*1,051*	*945*
World	**16,315**	**18,194**	**20,697**	**23,450**	**28,091**	**26,251**	**26,708**	**26,500**	**25,516**
Fabrication									
India	842	2,115	1,170	1,233	2,945	3,246	3,679	n/a	n/a
China	4	283	702	1,681	951	902	859	n/a	n/a
Thailand	750	957	1,145	954	974	882	844	n/a	n/a
Italy	1,290	1,700	1,195	802	612	639	608	n/a	n/a
United States	305	416	487	400	458	530	565	n/a	n/a
Indonesia	33	116	140	168	210	216	225	n/a	n/a
Turkey	128	186	258	153	177	177	193	n/a	n/a
Russia	n/a	n/a	n/a	291	183	177	178	n/a	n/a
Mexico	250	410	511	344	220	183	169	n/a	n/a
Germany	411	284	213	169	123	120	117	n/a	n/a
Korea, Rep.	140	152	147	167	126	116	106	n/a	n/a
Brazil	56	36	50	60	62	67	73	n/a	n/a
Japan	118	54	64	69	69	71	70	n/a	n/a
Vietnam	9	22	32	42	55	59	63	n/a	n/a
France	55	88	55	64	52	51	49	n/a	n/a
Bangladesh	n/a	n/a	n/a	43	35	43	45	n/a	n/a
Dominican Republic	n/a	n/a	n/a	42	44	43	42	n/a	n/a
Israel	52	59	58	42	37	40	38	n/a	n/a
Iran	n/a	n/a	n/a	43	34	34	32	n/a	n/a
Others	*n/a*	*n/a*	*n/a*	*755*	*567*	*559*	*556*	*n/a*	*n/a*
World	**5,871**	**8,280**	**7,478**	**7,522**	**7,934**	**8,155**	**8,511**	**n/a**	**n/a**

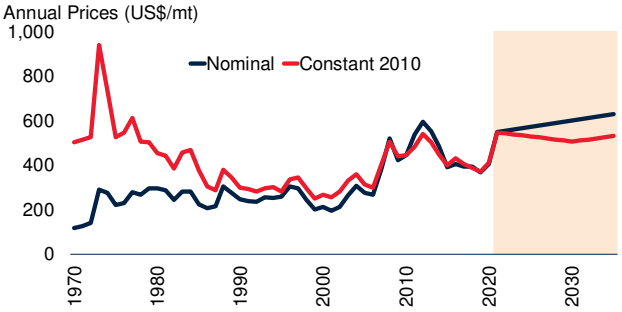
Sources: British Geological Survey, GFMS Silver Survey 2019, Thomson Reuters, U.S. Geological Survey, World Bureau of Metals Statistics, World Bank.
Note: n/a implies data not available. Fabrication: jewelry and silverware including the use of scrap.

Soybeans

Monthly Prices (US$/mt)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/mt)



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970/1971	1980/1981	1990/1991	2000/2001	2010/2011	2017/2018	2018/2019	2019/2020	2020/2021
					(million metric tons)				
Production									
Brazil	n/a	15.2	15.8	39.5	75.3	123.4	119.7	128.5	136.0
United States	30.7	48.9	52.4	75.1	90.7	120.1	120.5	96.7	112.5
Argentina	n/a	3.5	11.5	27.8	49.0	37.8	55.3	48.8	47.5
China	8.7	7.9	11.0	15.4	15.4	15.3	16.0	18.1	19.6
India	0.0	0.4	2.6	5.3	10.1	8.4	10.9	9.3	10.7
Paraguay	0.1	0.6	1.3	3.5	7.1	11.0	8.5	9.9	9.7
Canada	0.3	0.7	1.3	2.7	4.4	7.7	7.4	6.1	6.4
Russia	n/a	n/a	0.7	0.3	1.1	3.6	4.0	4.4	4.3
Ukraine	n/a	n/a	0.1	0.1	1.7	4.0	4.8	4.5	3.1
Bolivia	0.0	0.0	0.4	1.1	2.3	2.9	3.0	2.8	2.9
European Union	n/a	n/a	n/a	1.3	1.2	2.5	2.7	2.6	2.6
Others	*2.4*	*3.6*	*7.3*	*3.7*	*6.3*	*7.1*	*8.2*	*7.3*	*8.0*
World	**42.1**	**80.9**	**104.3**	**175.8**	**264.7**	**343.8**	**361.0**	**339.0**	**363.2**
Crushings									
China	1.5	1.5	3.9	18.9	55.0	90.0	85.0	91.5	96.0
United States	20.7	27.8	32.3	44.6	44.9	55.9	56.9	58.9	59.6
Brazil	n/a	13.8	14.2	22.7	36.3	44.2	42.5	46.0	46.8
Argentina	n/a	0.9	7.0	17.3	37.6	36.9	40.6	38.8	40.5
European Union	n/a	n/a	n/a	16.8	12.3	15.0	15.6	16.4	17.0
India	0.0	0.4	2.4	4.5	9.4	7.7	9.6	8.4	9.7
Mexico	0.3	1.5	1.9	4.5	3.6	5.3	6.2	6.0	6.2
Egypt	n/a	0.1	0.1	0.3	1.6	3.2	3.5	4.7	4.7
Russia	n/a	n/a	0.4	0.4	2.1	4.6	4.7	4.7	4.5
Others	*n/a*	*n/a*	*n/a*	*16.5*	*19.4*	*32.0*	*34.0*	*36.2*	*37.5*
World	**35.3**	**69.8**	**86.8**	**146.5**	**222.2**	**294.8**	**298.5**	**311.4**	**322.5**
Exports									
Brazil	n/a	1.8	2.5	15.5	30.0	76.1	74.9	92.1	86.0
United States	11.8	19.7	15.2	27.1	41.0	58.1	47.7	45.8	62.1
Argentina	n/a	2.7	4.5	7.3	9.2	2.1	9.1	10.0	6.9
Paraguay	0.0	0.6	1.0	2.4	5.1	6.0	4.9	6.6	6.0
Canada	0.0	0.1	0.2	0.7	2.9	4.9	5.3	3.9	4.2
Others	*0.5*	*0.4*	*2.1*	*0.7*	*3.4*	*5.9*	*7.0*	*6.6*	*5.8*
World	**12.3**	**25.3**	**25.4**	**53.7**	**91.6**	**153.2**	**148.8**	**165.1**	**170.9**
Imports									
China	n/a	0.5	0.0	13.2	52.3	94.1	82.5	98.5	100.0
European Union	n/a	n/a	n/a	17.7	12.5	14.6	15.0	15.7	15.4
Mexico	0.1	1.4	1.4	4.4	3.5	4.9	5.9	5.7	6.0
Argentina	n/a	n/a	n/a	0.3	0.0	4.7	6.4	4.9	4.7
Egypt	n/a	0.0	0.0	0.3	1.6	3.3	3.7	4.9	4.6
Thailand	n/a	0.0	n/a	1.3	2.1	2.5	3.2	3.8	4.0
Japan	3.2	4.2	4.4	4.8	2.9	3.3	3.3	3.3	3.4
Others	*9.3*	*20.1*	*19.8*	*11.1*	*14.7*	*26.4*	*26.0*	*28.1*	*29.7*
World	**12.6**	**26.2**	**25.5**	**53.1**	**89.7**	**153.7**	**145.9**	**165.0**	**167.8**

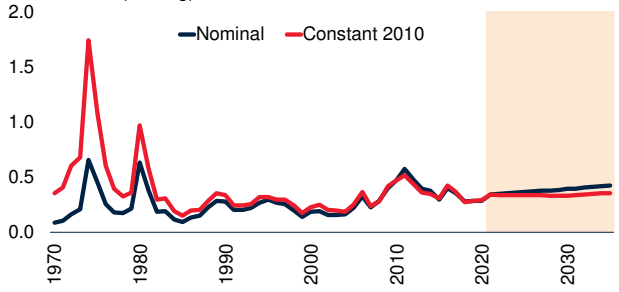
Source: U.S. Department of Agriculture (April 9, 2021 update).
Note: The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971. European Union includes EU-15 for 1970-1991.

Sugar

Monthly Prices (US$/kg)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/kg)



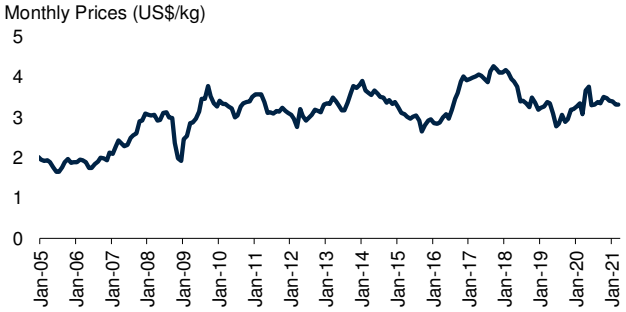
Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970/1971	1980/1981	1990/1991	2000/2001	2010/2011	2017/2018	2018/2019	2019/2020	2020/2021
					(million metric tons)				
Production									
Brazil	5.1	8.5	7.9	17.1	38.4	38.9	29.5	29.9	42.1
India	4.5	6.5	13.7	20.5	26.6	34.3	34.3	28.9	33.8
European Union	8.7	13.7	18.0	18.5	15.9	20.9	18.0	17.0	16.1
China	2.1	3.2	6.8	6.8	11.2	10.3	10.8	10.4	10.5
United States	5.6	5.6	6.3	8.0	7.1	8.4	8.2	7.4	8.2
Thailand	0.5	1.7	4.0	5.1	9.7	14.7	14.6	8.3	7.9
Mexico	2.5	2.5	3.9	5.2	5.5	6.4	6.8	5.6	6.3
Pakistan	n/a	0.9	2.1	2.6	3.9	7.2	5.3	5.3	6.0
Russia	n/a	n/a	2.6	1.6	3.0	6.6	6.1	7.8	5.5
Australia	2.7	3.3	3.6	4.2	3.7	4.5	4.7	4.3	4.3
Guatemala	0.2	0.5	1.0	1.6	2.0	2.9	3.0	2.8	2.8
Others	*38.4*	*42.0*	*44.5*	*39.5*	*35.2*	*39.2*	*38.2*	*37.9*	*38.6*
World	**70.3**	**88.6**	**114.4**	**130.8**	**162.2**	**194.3**	**179.3**	**165.5**	**181.9**
Stocks									
India	1.8	1.1	3.6	12.0	6.3	14.2	17.6	14.6	14.9
Thailand	0.0	0.2	0.2	0.6	3.0	6.8	8.3	7.3	5.3
China	0.3	0.7	1.4	1.0	1.6	6.6	5.4	4.5	3.5
Indonesia	0.4	0.3	0.4	1.4	0.6	1.8	2.3	2.0	2.0
Pakistan	n/a	0.1	0.3	0.4	1.5	3.1	1.9	1.4	1.4
Philippines	0.0	0.2	0.2	0.3	0.9	1.1	1.2	1.3	1.2
United States	2.9	1.4	1.4	2.0	1.3	1.8	1.6	1.5	1.2
Others	*14.7*	*13.7*	*14.9*	*22.2*	*14.3*	*16.7*	*14.8*	*13.8*	*13.2*
World	**20.2**	**17.6**	**22.4**	**39.9**	**29.5**	**52.1**	**53.2**	**46.2**	**42.8**
Exports									
Brazil	1.2	2.3	1.3	7.7	25.8	28.2	19.6	19.3	32.0
Thailand	0.2	1.0	2.7	3.4	6.6	10.9	10.6	7.0	7.3
India	0.3	0.1	0.2	1.4	3.9	2.2	4.7	5.8	6.0
Australia	1.8	2.6	2.8	3.1	2.8	3.6	3.7	3.6	3.4
Guatemala	0.1	0.2	0.7	1.2	1.5	1.9	2.1	1.9	2.0
Mexico	0.6	n/a	0.3	0.2	1.6	1.1	2.3	1.3	1.6
South Africa	0.8	0.6	0.8	1.6	0.4	0.8	1.0	1.5	1.2
Others	*16.3*	*21.6*	*25.1*	*19.9*	*11.3*	*16.4*	*12.9*	*12.9*	*11.8*
World	**21.3**	**28.4**	**33.9**	**38.3**	**53.9**	**65.1**	**57.1**	**53.3**	**65.3**
Imports									
Indonesia	0.1	0.6	0.2	1.6	3.1	4.3	5.4	4.8	5.7
China	0.4	1.1	1.1	1.1	2.1	4.4	4.1	4.4	4.4
European Union	1.1	2.4	3.1	1.8	3.8	1.3	2.0	2.1	3.0
United States	4.8	4.4	2.6	1.4	3.4	3.0	2.8	3.7	2.7
Bangladesh	n/a	0.0	n/a	0.8	1.5	2.7	2.4	2.3	2.6
Algeria	n/a	0.7	1.0	1.0	1.2	2.3	2.3	2.5	2.3
Malaysia	n/a	0.5	0.9	1.3	1.8	2.0	2.1	2.0	2.1
Others	*n/a*	*18.5*	*23.2*	*31.3*	*32.2*	*34.3*	*30.9*	*30.0*	*31.7*
World	**17.3**	**28.2**	**32.1**	**40.4**	**49.1**	**54.2**	**52.0**	**51.7**	**54.5**

Source: U.S. Department of Agriculture (November 24, 2020 update).
Note: The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971. European Union includes EU-15 for 1970-1991.

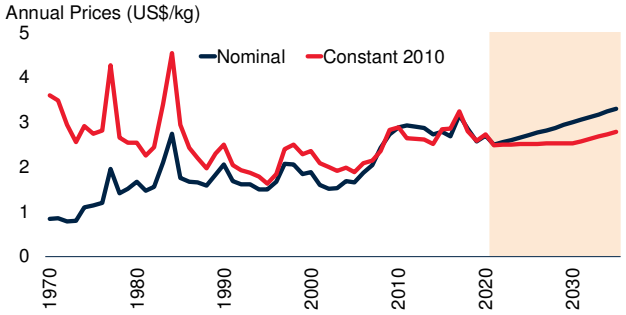
Tea

Monthly Prices (US$/kg)



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/kg)

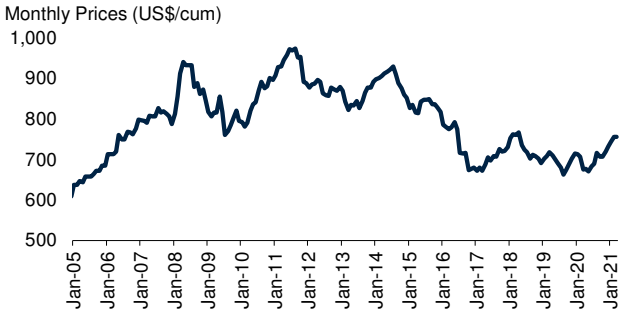


Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

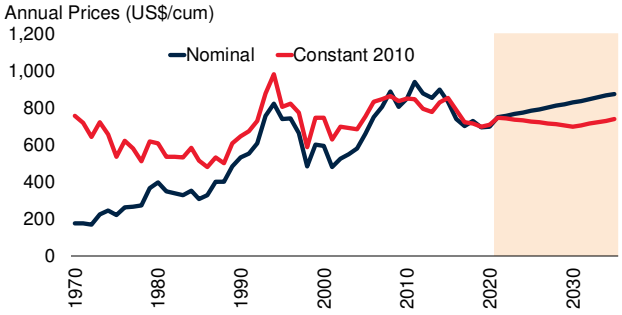
	1970	1980	1990	2000	2010	2016	2017	2018	2019
					(thousand metric tons)				
Production									
China	163	328	562	704	1,467	2,326	2,474	2,625	2,792
India	419	570	688	826	991	1,250	1,325	1,342	1,390
Kenya	41	90	197	236	399	473	440	493	459
Sri Lanka	212	191	233	306	331	293	308	304	300
Vietnam	15	21	32	70	198	240	260	270	269
Turkey	33	96	123	139	235	243	234	270	261
Indonesia	64	106	156	163	150	144	143	141	138
Myanmar	11	13	15	63	95	102	105	126	132
Iran	20	32	37	223	121	129	101	104	91
Bangladesh	31	40	39	46	60	65	82	78	91
Argentina	26	36	51	74	92	85	81	82	86
Japan	91	102	90	85	85	80	82	85	82
Uganda	18	2	7	29	49	51	57	67	73
Tanzania	8	16	18	24	33	35	39	46	63
Thailand	n/a	1	7	32	67	55	53	54	59
Others	*134*	*250*	*270*	*212*	*241*	*261*	*238*	*245*	*212*
World	**1,287**	**1,894**	**2,525**	**3,231**	**4,616**	**5,831**	**6,021**	**6,332**	**6,497**
Consumption									
China	109	220	383	497	1,217	1,685	1,731	1,772	n/a
India	218	331	490	632	774	1,139	1,082	1,095	n/a
Brazil	90	81	133	514	406	415	419	426	n/a
Turkey	26	91	95	137	242	252	294	302	n/a
Argentina	122	132	149	271	219	261	267	272	n/a
Kenya	6	12	21	2	2	170	168	180	n/a
Pakistan	30	61	106	111	93	148	157	169	n/a
Iran	24	39	79	48	200	220	156	147	n/a
Russia	n/a	n/a	n/a	158	176	164	154	147	n/a
United States	68	81	84	145	170	160	154	142	n/a
Vietnam	13	12	16	14	62	103	110	117	n/a
Others	*796*	*1,026*	*1,283*	*1,196*	*1,492*	*1,533*	*1,661*	*1,665*	*n/a*
World	**1,502**	**2,086**	**2,839**	**3,725**	**5,053**	**6,250**	**6,353**	**6,434**	**n/a**
Exports									
Kenya	42	84	166	217	418	303	467	501	476
China	61	120	211	238	308	337	368	381	386
India	200	239	198	201	235	230	261	262	258
Sri Lanka	208	185	216	287	313	287	287	165	170
Vietnam	2	9	16	56	137	136	146	77	135
Argentina	19	33	46	50	86	78	75	73	75
United Arab Emirates	0	8	7	12	50	32	55	67	66
Uganda	15	1	5	26	55	56	59	70	60
Malawi	18	31	41	42	50	44	41	42	47
Others	*187*	*274*	*321*	*334*	*373*	*358*	*377*	*376*	*339*
World	**752**	**984**	**1,227**	**1,464**	**2,023**	**1,861**	**2,136**	**2,015**	**2,011**

Source: Food and Agriculture Organization (Production December 22, 2020 update, Exports February 9, 2021 update, Food balance February 8, 2021 update).
Note: Consumption includes domestic use for food, feed, waste, and other uses. China includes Mainland, Hong Kong, Macao, and Taiwan, China.

Timber—Roundwood and Sawnwood



Source: See World Bank Commodities Price Data.
Note: Price refers to Sawnwood (S.E. Asia). Last observation is March 2021.
Click here to download chart and data.

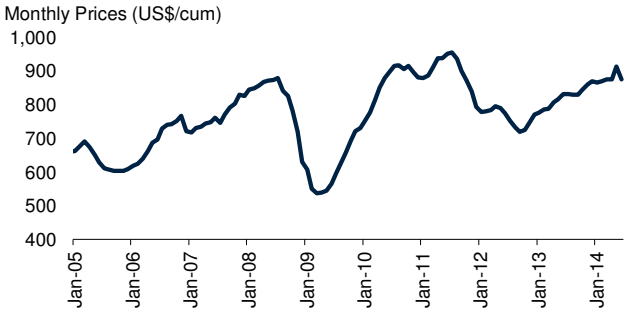


Source: World Bank.
Note: Price refers to Sawnwood (S.E. Asia). 2021-35 are forecasts.
Click here to download chart and data.

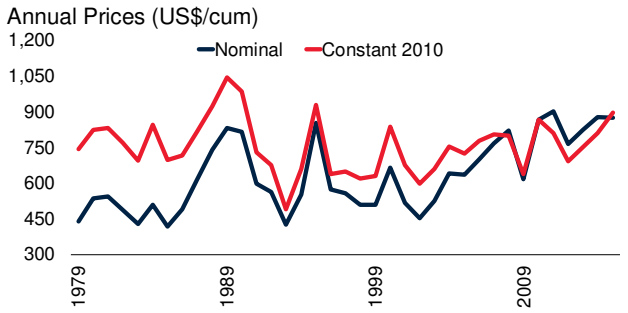
	1970	1980	1990	2000	2010	2016	2017	2018	2019
					(million cubic meters)				
Industrial roundwood: Production									
United States	312.7	327.1	427.2	420.6	336.1	374.5	372.3	392.5	387.7
Russia	n/a	n/a	n/a	145.6	161.6	198.2	197.6	219.6	203.2
China	42.2	79.2	91.2	96.0	161.8	164.4	163.2	181.7	181.7
Canada	117.5	150.8	156.0	198.9	138.8	154.7	155.2	155.6	144.0
Brazil	23.9	61.7	74.3	103.0	128.4	145.1	151.0	158.1	143.0
Indonesia	12.7	30.9	38.4	48.8	54.1	74.0	74.0	80.8	83.3
Sweden	56.7	44.8	49.1	57.4	66.3	67.9	67.6	68.3	68.5
Finland	37.5	43.0	40.2	50.1	45.4	54.3	55.3	60.5	56.0
Germany	33.0	38.9	80.3	49.2	47.1	44.0	43.3	52.9	53.4
Others	*640.5*	*670.3*	*752.8*	*519.9*	*583.6*	*645.5*	*668.0*	*700.1*	*703.9*
World	**1,276.4**	**1,446.7**	**1,709.5**	**1,689.6**	**1,723.3**	**1,922.7**	**1,947.5**	**2,070.1**	**2,024.7**
Industrial roundwood: Imports									
China	2.0	8.3	7.2	15.7	35.4	51.8	55.7	60.2	64.3
Austria	2.0	3.7	4.4	8.5	8.0	9.2	8.8	10.1	10.5
Sweden	0.6	3.1	2.0	11.7	6.3	6.8	6.7	9.5	8.8
Germany	5.2	3.8	2.0	3.5	7.7	8.7	8.8	8.9	7.3
Finland	2.3	3.8	5.2	9.9	6.3	5.9	4.8	6.9	6.2
Canada	2.1	3.0	1.5	6.5	4.7	6.2	4.3	5.1	4.7
Korea, Rep.	3.2	6.1	10.1	6.7	4.2	6.0	6.1	5.6	4.3
Others	*65.8*	*63.6*	*50.2*	*52.7*	*37.2*	*39.5*	*36.1*	*37.6*	*38.3*
World	**83.1**	**95.4**	**82.6**	**115.3**	**109.8**	**134.1**	**131.3**	**144.0**	**144.4**
Sawnwood: Production									
China	14.8	21.2	23.6	6.7	37.2	77.2	86.1	90.3	90.3
United States	63.7	65.3	86.1	91.1	60.0	78.2	80.4	82.0	82.5
Russia	n/a	n/a	n/a	20.0	28.9	36.8	40.6	42.7	44.5
Canada	19.8	32.8	39.7	50.5	38.7	49.7	47.9	47.6	42.5
Germany	11.6	13.0	14.7	16.3	22.1	22.2	23.2	23.8	24.6
Sweden	12.3	11.3	12.0	16.2	16.8	18.4	18.4	18.4	18.7
Finland	7.4	10.3	7.5	13.4	9.5	11.4	11.8	11.9	11.4
Austria	5.4	6.7	7.5	10.4	9.6	9.4	9.8	10.4	10.5
Brazil	8.0	14.9	13.7	21.3	17.5	10.0	10.2	10.2	10.2
Others	*246.3*	*245.4*	*258.1*	*139.4*	*135.5*	*149.5*	*154.8*	*154.0*	*153.7*
World	**389.1**	**420.9**	**463.0**	**385.2**	**375.6**	**462.7**	**483.1**	**491.2**	**488.9**
Sawnwood: Imports									
China	0.1	0.3	1.3	6.1	16.2	33.4	38.8	38.1	39.4
United States	10.6	17.0	22.5	34.4	16.6	28.3	27.4	26.4	25.3
United Kingdom	9.0	6.6	10.7	7.9	5.7	6.6	7.7	7.2	7.0
Japan	3.0	5.6	9.0	10.0	6.4	6.3	6.3	6.0	5.7
Germany	6.0	6.9	6.1	6.3	4.4	5.1	5.2	5.6	5.2
Italy	4.0	5.8	6.0	8.4	6.1	4.7	5.2	4.8	4.5
Egypt	0.4	1.6	1.6	2.0	4.8	5.0	4.6	3.9	4.3
Others	*19.6*	*27.8*	*27.3*	*40.7*	*48.2*	*53.9*	*55.2*	*59.3*	*57.6*
World	**52.7**	**71.5**	**84.5**	**115.8**	**108.4**	**143.5**	**150.4**	**151.2**	**149.2**

Source: Food and Agriculture Organization of the United Nations (March 1, 2021 update).
Note: Industrial roundwood, reported in cubic meters solid volume underbark (i.e. exclusing bark), is an aggregate comprising sawlogs and veneer logs, pulpwood, round and split; and other industrial roundwood except wood fuel. Sawnwood, reported in cubic meters solid volume, includes wood that has been produced from both domestic and imported roundwood, either by sawing lengthways or by a profile-chipping process and that exceeds 6mm in thickness.

Timber—Wood panels and Woodpulp



Source: See World Bank Commodities Price Data.
Note: Price refers to Woodpulp. Last observation is June 2014.
Click here to download chart and data.



Source: World Bank.
Note: Price refers to Woodpulp.
Click here to download chart and data.

	1970	1980	1990	2000	2010	2016	2017	2018	2019
					(million cubic meters)				
Wood-based panels: Production									
China	0.9	2.3	3.0	18.9	113.9	153.8	148.2	144.3	142.9
United States	23.0	26.4	37.0	45.4	32.2	36.0	36.2	34.2	34.4
Russia	n/a	n/a	n/a	4.7	9.8	14.2	15.6	17.3	17.6
Germany	5.4	8.0	9.1	13.7	12.4	12.2	12.7	12.4	12.5
India	0.2	0.2	0.4	0.3	4.4	8.9	10.3	11.7	12.3
Brazil	0.7	2.3	2.7	5.2	8.8	10.3	11.1	11.5	11.8
Poland	1.0	2.0	1.4	4.6	8.1	10.4	11.0	11.4	11.7
Canada	3.1	4.3	5.9	14.4	9.0	12.0	12.4	12.3	11.6
Turkey	0.2	0.4	0.8	2.4	6.5	9.5	9.3	9.5	9.5
Others	*32.0*	*50.9*	*63.6*	*68.5*	*79.3*	*88.3*	*90.5*	*94.0*	*93.5*
World	**66.6**	**96.9**	**123.8**	**178.2**	**284.4**	**355.6**	**357.3**	**358.6**	**357.7**
Wood-based panels: Imports									
United States	2.1	1.8	3.6	12.7	7.9	13.2	14.9	17.3	15.3
Germany	1.0	2.1	3.0	3.9	4.4	5.6	5.7	6.0	5.7
Japan	0.5	0.2	3.2	6.1	4.0	3.8	4.1	4.0	3.6
United Kingdom	2.0	2.4	3.2	3.3	2.7	3.4	3.5	3.8	3.6
Poland	0.2	0.4	0.1	0.7	1.7	2.4	3.1	3.1	3.2
Italy	0.1	0.7	0.8	1.5	2.2	2.5	2.7	2.9	2.8
Canada	0.2	0.2	0.5	1.2	2.8	3.0	3.4	3.1	2.8
Others	*3.0*	*6.2*	*13.4*	*25.9*	*38.6*	*48.1*	*52.1*	*53.6*	*51.8*
World	**9.0**	**13.9**	**27.9**	**55.2**	**64.3**	**81.8**	**89.5**	**93.9**	**88.9**
Woodpulp: Production									
United States	37.3	46.2	57.2	57.8	50.9	49.5	49.2	53.2	52.1
Brazil	0.8	3.4	4.3	7.3	14.5	19.4	20.2	21.7	20.3
Canada	16.6	19.9	23.0	26.7	18.9	17.0	16.8	16.8	16.8
China	1.2	1.3	2.1	3.7	9.6	12.2	12.6	13.7	14.9
Sweden	8.1	8.7	10.2	11.5	11.9	11.8	12.2	12.0	12.1
Finland	6.2	7.2	8.9	12.0	10.5	10.9	11.1	12.1	12.0
Japan	8.8	9.8	11.3	11.4	9.5	8.8	8.9	8.8	8.6
Indonesia	0.0	0.0	0.7	4.1	5.7	7.3	7.8	8.3	8.4
Russia	n/a	n/a	n/a	5.8	7.4	8.4	8.3	8.6	8.2
Others	*22.5*	*29.1*	*37.1*	*30.7*	*33.6*	*36.4*	*36.6*	*36.9*	*37.1*
World	**101.6**	**125.7**	**154.8**	**171.1**	**172.4**	**181.8**	**183.8**	**192.0**	**190.4**
Woodpulp: Imports									
China	0.1	0.4	0.9	4.0	12.1	21.9	24.6	25.3	27.4
United States	3.2	3.7	4.4	6.6	5.6	5.6	5.4	5.6	5.3
Germany	1.8	2.6	3.7	4.1	5.1	5.2	5.3	4.8	4.5
Italy	1.4	1.8	2.1	3.2	3.4	3.4	3.2	3.5	3.6
Korea, Rep.	0.2	0.5	1.1	2.1	2.5	2.2	2.3	2.2	2.2
France	1.3	1.8	1.9	2.4	1.9	1.9	2.0	2.0	1.7
Japan	0.9	2.2	2.9	3.1	1.8	1.6	1.8	1.7	1.7
Others	*7.6*	*7.6*	*8.3*	*12.3*	*16.5*	*20.1*	*20.2*	*21.3*	*21.0*
World	**16.6**	**20.6**	**25.2**	**37.8**	**49.0**	**62.0**	**64.7**	**66.4**	**67.3**

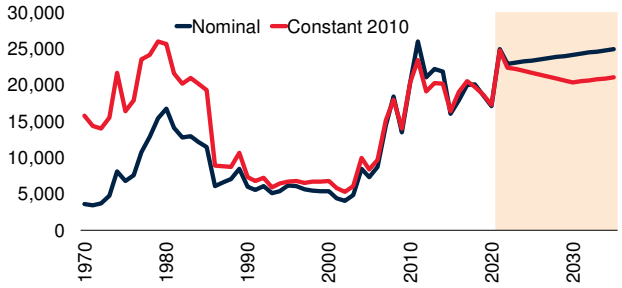
Sources: Food and Agriculture Organization of the United Nations (March 1, 2021 update).
Note: Wood-based panels, reported in cubic meters solid volume, is an aggregate comprising veneer sheets, plywood, particle board and fiberboard. Woodpulp, reported in metric tons air-dry weight (i.e. with 10% moisture content), is an aggregate comprising mechanical woodpulp; semi-chemical woodpulp; chemical woodpulp; and dissolving woodpulp.

Tin

Monthly Prices (US$/mt)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/mt)



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970	1980	1990	2000	2010	2017	2018	2019	2020
					(thousand metric tons)				
Mine Production									
China	n/a	16.0	40.0	87.7	129.6	112.2	127.0	134.3	161.3
Indonesia	19.1	32.5	40.0	51.6	84.0	82.8	84.0	86.4	65.4
Myanmar	0.3	1.3	0.5	1.6	0.8	58.9	45.9	45.0	29.1
Peru	0.1	1.1	5.1	36.4	33.8	17.8	18.6	19.7	20.6
Brazil	3.6	6.9	39.1	14.2	10.4	17.1	17.6	14.9	15.0
Bolivia	28.9	27.3	17.2	12.5	20.2	18.4	17.3	17.2	13.7
Congo, Dem. Rep.	6.5	n/a	n/a	0.0	7.4	10.2	9.0	12.5	13.5
Australia	8.8	11.6	7.4	9.1	18.6	7.4	6.9	7.7	8.2
Nigeria	8.0	2.7	0.3	2.0	1.3	8.6	7.9	7.0	5.8
Vietnam	n/a	n/a	0.8	1.8	5.4	5.0	5.5	5.5	5.4
Malaysia	73.8	61.4	28.5	6.3	2.7	4.8	3.9	3.6	3.2
Russia	n/a	n/a	n/a	6.5	0.1	1.0	1.5	2.3	2.5
Tanzania	n/a	n/a	n/a	0.0	0.0	0.1	0.0	0.0	1.6
Others	*n/a*	*n/a*	*n/a*	*4.8*	*3.6*	*4.9*	*5.1*	*3.9*	*3.6*
World	**184.3**	**228.1**	**210.6**	**234.5**	**318.0**	**349.2**	**349.9**	**360.0**	**349.0**
Refined Production									
China	20.0	16.0	35.8	109.9	149.0	178.4	177.7	181.0	202.9
Indonesia	5.2	30.5	30.4	46.4	64.2	72.0	81.4	81.6	74.0
Peru	n/a	n/a	n/a	17.4	36.4	17.9	18.3	19.5	19.2
Malaysia	92.1	71.3	49.0	26.2	38.7	27.2	27.2	23.7	18.5
Brazil	3.1	8.8	37.6	13.8	9.1	13.8	13.5	12.0	12.0
Thailand	22.0	34.7	15.5	17.2	23.5	10.6	10.9	9.6	11.3
Bolivia	n/a	17.5	13.4	9.4	15.0	16.1	15.6	15.1	9.6
Belgium	4.3	2.8	6.1	8.5	9.9	9.7	9.3	9.3	9.0
Vietnam	0.0	0.0	1.8	1.8	3.0	4.4	4.9	4.8	4.6
Poland	0.0	0.0	0.0	0.0	0.6	3.4	3.8	4.0	3.9
Taiwan, China	n/a	n/a	n/a	0	0	3	2.8	3.8	3.7
Japan	1.4	1.3	0.8	0.6	0.8	1.6	1.6	1.6	1.5
Russia	n/a	n/a	n/a	5.5	0.7	0.8	1.0	1.0	1.2
Others	*n/a*	*n/a*	*n/a*	*5.6*	*5.5*	*0.0*	*0.1*	*0.4*	*0.3*
World	**204.2**	**232.2**	**227.5**	**262.3**	**356.6**	**359.0**	**368.1**	**367.3**	**371.8**
Refined Consumption									
China	12.5	12.5	25.5	49.1	154.3	182.1	174.2	177.9	216.2
United States	53.8	46.1	36.8	51.0	32.0	31.5	34.7	31.3	29.2
Japan	28.6	30.9	34.8	25.2	35.7	29.1	28.1	24.9	20.2
Germany	17.3	19	21.7	20.7	17.4	20.0	20.2	18.4	14.9
Korea, Rep.	0.4	1.8	7.8	15.3	17.4	13.1	13.9	12.0	13.4
Taiwan, China	n/a	1.3	4.8	11.1	11.1	7.3	7.4	8.4	10.1
India	4.8	2.3	2.3	6.4	10.7	10.0	11.4	10.6	9.7
Netherlands	5	5	6.9	3.6	5.4	6.0	6.0	6.0	5.4
Spain	3	4.2	4	4.1	6.1	5.5	6.0	5.8	5.3
Others	*100.4*	*100.9*	*93.0*	*90.4*	*78.5*	*74.5*	*75.6*	*71.3*	*60.7*
World	**225.8**	**224.0**	**237.6**	**276.9**	**368.8**	**379.0**	**377.5**	**366.6**	**385.1**

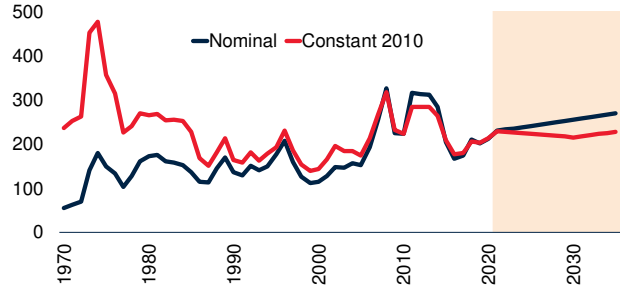
Sources: British Geological Survey, Metallgesellschaft, U.S. Geological Survey, World Bureau of Metals Statistics, World Bank.
Note: n/a implies data not available. Refined production and consumption include significant recycled material.

Wheat

Monthly Prices (US$/mt)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/mt)



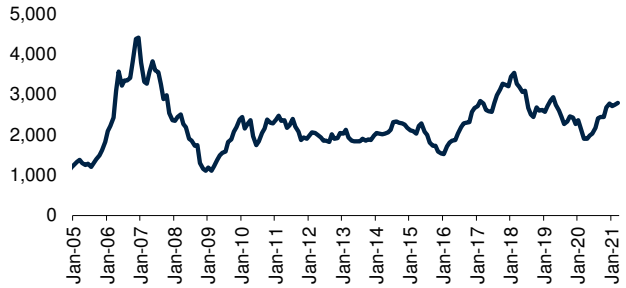
Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970/1971	1980/1981	1990/1991	2000/2001	2010/2011	2017/2018	2018/2019	2019/2020	2020/2021
					(million metric tons)				
Production									
European Union	45.6	67.4	89.1	132.7	136.7	151.1	136.6	154.3	135.6
China	29.2	55.2	98.2	99.6	116.1	134.3	131.4	133.6	134.3
India	20.1	31.8	49.9	76.4	80.8	98.5	99.9	103.6	107.9
Russia	n/a	n/a	49.6	34.5	41.5	85.2	71.7	73.6	85.4
United States	36.8	64.8	74.3	60.6	58.9	47.4	51.3	52.6	49.7
Canada	9.0	19.3	32.1	26.5	23.3	30.4	32.4	32.7	35.2
Australia	7.9	10.9	15.1	22.1	27.4	20.9	17.6	15.2	33.0
Ukraine	n/a	n/a	30.4	10.2	16.8	27.0	25.1	29.2	25.5
Pakistan	7.3	10.9	14.4	21.1	23.3	26.6	25.1	24.3	25.2
Turkey	8.0	13.0	16.0	18.0	17.0	21.0	19.0	17.5	18.3
Argentina	4.9	7.8	11.0	16.3	17.2	18.5	19.5	19.8	17.6
Others	*137.7*	*154.9*	*108.8*	*64.6*	*91.6*	*101.9*	*101.5*	*107.5*	*109.0*
World	**306.5**	**435.9**	**588.8**	**582.6**	**650.7**	**762.8**	**731.0**	**763.9**	**776.5**
Stocks									
China	7.2	31.7	49.9	91.9	59.5	131.2	139.8	151.7	145.4
India	5.0	4.0	5.8	21.5	15.4	13.2	17.0	24.7	27.3
United States	22.4	26.9	23.6	23.8	23.5	29.9	29.4	28.0	23.2
Russia	n/a	n/a	16.4	1.5	13.7	12.0	7.8	7.2	12.1
European Union	7.2	12.6	17.9	17.9	13.5	17.9	15.9	14.1	10.7
Iran	0.7	1.2	3.2	2.9	2.9	8.1	6.2	6.6	6.6
Australia	3.7	2.0	2.8	5.5	8.2	4.5	4.4	2.9	5.6
Others	*34.4*	*34.2*	*51.2*	*40.9*	*64.2*	*70.3*	*62.9*	*64.9*	*64.6*
World	**80.5**	**112.6**	**170.9**	**205.9**	**200.9**	**287.2**	**283.4**	**300.0**	**295.5**
Exports									
Russia	n/a	n/a	1.2	0.7	4.0	41.4	35.9	34.5	39.5
European Union	6.2	15.7	22.2	15.7	23.1	23.4	23.3	38.4	27.5
Canada	11.8	16.3	21.7	17.3	16.6	22.0	24.4	24.6	27.0
United States	20.2	41.2	29.1	28.9	35.1	24.7	25.5	26.3	26.8
Australia	9.1	9.6	11.8	15.9	18.6	13.8	9.0	9.1	22.0
Ukraine	n/a	n/a	2.0	0.1	4.3	17.8	16.0	21.0	17.5
Argentina	1.0	3.8	5.6	11.3	9.5	12.7	12.2	13.5	11.5
Others	*8.1*	*3.5*	*10.2*	*11.2*	*21.9*	*26.9*	*27.4*	*24.1*	*27.1*
World	**56.5**	**90.1**	**103.8**	**101.2**	**133.0**	**182.8**	**173.7**	**191.5**	**198.9**
Imports									
Egypt	2.8	5.4	5.7	6.1	10.6	12.4	12.4	12.8	13.0
China	3.7	13.8	9.4	0.2	0.9	3.9	3.1	5.4	10.5
Indonesia	0.5	1.2	2.0	4.1	6.6	10.8	10.9	10.6	10.5
Turkey	0.9	0.0	0.3	0.4	3.7	6.2	6.4	10.9	8.2
Philippines	0.6	0.9	1.5	3.1	3.2	6.1	7.5	7.1	6.8
Brazil	1.7	3.9	4.4	7.2	6.7	7.0	7.0	7.2	6.7
Bangladesh	0.0	1.0	1.4	1.3	4.0	6.5	5.1	6.8	6.6
Others	*45.7*	*63.3*	*74.3*	*77.1*	*96.2*	*128.6*	*118.8*	*124.7*	*129.5*
World	**55.8**	**89.5**	**99.0**	**99.3**	**131.9**	**181.5**	**171.3**	**185.4**	**191.8**

Source: U.S. Department of Agriculture (April 9, 2021 update).
Note: The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971. 'n/a' implies not available. European Union includes EU-15 for 1970-1991..

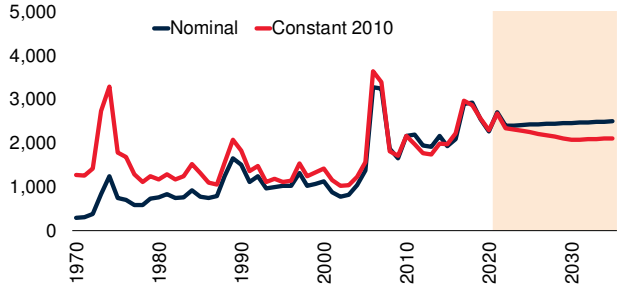
Zinc

Monthly Prices (US$/mt)



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2021.
Click here to download chart and data.

Annual Prices (US$/mt)



Source: World Bank.
Note: 2021-35 are forecasts.
Click here to download chart and data.

	1970	1980	1990	2000	2010	2017	2018	2019	2020
					(thousand metric tons)				
Mine Production									
China	100	150	750	1,780	3,842	3,868	3,721	4,645	4,514
Peru	299	488	584	910	1,470	1,473	1,470	1,404	1,329
Australia	487	495	933	1,420	1,475	852	1,136	1,338	1,309
India	8	32	70	208	741	828	747	713	740
United States	485	317	543	829	748	774	838	753	703
Mexico	263	238	322	401	570	674	637	701	638
Bolivia	46	50	104	149	411	527	520	528	634
Kazakhstan	n/a	n/a	n/a	322	405	347	345	370	370
Russia	n/a	n/a	n/a	132	214	275	296	300	310
Sweden	93	176	164	177	199	251	238	248	236
Canada	1,253	1,059	1,203	1,002	649	347	305	323	210
Brazil	n/a	70	110	100	211	156	170	163	173
South Africa	n/a	n/a	n/a	63	36	31	28	125	159
Others	*n/a*	*n/a*	*n/a*	*1,385*	*1,532*	*1,592*	*1,725*	*1,770*	*1,590*
World	**5,359**	**6,189**	**7,117**	**8,815**	**12,469**	**11,965**	**12,147**	**13,257**	**12,755**
Refined Production									
China	100	155	550	1,957	5,209	6,144	5,607	6,236	6,425
Korea, Rep.	2	79	257	473	750	1,069	1,099	950	963
India	23	44	79	176	701	792	776	691	694
Canada	413	592	592	780	691	598	620	655	671
Spain	89	152	253	386	517	507	511	511	511
Japan	676	735	687	654	574	524	521	537	501
Australia	261	306	303	489	507	471	490	437	464
Mexico	85	145	199	337	322	327	336	393	365
Peru	71	64	118	200	223	312	334	357	348
Kazakhstan	n/a	n/a	n/a	263	319	329	329	296	319
Finland	57	147	163	223	307	285	295	291	297
Belgium	241	249	300	264	281	249	275	271	271
Netherlands	47	170	209	217	264	248	268	240	240
Others	*n/a*	*n/a*	*n/a*	*2,734*	*2,254*	*1,919*	*1,869*	*1,796*	*1,715*
World	**5,095**	**6,183**	**6,971**	**9,153**	**12,919**	**13,775**	**13,329**	**13,662**	**13,784**
Refined Consumption									
China	150	200	369	1,402	5,350	6,890	6,105	6,821	6,758
United States	1074	810	992	1,315	907	829	867	950	852
India	97	95	135	224	538	653	714	646	534
Korea, Rep.	11	68	230	419	540	735	716	566	503
Germany	448	474	530	532	494	452	444	389	377
Japan	623	752	814	674	516	482	482	517	360
Turkey	9	12	47	92	182	267	248	252	267
Italy	178	236	270	377	339	275	280	276	263
Spain	77	91	119	195	206	214	288	139	251
Others	*2,375*	*3,402*	*3,062*	*3,659*	*3,460*	*3,406*	*3,086*	*3,165*	*2,928*
World Total	**5,042**	**6,140**	**6,568**	**8,889**	**12,532**	**14,204**	**13,230**	**13,721**	**13,093**

Sources: British Geological Survey, Metallgesellschaft, U.S. Geological Survey, World Bureau of Metals Statistics, World Bank.
Note: n/a implies data not available.

APPENDIX C

Description of price series
Technical notes

Description of price series

Energy

Coal (Australia). Thermal, f.o.b. Newcastle, 6,000 kcal/kg, spot price.

Coal (South Africa). f.o.b. Richards Bay, NAR, 6000 kcal/kg, sulfur less than 1%, forward month one.

Crude oil. Average price of Brent (38° API), Dubai Fateh (32° API), and West Texas Intermediate (WTI, 40° API). Equally weighed.

Natural Gas Index (Laspeyres). Weights based on five-year consumption volumes for Europe, U.S. and Japan (LNG), updated every five years.

Natural gas (Europe). Netherlands Title Transfer Facility (TTF).

Natural gas (U.S.). Spot price at Henry Hub, Louisiana.

Liquefied natural gas (Japan). LNG, import price, cif; recent two months' averages are estimates.

Non-Energy

Beverages

Cocoa (ICCO). International Cocoa Organisation daily price, average of the first three positions on the terminal markets of New York and London, nearest three future trading months.

Coffee (ICO). International Coffee Organization indicator price, other mild Arabicas, average New York and Bremen/Hamburg markets, ex-dock.

Coffee (ICO). International Coffee Organization indicator price, Robustas, average New York and Le Havre/Marseilles markets, ex-dock.

Tea. Average three auctions, arithmetic average of quotations at Kolkata, Colombo, and Mombasa/ Nairobi.

Tea (Colombo). Sri Lankan origin, all tea, arithmetic average of weekly quotes.

Tea (Kolkata). leaf, include excise duty, arithmetic average of weekly quotes.

Tea (Mombasa/Nairobi). African origin, all tea, arithmetic average of weekly quotes.

Oils and meals

Coconut oil (Philippines/Indonesia). Crude, c.i.f. Rotterdam.

Groundnuts (U.S.). Runners 40/50, CFR N.W. Europe

Groundnut oil. U.S. crude, FOB South-East.

Fishmeal. German, Danish 64% protein, FOB Bremen.

Palm oil (Malaysia). RBD, FOB Malaysia ports.

Palmkernel Oil (Malaysia/Indonesia). Crude, c.i.f. Rotterdam.

Soybean meal. Soybean pellets 48% protein, c.i.f Rotterdam.

Soybean oil. Dutch soyoil crude degummed, EXW Dutch Mills.

Soybeans. U.S. Gulf yellow soybean No. 2, c.i.f. Rotterdam.

Grains

Barley (U.S.). Feed, No. 2, spot, 20-days-to-arrive, delivered Minneapolis.

Maize (U.S.). No. 2, yellow, f.o.b. U.S. Gulf ports.

Rice (Thailand). 5% broken, white rice (WR), milled, indicative price based on weekly surveys of export transactions, government standard, f.o.b. Bangkok.

Rice (Thailand). 25% broken, WR, milled indicative survey price, government standard, f.o.b. Bangkok.

Rice (Thailand). 100% broken, A.1 Super, indicative survey price, government standard, f.o.b. Bangkok.

Rice (Vietnam). 5% broken, WR, milled, weekly indicative survey price, minimum export price, f.o.b. Hanoi.

Sorghum (U.S.). No. 2 milo yellow, f.o.b. Gulf ports.

Wheat (U.S.). No. 1, hard red winter (HRW), ordinary protein, export price delivered at the U.S. Gulf port for prompt or 30 days shipment.

Wheat (U.S.). No. 2, soft red winter (SRW), export price delivered at the U.S. Gulf port for prompt or 30 days shipment.

Other food

Bananas (Central and South America). Major brands, free on truck (f.o.t.) Southern Europe, including duties.

Bananas (Central and South America). Major brands, U.S. import price, f.o.t. U.S. Gulf ports.

Meat, beef (Australia/New Zealand). Chucks and cow forequarters, frozen boneless, 85% chemical lean, c.i.f. U.S. port (east coast), ex-dock.

Meat, chicken (U.S.). Urner Barry North East weighted average for broiler/fryer, whole birds, 2.5 to 3.5 pounds, USDA grade "A".

Meat, sheep (New Zealand). Frozen whole carcasses Prime Medium (PM) wholesale, Smithfield, London.

Oranges (Mediterranean exporters). Navel, EEC indicative import price, c.i.f. Paris.

Shrimp (U.S.). Brown, shell-on, headless, in frozen blocks, source Gulf of Mexico, 26 to 30 count per pound, wholesale U.S.

Sugar (EU). European Union negotiated import price for raw unpackaged sugar from African, Caribbean, and Pacific (ACP), c.i.f. European ports.

Sugar (U.S.). Nearby futures contract, c.i.f.

Sugar (World). International Sugar Agreement (ISA) daily price, raw, f.o.b. and stowed at greater Caribbean ports.

Timber

Logs (Africa). Sapele, high quality (loyal and marchand), 80 centimeter or more, f.o.b. Douala, Cameroon.

Logs (Southeast Asia). Meranti, Sarawak, Malaysia, sale price charged by importers, Tokyo.

Plywood (Africa and Southeast Asia). Lauan, 3-ply, extra, 91 cm x 182 cm x 4 mm, wholesale price, spot Tokyo.

Sawnwood (Africa). Sapele, width 6 inches or more, length 6 feet or more, f.a.s. Cameroonian ports.

Sawnwood (Southeast Asia). Malaysian dark red seraya/meranti, select and better quality, average 7 to 8 inches; length average 12 to 14 inches; thickness 1 to 2 inches; kiln dry, c. & f. U.K. ports, with 5% agents commission including premium for products of certified sustainable forest.

Other raw materials

Cotton (Cotlook "A" index). Middling 1-3/32 inch, traded in Far East, C/F.

Rubber (Asia). RSS3 grade, Singapore Commodity Exchange Ltd (SICOM) nearby contract.

Rubber (Asia). TSR 20, Technically Specified Rubber, SICOM nearby contract.

Fertilizers

DAP (diammonium phosphate), spot, f.o.b. U.S. Gulf.

Phosphate rock , f.o.b. North Africa.

Potassium chloride (muriate of potash), spot, f.o.b. Vancouver.

TSP (triple superphosphate), spot, import U.S. Gulf.

Urea (Ukraine), f.o.b. Black Sea.

Metals and minerals

Aluminum (LME). London Metal Exchange, unalloyed primary ingots, standard high grade, physical settlement.

Copper (LME). Standard grade A, cathodes and wire bar shapes, physical settlement.

Iron ore (any origin). Fines, spot price, c.f.r. China, 62% Fe.

Lead (LME). Refined, standard high grade, physical settlement.

Nickel (LME). Cathodes, standard high grade, physical settlement.

Tin (LME). Refined, standard high grade, physical settlement.

Zinc (LME). Refined, standard special high grade, physical settlement.

Precious Metals

Gold (U.K.). 99.5% fine, London afternoon fixing, average of daily rates.

Platinum (U.K.). 99.9% refined, London afternoon fixing.

Silver (U.K.). 99.9% refined, London afternoon fixing.

Technical Notes

Definitions and explanations

Constant prices are prices which are deflated by the Manufacturers Unit Value Index (MUV).

MUV is the unit value index in U.S. dollar terms of manufactures exported from fifteen countries: Brazil, Canada, China, Germany, France, India, Italy, Japan, Mexico, Republic of Korea, South Africa, Spain, Thailand, the United Kingdom, and the United States.

Price indexes were computed by the Laspeyres formula. The Non-Energy Price Index is comprised of 34 commodities. U.S. dollar prices of each commodity is weighted by 2002-2004 average export values. Base year reference for all indexes is 2010. Countries included in indexes are all low- and middle-income, according to World Bank income classifications.

Price index weights. Trade data as of May 2008 comes from United Nations' Comtrade Database via the World Bank WITS system, Food and Agriculture Organization FAOSTAT Database, International Energy Agency Database, BP Statistical Review, World Metal Statistics, World Bureau of Metal Statistics, and World Bank staff estimates. The weights can be found in the table on the next page.

Reporting period. Calendar vs. crop or marketing year refers to the span of the year. It is common in many agricultural commodities to refer to production and other variables over a twelve-month period that begins with harvest. A crop or marketing year will often differ by commodity and, in some cases, by country or region.

Abbreviations

$ = U.S. dollar

bbl = barrel

c.i.f. = cost, insurance, freight

c.f.r. = cost and freight

CPI = consumer price index

cum = cubic meter

dmt = dry metric ton

f.o.b. = free on board

f.o.t. = free on truck

kg = kilogram

mb/d = million barrels per day

mmbtu = million British thermal units

mmt = million metric tons

mt = metric ton (1,000 kilograms)

toz = troy ounce

Acronyms

COVID-19	Coronavirus Disease 2019
DAP	diammonium phosphate
EAP	East Asia and Pacific
ECA	Europe and Central Asia
EIA	Energy Information Administration
EU	European Union
EMDEs	Emerging markets and developing economies
ETFs	exchange-traded funds
FAO	Food and Agriculture Organization
FRED	Federal Reserve Bank of St. Louis Economic Data
HHI	Herfindahl–Hirschman Index
HRW	hard red winter
ICAC	International Cotton Advisory Committee
IEA	International Energy Agency
IFA	International Fertilizer Association
IMF	International Monetary Fund
IRSG	International Rubber Study Group
LAC	Latin America and the Caribbean
LME	London Metal Exchange
LNG	liquefied natural gas
MNA	Middle East and North Africa
MOP	muriate of potash, or potassium chloride

MUV	Manufacture Unit Value
NPI	nickel pig iron
OECD	Organisation of Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
PMI	purchasing managers' index
PPI	producer price index
SAR	South Asia
SRW	soft red winter
SSA	Sub-Saharan Africa
SVAR	structural vector autoregression
TTF	Netherlands Title Transfer Facility
TSP	triple superphosphate
USDA	United States Department of Agriculture
USGS	U.S. Geological Survey
WTI	West Texas Intermediate

Data sources

Africa Tea Brokers Limited

Bloomberg

Bloomberg L.P.—Green Markets

BP Statistical Review

British Geological Survey

Federal Reserve Bank of St. Louis Economic Data (FRED)

Food and Agriculture Organization (FAO)

Gold Fields Mineral Services (GFMS)

Global Energy Monitor

Haver Analytics

Intergovernmental Group on Bananas and Tropical Fruits

Intergovernmental Group on Tea

International Cocoa Organisation (ICCO)

International Coffee Organization (ICO)

International Cotton Advisory Committee (ICAC)

International Energy Agency (IEA)

International Fertilizer Association (IFA)

International Rubber Study Group (IRSG)

International Tropical Timber Organization (ITTO)

International Sugar Organization (ISO)

ISTA Mielke GmbH Oil World

Japan Lumber Journal

London Metal Exchange

Markit Group Ltd

Meat Trade Journal

Metallgesellschaft

Nova Media Publishing, Inc.

Observatory of Economic Complexity

Official Statistics of Japan

Platinum and Palladium Survey

Silver Institute

Steel Statistical Yearbook

Tea Board India

Tea Exporters Association Sri Lanka

Thomson Reuters

Transportation Security Administration

UN Comtrade

Urner Barry

U.S. Department of Agriculture (USDA)

U.S. Energy Information Administration (EIA)

U.S. Geological Survey

World Bureau of Metal Statistics

World Gold Council

World Platinum Investment Council

Weights for commodity price indexes

Commodity group	Share of energy and non-energy indexes	Share of sub-group indexes
ENERGY	**100.0**	**100.0**
Coal	4.7	4.7
Crude Oil	84.6	84.6
Natural Gas	10.8	10.8
NON-ENERGY	**100.0**	
Agriculture	**64.9**	
Beverages	**8.4**	**100.0**
Coffee	3.8	45.7
Cocoa	3.1	36.9
Tea	1.5	17.4
Food	**40.0**	
Grains	**11.3**	100.0
Rice	3.4	30.1
Wheat	2.8	25.2
Maize (includes sorghum)	4.6	40.7
Barley	0.5	4.1
Oils and meals	**16.3**	**100.0**
Soybeans	4.0	24.6
Soybean Oil	2.1	13.0
Soybean Meal	4.3	26.3
Palm Oil	4.9	30.2
Coconut Oil	0.5	3.1
Groundnut Oil (includes groundnuts)	0.5	2.8
Other food	**12.4**	100.0
Sugar	3.9	31.5
Bananas	1.9	15.7
Meat, beef	2.7	22.0
Meat, chicken	2.4	19.2
Oranges (includes orange junice)	1.4	11.6
Agricultural Raw Materials	**16.5**	
Timber	**8.6**	**100.0**
Logs	1.9	22.1
Sawnwood	6.7	77.9
Other Raw Materials	**7.9**	**100.0**
Cotton	1.9	24.7
Natural Rubber	3.7	46.7
Tobacco	2.3	28.7
Fertilizers	**3.6**	**100.0**
Natural Phosphate Rock	0.6	16.9
Phosphate	0.8	21.7
Potassium	0.7	20.1
Nitogenous	1.5	41.3
Metals and Minerals	**31.6**	**100.0**
Aluminum	8.4	26.7
Copper	12.1	38.4
Iron Ore	6.0	18.9
Lead	0.6	1.8
Nickel	2.5	8.1
Tin	0.7	2.1
Zinc	1.3	4.1
PRECIOUS METALS	**100.0**	
Gold	77.8	
Silver	18.9	
Platinum	3.3	

Note: Index weights are based on 2002-04 developing countries' export values. Precious metals are not included in the non-energy index.

Commodity Markets Outlook: Selected Topics, 2011-21

Topics	Date
Causes and consequences of metal price shocks	April 2021
Persistence of commodity shocks	October 2020
Set up to fail? The collapse of commodity agreements	April 2020
A Shock Like no Other: The Impact of COVID-19 on Commodity Markets	April 2020
The role of substitution in commodity demand	October 2019
Innovation, disruptive technologies, and substitution among commodities	October 2019
Oil market implications of the strike on Saudi Arambo facilities	October 2019
Food price shocks: Channels and implications	October 2019
The implications of tariffs for commodity markets	October 2018
The changing of the guard: Shifts in commodity demand	October 2018
Oil exporters: Policies and challenges	October 2018
Investment weakness in commodity exporters	January 2017
OPEC in historical context: Commodity agreements and market fundamentals	October 2016
From energy prices to food prices: Moving in tandem?	July 2016
Resource development in era of cheap commodities	October 2016
Weak growth in emerging market economies: What does it imply for commodity markets?	January 2016
Understanding El Niño: What does it mean for commodity markets?	October 2015
Iran nuclear agreement: A game changer for energy markets?	October 2015
How important are China and India in global commodity consumption?	July 2015
Anatomy of the last four oil price crashes	October 2015
Putting the recent plunge in oil prices in perspective	January 2015
The role of income growth in commodities	October 2014
Price volatility for most commodities has returned to historical norms	July 2014
The nature and causes of oil price volatility	January 2014
A global energy market?	July 2013
Global reserves, demand growth, and the “super cycle” hypothesis	July 2013
The “energy revolution,” innovation, and the nature of substitution	January 2013
Commodity prices: levels, volatility, and comovement	January 2013
Which drivers matter most in food price movements?	January 2013
Induced innovation, price divergence, and substitution	June 2012
The role of emerging markets in commodity consumption	June 2012
WTI-Brent price dislocation	January 2012
Metals consumption in China and India	January 2012
China, global metal demand, and the super-cycle hypothesis	June 2011

ECO-AUDIT

Environmental Benefits Statement

The World Bank Group is committed to reducing its environmental footprint. In support of this commitment, we leverage electronic publishing options and print-on-demand technology, which is located in regional hubs worldwide. Together, these initiatives enable print runs to be lowered and shipping distances decreased, resulting in reduced paper consumption, chemical use, greenhouse gas emissions, and waste.

We follow the recommended standards for paper use set by the Green Press Initiative. The majority of our books are printed on Forest Stewardship Council (FSC)-certified paper, with nearly all containing 50-100 percent recycled content. The recycled fiber in our book paper is either unbleached or bleached using totally chlorine-free (TCF), processed chlorine-free (PCF), or enhanced elemental chlorine-free (EECF) processes.

More information about the Bank's environmental philosophy can be found at http://www.worldbank.org/corporateresponsibility.

Commodity prices continued to recover in the first quarter of 2021 from lows reached in 2020, supported by the global economic recovery, improved growth prospects, and supply factors specific to crude oil, copper, and some food commodities. Looking ahead, oil prices are forecast to average $56/bbl in 2021, 36 percent higher than in 2020, and see a further rise to $60/bbl in 2022 as demand continues to recover. Metal prices are expected to average 30 percent higher in 2021 than in 2020 on the back of strong demand before dropping back somewhat in 2022. Agriculture prices are forecast to average nearly 14 percent higher in 2021, driven by a few food commodities, and are expected to stabilize thereafter.

A Special Focus section examines the impact of metal price shocks on metal-exporting countries. Since global metal prices are predominantly driven by global demand shocks, metal price swings can amplify the impact of global downturns and recessions—or conversely, upturns—for metal exporters. Metal price jumps are associated with small, temporary gains from price increases for metal exporters, but metal price collapses tend to lead to larger, and longer-lasting, output losses.

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 to 2030 for 46 commodities are also presented together with historical price data. Commodity price data updates are published separately at the beginning of each month.

The report and data can be accessed at:

www.worldbank.org/commodities

WORLD BANK GROUP