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A World Bank Report

APRIL 2019

Commodity Markets Outlook

Food Price Shocks: Channels and Implications

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WORLD BANK GROUP

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The World Bank's *Commodity Markets Outlook* is published twice a year, in April and October. The report provides detailed market analysis for major commodity groups, including energy, agriculture, fertilizers, metals, and precious metals. Price forecasts to 2030 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.

The report and data can be accessed at:
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Executive Summary

Most commodity prices gained momentum in the first quarter of 2019 following last year's declines, and many have recovered from the previous quarter's lows. Energy prices have diverged as OPEC production cuts have lifted oil prices while record-high U.S. shale gas exports have depressed natural gas and, indirectly, coal prices. Most metal and mineral prices have recovered from losses in the last quarter of 2018, amid strengthening growth prospects for China and supply bottlenecks. Agricultural prices rose moderately in the first quarter on expectations of lower plantings. Crude oil prices, which averaged $68/bbl in 2018, are expected to average $66/bbl over 2019 and $65/bbl in 2020, with balanced risks primarily related to policy outcomes. Non-energy prices in 2019 are expected to remain below 2018 averages, before rising moderately in 2020 as the global economy emerges from its recent soft patch. A Special Focus section illustrates the adverse poverty implications of food price spikes that tend to be amplified by commonly used trade-related government responses.

Recent trends

The majority of energy, metal and mineral, and agricultural commodity prices declined in the last quarter of 2018, only to rebound in the first quarter of 2019 (Figure 1). By March, more than half (although virtually none of the energy prices) had recouped their losses and returned to September 2018 levels. The weakness of energy, as well as metal and mineral prices in late 2018, mainly reflected concerns about global growth, especially in China amid trade tensions. Renewed fiscal stimulus and the resumption of U.S.-China trade negotiations in January, however, improved growth prospects and supported a rebound in commodity prices. This rebound was compounded by a series of commodity-specific supply factors.

Since the beginning of 2019, the juxtaposition of soaring U.S. shale oil and gas output and production restraint by the Organization of the Petroleum Exporting Countries (OPEC) has driven a wedge between *oil* and *other energy* prices. In the last quarter of 2018, against a backdrop of global growth concerns, rising oil production by OPEC, and U.S. waivers on sanctions on Iran had triggered a plunge in *Brent crude oil prices* to a low of $52/bbl in mid-December from a peak of $83/bbl in early October. Since then, oil prices have recouped most of these losses on subsequent production cuts by OPEC and its partners. In contrast, Asian spot *liquefied natural gas (LNG) prices*—which, on average through 2017 to mid 2018 were almost triple U.S. prices—plunged by more than one-third between September 2018 and March, and reached levels of European natural gas prices by mid-April. This has in part reflected a one-third increase in U.S. LNG exports and new capacity coming onstream in Australia and Qatar.

Having fallen or having remained subdued in the last quarter of 2018, most *non-energy prices* had recovered their losses by March, with particularly strong rebounds in metals and minerals. This recovery in *metal prices* reflected improving growth prospects for China—which accounts for half of global consumption—as well as a series of supply bottlenecks and concerns: the Vale dam accident in Brazil (iron ore, nickel); heavy floods in Chile (copper); protests in Peru (copper); smelter restrictions in response to environmental concerns in China (lead, zinc); and export restrictions in Indonesia (tin). Similarly, supply factors buoyed the return to 2018 levels for most *agricultural commodity prices*. These included weather-related planting delays for U.S. wheat and corn as well as lower expectations for U.S. soybean plantings on concerns about trade tensions.

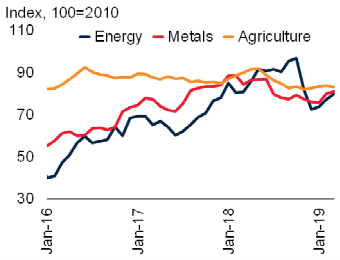
Outlook and risks

As a result of the weak start into the year, *energy* prices are expected to average 5.4 percent lower in 2019 than in 2018 (a downward revision from October) followed by a slight decline in 2020 (Table 1). *Non-energy* prices are projected to decline 2.1 percent in 2019 (a modest downward revision from October) followed by a pick up in 2020. The outlook for commodity prices, especially oil, is vulnerable to policy-related risks.

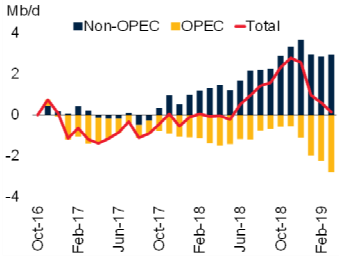
FIGURE 1 Commodity market developments

Most commodity prices gained momentum during the first quarter of 2019. Production cuts by OPEC and its partners have substantially reduced global supply and supported oil prices. In contrast, prices of Asian LNG imports have plunged on weaker demand and surging U.S. exports, which rose by one-third between 2018 Q3 and 2019 Q1. In 2019-20, U.S. farmers intend to substitute soybean plantings with other crops, including maize.

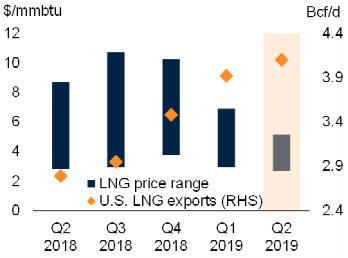
A. Commodity price indexes, monthly



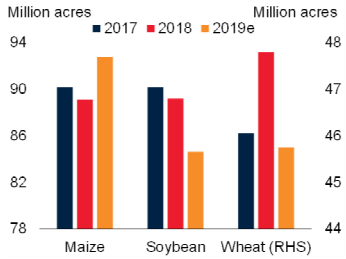
B. Oil production, cumulative change since October 2016



C. Natural gas: International prices and U.S. LNG exports



D. U.S. crop planting intentions



Source: Bloomberg, EIA, IEA, USDA, World Bank
A. Last observation is March 2019.
B. Last observation is February 2019.
C. Range of quarterly average natural gas prices in Japan, Europe, and the United States, with prices in Japan systematically the highest and those in the United States the lowest. Data for 2019 Q2 show EIA expectations for LNG exports, and average prices for the first week of April 2019 .
D. Years represent crop seasons (e.g., 2018 refers to 2018-19); 2019e refers to estimates from the March 29 USDA's Prospective Plantings Report.
Download data and charts.

Oil prices are expected to average $66/bbl in 2019 and $65/bbl in 2020, lower than the October projections (by $8/bbl and $4/bbl, respectively). The downward revisions reflect a weaker outlook for global growth in 2019 and much larger than expected increases in U.S. shale production. The forecast assumes that production cuts by OPEC and its partners will be sustained throughout 2019, and that demand will strengthen in 2020 in tandem with a recovery from the current soft patch in the global economy. Risks to the oil price outlook—which are broadly balanced—relate primarily to policy outcomes. These include OPEC's June meeting regarding production cuts, the impact of the removal of waivers to the U.S. sanctions on Iran, and the effect of the International Maritime Organization's sulfur emissions regulation that takes effect on January 1, 2020. Other risks include geopolitical events such as conflict in Libya, weaker-than-expected growth in major oil consumers, especially China and the United States, and environmental policies.

Metal prices are expected to continue their recovery in 2019 and 2020 following sharp drops in the second half of 2018. Supply concerns (especially in copper and zinc), disruptions (in iron ore production due to the tailings dam disaster in Brazil), and China's fiscal stimulus are expected to provide support. Risks are broadly balanced. Downside risks include a weaker-than-expected demand boost from China's fiscal stimulus and a prolonged stall in U.S.-China trade negotiations; upside risks include tighter-than-expected environmental policies and slower-than-expected easing of supply bottlenecks.

Agricultural prices are expected to fall 2.6 percent in 2019, on average, amid ample stocks. In 2020, prices are expected to rise 1.7 percent on expected cuts in U.S. crop plantings and higher costs of energy and fertilizers. Risks to this outlook are to the upside. Higher-than-expected energy costs could lift prices of some crops such as grains and oilseeds. Greater-than-projected growth in biofuel production could also lead to higher prices for some food commodities.

Special focus on food prices

In the event of large swings in world food prices, countries often intervene to dampen the impact on domestic prices and to lessen the burden of adjustment for vulnerable population groups. While individual countries can succeed at insulating their domestic markets, the collective intervention of many countries may amplify movements in world prices. Trade policies introduced during the 2010-11 food price spike accounted for about 40 percent of the increase in the world price of wheat and one-quarter of the increase in the world price of maize at that time. Combined with government policy responses, the 2010-11 price spike tipped 8.3 million people (about 1 percent of the world's poor) into poverty.

TABLE 1 Nominal price indexes and forecast revisions

	Price Indexes (2010=100)[1]					Change (%) q/q		Change (%) y/y		Index revision[3]	
	2016	2017	2018	2019f[2]	2020f[2]	2018Q4	2019Q1	2019	2020	2019f[2]	2020f[2]
Energy	55	68	87	82	81	-9.5	-8.0	-5.4	-1.4	-9.6	-4.6
Non-Energy[3]	79	84	85	83	85	-1.5	0.9	-2.1	1.4	-2.4	-2.2
Agriculture	87	87	87	84	86	-2.2	0.9	-2.6	1.7	-3.2	-3.2
Fertilizers	78	74	82	86	88	6.6	-5.4	4.8	1.7	3.6	3.4
Metals and minerals	63	78	83	81	82	-1.0	1.7	-1.9	0.8	-1.2	-0.8
Precious metals[4]	97	98	97	100	103	0.7	6.1	2.6	3.1	4.0	7.8
Memorandum items											
Crude oil ($/bbl)	43	53	68	66	65	-11.9	-6.0	-3.4	-1.5	-8.0	-4.0
Gold ($/toz)	1,249	1,258	1,269	1,310	1,360	1.3	6.1	3.2	3.8	65.1	129.0

Source: World Bank.

Notes: (1) Numbers may differ from tables A.1-4 due to rounding. (2) "f" denotes forecasts. (3) Denotes revision to the forecasts from the October 2018 report (expressed as change in index value except for $/bbl for crude oil, and $/toz for gold). (4) The non-energy price index excludes precious metals. See Appendix C for definitions of prices and indexes.

SPECIAL FOCUS

Food Price Shocks: Channels and Implications

Food Price Shocks: Channels and Implications

Countries sometimes use trade policies to dampen the impact of international food price swings on domestic markets to lessen the burden of adjustment on vulnerable population groups. While individual countries can succeed at insulating their domestic markets from fluctuations in global food prices, the collective intervention of many countries may amplify the movements of world prices. Insulating policies introduced during the 2010-11 food price spike may have accounted for 40 percent of the increase in the world price of wheat and one-quarter of the increase in the world price of maize. Combined with government policy responses, the 2010-11 food price spike tipped 8.3 million people (almost 1 percent of the world's poor) into poverty. Instead of trade policies, targeted safety net interventions such as cash transfers, food and in-kind transfers, and risk management instruments can be more effective in mitigating the negative effects of food price shocks on poor households.

Introduction

Food commodities have experienced a large and broad-based price cycle during the past two decades. Between 2000 and 2008, the World Bank's Food Price Index rose by 80 percent in real terms (Figure SF1). While prices have come down from their 2008 highs, they are still 40 percent higher than their 1985-2000 average, a period characterized by moderate and stable prices.

Agricultural and food prices are expected to remain stable over the medium term. However, sharp price changes stemming from energy price fluctuations, adverse weather events, or trade tensions cannot be ruled out. First, higher-than-expected energy prices, a key input in the production of most agricultural commodities, could affect food prices, especially grains and oilseeds. Energy prices affect agricultural production costs directly (through fuel use) and indirectly (through fertilizer and other chemicals use). They also create incentives to shift production to biofuels. Second, El Niño episodes, such as the one in 2016-17, could disrupt commodity supplies, especially at a regional level, particularly in Central America, the Caribbean, and Southern Africa. Third, the growing frequency of extreme weather events increases the risk of disruption to food production, food availability, and access to food. Finally, policy measures introduced by major producers and exporters in response to higher price shocks could also affect prices (World Bank 2018).

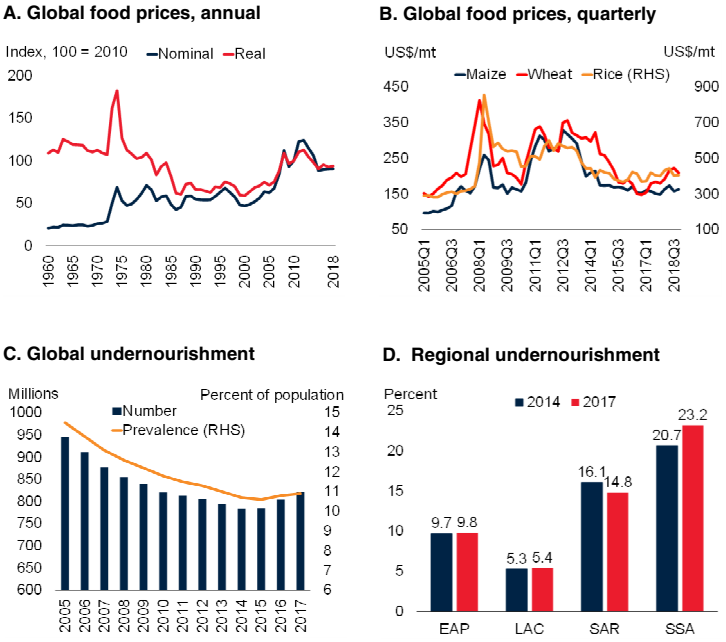
Food price increases have important macro- and microeconomic impacts through several channels. At the macroeconomic level, food price increases raise inflation and contribute to terms of trade shocks. At the microeconomic level, for households that are net sellers of food products, rising food prices can increase real incomes. However, on average, higher food prices raise poverty, reduce nutrition, and curtail the consumption of essential services such as education and health care (World Bank 2011).

Countries often use policy interventions to dampen the domestic impact of international food price spikes and lessen the burden on vulnerable population groups. For example, during the 2007-08 food price spike, close to three-quarters of emerging market and developing economies (EMDEs) took policy actions to moderate the impact (World Bank 2009). In the event of food price increases, net food-importing countries usually intervene by lowering trade protection (typically tariffs) on food items, while net food-exporting countries impose export restrictions or bans. These policies are often complemented with social safety net programs such as cash transfers or school feeding programs.

To the extent that policy interventions reduce the transmission of international price surges to domestic markets, they achieve their objective. However, the combined intervention of many countries can exacerbate changes in international prices. Insulating policies introduced during price spikes encourage consumption and dampen incentives to increase production. In turn, this results in higher import demand and reduced export supply that can further drive up global prices. During price plunges, government

FIGURE SF.1 Global food prices

Although food prices have declined considerably since their 2011 highs, they are still significantly above their lows of the early 2000s. Evidence points to a rise in undernourishment rates in the past two years, reversing the declining trend observed in the previous decade.



Source: FAO; World Bank.
A. Based on yearly commodity price indexes between 1960-2017.
C.D. Undernourishment is defined a state, lasting for at least one year, of inability to acquire enough food, defined as a level of food intake insufficient to meet dietary energy requirements.
D. EAP = East Asia and Pacific, LAC = Latin America and the Caribbean, SAR = South Asia, and SSA = Sub-Saharan Africa.
Download data and charts.

interventions encourage exports that tend to depress world prices. Only countries that insulate themselves to an above-average degree can reduce price volatility in their domestic markets (Anderson, Martin, and Ivanic 2017).

In this context, this essay addresses the following questions: How do food price shocks affect EMDEs? How do countries intervene to reduce the impact of food price shocks? What was the impact of the 2010-11 food price spike on poverty?

The impact of food price shocks

At the *macroeconomic* level, a high share of agriculture and food in total output, consumption, employment, trade, and government revenues heightens the vulnerability of countries to volatility in international food prices.

- *Reliance on food imports and production.* Agriculture accounts for close to one-third of total value added and two-thirds of total employment in low-income countries (LICs). This is almost three times as much as in the average EMDE (Figure SF2; Aksoy and Beghin 2004). In addition, more than three-quarters of LICs are net food importers, compared to only half of EMDEs.

- *Inflation.* A rise in food prices increases headline consumer price inflation. For example, during the latest food price spikes, LIC inflation more than doubled, from 7 to 15 percent during 2007-2008 and from 5 to 11 percent during 2010-2011. The increase in EMDE inflation was less pronounced, rising from 7 to 11 percent during 2007-2008 and from 5 to 6 percent during 2010-2011. Food prices accounted disproportionately for these increases in inflation—about two-thirds in LICs and more than half in EMDEs.

- *Terms of trade.* Sharp increases in food prices can result in significant adverse terms of trade shocks that lower growth, especially in countries that are large net importers of food. In heavy food importers, the exchange rate depreciation typically associated with adverse terms of trade shocks can compel central banks to tighten monetary policy, which can further lower growth. Indeed, during the 2007-08 food price spike, close to half of EMDE central banks responded to rising inflation and currency depreciation by tightening monetary policy.

- *Fiscal policy.* Absent stabilizing fiscal arrangements, heavy reliance on food and agricultural trade can contribute to volatility in public finances and erode fiscal sustainability. When food prices fall, revenue losses in the agricultural sector are exacerbated by political pressures to subsidize food production. Food price spikes may also cause sociopolitical instability, including political unrest (Barrett 2013).

At the *microeconomic* level, a high share of net food buyers among the poorest segments of society

heightens the adverse effects of food price spikes on poverty and income inequality. Rising food prices impact households through price and income channels. They can reduce household purchasing power via higher food prices. However, they can also raise income generated from food production. The overall impact on poverty and income inequality depends on the relative magnitude of these effects for households in different segments of the income distribution.

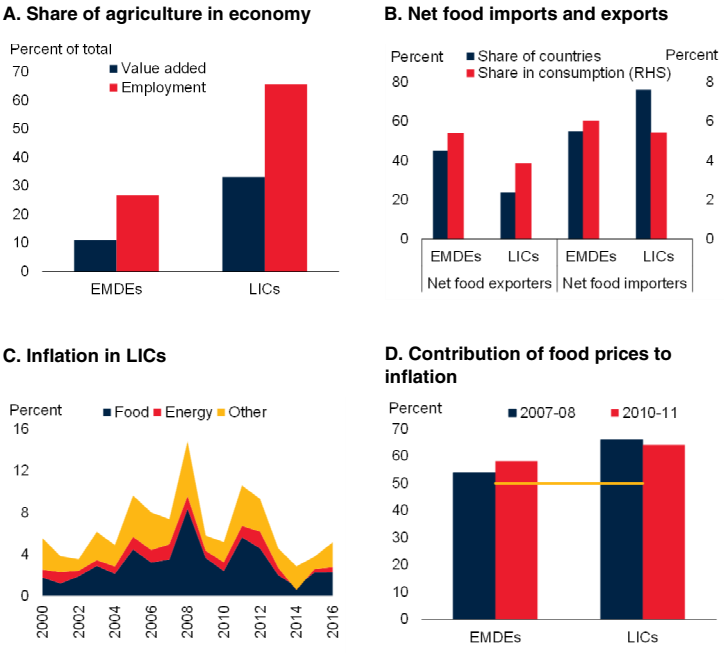
- *Food consumption in the average household.* In LICs, households spend, on average, close to 60 percent of their income on food (Figure SF3). More than one-third of LIC household consumption expenditure on food is spent on staple foods such as cereals and vegetables. These staple foods are considerably more exposed to international price volatility than domestically processed food products.

- *Net food buyers and sellers.* For households that are net sellers of agricultural and food products, rising food prices raise incomes. In contrast, poor urban households who are typically net buyers of food spend a large share of their consumption expenditure on food (Aksoy and Hoekman 2010). On average, many of the poor in EMDEs and LICs are net buyers of food. As a result, food price spikes tend to raise poverty, reduce nutrition, and cut consumption of essential services such as education and health care.[1] In extreme cases, food price spikes can lead to food insecurity and hunger, with severe adverse long-term impacts on human capital.

Government policy responses. In the event of large swings in global food prices, governments are confronted with difficult policy choices. One option is to allow domestic prices to adjust to world food price changes, exposing domestic consumers and producers to changes in their real incomes. Such an adjustment, however, may raise inflation in the short run, and in countries where inflation expectations are poorly anchored, in the medium to long run.[2] Alternatively, governments can spare consumers or producers from these losses by reducing the transmission of international food price shocks to domestic markets.[3] In practice, governments in EMDEs

FIGURE SF.2 Macroeconomic channels of transmission from global food price changes

A high share of agriculture and food in total output, consumption, employment, trade, and government revenues heightens the vulnerability of countries to sharp movements in international food prices.



Source: World Bank.
A. Based on a sample of 93 non-LIC EMDEs and 21 LICs. Averages for 2010-16.
B. Blue bars show the share of non-LIC EMDEs or LICs in which food imports exceed food exports ("Net food importers") or food imports fall short of food exports ("Net food exporters"). Red bars show net food imports relative to consumption in non-LIC EMDE and LIC food exporters and importers.
C. Average inflation based on a sample of 12 LICs.
D. Share of inflation accounted for by food price inflation.
Download data and charts.

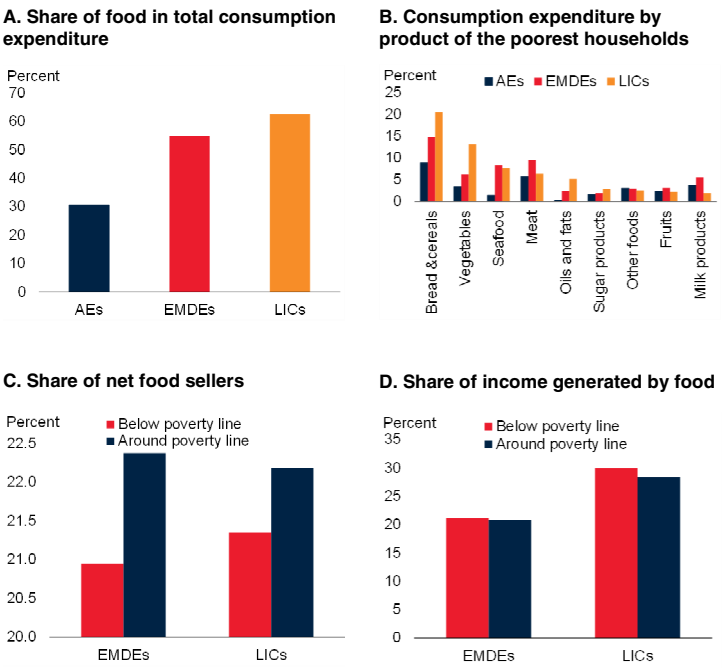
[1] If food price spikes are associated with a positive, large, and quick agricultural supply response they can lead to a reduction in poverty (Headey 2018).

[2] The decline in real incomes associated with higher inflation could entail welfare losses (Gouel and Jean 2015; Freund and Ozden 2008; Giordani, Rocha, and Ruta 2016; Easterly and Fischer 2001). In principle, monetary policy tightening can offset inflationary effects from rising global food prices to ensure that rising food prices remain a purely relative price change and do not become entrenched in higher inflation. However, this would come at the cost of reduced economic activity (Lustig 2009).

[3] Policymakers may also have a longer-term goal to protect (or to tax) domestic agents (Grossman and Helpman 1994). In empirical work based on political economy models, government interventions vary to reduce both the costs associated with adjusting prices and the costs of providing interventions that differ from the long-run political equilibrium (Anderson and Nelgen 2011; Ivanic and Martin 2014). The less-than-perfect pass through of world price shocks into domestic markets is explicitly considered.

FIGURE SF.3 Microeconomic channels of transmission from global food price changes

A high share of net food buyers among the poorest segments of the population heightens the adverse effects of food price spikes on income distribution and poverty.



Source: International Food Policy Research Institute; World Bank.

A. Indicates share of food in total consumption expenditure of households. Data is available for 19 AEs, 63 non-LIC EMDEs and 25 LICs. The base year of the household surveys differs but the data has been converted to a common reference year, 2010. The share of income spent on food is likely to be different.

B. Indicates the share of products in total household consumption expenditure. Data is available for 19 AEs, 63 non-LIC EMDEs and 25 LICs. The base year of the household surveys differs but the data has been converted to a common reference year, 2010. The share of income spent on food is likely to be different.

C.D. Averages weighted by the number of poor for a sample of 22 non-LIC EMDEs and 7 LICs. Poverty line is defined as $1.90/day.

Download data and charts.

tend to respond particularly strongly to sharp changes in the world prices of staple foods—such as rice, wheat and maize—to reduce the volatility of domestic prices. For staple foods, domestic price movements can diverge substantially from international price movements in the short run, but converge in the longer term.

Evolution of global and domestic food prices

Food price spikes during the 2000s. Domestic food prices are considerably less volatile than global food prices in the short run. However, over the longer term there is a tendency for domestic prices to return to their original relationship with international prices. The movements of world and domestic staple food prices during the latest two food price spikes (2007-08 and 2010-11) resembled similar earlier episodes: world prices rose rapidly, while domestic prices rose only gradually. However, the 2010-11 spike was different from previous episodes in several aspects. The 2007-08 increase in food prices came after a long period of stability in food prices. In 2007-08, world prices of all staple foods increased steeply, led by rice.

Government interventions. During the 2007-08 food price spike, close to three-quarters of EMDEs took action to insulate their economies (World Bank 2009). The most commonly used interventions were reductions in taxes, including import duties and consumer taxes (Figure SF4). Net importers frequently intervened by lowering import tariffs or even by introducing import subsidies, while net exporters imposed export restrictions to dampen price increase. In contrast, the 2010-11 food price spike episode occurred when world markets and policies were still normalizing from the 2007-08 episode. Government interventions differed considerably across countries and across commodities. On average, policy actions actually contributed to a decline in the world price of rice.

- *Rice.* Between 2007Q1 and 2008Q2, world rice prices increased by 170 percent. This sharp increase reflected export restrictions introduced by major producers (e.g., India and Vietnam) motivated by food security concerns, panic buying by several large importers, a weak dollar, and record high oil prices, a major input into food production (Baffes and Haniotis 2016). During this episode, domestic markets were largely insulated (Ivanic and Martin 2008). By contrast, during the 2010-11 price spike, rice prices increased much less, about 30 percent between June 2010 and May 2012. In some countries, adverse supply conditions, combined with changes in non-tariff trade policies, resulted in domestic rice prices rising above world prices. Instead of policies aimed at insulating domestic markets, EMDEs

typically implemented measures that raised domestic prices relative to world prices.

- *Wheat.* Between 2007Q1 and 2008Q2, world wheat prices increased by 75 percent, partly in response to lower-than-anticipated production caused by drought in Australia, Ukraine, and other major exporters. Strong policy intervention partially insulated domestic markets from the price spike and subsequent collapse in the aftermath of the global financial crisis. Similarly, during the 2010-11 event, world wheat prices more than doubled between June 2010 and May 2011. This time, the increase in world prices was partly driven by lower-than-expected production and exports in Kazakhstan, Russia, and Ukraine and excessive rains in Australia that damaged crops. Large orders from major wheat importers in the Middle East and North Africa added to price pressures.

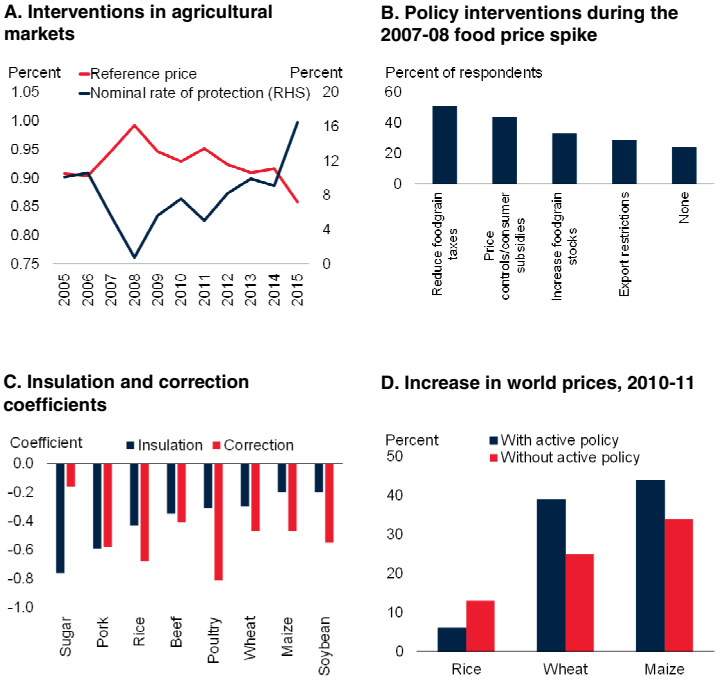
- *Maize.* During the 2007-08 food price spike, the world price of maize rose by 50 percent, partly as a result of increasing U.S. demand for maize stimulated by mandatory targets for ethanol production. Similarly, during the 2010-11 episode, the world price of maize increased significantly. As in the case of wheat, adverse weather-related events in major maize exporting countries contributed to the jump in world prices. In contrast, many countries in Sub-Saharan Africa benefitted from excellent maize harvests, which in combination with unpredictable trade policies led to sharp falls in domestic prices.

Insulation of domestic food markets

Measuring the insulation of domestic markets. Governments intervene to insulate domestic prices from global food price swings. The degree of insulation is quantified using an Error Correction Model that estimates the short- and long-run response of domestic food prices to global food commodity prices (Laborde, Lakatos, and Martin 2019). The model estimates the degree of insulation to global price changes in both the short run and long run. The sample includes annual data for 8 food commodity prices in 82 countries, of which 44 are EMDEs and 12 are LICs, during 1955-2011.

FIGURE SF.4 Food-related government policies

Insulation policies undertaken during the 2010-11 episode amplified the increase of world prices and accounted for about 40 percent of the increase in the world price of wheat and one-quarter of the increase in the world price of maize.



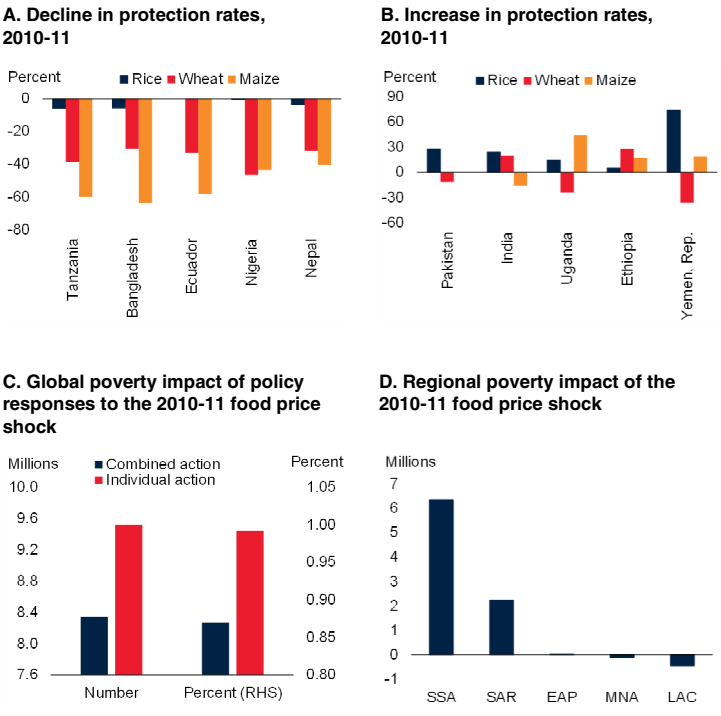
Source: Ag-Incentives Database, Ivanic and Martin (2014), World Bank.
A. Nominal rate of protection is computed as the price difference between the farm gate price received by producers and an undistorted reference price at the farm gate level.
B. Percent of respondents based on a survey of 80 EMDEs.
C.D. Estimates based on an Error Correction Model described in Laborde, Lakatos, and Martin (2019). The coefficient of price insulation ranges from 0 for countries that do not insulate against the rise in world prices, to -1 for countries that adopt policies that fully insulate domestic markets. Based on data for 82 countries, of which 26 are advanced economies, 44 are non-LIC EMDEs, and 12 are LICs for the period 1955-2011.
Download data and charts.

Estimates of short-term insulation. Estimates point to considerable short-term insulation in markets for key staple foods such as rice and wheat (Figure SF4). Among these three grains, insulation is the highest for rice. In the short run, a 10 percent increase in global rice, wheat, and maize prices is associated with an increase in domestic prices of 6 percent, 7 percent, and 8 percent, respectively.[4]

[4] Baffes, Kshirsagar, and Mitchell (2019) argue that domestic prices respond faster to regional prices than to the international benchmark.

FIGURE SF.5 Government interventions during the 2010-11 food price spike and their poverty impact

The 2010-11 food price spike raised global poverty. The combined impact of all government interventions raised poverty worldwide, except in a few countries.



Source: World Bank.

A. Changes in the rates of protection are presented in the form: $T_t = \Delta t/(1+t_0)$, where t is the initial rate of protection (positive if an import tariff or export subsidy) and Δt is the change in this rate of protection. If the change in the rate of protection is negative during a period of rising world prices, countries are seeking to insulate their markets from the increase in prices. If it is positive, policymakers are compounding the increase in world prices with an increase in protection, which may be due to the correction of past "errors": If domestic prices fall below policymakers' desired long-run level of protection, or if a policy that insulated the domestic market from world markets and a subsequent exogenous shock—such as a harvest shortfall—has caused the domestic price to rise relative to the world price.

C.D. Based on estimates using the MIRAGRODEP computable general equilibrium model and assuming increases in the price of maize, rice, and wheat as represented in Figure SF.4.D. Based on a poverty line of $1.90/day.

C. EAP = East Asia and Pacific; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia; and SSA = Sub-Saharan Africa.

Download data and charts.

Effectiveness of insulating policy measures. Certain types of interventions in markets for staple foods have raised volatility in domestic markets. For example, during the 2008-09 food price spike, several African countries intervened using food pricing, marketing, and trade policies to stabilize domestic maize markets. Countries that intervened most intensively experienced the highest domestic price volatility, mostly because of the ad hoc and unpredictable nature of these interventions (Chapoto and Jayne 2009).[5] The use of an export ban during food price spikes illustrates the tradeoff between different policy instruments:

- *Ensuring food security.* By restricting the sale of food for exports, an export ban increases domestic supply and dampens domestic food price increases. This can help net-food buyers access food.
- *Alleviating poverty.* Net food sellers are likely to be hardest-hit by price hikes caused by drought. An export ban reduces their ability to mitigate their production losses with higher incomes from higher prices. If these farmers are among the poorer segments of the income distribution, the export ban will likely increase poverty, as it did in Zambia during the 2016-17 El Niño event (Al-Mamun et al. 2017).
- *Volatility.* While export bans may alleviate price pressures during a specific situation, they affect domestic prices by preventing domestic shocks from being dissipated through changes in trade. If bans are backed up by stockholding measures they can be consistent with domestic price stabilization, perhaps at the cost of higher fiscal outlays (see Gouel, Gautam, and Martin 2016 for the case of India).

Synchronous policy measures. While individual countries can succeed at insulating their domestic markets from short-term fluctuations in global food prices, their combined policies could affect world prices. Government interventions tend to increase consumption and reduce production during price spikes and support production and discourage consumption during price plunges. During price spikes, this results in higher import demand (or lower exports) and, hence, even higher world prices. During price plunges, the

[5] After abstaining from the use of interventions in staple food markets for several years, policymakers in eastern and southern Africa used extensively pricing, marketing, and trade policy tools during the 2015-16 agricultural season to contain the impact of an El Niño-induced decline in output and food security (Al-Mamun et al. 2017; Tschirley and Jayne 2010).

interventions encourage greater exports and, as a result, lower world prices.

Poverty impact of the 2010-11 food price shock

The impact of the 2010-11 food price shock on poverty is quantified in two steps. The first step estimates protection rates to capture government interventions (Anderson, Ivanic, and Martin 2014). In the second step, these estimates are fed into a computable general equilibrium (CGE) model in combination with household models for 285,000 households from 31 countries to determine the impact of policy interventions on poverty (Laborde, Robichaud and Tokgoz 2013; Laborde, Lakatos, and Martin 2019). Two scenarios are compared. In the first scenario, the impact of countries' own interventions on poverty is considered. In the second scenario, the combined effect of all policy interventions on global food markets and their feedback to domestic poverty is quantified.

Quantifying policy interventions. A primary shock, such as a weather shock, is assumed to generate initial production shortfalls that are calibrated to match the observed changes in protection rates and world prices. Government interventions to suppress the pass-through of domestic prices from global food price spikes are reflected in a falling ratio of domestic to world prices—the "protection rate." If the protection rate rises, policymakers are compounding the increase in world prices. Protection rates are assumed to reflect trade measures by governments, such as the introduction of export bans (food exporters) or the reduction of import duties (food importers). These policy responses are calibrated to match the observed protection rates and world price increases in 2010-11. As the model distinguishes between domestic and imported goods, two potential policy instruments are considered—an import duty (or subsidy) and an export subsidy (or tax). These measures, in turn, reinforce the original shock to world prices. The data used for quantifying the extent of trade policy interventions are taken primarily from the Ag-Incentives Consortium database reflecting changes in domestic and world prices for 57 countries and 68 agricultural and food commodities during 2005-2015.[6] Where data from the Ag-Incentives database were unavailable, alternative data were used from FAOSTAT, GIEWS and Fewsnet.[7] Overall, this analysis covers 24 major food-producing and consuming countries, using data on household income sources and spending patterns from 2011. Of these, 18 are EMDEs and 6 are LICs.

Impact of policy interventions on global prices. During the food price spike of 2010-11, world prices of maize, wheat and rice rose by 44 percent, 39 percent, and 6 percent, respectively. Results suggest that the combined action of many governments amplified global wheat and maize price increases, accounting for about 40 percent of the increase in world price of wheat and one-quarter of the increase in the price of maize (Figure SF4). In contrast, combined policy action reduced the rice price surge compared to a non-action scenario. This primarily reflects the elimination of export restrictions in India and the increased import protection in Indonesia, Pakistan, Uganda, and Yemen.

- *Wheat.* Most EMDEs took measures to offset the increase in global wheat prices in 2010-11, broadly similar to those employed during the spike in wheat prices in 2007-08. Policymakers justified efforts to dampen the impact of the global wheat price spike by noting that the world wheat price spike partly reflected a catching up with rising domestic wheat prices.[8] The combined intervention of

[6] The data is available at www.ag-incentives.org.

[7] FAOSTAT refers to the UN's Food and Agriculture Organization Statistics, GIEWS is the Global Information and Early Warning System, and Fewsnet is the Farming Early Warning Systems Network.

[8] Ethiopia, where domestic wheat prices rose 28 percentage points more than world prices during 2010-11, is an exception. This reflected domestic supply shocks, combined with limited access to global wheat markets to alleviate shortages. In particular, wheat output fell by 10 percent in 2010-11 as a result of a fungus that destroyed the wheat harvest and lowered stocks in 2011. Wheat imports rose but were constrained by tight foreign exchange controls, effectively stopping private sector imports and ensuing that all grain imports are channeled through the state-owned Ethiopian Grain Trade Enterprise (Negassa and Jayne 1997; Wakeyo and Lanos 2014).

countries accounted for close to 40 percent of the increase in the world price of wheat.

- *Maize.* Although most countries insulated their domestic maize markets against maize price increases during 2010-11, there was considerable heterogeneity in policy responses. In Bangladesh, Ecuador, Malawi, Tanzania, and Zambia, protection rates fell, fully offsetting the rise in global maize prices. Ethiopia, Uganda, and Yemen increased protection rates or used policies that, in combination with domestic output shocks, amplified the increase in domestic prices.

- *Rice.* Some countries (e.g., Bangladesh, Nepal, Panama, Tanzania, and Zambia) reduced trade barriers to partially offset the rise in world rice prices. However, important net rice exporters such as India, Pakistan, and Yemen implemented policy interventions that ultimately raised domestic rice prices more than the increase in world prices. In India, the world's second-largest rice producer, quantitative restrictions imposed in 2007 initially prevented domestic price increases. However, the subsequent abolition of export quotas in September 2011 resulted in a surge in exports and a rise in domestic prices. In Pakistan, heavy summer flooding that affected one-fifth of the country's land area and inflicted extensive damage to crops raised domestic rice prices relative to the world price over the same period. A large increase in domestic prices relative to external prices occurred in Yemen, amid persistent water shortages and a shift to less water-intensive non-staple crops; in Ethiopia and Uganda, and cause was drought. The combined intervention of all countries dampened the increase in the world price of rice by about 50 percent compared to a scenario without insulation policies.

Poverty impact of 2010-11 food price spike with policy intervention. Model results suggest that despite widespread interventions, the food price spikes of 2010-11 still raised poverty in most countries. Globally, the 2010-11 food price spike tipped 8.3 million people (almost 1 percent of the world's poor) into poverty (Figure SF5). This is the *marginal impact* of the food price shocks on poverty levels; due to other forces the actual number of people living in poverty fell by 128 million over this period. The increase in world food prices, combined with government intervention, was most strongly felt in countries such as India and Uganda, where the extreme poor tend to be net food-buyers whose real incomes declined.[9] These poverty impacts are less pronounced compared to the 2007-08 food price shock, due to the latter's greater severity, stronger world-domestic price transmission, and higher initial poverty rates (Ivanic and Martin 2008; Anderson, Ivanic, and Martin 2014; Laborde, Lakatos, and Martin 2019).

Conclusion

Following post-2000 food price increases, many countries used trade policies to insulate domestic markets from increases in world prices. Such policies became increasingly common during the 2010-11 food price spike. While each country's policies dampened domestic price movements, the combined use of policies by many countries amplified the increase in world prices. Insulation policies accounted for 40 percent of the increase in world wheat prices and one-quarter for world maize prices. The increase in food prices combined with government policy responses in 2010-11 tipped 8.3 million people into poverty. These findings highlight how the use of trade policy interventions to insulate domestic markets from food price shocks can amplify international price movements, and may not be effective in protecting the most vulnerable populations groups.

Instead of trade policy interventions, policy makers could use other policies to soften the impact of large food price fluctuations. These include targeted safety-net interventions such as cash transfers, food and in-kind transfers, school

[9] Results reported here do not take into account the impact of safety-net programs such as India's Public Distribution System, which distributes food to poor households at fixed prices and so automatically makes larger transfers to the poor when food prices rise.

feeding programs, and public works programs. Measures such as crop and weather insurance and warehouse receipt systems could also be used as risk management instruments. These interventions could be combined with targeted nutrition and health programs as well as regulatory interventions to improve health outcomes.

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Commodity Market Developments and Outlook

Energy

Energy prices partially recovered in the first quarter of 2019, following a steep decline in almost all energy prices in the preceding quarter. However, there has been significant divergence between different energy commodities. Oil prices have risen 34 percent since the start of the year, amid production cuts by the Organization of the Petroleum Exporting Countries (OPEC) and other producers, and supply disruptions elsewhere. In contrast, natural gas prices fell sharply in March and into April in part due to rising liquefied natural gas exports from the United States and Australia, which also weighed on the prices of coal as a close substitute to natural gas. Oil prices are expected to decline from recent highs and average $66/bbl in 2019 and $65/bbl in 2020, with risks around this outlook broadly balanced.

Crude oil

Recent developments

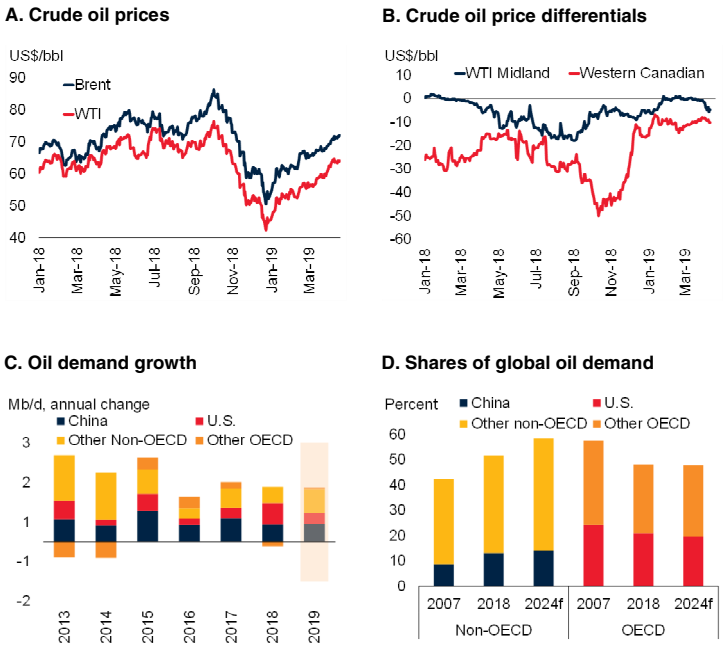
Crude oil prices fell 6 percent in the first quarter of 2019 (q/q) following a 11.5 percent decline in the previous quarter (Figure 2). However, prices have risen steadily since the start of the year, with the price of Brent crude oil reaching $74/bbl and West Texas Intermediate (WTI) reaching $66/bbl in late April. These fluctuations have been driven by supply developments: in November the United States granted waivers to its sanctions against Iran to eight countries, which, together with a sharp increase in supply among OPEC countries, primarily Saudi Arabia, resulted in much higher-than-expected global production in the last quarter of 2018. This contributed to oil prices plunging 41 percent between mid-October and December. However, subsequent production cuts by OPEC and its partners, together with supply disruptions elsewhere, have since boosted prices.

There have also been sizeable movements in the prices of different grades of crude oil. Western Canadian oil had been trading at a very large discount to WTI Cushing, the U.S. benchmark, because of severe transport bottlenecks, with the spread reaching $50/bbl in October. This led the province of Alberta to enforce mandatory production cuts of 0.3 million barrels per day (mb/d) in January, an intervention that has since substantially boosted Western Canadian prices. Similarly, WTI Midland (the price of oil in the Permian region) was trading at a discount of $18 to WTI Cushing because of transport bottlenecks, but eased towards parity in the second half of 2018, assisted by technological developments such as improved pipeline management.

Global consumption of crude oil rose 1.1 percent in the first quarter of 2019 (y/y), a slight acceleration relative to the previous quarter. China, India, and the United States accounted for most of the increase. Oil consumption expanded 3 percent (0.4 mb/d) in China, although the pace of growth

FIGURE 2 Oil market developments

Crude oil prices recovered over the first quarter of 2019, with Brent reaching $74 in April. Price differentials for different types of crude oil fell amid reduced transport bottlenecks in the United States and production restraint in Canada. Oil demand remained robust in 2018, and growth in 2019 is expected to be driven by China and India, a continuation of a longer-term shift away from advanced economies.

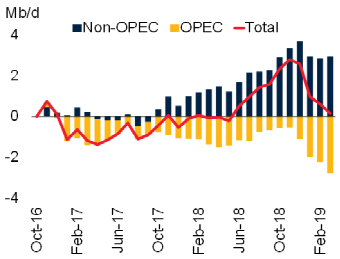


Source: Bloomberg, IEA, World Bank.
A. Last observation is April 19, 2019.
B. Lines show differences compared with WTI Cushing. Last observation is April 19, 2019.
C. Shaded area shows IEA forecast for 2019.
D. 2024f indicates IEA forecast.
Download data and charts.

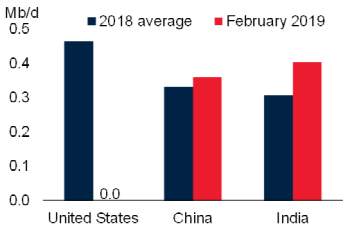
FIGURE 3 Oil production developments

Global oil production fell sharply in the first quarter of 2019, following a steep increase in the second half of 2018. OPEC and its partners substantially cut production, while output also fell sharply in Iran and Venezuela. U.S. oil production rose at the fastest pace ever recorded in any country in 2018, contributing to a sharp increase in exports.

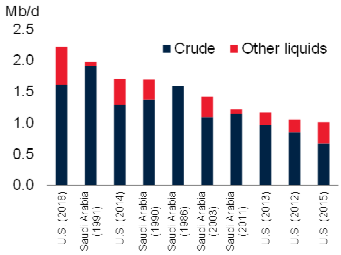
A. Cumulative changes in crude oil production



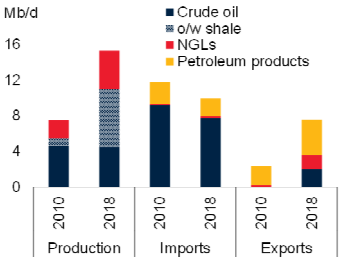
B. Venezuelan oil exports, by partner



C. Top 10 one-year increases in oil production, by country and year



D. U.S. oil production and trade, by product



Source: Bloomberg, EIA, IEA, World Bank.
A. Change in crude oil production since October 2016, the date of the first OPEC production cut agreement. OPEC excludes Qatar. Last observation is March 2019.
C. The number in brackets is the year in which the increase occurred. "Other liquids" include condensates and natural gas liquids. Sample begins in 1984.
D. NGLs stands for "natural gas liquids."
Download data and charts.

has been slowing, partly because of environmental policies. For example, demand from the transport sector has been dampened by the use of vehicle quotas in major cities which has restricted new vehicle sales. Growth in the United States has been strong in recent quarters and rose 1.4 percent (0.3 mb/d) in the first quarter of 2019 (y/y). Strong economic growth, increased demand from the transport sector (particularly for e-commerce), and a booming petrochemical industry all contributed to the rise. Oil consumption among other advanced economies has fallen, with a decline of 0.1 mb/d in both Germany and Japan on weaker economic activity.

Consumption is expected to rise by 1.2 percent in 2019, somewhat less than expected in the October 2018 report and toward the lower end of industry forecasts. Global growth in 2019 is expected to be weaker than previously forecast, although the weakness should be temporary. Non-OECD countries are expected to continue to account for most of the increase in demand given their higher growth rates relative to advanced economies.

Beyond 2020, OECD oil consumption growth is expected to be negligible according to the International Energy Agency (IEA)'s *Oil Market Report 2019,* with small increases in North America offset by declines in Europe and Japan as efficiency and environmental policies reduce oil consumption, particularly in the transport sector. Non-OECD consumption growth is expected to average around 2 percent per year over the next five years, but gradually slow as countries continue to improve energy efficiency and strengthen environmental policies.

Global oil production plunged in the first quarter of 2019, following a sharp expansion in the preceding quarter (Figure 3). The increase at the end of last year was primarily due to Saudi Arabia, who substantially increased production between June and October by 0.6 mb/d in anticipation of the U.S. sanctions on Iran. However, in November the U.S. decided to grant waivers to the sanctions to eight countries, including China and India (which together account for 18 percent of global oil consumption). This led to much higher-than-expected levels of production in November and December, contributing to a rise in inventories and declining prices.

In response to these developments, OPEC and its coalition of partners, including Russia, agreed to implement production cuts of 1.2 mb/d starting in 2019. Compliance with the agreement by OPEC members has been strong, and output has fallen by more than agreed levels. Production curtailments have been led by Saudi Arabia, which reduced output by 8 percent (0.81 mb/d) between October 2018 and March 2019, compared with its agreed cut of 3 percent (0.32 mb/d). Non-OPEC countries have been slower to adhere to the reduction, with Russia projected to reach its target in April. OPEC and its partners are expected to decide whether to extend production limits at their meeting in June.

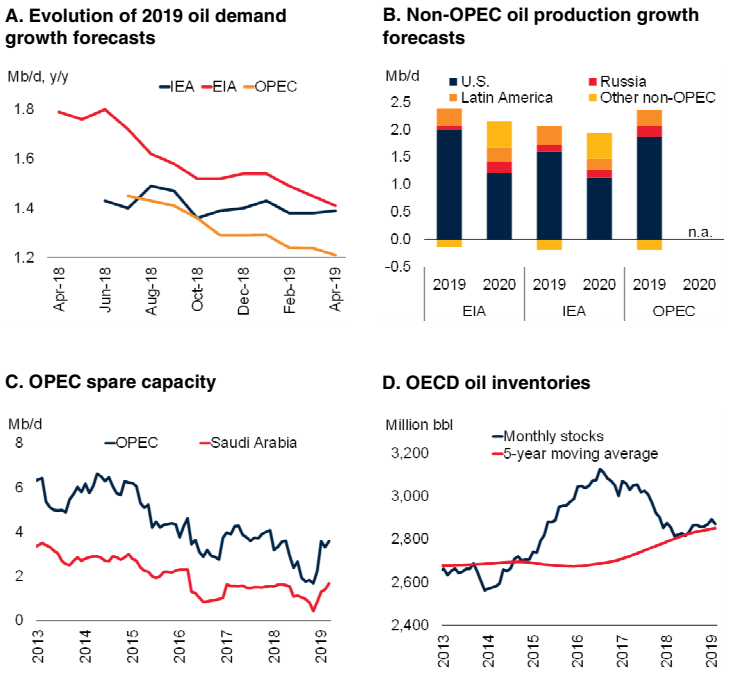
Production has also fallen in Iran and Venezuela, which are exempt from the OPEC agreement. The impact of U.S. sanctions on Iranian production, despite the existing waivers, has been substantial. Output is down almost 30 percent (1.1 mb/d) relative to its peak in the second quarter of 2018, and comparable to the impact of earlier sanctions in 2014. In Venezuela crude oil production has fallen by a third (0.4 mb/d) since September, to just 0.9 mb/d in March 2019. This deterioration reflects the worsening political and economic situation in the country, including prolonged power cuts. New U.S. sanctions on Venezuela have also affected the oil industry—U.S. imports of Venezuelan oil fell from an average of 0.5 mb/d in 2018 to zero in February, although there has been some diversion of Venezuelan oil exports to other countries such as China and India.

Oil production in the United States surged 2.4 mb/d in 2018 Q4 (y/y), double the increase expected by the U.S. Energy Information Administration in its *Short-Term Energy Outlook* report in January 2018. An increase in investment, together with efficiency gains and innovative solutions to transport bottlenecks, allowed U.S. oil production, including natural gas liquids (NGLs), to increase at the fastest annual pace recorded by any country. Indeed, the shale boom has led the U.S. to account for five of the ten largest one-year increases in oil production globally since 1984, all occurring in the last six years.

In contrast to the previous year's surge, U.S. oil production was almost unchanged in the first quarter of 2019 relative to the previous quarter. The rig count fell nearly 10 percent (q/q) as companies responded to the unexpected increase in OPEC supply at the end of last year, while U.S. production was also disrupted by adverse weather. U.S. oil production is nonetheless expected to rise by 1.6 mb/d in 2019 according to the IEA's April 2019 *Oil Market Report*, a slower pace than 2018 but still robust. Many wells have been drilled but uncompleted, which would enable producers to quickly ramp up production. Additional pipeline capacity is also expected to come onstream throughout 2019, further easing transport bottlenecks and raising oil flows.

FIGURE 4 Oil market prospects

Oil prices are expected to average $66/bbl in 2019, amid weaker expectations for demand growth in 2019, rising U.S. production, and OPEC restraint. Increased levels of spare capacity in OPEC countries and adequate inventories provide a buffer against unexpected outages.



Source: Bloomberg, EIA, IEA, OPEC, World Bank.
B. Chart shows latest forecasts for non-OPEC production by the EIA, IEA, and OPEC. N.A. indicates data are not available.
C. OPEC includes Saudi Arabia.
D. Trailing 5-year moving average.
Download data and charts.

As a result of the sharp increase in production, U.S. exports of oil, NGLs, and petroleum products have risen sharply, although the U.S. remains a net importer of these liquids. The IEA expects the United States will become a net exporter of oil and other liquids by the end of 2020, and will export more than Russia by the end of 2023.

Price forecasts and risks

Crude oil prices are expected to moderate a little from their current levels and average $66/bbl in 2019, and $65/bbl in 2020. This is a downward revision from the previous forecast and reflects weaker-than-expected global growth and a much larger increase in U.S. production than anticipated in 2018. The forecast assumes that: oil demand

growth slows slightly in line with weaker global growth this year; U.S. shale production increases robustly in 2019 albeit at a slower pace than 2018, before slowing in 2020; and growth in other non-OPEC countries rises modestly (Figure 4).

Risks to the outlook relate primarily to policy decisions, but are broadly offsetting. The United States' decision on April 22 to terminate waivers to its sanctions on Iran could put upward pressure on oil prices. However, the impact of this decision remains uncertain, for two reasons. First, it is not clear how quickly countries will comply with the removal of waivers. Second, countries could choose to ignore the sanctions—for example, over the past three months some countries have been importing more oil from Iran than allowed under the existing waivers. As such, the full impact of the sanctions on the oil market could be smaller than if all Iranian oil exports stopped when the waivers expire on May 2. Iran currently exports around 1.4 mb/d of crude oil and condensates, around 1.4 percent of global supply.

It is possible that major oil-producing countries, notably Saudi Arabia and the United Arab Emirates, could increase production to compensate for any shortfall resulting from the termination of waivers. OPEC currently has around 3.5 mb/d of spare capacity, with Saudi Arabia accounting for approximately one-half of this. However, it is unclear how rapidly these countries will be willing to respond to a reduction in Iranian exports. Any change in their production will have implications for the future of the production agreement between OPEC and its partners—the group is due to meet in June to discuss whether to extend the cuts.

Other geopolitical risks also remain elevated, including conflict-related disruptions in Libya, and further deterioration in Venezuela. In addition, legislation under consideration in the U.S. congress—the "No Oil Producing and Exporting Cartels Act" or NOPEC—would allow antitrust cases to be brought against countries making it possible to sue OPEC for collectively reducing output.

On the demand side, consumption of oil could be weaker than expected, either because of slower global growth, or greater adoption of environmental policies. In addition, new regulations implemented by the International Maritime Organization will lead to shifts in demand for specific oil products and potentially for different types of crude oil. The regulations restrict emissions of sulfur by marine vessels, and come into force on January 1, 2020. Operators of marine vessels have three main options to comply with the regulations:

- Install scrubbers to remove the sulfur from ships' exhaust, thereby allowing the continued use of high-sulfur fuels. The sulfur would be collected and either discarded into the sea, or offloaded at ports.

- Switch from using high sulfur fuel to a lower sulfur fuel, such as marine gasoil/diesel.

- Convert vessels to run on alternative fuels, such as liquefied natural gas.

Most ships are expected to switch to using lower sulfur fuel, which will lead to a surge in demand for gasoil/diesel and result in a sharp fall in demand for high-sulfur heavy fuel oil (although some may be used for electricity generation in power plants). However, the magnitude of the impact will depend on the degree of enforcement. Ships currently account for about 4 percent of global demand for oil (the energy equivalent of 15 percent of global gasoil/diesel consumption). The IEA estimates that gasoil/diesel prices could rise 20 percent in 2020 under a scenario with relatively limited enforcement of the new regulations, but prices could double if enforcement is strict. Any increase is expected to be temporary, however, as the market adjusts to the new regulations. In addition, the price premium for Brent and WTI over Dubai could rise, given the lower sulfur content of these grades of oil.

Natural gas

Natural gas prices have declined sharply since the start of the year, with the wedge between the three main spot prices narrowing dramatically (Figure 5). U.S. prices temporarily surged at the end of 2018, rising more than 50 percent to $4.6/mmbtu in November, before dropping below $3/mmbtu at the start of January 2019. The spike in prices was triggered by expectations of a colder-than-average winter, which was exacerbated by low inventories. Spot prices in Europe and Asia, which had risen in the second half of 2018, plunged in March. The fall was triggered by weaker demand due to mild weather and the restarting of nuclear power plants in Japan, as well as greater availability of liquefied natural gas (LNG).

Global exports of LNG have been rising steadily. Exports from the United States rose 50 percent to 3 bcf/d in 2018 and are expected to double to 6.1 bcf/d by the end of 2019. Surging production of natural gas in the U.S. has facilitated an increase in LNG exports, despite a 10 percent jump in U.S. natural gas consumption in 2018. LNG export capacity in Australia and Qatar has also increased substantially and is set to grow further.

Over the next two years prices are expected to recover from their current lows as demand picks up but remain below 2018 averages. Further ahead, the increase in LNG capacity is set to alter the composition of natural gas markets, which have historically seen prices linked to oil prices. Reflecting these developments, long-term forecasts for natural gas prices have been revised down, from $8/mmbtu to $7/mmbtu in Europe, and from $10/mmbtu to $8.5/mmbtu in Japan. The expansion of long-distance gas trade via LNG tankers will cause the price differentials between different locations to shrink.

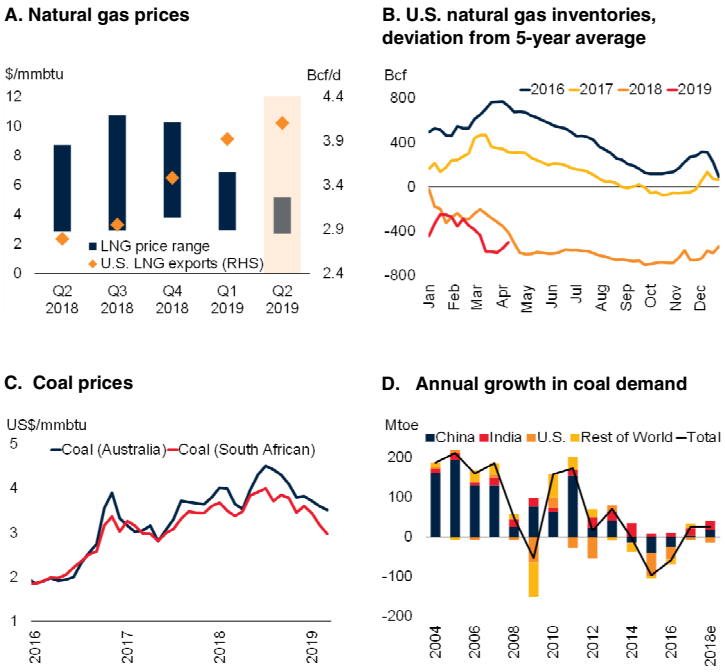
Coal

Coal prices fell 7.6 percent in the first quarter of 2019 (q/q) following steep declines in the second half 2018. In advanced economies demand for coal declined in favor of natural gas, particularly for electricity generation. Seaborne prices have also been affected by China's decision to curb imports of coal from Australia, its biggest supplier.

Coal prices are expected to partially recover from their current levels and average $94/mt in 2019, a 12.1 percent decline from 2018, reflecting the weakness in natural gas prices, as well as muted demand. The ongoing shift away from coal to natural gas in electricity generation is expected to continue. Risks are skewed to the downside, and include weaker global growth, and environmental policies aimed at reducing air pollution, primarily in China, as well as other countries such as India, which accounts for 11 percent of global demand for coal.

FIGURE 5 Coal and natural gas developments

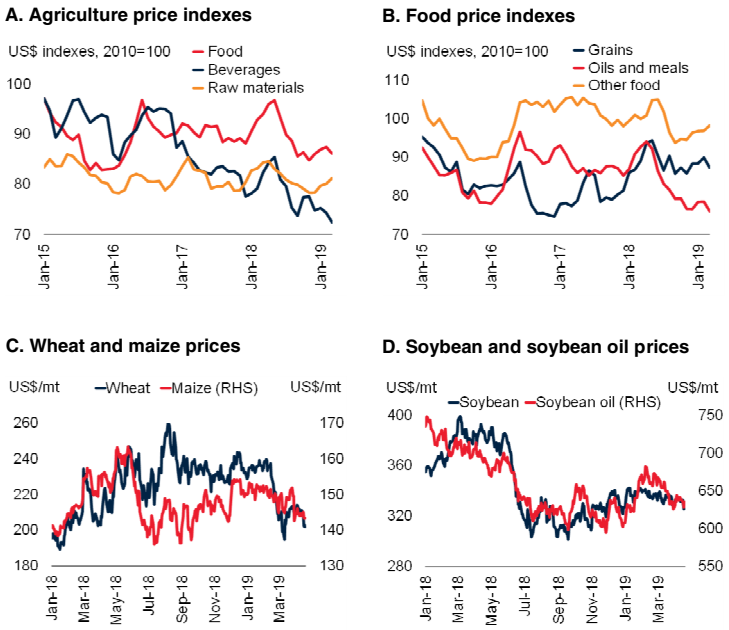
Natural gas prices have been volatile over the past 12 months, and price differentials between the three benchmarks have shrunk on increased supply. Very low levels of inventories in the United States contributed to temporary price spikes in 2018. Coal prices also fell sharply in the first quarter of 2019, on lower natural gas prices and reduced demand from China and some other countries.



Source: Bloomberg, BP Statistical Review, EIA, IEA, World Bank.
A. Range of quarterly average natural gas prices in Japan, Europe, and the United States, with prices in Japan systematically the highest and those in the United States the lowest. Data for 2019 Q2 show EIA expectations for LNG exports, and average prices for the first week of April 2019.
B. Lines show the deviation of inventories relative to their average for each month over the period 2013-2017. Last observation is April 12, 2019.
C. Last observation is March 2019.
D. 2018 estimated using IEA growth rates.
Download data and charts.

FIGURE 6 Agricultural price developments

Agricultural commodity prices stabilized in 2019 Q1 following declines in 2018. The factors that pushed prices down last year have moderated, including easing of trade tensions, lower plantings in the U.S., and stabilization of currencies of key exporters.



Source: Bloomberg, World Bank.
A.B. Last observation is March 2019.
C.D. Last observation is April 19, 2019.
Download data and charts.

Agriculture

Most agricultural commodity prices rose moderately in the first quarter of 2019, following considerable declines during the second half of last year. The World Bank's Agriculture Price Index increased 0.9 percent in the quarter (q/q), as a 3.4 percent decline in beverages was balanced by moderate gains in all other categories. The index was still 5.6 percent lower than a year ago. Most of the factors that depressed prices last year have moderated, including easing of trade tensions and lower prospective plantings in the U.S. for next season's crop. The index is expected to decline 2.6 percent in 2019 and increase 1.7 percent in 2020 due to lower production and higher fertilizer prices. Downside risks to the forecast emanate primarily from an escalation of trade tensions. On the upside, higher energy prices could lift the cost of energy-intensive crops, notably grains and oilseeds. Higher-than-projected demand for biofuels could also induce higher prices for some commodities.

Grains, oils, and meals

Recent developments

The World Bank's *Grain Price Index* gained nearly 2 percent in the first quarter of 2019 (q/q), and is more than 1 percent higher than a year ago (Figure 6). Production estimates for 2018-19 have been revised upward throughout the season. According to the U.S. Department of Agriculture's (USDA) latest assessment (April 2019), global supplies of the three main grains (wheat, maize, and rice) are projected to reach 3,126 million metric tons (mmt) this season (September 2018 to August 2019), nearly 1 percent higher than last season's supplies.

Wheat prices, which gained 1 percent in the first quarter, are more than 10 percent higher than a year ago. Global wheat supplies tightened considerably this season, with production projected to be 4 percent lower compared to last season's record of 763 mmt, according to the USDA. The decline—though less severe than originally estimated—is due to weather-related yield losses in key Eastern European and Central Asian producers. Global consumption of wheat is expected to decline marginally from last season, pushing the stocks-to-use ratio—a measure of supply availability relative to demand—down by 1 percentage point, but still the second highest ratio of the past two decades.

Maize prices rose 3 percent in the first quarter, following a 3 percent increase in Q4. The global maize crop for 2018-19, which has been revised gradually upward throughout the season, is projected to be almost 3 percent higher than 2017-18, according to the USDA, as lower output from the United States, the world's top producer, will be more than offset by larger-than-expected crops from other key producers, including Argentina, the European Union, and Ukraine. Consumption of maize is projected to increase more than 3 percent, pushing the stocks-to-use ratio to 27.4 percent, a 5-year low. Such a low stock-to-use ratio would typically be cause for alarm, however ample supplies of other grains and oilseeds help provide a buffer (Figure 7).

Rice prices have been remarkably stable during the past three quarters, fluctuating between $400/mt and $410/mt, after plunging nearly 12 percent from May to July last year. Weather-related disruptions in Brazil and the Philippines have been offset by favorable conditions in most Asian rice producers, including India, Indonesia, Thailand, and Vietnam. Global rice production is projected to increase marginally in 2018-19 to 501 mmt, a slightly more optimistic outcome than earlier assessments. Global consumption is projected to increase by about 1 percent, resulting in a stock-to-use ratio of 35 percent, a 20-year high.

The World Bank's *Oil and Meals Price Index* remained broadly stable in the first quarter of 2019 (q/q) but stands 14 percent lower than 2018 Q1. Although there was price weakness across the board last year, it was more pronounced in coconut, palm kernel, and palm oils, whose prices plunged by 42, 38, and 17 percent, respectively, from 2018 Q1 to 2019 Q1. Low prices reflect favorable harvests across all regions and, to a lesser extent, Chinese tariffs on soybeans (see October 2018 *Commodity Markets Outlook*).

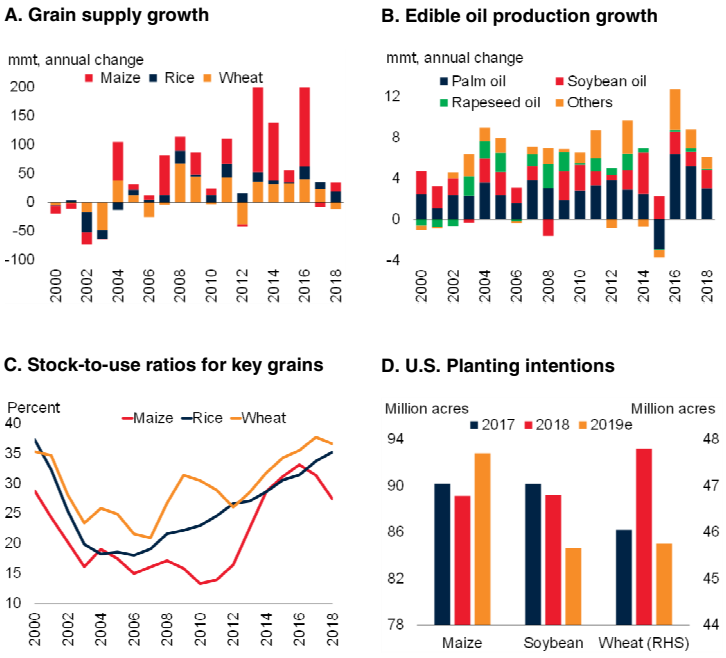
The edible oil production outlook for the current season (ending September 2019) continues to look promising due to favorable growing conditions. Global output of the 17 major edible oils (including palm, soybean, and rapeseed, which together account for two-thirds of global output) is forecast to increase 2 percent in the 2018-19 season. More than two-thirds of the production gains are projected to come from palm oil. Indonesia and Malaysia are the primary producers of palm oil, and both are experiencing favorable weather conditions. Most of the remaining growth is expected from sunflower oil, due to good growing conditions in Ukraine and Russia, which together account for half of global output.

Global oilseed output for 2018-19 is also projected to rise, with supplies of the 10 major oilseeds projected to reach 578 mmt, up from last season's 566 mmt. All of the growth is expected to come from soybeans, mostly from Argentina and, to a lesser extent, the United States.

Global soybean prices were also depressed by upwardly revised production estimates and weaker

FIGURE 7 Supply conditions for grains and edible oils

Despite some weather-related disruptions, supplies of most grains and edible oils are ample, keeping the stock-to-use ratios at comfortable levels. Early estimates for the next season's U.S. crop indicate an overall reduction in plantings and a shift from soybeans to maize.



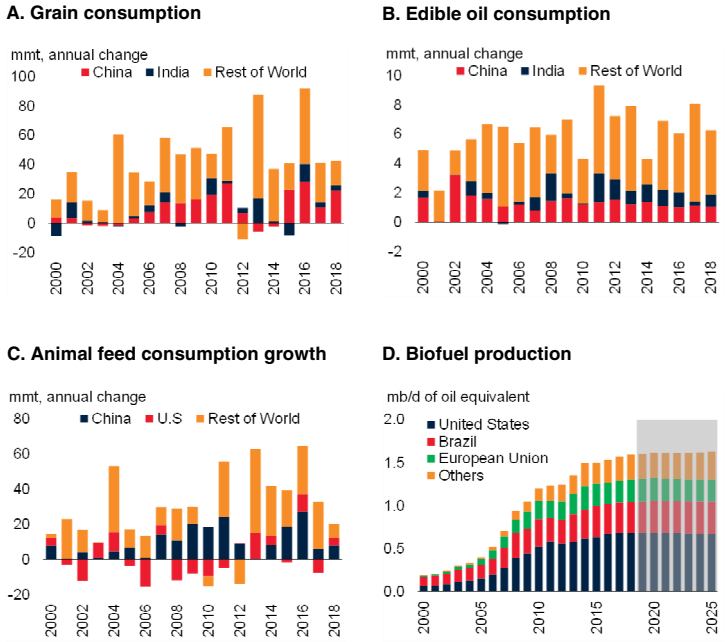
Source: USDA, World Bank.
A.B.C. Years represent crop season (for example, 2018 refers to 2018-19). Data update on April 9, 2019.
D. 2019e refer to estimates from the March 29 USDA's Prospective Plantings Report.
Download data and charts.

demand for animal feed resulting from the spread of African swine flu to China in the second half of 2018. The edible oil and oilseed markets have also been affected by trade frictions. Soybeans were particularly impacted by the imposition of a 25 percent tariff in July 2018 by China on imports from the United States. Because the U.S. and China are the largest players in the global soybean market—the United States accounts for one-third of global production and China accounts for two-thirds of global imports—the tariffs exerted downward pressure on soybean prices. However, the medium– and longer-term impact of tariffs on soybean prices is expected to be marginal, for three reasons of which there is already much evidence:

- *Trade diversion:* To avoid tariffs applied to U.S. soybeans, importers from China turned to South American producers, especially Brazilian suppliers (Brazil and Argentina

FIGURE 8 Demand conditions for grains and oilseeds

Consumption of grains and edible oils is expected to increase only marginally in 2018-19 due to lower animal feed use growth. Growth in biofuel consumption, a key source of food commodity demand, is projected to moderate in the longer term.



Source: IEA, OECD, USDA, World Bank.
A.B.C. Years represent crop season (for example, 2018 refers to 2018-19). Data update on April 9, 2019.
D. Shaded area (2019-25) represents IEA and OECD projections.
Download data and charts.

account for 33 and 15 of global soybean supplies). Reduced purchases from the United States and increased purchases from South America initially created a gap between U.S. and Brazilian soybean prices of more than 20 percent in October. However, the price gap disappeared by December.

- *Changing crop patterns:* Because of reduced soybean exports to China, U.S. farmers were expected to substitute soybean plantings with other crops. According to the March 29 *Prospective Plantings Report*, the USDA estimates that U.S. farmers will reduce the area allocated to soybeans by more than 5 percent and increase the area for maize by 4 percent.

- *Substitution.* China's soybean imports are projected to decline from 94.1 mmt during 2017-18 to 87.2 mmt during 2018-19. However, imports of palm oil (a close substitute to soybean oil) are projected to increase from 5.4 to 6.1 mmt and imports of maize (a close substitute to soybean meal) are expected to increase by 1.3 mmt during the same period.

Price forecasts and risks

The *Grain Price Index* is expected to increase marginally in 2019 before edging up more than 1 percent in 2020, as lower plantings are likely to reduce global supplies. *Oils and Meals* prices are expected to gain 3 percent in 2020, partly offsetting a projected decline of 7 percent in 2019. Several risks underpin these forecasts: the direction of energy and fertilizer prices (both of which are key inputs to grains and oilseeds); whether trade frictions are resolved; changes to domestic support policies; strengthening of the U.S. dollar; and currency movements of major exporters of particular commodities. Other risks include adverse weather patterns, including the ongoing (weak) El Niño, and diversion of food commodities to biofuels (Figure 8).

Energy is a key input to agricultural production and affects costs directly (through fuel) and indirectly (through fertilizer and other chemicals). Energy prices are expected to decline nearly 8 percent in 2019 while fertilizer prices are projected to increase 5 percent. Higher-than-expected prices for energy and fertilizer could exert upward pressure on most agricultural commodities, especially grains and oilseeds, which are energy intensive.

Trade policies appeared to have played an important role in commodity price movements last year (see Box in the October 2018 *Commodity Markets Outlook*). As noted earlier for the soybean market, trade diversion, changing crop patterns, and substitution among commodities partly offset the impact of tariffs. However, an escalation of trade frictions among other countries and other commodities could distort agricultural markets.

On the macroeconomic side, a strengthening of the U.S. dollar could exert downward pressure on

commodity prices. Indeed, last year's weakness in commodity prices was, in part, a reflection of the weak U.S. dollar. Research has shown that a 10 percent appreciation of the dollar against major currencies is associated with a 5 percent declined in prices of internationally-traded commodities (see the Special Focus of the July 2016 *Commodity Markets Outlook*). Furthermore, currency depreciations of countries that account for a large share of global trade in a commodity market could also affect the price outlook.

El Niño weather conditions, which strengthened since February 2019, are likely to continue through the Northern Hemisphere spring (80 percent probability from April to June) and summer (60 percent probability from June to August). Given the mild nature of El Niño, combined with ample supplies, global agricultural markets are unlikely to be affected in a major way. However, according to the U.S. National Oceanic and Atmospheric Administration, the ongoing El Niño bears some similarities to the 2015 episode, one of the strongest El Niño patterns in recent history. The ongoing El Niño has already been linked to tropical cyclone Veronica, which caused iron ore supply disruptions in Australia.

Finally, the agricultural outlook assumes that biofuel production will continue to be a source of demand for some food commodities, especially in the United States, Brazil, and the European Union. Although output of biofuels has plateaued, there are indications that growth may pick up again. For example, China announced in 2018 that it will increase the production of maize-based ethanol. Global biodiesel production growth has also accelerated recently.

Beverages

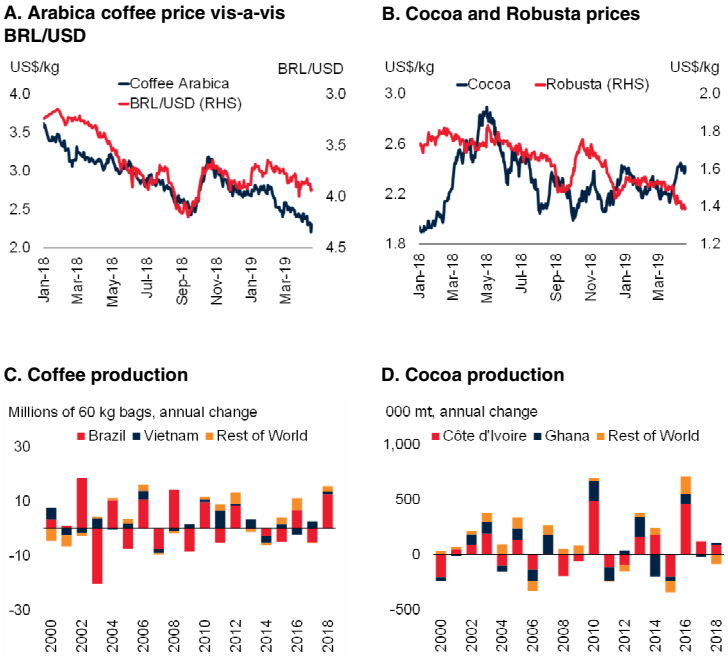
The World Bank's *Beverage Price Index* declined more than 3 percent in 2019 Q1 (q/q), down 7 percent from a year ago, with coffee (Arabica and Robusta) and tea all experiencing significant price drops. The index is projected to decline almost 3 percent in 2019 before a modest recovery in 2020.

Both Arabica and Robusta prices declined sharply in the first quarter (down 5 percent each), with the former reaching an 11-year low. The price drop reflects record global production, which reached 172 million bags, up from last year's 158 million bags, and led to an increase in inventories of 10 million bags (Figure 9). The supply glut reflects large crops in Brazil and Vietnam—the world's largest Arabica and Robusta suppliers, respectively—and weaker-than-expected consumption. Estimates for the ongoing crop year also point to record supplies, especially in the Robusta market. Arabica and Robusta coffee prices are expected to average $2.85/kg and $1.75/kg in 2019 (representing 3 and 6 percent declines from 2018), followed by a marginal increase in 2020.

Cocoa prices, which rose 3 percent in the first quarter, have been relatively stable during the past three quarters. The global cocoa crop experienced no change in 2018/19 as gains by Côte d'Ivoire and Ghana—which account for two-thirds of

FIGURE 9 Beverage commodity market developments

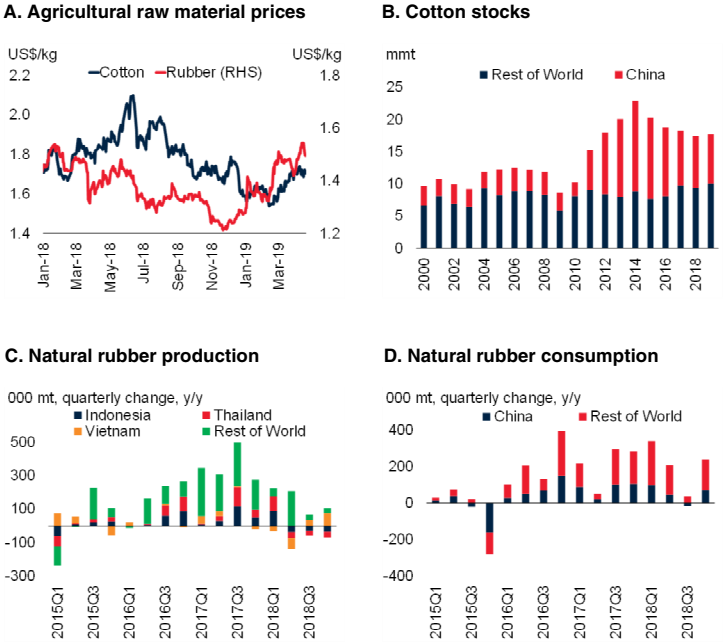
Following last year's declines due to ample supplies and currency depreciations of key exporters, beverage prices stabilized.



Source: Bloomberg, ICO, USDA, World Bank.
A.B. Last observation is April 19, 2019.
C.D. Years represent crop season (for example, 2018 refers to 2018-19). Data update on April 9, 2019.
Download data and charts.

FIGURE 10 Agricultural raw materials market developments

Natural rubber prices staged a recovery in response to supply shortfalls of key Asian suppliers. Cotton prices remain weak on expected ample supplies due to larger plantings.



Source: Bloomberg, ICAC, IRSG, World Bank.
A. Last observation is April 19, 2019.
B. Years represent crop season (for example, 2018 refers to 2018-19 crop season).
C.D. Last observation is 2018Q4.
Download data and charts.

global supplies—were balanced by declines elsewhere, including Brazil, Cameroon, Indonesia, and Nigeria. Cocoa prices are expected to remain at current levels in 2019, before gaining 2 percent in 2020.

Tea prices, especially Kolkata and Mombasa, plunged 23 and 7 percent, respectively, in the first quarter (q/q), and stand 7 and 25 percent lower than a year ago. The Kolkata auction dropped to an 11-year low. Large tea crops due to favorable weather conditions in East Africa (especially Kenya) and India have caused the price collapse. In response, the Indian Tea Board ordered a suspension of tea production in December. Tea prices (3-auction average) are expected to decline 14 percent in 2019, before making marginal gains in 2010.

Agricultural raw materials

The World Bank's *Raw Materials Price Index* gained 2 percent in the first quarter of 2019 (q/q) in response to a large increase in rubber prices but stood almost 4 percent lower than 2018 Q1. The index is expected to stabilize in 2019 and gain marginally in 2020.

Cotton prices declined nearly 5 percent in the first quarter and stand almost 9 percent lower than a year ago. The weakness reflects estimates that production will outpace consumption next season (2019-20), the first time since 2015-16. Production is expected to reach 27.6 mmt in 2019-20, with increases in most major producing countries including the United States, China, India, Pakistan, and several West African countries. Consumption, on the other hand, is estimated at 27.3 mmt, suggesting global stocks will increase by almost 2 mmt. Following a projected decline of almost 7 percent in 2019, cotton prices are expected to experience a 1 percent increase in 2020.

Natural rubber prices surged almost 18 percent in the first quarter to reach $1.72/kg in March, after plunging to a 30-month low in the third quarter of 2018 (Figure 10). The rebound reflects a slowdown in global natural rubber production in late 2018 and early 2019 due to adverse weather conditions and slower tapping. Lower production materialized in most East Asian producers, especially Thailand, Indonesia, and Malaysia, which together account for nearly 70 percent of global supplies. On the demand side, consumption of natural rubber for vehicle tires (two-thirds of its market) is expected to fall as vehicle sales have been slowing in all main regions, including China, North America, and Europe. However, fiscal stimulus in China, along with the reversal of interest rate hikes in many advanced economies is expected to stimulate demand somewhat. On net, natural rubber prices are expected to gain almost 9 percent in 2019 and 3 percent in 2020.

Fertilizers

The World Bank's Fertilizer Price Index fell 5.4 percent in the first quarter of 2019 (q/q) after three consecutive quarterly increases. Seasonally weak Chinese demand, limited fertilizer application in North America, and declines in input costs contributed to the recent price fall. Fertilizer demand is expected to recover and the price index is forecast to increase by 4.8 percent in 2019, led by potash. Over the medium term, prices are subject to downside risks as adoption of enhanced-efficiency specialty fertilizers (controlled- and slow-release) gain pace, leading to reduced application of conventional fertilizers.

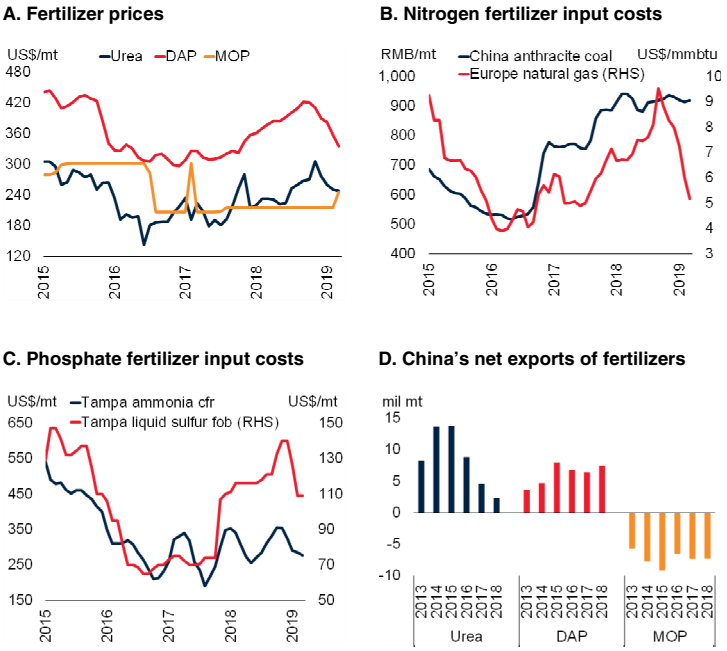
Nitrogen (urea) prices fell 11 percent in the first quarter after large gains in the second half of 2018 (Figure 11). The decline reflected weak Chinese seasonal demand, below-average use in North America due to early snow, and lower input costs (natural gas and coal). These factors more than offset strong import demand elsewhere, notably Brazil. On the production side, stringent environmental policies have led to plant closures and sharp reductions in urea exports from China, the world's largest nitrogen fertilizer producer. However, this has been offset by capacity additions in India, Nigeria, and Russia. In addition, concerns that the re-imposition of sanctions on Iran by the United States would curtail Iranian supply did not materialize, due to waivers given to China, India, and Turkey (accounting for more than three-quarters of Iranian urea exports). Urea prices are projected to remain broadly unchanged in 2019.

Phosphate DAP (diammonium phosphate) prices plunged 12 percent in the first quarter, following a slight decline in the preceding quarter, on weak global demand. Consumption in China, the world's largest consumer of phosphate fertilizers, continues to fall as it moves toward its zero growth policy on fertilizer use, while Indian demand remains lackluster as buyers are holding back purchases until there is more clarity on subsidies following the general elections in May. Cheaper input costs (ammonia and sulfur) also pushed prices lower. Phosphate production has risen in Morocco and Saudi Arabia, while Chinese exports, which had been trending down due to environmental restrictions, have also increased. During the remainder of 2019, prices are expected to mildly recover from current levels but, on average, remain 6 percent lower than in 2018.

Potash MOP (muriate of potash, or potassium chloride) prices increased 4.6 percent in the first quarter, after remaining flat throughout 2018. Global potash demand reached a record high in 2018, led by gains in Brazil (for corn and soybeans), China (fruits and vegetables), and Southeast Asia (palm oil). Demand is expected to further increase on corn acreage expansions in the United States and more soybean plantings in Brazil. Record harvests in recent years and limited use in the fall season should see increased fertilizer application to replenish lost nutrients. Production growth is expected to be modest, as new projects in Canada, Russia, and Turkmenistan have fallen short of market expectations. Potash prices are projected to rise 11.4 percent in 2019.

FIGURE 11 Fertilizer market developments

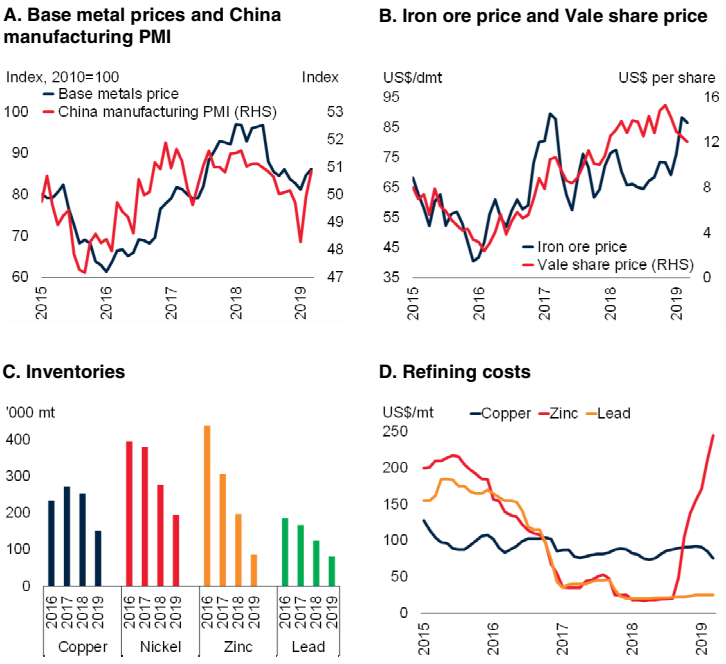
Fertilizer prices declined in the first quarter of 2019 on weak seasonal Chinese demand, limited use in North America in the fall season, and lower input costs.



Source: Bloomberg, General Administration of Customs China, World Bank.
A-C. Last observation is March 2019.
Download data and charts.

FIGURE 12 Metals and minerals market developments

Metal prices rose in the first quarter of 2019 on supply concerns and improved growth prospects in China because of fiscal stimulus and progress in trade negotiations between the United States and China.



Source: Bloomberg, China National Bureau of Statistics, Haver Analytics, LME, Shanghai Metals Market, World Bank, World Bureau of Metal Statistics.
A.B.D. Last observation is March 2019.
A. PMI (purchasing managers' index) reading above (below) 50 indicates an expansion (contraction).
C. Average daily LME inventories. Last observation is April 19, 2019.
D. Refining costs refer to smelting fees to turn concentrates into refined metal (treatment charges). Prices shown are spot treatment charges in China.
Download data and charts.

Metals and Minerals

The World Bank's Metals and Minerals Price Index increased 1.7 percent in the first quarter of 2019 (q/q). This was a rebound from a decline in the fourth quarter of 2018 that followed an even steeper decline in the preceding quarter. The price increase reflected supply concerns, progress in trade negotiations between the United States and China, and fiscal stimulus in China. Metal prices are anticipated to continue rebounding from their 2018 troughs but average 1.9 percent lower in 2019. Risks are broadly balanced. Downside risks include a weaker-than-expected demand boost from China's fiscal stimulus and a prolonged stall in U.S.-China trade negotiations. Most base metal prices face upside risks from the possibility of tighter-than-expected environmental policies and slower-than-expected easing of commodity-specific supply bottlenecks.

Copper prices rose 1 percent in the first quarter after a steep plunge in the second half of 2018. Since early 2019, prices have been supported by improving prospects for economic growth, and strong import copper demand in China, which accounts for half of global copper consumption (Figure 12). China's copper imports were encouraged by a ban on scrap imports that was initially imposed in 2017 and subsequently tightened, most recently in December. China's value added tax cut in April 2019 on manufacturing, transport, and construction is expected to boost investment in copper-intensive infrastructure projects, especially in electricity and railways, and in housing. Since early 2019, copper prices have also been supported by heavy floods in Chile, production cuts in the Democratic Republic of Congo, and protests in Peru. During the remainder of the year, prices are expected to gradually increase but still average 0.6 percent lower than in 2018. Risks to this outlook are to the downside. In particular, the most recent fiscal stimulus package in China could lift copper demand less than earlier packages since it prioritized tax cuts over government spending.

Nickel prices gained 8.3 percent in the first quarter after a sharp decline during the last quarter of 2018. The price increase since early 2019 was in large part due to concerns about prospects and operations of the world's largest nickel producer, Vale (13 percent of global nickel supply), following its tailings dam accident in Brazil. Rapidly growing demand for electric vehicles, despite subsidy cuts by the Chinese government, also supported prices. Amid lower nickel inventories, prices are expected to continue inching higher during the remainder of 2019 but, on average, remain 1.8 percent lower than in 2018. Over the medium to long term, demand for nickel is anticipated to be robust as electric vehicle production strengthens and battery composition changes to use more nickel. Risks to nickel prices are to the upside, especially if new large-scale battery-grade Indonesian projects are delayed or authorities renew export bans.

Alone among base metals, ***aluminum*** prices dropped 5.1 percent in the first quarter as supply concerns receded in early 2019. Sanctions

imposed on the Russian aluminum producer Rusal in April 2018 were lifted in January 2019. A production embargo on the world's largest alumina refinery, Alunorte in Brazil (10 percent of global alumina supply excluding China), due to alleged environmental breaches was lifted although the resumption of full production is still awaiting federal court approval. Aluminum production and smelter capacity have expanded in China where environmental curbs were less stringent than expected. Aluminum prices are projected to fall by 8 percent in 2019 reflecting lower alumina prices and large aluminum overcapacity in China. Risks are tilted to the upside arising from tighter-than-expected environmental policies in China and a delayed resumption of Alunorte's full production.

Zinc prices increased 3.1 percent in the first quarter following gains in the preceding quarter, accompanied by steep drawdowns in inventories. Price increases have largely reflected robust demand from China, which accounts for half of global consumption, and smelter bottlenecks that restricted refined output. Against the backdrop of rapidly growing zinc ore production, smelter capacity constraints have driven refining fees (zinc concentrate treatment charges) to near record-highs. Zinc prices are projected to fall by 1.8 percent in 2019 on moderating demand and new ore production coming onstream from Australia, Canada, and South Africa. This outlook is subject to upside risk from the possibility of tighter-than-expected environmental policy in China constraining smelter capacity.

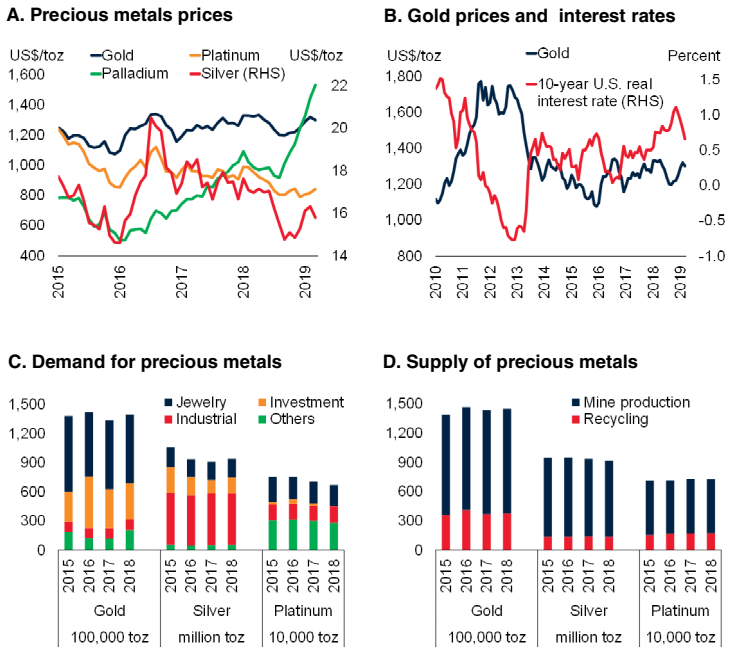
Lead prices rose 3.6 percent in the first quarter, in a partial rebound from declines in the preceding two quarters. Prices were supported by strong import demand from China, which accounts for two-fifths of global consumption, amid production cuts in the country as a result of efforts to reduce emissions. Inventories have also fallen to the lowest level in nearly 10 years. Lead prices are projected to gradually increase over the remainder of 2019 but remain 11.6 percent lower than in 2018. More stringent environmental regulations in China restricting the recycling of lead scrap materials, which accounts for more than two-fifths of total refined production, presents an upside risk to the forecast. Over the medium term, a shift toward electric vehicles is likely to depress demand for lead, which is heavily used in batteries for internal combustion engine vehicles but not in electric vehicles.

Tin prices saw the largest increase among base metals in the first quarter, rising 9.9 percent (q/q), largely reversing declines in the two preceding quarters. The price increase reflected raw material shortages that caused partial closures at Chinese smelters after Indonesia tightened export regulations, and mines in Myanmar depleted. Tin prices are forecast to gain 5.3 percent in 2019 amid persistent pressures on raw material supplies. Risks are tilted to the upside if the depletion of mines proceeds faster than expected or export restrictions are extended. Looking forward, tin is expected to benefit from robust demand from growing technologies like electric vehicles, renewable energy, and robotics.

Iron ore prices increased sharply by 16.2 percent in the first quarter, primarily due to supply disruptions in Brazil and Australia. Following the Brumadinho dam rupture, all of Vale's upstream tailings dams in Brazil have been decommissioned and operations at several mines have been temporarily suspended. In Australia, BHP and Rio Tinto's production were impacted by tropical cyclone Veronica, and ore shipments have been disrupted due to a fire at the latter's export terminal. These supply disruptions amount to about 6 percent of the global iron ore seaborne market. The recent Chinese fiscal stimulus is also expected to strengthen steel use, and hence, iron ore demand, since China accounts for one-half and three-fifths of global steel and iron ore consumption, respectively. Iron ore prices are projected to increase 11.4 percent in 2019. This forecast is subject to downside risks, especially renewed tightening of environmental policies in China that would restrict steel production.

FIGURE 13 Precious metals market developments

Precious metals prices rose in the first quarter of 2019 due to a pause in interest rate hikes by the U.S. Federal Reserve and an increase in gold and silver demand.



Source: Bloomberg, FRED, Silver Institute, World Bank, World Bureau of Metal Statistics, World Gold Council, World Platinum Investment Council.
A.B. Last observation is March 2019.
B. The interest rate is the 10-year treasury inflation-indexed security with constant maturity (not seasonally adjusted).
C. For gold, Others = central bank purchases; for silver, Others = silverware; for platinum, Others = automotive demand.
Download data and charts.

Precious Metals

The World Bank's Precious Metals Price Index rose 6.1 percent in the first quarter (q/q) of 2019 following a slight increase in the preceding quarter. A pause in interest rate hikes by the U.S. Federal Reserve and robust gold and silver demand contributed to the price increase. The price index is forecast to continue its upward trend, led by gold, and average 2.6 percent higher than in 2018. Upside risks to the forecast include the possibility of an interest rate cut in the United States.

Gold prices, after reaching a recent trough in September 2018, increased 6.1 percent in the first quarter (Figure 13). Prices have been supported by strong demand and a fall in long-term real interest rates. The depreciation of the U.S. dollar against the renminbi led to a strengthening in Chinese jewelry demand. Emerging market central banks, particularly China, India, Russia, and Turkey, have increased gold holdings to diversify their asset base, and investors have increased net long positions in gold-backed exchange traded funds. These factors have more than offset soft industrial demand. Demand in the electronics sector has been stable but the use of gold in dental applications continues to fall due to the preference for cheaper porcelain alloys. Gold prices are forecast to be 3.2 higher in 2019 on expectations of robust demand and a prolonged pause in interest rate hikes by the U.S. Federal Reserve.

Silver prices have moved in line with gold, rising 6.9 percent in the first quarter. Silver's heavy discount to gold has led investors to diversify their portfolios, with Indian investment demand rising. Jewelry demand and silverware fabrication also rose moderately. However, industrial demand for silver, which accounts for more than half of total demand, remains weak. Tariffs on solar imports to the United States led to reduced use of silver in solar panels in 2018, and this trend is expected to persist. The use of silver in photovoltaics is expected to decline as it is one of the most expensive components. Silver prices are projected to remain broadly unchanged in 2019.

Platinum prices remained unchanged in the first quarter of 2019 after steep declines in the first three quarters of 2018. Jewelry and automotive demand, each accounting for about two-fifths of platinum demand, continue to trend lower. Platinum, used extensively in the catalytic converters on diesel engine vehicles, has fallen out of favor in Europe due to declining market share for diesel vehicles. On the other hand, the price of palladium, which is used for pollution control in gasoline-powered vehicles, has been boosted by supply disruptions in South Africa. Despite diverging platinum and palladium prices, prospects for substitution are limited at present due to technical constraints. In addition, with the switch to electric vehicles on the horizon there is less incentive to invest in platinum-based technology, which may become obsolete. Platinum prices are expected to decline by 4.5 percent in 2019.

APPENDIX A

Historical commodity prices
Price forecasts

TABLE A.1 Commodity prices

Commodity	Unit		2017	2018	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Jan 2019	Feb 2019	Mar 2019
Energy												
Coal, Australia	$/mt	*	88.5	107.0	103.0	104.4	117.0	103.6	95.7	98.6	95.4	93.1
Coal, South Africa	$/mt		85.1	97.6	93.2	99.4	102.2	95.8	84.8	91.3	84.2	78.8
Crude oil, average	$/bbl		52.8	68.3	64.6	71.4	73.0	64.3	60.5	56.6	61.1	63.8
Crude oil, Brent	$/bbl	*	54.4	71.1	67.0	74.5	75.5	67.4	63.3	59.3	64.1	66.4
Crude oil, Dubai	$/bbl	*	53.1	69.2	64.0	71.8	74.0	66.8	63.4	59.0	64.3	66.8
Crude oil, WTI	$/bbl	*	50.9	64.8	62.9	67.9	69.7	58.8	54.9	51.5	55.0	58.2
Natural gas, Index	2010=100		68.9	82.1	75.8	75.9	82.7	93.7	72.6	80.1	69.5	68.3
Natural gas, Europe	$/mmbtu	*	5.72	7.68	6.69	7.29	8.40	8.34	6.15	7.26	6.01	5.18
Natural gas, U.S.	$/mmbtu	*	2.96	3.16	3.08	2.83	2.92	3.79	2.91	3.08	2.72	2.94
Natural gas, Japan	$/mmbtu	*	8.61	10.67	9.76	10.26	10.87	11.79	11.87	12.01	11.81	11.81
Non-Energy												
Agriculture												
Beverages												
Cocoa	$/kg	**	2.03	2.29	2.19	2.57	2.24	2.18	2.24	2.26	2.26	2.20
Coffee, Arabica	$/kg	**	3.32	2.93	3.01	2.97	2.77	2.95	2.80	2.83	2.83	2.73
Coffee, Robusta	$/kg	**	2.23	1.87	1.96	1.93	1.78	1.81	1.72	1.72	1.73	1.70
Tea, average	$/kg		3.15	2.85	2.98	2.95	2.78	2.69	2.43	2.54	2.38	2.35
Tea, Colombo	$/kg	**	4.05	3.61	4.07	3.68	3.33	3.34	3.27	3.23	3.27	3.30
Tea, Kolkata	$/kg	**	2.42	2.36	1.95	2.55	2.57	2.37	1.82	2.12	1.72	1.63
Tea, Mombasa	$/kg	**	2.97	2.58	2.92	2.61	2.43	2.36	2.19	2.27	2.16	2.13
Food												
Oils and Meals												
Coconut oil	$/mt	**	1,651	997	1,252	1,030	910	796	721	773	710	679
Fishmeal	$/mt		1,367	1,525	1,602	1,529	1,488	1,482	1,478	1,486	1,472	1,476
Groundnuts	$/mt		1,487	1,320	1,189	1,444	1,412	1,234	1,309	1,235	1,368	1,325
Groundnut oil	$/mt	**	1,461	1,446	1,434	1,450	1,465	1,435	1,373	1,380	1,370	1,370
Palm oil	$/mt	**	751	639	706	682	612	555	587	585	603	573
Palmkernel oil	$/mt		1,288	927	1,142	936	881	747	705	765	695	655
Soybean meal	$/mt	**	350	405	414	447	391	369	353	362	353	345
Soybean oil	$/mt	**	850	789	850	805	765	736	757	748	773	750
Soybeans	$/mt	**	393	394	412	421	370	374	378	382	381	370
Grains												
Barley	$/mt	**	98	126	127	131	126	119	119	119	119	119
Maize	$/mt	**	155	164	164	173	158	163	167	167	170	165
Rice, Thailand 5%	$/mt	**	399	421	432	443	403	405	408	410	408	406
Rice, Thailand 25%	$/mt		385	408	417	429	392	394	401	402	401	399
Rice, Thailand A1	$/mt		380	401	407	424	391	383	385	387	386	382
Rice, Vietnam 5%	$/mt		363	406	395	425	409	395	369	396	368	343
Sorghum	$/mt		163	169	182	173	159	160	168	163	170	169
Wheat, US HRW	$/mt	**	174	210	192	216	222	209	212	210	219	206
Wheat, US SRW	$/mt		178	204	189	205	209	213	212	220	217	198
Other Food												
Bananas, EU	$/kg		0.90	…	…	…	…	…	…	…	…	…
Bananas, U.S.	$/kg	**	1.08	…	…	…	…	…	…	…	…	…
Meat, beef	$/kg	**	4.39	4.20	4.36	4.31	4.10	4.00	4.33	4.24	4.28	4.48
Meat, chicken	$/kg	**	2.12	2.24	2.09	2.58	2.26	2.05	2.10	2.15	2.09	2.07
Meat, sheep	$/kg		5.42	5.87	5.87	…	…	…	…	…	…	…
Oranges	$/kg	*	0.81	0.79	0.76	0.83	0.84	0.73	0.64	0.64	0.63	0.65
Shrimp	$/kg		13.32	12.24	12.63	12.76	11.93	11.64	11.79	11.79	11.79	11.79
Sugar, EU	$/kg	*	0.37	0.39	0.40	0.39	0.38	0.37	0.37	0.37	0.37	0.37
Sugar, U.S.	$/kg	*	0.62	0.56	0.57	0.55	0.56	0.55	0.57	0.56	0.57	0.58
Sugar, World	$/kg	*	0.35	0.28	0.29	0.27	0.25	0.29	0.28	0.28	0.29	0.28

TABLE A.1 Commodity prices (*continued*)

Commodity	Unit		2017	2018	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Jan 2019	Feb 2019	Mar 2019
Raw Materials												
Timber												
Logs, Africa	$/cum		395	414	430	417	407	399	398	400	397	396
Logs, S.E. Asia	$/cum	**	265	270	275	273	267	264	270	273	270	268
Plywood	¢/sheets		487	495	504	501	490	484	496	501	495	491
Sawnwood, Africa	$/cum		617	640	667	652	625	616	624	617	623	631
Sawnwood, S.E. Asia	$/cum	**	702	728	758	742	710	701	710	702	709	718
Woodpulp	$/mt		875	875	875	875	875	875	875	875	875	875
Other Raw Materials												
Cotton	$/kg	**	1.84	2.01	1.99	2.09	2.07	1.91	1.82	1.82	1.79	1.85
Rubber, RSS3	$/kg	**	2.00	1.57	1.73	1.66	1.46	1.40	1.66	1.59	1.65	1.72
Rubber, TSR20	$/kg		1.67	1.37	1.47	1.40	1.33	1.27	1.41	1.36	1.40	1.47
Fertilizers												
DAP	$/mt	**	323	393	369	387	410	407	358	382	357	335
Phosphate rock	$/mt	**	90	88	82	88	87	94	101	103	103	99
Potassium chloride	$/mt	**	218	216	216	216	216	216	226	216	216	246
TSP	$/mt	**	283	347	321	329	359	377	340	355	344	321
Urea, E. Europe	$/mt	**	214	249	228	226	260	284	253	260	251	248
Metals and Minerals												
Aluminum	$/mt	**	1,968	2,108	2,154	2,264	2,053	1,963	1,863	1,854	1,863	1,871
Copper	$/mt	**	6,170	6,530	6,957	6,881	6,118	6,164	6,226	5,939	6,300	6,439
Iron ore	$/dmt	**	71.8	69.8	74.7	65.6	66.7	71.9	83.6	76.2	88.2	86.5
Lead	$/mt	**	2,315	2,240	2,518	2,383	2,094	1,966	2,035	1,997	2,063	2,046
Nickel	$/mt	**	10,410	13,114	13,284	14,470	13,239	11,463	12,412	11,523	12,685	13,026
Tin	$/mt	**	20,061	20,145	21,187	20,937	19,309	19,149	21,038	20,458	21,264	21,393
Zinc	$/mt	**	2,891	2,922	3,415	3,112	2,534	2,629	2,709	2,570	2,707	2,851
Precious Metals												
Gold	$/toz	***	1,258	1,269	1,329	1,307	1,213	1,229	1,304	1,292	1,320	1,301
Platinum	$/toz	***	948	880	977	905	814	822	823	807	818	843
Silver	$/toz	***	17.07	15.71	16.73	16.56	14.99	14.57	15.58	15.62	15.82	15.30
Commodity Price Indexes (2010=100)												
Energy			68.1	87.0	82.2	89.5	92.6	83.8	77.1	73.8	77.4	80.0
Non-energy			83.8	85.2	87.7	89.1	82.7	81.4	82.1	81.2	82.7	82.5
Agriculture			87.0	86.7	88.6	90.8	84.6	82.8	83.5	83.5	83.9	83.1
Beverages			83.1	79.1	79.9	83.6	76.2	76.6	74.0	75.3	74.3	72.4
Food			90.2	90.4	92.5	95.4	88.1	85.8	86.9	87.0	87.5	86.1
Oils and Meals			87.6	85.0	90.2	91.0	81.3	77.5	77.7	78.5	78.5	76.0
Grains			80.5	88.8	87.4	92.8	87.6	87.2	88.6	88.4	90.0	87.4
Other Food			102.4	99.1	100.2	103.6	97.4	95.3	97.4	96.8	96.9	98.3
Raw Materials			81.2	81.4	83.4	83.3	80.4	78.6	80.2	79.3	80.1	81.2
Timber			85.6	88.3	91.5	89.8	86.4	85.3	86.6	86.2	86.5	87.2
Other Raw Materials			76.3	73.9	74.6	76.2	73.8	71.2	73.2	71.7	73.2	74.7
Fertilizers			74.3	82.5	77.1	78.0	84.6	90.2	85.3	86.8	84.9	84.3
Metals and minerals			78.2	82.5	87.2	86.7	78.4	77.6	79.0	75.8	80.1	81.1
Base Metals		****	84.9	90.6	95.6	96.4	86.0	84.2	84.0	81.3	84.7	86.2
Precious Metals			97.8	97.2	102.1	100.4	92.8	93.4	99.2	98.4	100.4	98.7

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 www.worldbank.org/commodities.
Download data.

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

Commodity	Unit	2016	2017	2018	Forecasts 2019	2020	2021	2022	2025	2030
Energy										
Coal, Australia	$/mt	66.1	88.5	107.0	94.0	90.0	86.4	83.0	73.5	60.0
Crude oil, avg	$/bbl	42.8	52.8	68.3	66.0	65.0	65.5	66.0	67.5	70.0
Natural gas, Europe	$/mmbtu	4.6	5.7	7.7	6.0	6.0	6.1	6.2	6.5	7.0
Natural gas, U.S.	$/mmbtu	2.5	3.0	3.2	2.8	2.9	3.0	3.1	3.4	4.0
Natural gas, Japan	$/mmbtu	7.4	8.6	10.7	7.4	7.5	7.6	7.7	8.0	8.5
Non-Energy										
Agriculture										
Beverages										
Cocoa	$/kg	2.89	2.03	2.29	2.30	2.36	2.41	2.47	2.66	3.00
Coffee, Arabica	$/kg	3.61	3.32	2.93	2.85	2.90	2.94	2.99	3.14	3.40
Coffee, Robusta	$/kg	1.95	2.23	1.87	1.75	1.79	1.82	1.86	1.98	2.20
Tea, average	$/kg	2.68	3.15	2.85	2.45	2.51	2.57	2.64	2.83	3.20
Food										
Oils and Meals										
Coconut oil	$/mt	1,482	1,651	997	720	754	790	828	951	1,200
Groundnut oil	$/mt	1,381	1,461	1,446	1,400	1,425	1,450	1,476	1,556	1,700
Palm oil	$/mt	736	751	639	600	623	646	670	749	900
Soybean meal	$/mt	375	350	405	355	363	371	379	404	450
Soybean oil	$/mt	815	850	789	760	779	799	819	883	1,000
Soybeans	$/mt	405	393	394	390	401	412	424	461	530
Grains										
Barley	$/mt	104	98	126	125	129	134	138	153	180
Maize	$/mt	159	155	164	168	171	175	179	190	210
Rice, Thailand, 5%	$/mt	396	399	421	410	413	415	418	426	440
Wheat, U.S., HRW	$/mt	167	174	210	212	214	217	219	227	240
Other Food										
Bananas, U.S.		1.00	1.08	1.15	1.14	1.14	1.13	1.13	1.12	1.10
Meat, beef	$/kg	4.06	4.39	4.20	4.35	4.34	4.32	4.31	4.27	4.20
Meat, chicken	$/kg	1.85	2.12	2.24	2.10	2.12	2.14	2.15	2.21	2.30
Oranges	$/kg	0.89	0.81	0.79	0.67	0.69	0.71	0.73	0.79	0.90
Shrimp	$/kg	11.22	13.32	12.24	12.00	12.17	12.34	12.52	13.05	14.00
Sugar, World	$/kg	0.40	0.35	0.28	0.28	0.29	0.30	0.30	0.33	0.38
Raw Materials										
Timber										
Logs, Africa	$/cum	387	395	414	400	404	409	413	427	450
Logs, S.E. Asia	$/cum	274	265	270	275	279	283	287	299	320
Sawnwood, S.E. Asia	$/cum	739	702	728	720	731	742	753	788	850
Other Raw Materials										
Cotton A	$/kg	1.64	1.84	2.01	1.88	1.91	1.93	1.96	2.05	2.20
Rubber, RSS3	$/kg	1.61	2.00	1.57	1.70	1.75	1.81	1.87	2.05	2.40
Tobacco	$/mt	4,806	4,679	4,863	4,900	4,862	4,825	4,788	4,678	4,500
Fertilizers										
DAP	$/mt	316	323	393	370	377	383	390	412	450
Phosphate rock	$/mt	110	90	88	105	107	108	110	115	125
Potassium chloride	$/mt	260	218	216	240	246	253	260	281	320
TSP	$/mt	291	283	347	340	343	347	350	361	380
Urea, E. Europe	$/mt	194	214	249	250	254	258	263	276	300
Metals and Minerals										
Aluminum	$/mt	1,604	1,968	2,108	1,940	1,970	1,992	2,014	2,082	2,200
Copper	$/mt	4,868	6,170	6,530	6,490	6,680	6,711	6,743	6,838	7,000
Iron ore	$/dmt	58.4	71.8	69.8	77.7	73.0	72.7	72.4	71.5	70.0
Lead	$/mt	1,867	2,315	2,240	1,980	2,000	2,010	2,020	2,049	2,100
Nickel	$/mt	9,595	10,410	13,114	12,880	13,700	14,079	14,469	15,704	18,000
Tin	$/mt	17,934	20,061	20,145	21,210	21,580	21,718	21,857	22,279	23,000
Zinc	$/mt	2,090	2,891	2,922	2,870	2,650	2,635	2,619	2,574	2,500
Precious Metals										
Gold	$/toz	1,249	1,258	1,269	1,310	1,360	1,354	1,348	1,330	1,300
Silver	$/toz	17.1	17.1	15.7	15.7	15.6	15.7	15.9	16.3	17.0
Platinum	$/toz	987	948	880	840	850	887	925	1,051	1,300

Source and Note: See Appendix C.
Download data.

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

Commodity	Unit	2016	2017	2018	Forecasts 2019	2020	2021	2022	2025	2030
Energy										
Coal, Australia	$/mt	70.3	91.0	105.1	90.5	85.2	80.5	75.9	63.8	47.7
Crude oil, avg	$/bbl	45.5	54.3	67.1	63.5	61.5	61.0	60.4	58.6	55.6
Natural gas, Europe	$/mmbtu	4.9	5.9	7.5	5.8	5.7	5.7	5.7	5.6	5.6
Natural gas, U.S.	$/mmbtu	2.7	3.0	3.1	2.7	2.7	2.8	2.8	3.0	3.2
Natural gas, Japan	$/mmbtu	7.8	8.8	10.5	7.1	7.1	7.1	7.0	6.9	6.8
Non-Energy										
Agriculture										
Beverages										
Cocoa	$/kg	3.07	2.09	2.25	2.21	2.23	2.25	2.26	2.31	2.38
Coffee, Arabica	$/kg	3.84	3.42	2.87	2.74	2.74	2.74	2.74	2.73	2.70
Coffee, Robusta	$/kg	2.08	2.29	1.84	1.68	1.69	1.70	1.70	1.72	1.75
Tea, average	$/kg	2.86	3.24	2.80	2.36	2.38	2.39	2.41	2.46	2.54
Food										
Oils and Meals										
Coconut oil	$/mt	1,576	1,697	979	693	714	736	757	826	954
Groundnut oil	$/mt	1,468	1,502	1,420	1,348	1,349	1,350	1,350	1,352	1,351
Palm oil	$/mt	782	772	627	578	589	601	613	650	715
Soybean meal	$/mt	398	360	398	342	343	345	346	351	358
Soybean oil	$/mt	867	874	775	732	738	744	749	767	795
Soybeans	$/mt	431	404	387	375	380	384	388	400	421
Grains										
Barley	$/mt	111	100	124	120	122	124	126	132	143
Maize	$/mt	169	159	161	162	162	163	163	165	167
Rice, Thailand, 5%	$/mt	421	410	413	395	391	387	382	370	350
Wheat, U.S., HRW	$/mt	177	179	206	204	203	202	201	197	191
Other Food										
Bananas, U.S.	$/kg	1.06	1.11	1.13	1.10	1.08	1.05	1.03	0.97	0.87
Meat, beef	$/kg	4.32	4.51	4.12	4.19	4.10	4.02	3.94	3.71	3.34
Meat, chicken	$/kg	1.97	2.18	2.20	2.02	2.00	1.99	1.97	1.92	1.83
Oranges	$/kg	0.95	0.83	0.78	0.64	0.65	0.66	0.66	0.68	0.72
Shrimp	$/kg	11.93	13.69	12.01	11.55	11.52	11.49	11.45	11.34	11.13
Sugar, World	$/kg	0.42	0.36	0.27	0.27	0.27	0.28	0.28	0.29	0.30
Raw Materials										
Timber										
Logs, Africa	$/cum	412	406	406	385	383	380	378	370	358
Logs, S.E. Asia	$/cum	292	273	265	265	264	263	262	259	254
Sawnwood, S.E. Asia	$/cum	786	722	715	693	692	691	689	685	676
Other Raw Materials										
Cotton A	$/kg	1.74	1.89	1.98	1.81	1.81	1.80	1.80	1.78	1.75
Rubber, RSS3	$/kg	1.71	2.05	1.54	1.64	1.66	1.69	1.71	1.78	1.91
Tobacco	$/mt	5,111	4,810	4,774	4,717	4,602	4,492	4,380	4,062	3,577
Fertilizers										
DAP	$/mt	336	332	386	356	357	357	357	358	358
Phosphate rock	$/mt	117	92	86	101	101	101	101	100	99
Potassium chloride	$/mt	277	224	212	231	233	235	237	244	254
TSP	$/mt	310	291	340	327	325	323	321	314	302
Urea, E. Europe	$/mt	206	220	245	241	241	241	240	240	238
Metals and Minerals										
Aluminum	$/mt	1,706	2,023	2,070	1,868	1,865	1,854	1,843	1,808	1,749
Copper	$/mt	5,177	6,342	6,411	6,248	6,323	6,248	6,169	5,939	5,565
Iron ore	$/dmt	62.1	73.8	68.5	74.8	69.1	67.7	66.2	62.1	55.6
Lead	$/mt	1,985	2,379	2,200	1,906	1,893	1,871	1,848	1,780	1,669
Nickel	$/mt	10,204	10,700	12,875	12,399	12,968	13,107	13,237	13,638	14,309
Tin	$/mt	19,072	20,621	19,778	20,418	20,427	20,219	19,996	19,348	18,283
Zinc	$/mt	2,223	2,972	2,869	2,763	2,508	2,453	2,396	2,235	1,987
Precious Metals										
Gold	$/toz	1,328	1,293	1,246	1,261	1,287	1,260	1,233	1,155	1,033
Silver	$/toz	18.2	17.5	15.4	15.1	14.8	14.6	14.5	14.1	13.5
Platinum	$/toz	1,050	975	863	809	805	826	847	913	1,033

Source and Note: See Appendix C.
Download data.

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

Commodity	Unit	2016	2017	2018	Forecasts 2019	2020	2021	2022	2025	2030
Nominal US dollars (2010=100)										
Energy		55.1	68.1	87.0	82.3	81.2	81.7	82.3	84.0	87.2
Non-energy		79.4	83.8	85.2	83.4	84.6	85.7	86.9	90.6	97.4
Agriculture		87.5	87.0	86.7	84.4	85.9	87.3	88.8	93.4	102.0
Beverages		91.3	83.1	79.1	75.5	77.1	78.7	80.4	85.7	95.3
Food		89.6	90.2	90.4	87.5	89.1	90.6	92.2	97.2	106.6
Oils and Meals		88.3	87.6	85.0	79.0	81.2	83.5	85.9	93.5	107.7
Grains		80.7	80.5	88.8	89.1	90.4	91.7	93.0	97.2	104.6
Other food		99.5	102.4	99.1	97.4	98.2	98.9	99.7	102.2	106.9
Raw materials		80.2	81.2	81.4	81.5	82.5	83.6	84.7	88.1	94.3
Timber		89.6	85.6	88.3	88.0	89.3	90.6	91.9	96.1	103.5
Other Raw Materials		70.0	76.3	73.9	74.4	75.2	75.9	76.7	79.3	84.2
Fertilizers		77.8	74.3	82.5	86.4	87.9	89.3	90.8	95.5	103.9
Metals and minerals *		63.0	78.2	82.5	81.0	81.6	82.2	82.7	84.3	87.3
Base Metals **		68.3	84.9	90.6	87.4	89.0	89.7	90.4	92.6	96.4
Precious Metals		97.5	97.8	97.2	99.7	102.8	102.6	102.4	101.9	101.2
Constant 2010 U.S. dollars (2010=100), deflated by the MUV Index										
Energy		58.5	70.0	85.4	79.2	76.9	76.1	75.3	72.9	69.3
Non-energy		84.4	86.1	83.7	80.3	80.1	79.8	79.5	78.7	77.4
Agriculture		93.0	89.4	85.1	81.3	81.3	81.3	81.2	81.1	81.1
Beverages		97.1	85.4	77.6	72.6	72.9	73.3	73.6	74.4	75.8
Food		95.3	92.7	88.8	84.3	84.3	84.4	84.4	84.5	84.7
Oils and Meals		93.9	90.0	83.5	76.0	76.9	77.8	78.6	81.2	85.6
Grains		85.8	82.8	87.1	85.8	85.6	85.4	85.1	84.4	83.2
Other food		105.8	105.3	97.3	93.8	92.9	92.1	91.2	88.8	85.0
Raw materials		85.3	83.4	79.9	78.5	78.1	77.8	77.5	76.5	74.9
Timber		95.3	87.9	86.7	84.7	84.5	84.3	84.1	83.5	82.3
Other Raw Materials		74.4	78.5	72.6	71.7	71.2	70.7	70.2	68.8	66.9
Fertilizers		82.7	76.3	81.0	83.2	83.2	83.2	83.1	83.0	82.6
Metals and minerals *		67.0	80.4	81.0	77.9	77.3	76.5	75.7	73.2	69.4
Base Metals **		72.6	87.3	88.9	84.1	84.2	83.5	82.7	80.4	76.6
Precious Metals		103.6	100.6	95.4	95.9	97.3	95.5	93.7	88.5	80.4
Inflation indexes, 2010=100										
MUV index ***		94.0	97.3	101.9	103.9	105.6	107.4	109.3	115.1	125.8
% change per annum		(3.9)	3.5	4.7	2.0	1.7	1.7	1.8	1.8	1.8
U.S. GDP deflator		110.1	111.8	114.2	116.0	118.1	120.5	122.9	130.4	144.0
% change per annum		1.3	1.6	2.1	1.5	1.8	2.0	2.0	2.0	2.0

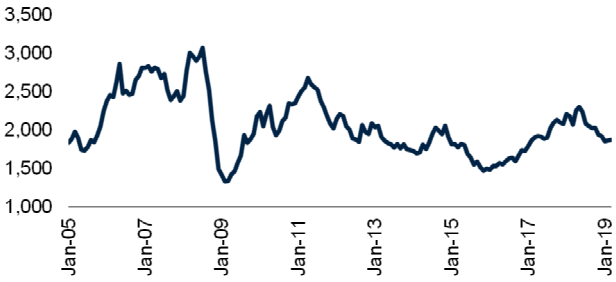
Source: See Appendix C.
Note: (*) Base metals plus iron ore; (**) Includes aluminum, copper, lead, nickel, tin and zinc; (***) MUV is the unit value index of manufacture exports. For other notes see Appendix C.
Download data.

APPENDIX B

Supply-Demand balances

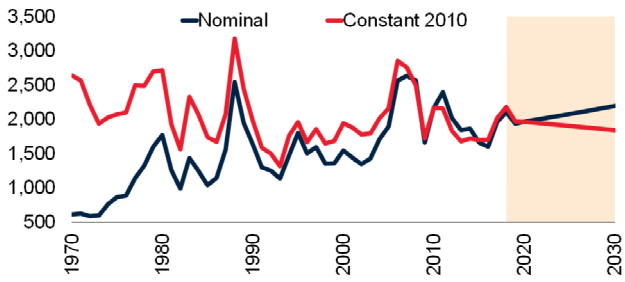
Aluminum

Monthly Prices (US$/mt)



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

Annual Prices (US$/mt)



Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970	1980	1990	2000	2010	2015	2016	2017	2018
					(thousand metric tons)				
Bauxite Production									
Australia	9,256	27,179	41,391	53,802	68,584	80,910	83,517	89,421	96,144
China	500	1,700	3,655	7,900	36,837	60,788	66,158	65,000	69,017
Guinea	2,600	13,911	16,150	17,992	17,500	20,692	26,917	45,000	55,314
Brazil	510	4,632	9,749	13,974	32,028	37,064	37,700	38,123	38,122
India	1,370	1,785	4,853	7,993	12,723	28,124	24,745	22,313	24,638
Jamaica	12,010	11,978	10,965	11,127	8,540	9,629	8,540	8,245	9,963
Kazakhstan	989	n/a	n/a	3,730	5,310	4,683	4,801	4,843	6,104
Russia	n/a	n/a	n/a	5,089	5,035	5,398	5,432	5,523	5,887
Saudi Arabia	5	n/a	n/a	n/a	236	2,174	3,843	3,708	3,843
Indonesia	1,223	1,249	1,164	1,151	27,410	472	700	1,294	3,037
Sierra Leone	449	674	1,445	n/a	1,089	1,334	1,369	1,788	2,004
Greece	2,292	3,259	2,511	1,819	1,902	1,831	1,880	1,927	1,930
Guyana	3,211	3,052	1,424	2,689	1,083	1,526	1,479	1,459	1,926
Others		*n/a*	*n/a*	*11,948*	*8,418*	*38,292*	*14,259*	*15,119*	*8,638*
World	**57,280**	**93,268**	**115,099**	**139,213**	**226,695**	**292,915**	**281,340**	**303,761**	**326,567**
Refined Production									
China	127	350	854	2,989	16,244	31,518	32,698	32,273	33,586
Russia	n/a	n/a	n/a	3,247	3,947	3,529	3,561	3,584	3,669
Canada	963	1,068	1,567	2,373	2,963	2,880	3,209	3,212	2,923
United Arab Emirates	n/a	35	174	536	1,400	2,397	2,471	2,500	2,393
India	161	185	433	624	1,621	2,355	2,897	3,401	2,175
Australia	206	303	1,234	1,769	1,928	1,646	1,635	1,487	1,575
Norway	530	653	867	1,031	1,090	1,224	1,247	1,253	1,275
Bahrain	n/a	126	213	509	851	961	971	981	1,011
Saudi Arabia	5	n/a	n/a	n/a	0	839	871	916	932
United States	3,607	4,654	4,048	3,668	1,726	1,587	818	741	897
Iceland	39	73	87	226	826	800	855	870	865
Malaysia	1	n/a	n/a	n/a	60	440	620	760	760
South Africa	n/a	86	158	673	807	695	701	716	714
Others		*n/a*	*n/a*	*6,986*	*7,992*	*6,995*	*7,071*	*6,900*	*6,911*
World	**9645**	**16,099**	**19,275**	**24,632**	**41,454**	**57,865**	**59,625**	**59,594**	**59,686**
Refined Production									
China	225	550	861	3,352	15,854	31,068	32,563	31,908	33,304
United States	3,488	4,454	4,330	6,161	4,242	5,325	5,121	5,615	4,616
Germany	825	1,272	1,379	1,632	1,912	2,163	2,197	2,160	2,136
Japan	911	1,639	2,414	2,223	2,025	1,779	1,742	1,950	1,979
Korea, Rep.	15	68	369	823	1,255	1,366	1,453	1,420	1,151
India	162	234	433	601	1,475	1,521	1,378	1,220	991
Turkey	14	45	152	211	703	952	949	961	954
Italy	279	23	0	780	857	801	909	924	951
Brazil	84	296	341	514	985	801	764	868	871
Others	*4,024*	*6,731*	*8,947*	*8,708*	*11,255*	*11,689*	*11,909*	*12,242*	*12,856*
World	**10,027**	**15,312**	**19,227**	**25,004**	**40,563**	**57,465**	**58,984**	**59,267**	**59,808**

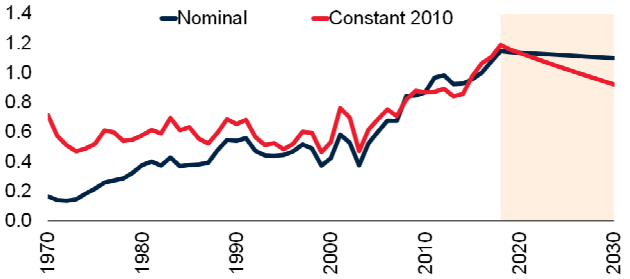
Source: British Geological Survey, Metallgesellschaft, U.S. Geological Survey, World Bureau of Metals Statistics, World Bank.
Note: n/a implies data not available.

Bananas

Monthly Prices (US$/kg)

Source: See World Bank Commodities Price Data.
Note: Last observation is December 2017.
Download data and charts.

Annual Prices (US$/kg)



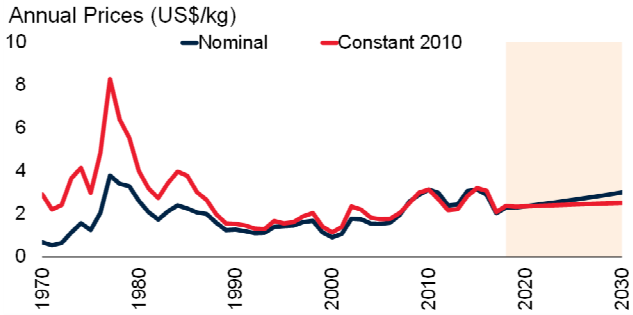
Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970	1980	1990	2000	2010	2014	2015	2016	2017
				(thousand metric tonnes)					
Exports									
Ecuador	1,246	1,291	2,157	3,940	5,010	5,716	6,040	5,974	6,415
Costa Rica	856	973	1,434	1,883	1,828	2,169	1,964	2,365	2,649
Guatemala	200	371	360	801	1,371	2,064	2,153	2,146	2,366
Colombia	262	692	1,148	1,680	1,803	1,786	1,674	1,842	1,885
Philippines	107	923	840	1,599	1,589	3,680	1,852	1,397	1,663
Honduras	799	973	781	375	512	636	690	659	649
Mexico	1	16	154	46	174	386	417	448	561
Côte d'Ivoire	140	122	94	217	336	335	305	364	366
Cameroon	50	65	78	238	233	265	283	250	234
Panama	600	504	745	489	295	256	268	267	209
Peru	0	0	0	1	89	160	191	202	203
Nicaragua	n/a	n/a	n/a	46	52	65	77	109	137
Dominican Republic	4	10	11	80	408	377	138	383	125
Bolivia	0	0	0	9	88	124	133	128	115
India	7	0	0	9	61	55	80	112	94
Belize	0	15	24	66	82	103	99	71	75
Suriname	25	34	28	35	79	75	85	67	70
Pakistan	1	12	0	2	58	43	54	50	48
Brazil	204	67	53	72	140	84	80	64	41
Others	*1,016*	*705*	*1,121*	*333*	*1,354*	*178*	*110*	*169*	*163*
World	**5,519**	**6,772**	**9,030**	**11,922**	**15,560**	**18,557**	**16,691**	**17,067**	**18,068**
Imports									
United States	1,846	2,423	3,099	3,630	3,858	4,036	4,082	4,041	4,238
Russian Federation	n/a	n/a	n/a	500	1,054	1,275	1,227	1,356	1,544
China	29	21	48	642	724	1,188	1,139	955	1,113
Japan	844	726	758	1,079	1,110	97	960	956	986
Canada	199	246	341	398	496	555	562	540	579
Argentina	164	195	73	340	351	411	427	433	488
Korea, Rep.	3	15	22	184	338	359	364	365	437
Ukraine	n/a	n/a	n/a	60	215	215	146	192	238
Chile	n/a	n/a	n/a	193	176	175	199	206	224
Saudi Arabia	22	135	129	187	278	204	230	191	211
Turkey	0	0	62	124	161	207	219	209	208
United Arab Emirates	0	23	30	69	120	121	144	161	160
South Africa	13	0	7	26	37	8	24	98	115
Algeria	11	n/a	n/a	0	188	263	246	197	96
Switzerland	59	64	76	72	80	84	87	90	92
New Zealand	24	37	49	68	81	66	77	96	88
Norway	33	31	49	60	79	85	85	84	86
Belarus	n/a	n/a	n/a	31	45	66	72	64	74
Kuwait	10	25	15	23	91	64	132	120	72
El Salvador	11	50	44	59	49	57	61	65	66
Tunisia	3	9	0	16	19	36	60	65	55
Others	*2,313*	*2,680*	*4,080*	*4,391*	*5,922*	*6,924*	*5,870*	*5,877*	*6,266*
World	**5,584**	**6,680**	**8,881**	**12,151**	**15,470**	**16,496**	**16,411**	**16,361**	**17,436**

Source: FAO.
Note: Data include re-exports. Data for 1970, 1980, and 1990 are from the Intergovernmental Group on Bananas and Tropical Fruits (March 8, 2018 update) while data for 2000 onwards are from Banana Market Review (2017). Due to different methodologies, pre- and post-2000 data may not be directly comparable.

Coal

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.



Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1981	1990	2000	2005	2010	2014	2015	2016	2017
	(million metric tonnes oil equivalent)								
Production									
China	311	540	707	1,242	1,665	1,864	1,826	1,691	1,747
United States	440	538	542	551	524	482	427	348	371
Australia	68	115	172	215	251	306	306	308	297
India	64	106	152	190	252	270	281	285	294
Indonesia	0	6	45	90	162	270	272	269	272
Russian Federation	n/a	186	122	136	151	177	186	194	206
South Africa	75	100	127	138	144	148	143	142	143
Colombia	3	14	26	41	51	61	59	62	61
Poland	103	100	72	69	55	54	53	52	50
Kazakhstan	n/a	57	32	37	48	49	46	44	48
Germany	149	125	61	57	46	44	43	40	40
Canada	23	40	39	35	35	36	32	32	31
Mongolia	2	3	2	4	15	15	14	22	30
Vietnam	3	3	7	19	25	23	23	22	21
Turkey	7	12	13	11	18	16	13	16	21
Czech Republic	43	36	25	24	21	17	17	16	15
Ukraine	n/a	76	36	35	32	26	16	17	14
Serbia	n/a	n/a	n/a	n/a	7	6	7	7	8
Bulgaria	5	5	4	4	5	5	6	5	6
Mexico	2	3	5	6	7	7	7	6	6
Romania	9	8	6	6	6	4	5	4	5
Greece	4	7	8	9	7	6	6	4	5
Thailand	1	4	5	6	5	5	4	4	4
Others	*n/a*	*168*	*93*	*86*	*69*	*75*	*70*	*73*	*74*
World	**1,843**	**2,251**	**2,301**	**3,011**	**3,602**	**3,966**	**3,862**	**3,664**	**3,769**
Consumption									
China	303	528	706	1,325	1,749	1,955	1,914	1,889	1,893
India	64	110	164	211	290	388	395	406	424
United States	381	459	541	546	499	431	372	341	332
Japan	65	78	96	114	116	119	119	119	121
Russian Federation	n/a	182	106	95	91	88	92	89	92
Korea, Rep.	15	24	43	55	76	85	86	82	86
South Africa	51	67	75	80	93	90	83	85	82
Germany	144	132	85	81	77	80	79	76	71
Indonesia	0	3	13	24	40	45	51	53	57
Poland	91	78	56	55	55	49	49	50	49
Turkey	7	16	23	22	31	36	35	39	45
Australia	29	38	48	52	49	43	44	44	42
Taiwan, China	4	11	28	35	38	39	38	39	39
Kazakhstan	n/a	39	18	27	33	37	34	34	36
Vietnam	3	2	5	9	15	21	26	28	28
Others	*n/a*	*455*	*351*	*375*	*355*	*359*	*349*	*335*	*334*
World	**1,819**	**2,222**	**2,356**	**3,106**	**3,606**	**3,862**	**3,765**	**3,706**	**3,732**

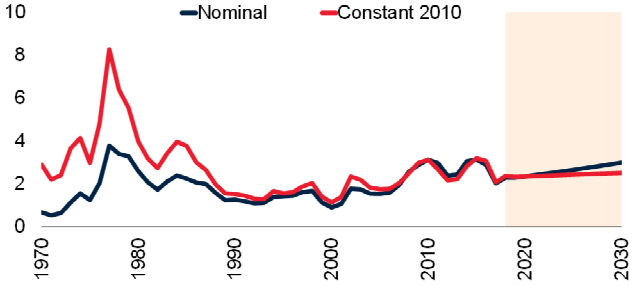
Source: BP Statistical Review (June 2018 update).
Note: n/a implies data not available. Commercial solid fuels only, i.e. bituminous coal and anthracite (hard coal), and lignite and brown (sub-bituminous) coal, and other commercial solid fuels.

Cocoa

Monthly Prices (US$/kg)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

Annual Prices (US$/kg)



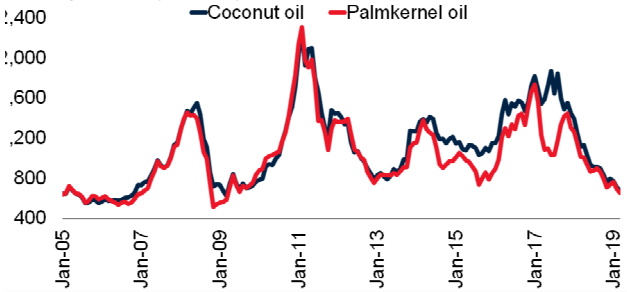
Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2015/16	2016/17	2017/18	2018/19
	(thousand metric tons)								
Production									
Côte d'Ivoire	180	417	804	1,212	1,511	1,581	2,020	1,964	2,150
Ghana	406	258	293	395	1,025	778	970	905	900
Ecuador	72	87	111	89	161	232	290	285	298
Cameroon	112	117	115	133	229	211	248	250	250
Nigeria	305	156	160	180	240	200	245	255	245
Indonesia	2	12	150	385	440	320	270	240	220
Brazil	182	353	368	163	200	141	174	204	195
Peru	2	7	11	17	54	105	116	134	120
Dominican Republic	35	35	42	45	54	80	57	70	70
Others	*233*	*252*	*452*	*233*	*396*	*350*	*350*	*342*	*351*
World	**1,528**	**1,694**	**2,507**	**2,852**	**4,309**	**3,997**	**4,739**	**4,649**	**4,799**
Grindings									
Netherlands	116	140	268	452	540	534	565	595	600
Côte d'Ivoire	35	60	118	285	361	492	577	559	580
Indonesia	1	10	32	83	190	382	455	483	490
Germany	151	180	294	227	439	430	410	448	455
United States	279	186	268	445	401	398	390	385	392
Ghana	48	27	30	70	212	202	250	311	300
Brazil	67	191	260	195	239	225	227	230	234
Others	*735*	*773*	*1,055*	*1,285*	*1,557*	*1,465*	*1,719*	*1,582*	*1,661*
World	**1,431**	**1,566**	**2,325**	**3,041**	**3,938**	**4,127**	**4,594**	**4,594**	**4,712**
Exports									
Côte d'Ivoire	138	406	688	903	1,079	1,089	1,419	1,549	1,400
Ghana	348	182	245	307	694	582	577	573	662
Ecuador	46	19	56	57	136	207	283	282	250
Nigeria	216	76	142	149	219	180	305	282	197
Cameroon	75	96	96	102	204	176	188	161	190
Malaysia	3	40	148	17	21	87	136	145	161
Dominican Republic	29	27	36	34	52	77	57	56	79
Others	*265*	*255*	*326*	*417*	*590*	*323*	*301*	*286*	*257*
World	**1,119**	**1,100**	**1,737**	**1,987**	**2,996**	**2,720**	**3,265**	**3,334**	**3,197**
Imports									
Netherlands	116	167	267	549	806	795	906	820	622
Germany	155	187	300	228	434	407	447	448	431
Malaysia	1	n/a	1	110	320	229	289	312	371
United States	269	246	320	355	472	387	537	470	366
Belgium	18	28	50	101	194	297	302	320	257
France	42	59	74	157	149	139	147	142	167
Italy	41	32	56	72	86	94	100	100	108
Turkey	1	2	6	39	71	86	103	103	88
Spain	34	37	45	49	88	113	127	124	86
Others	*462*	*440*	*643*	*749*	*737*	*648*	*893*	*972*	*1,088*
World	**1,139**	**1,198**	**1,761**	**2,409**	**3,357**	**3,196**	**3,851**	**3,812**	**3,586**

Source: Quarterly Bulletin of Cocoa Statistics (Cocoa year 2018/19 Volume XLV No. 1 update).
Note: n/a implies data not available. 1970/71 data are average of 1968-1972.

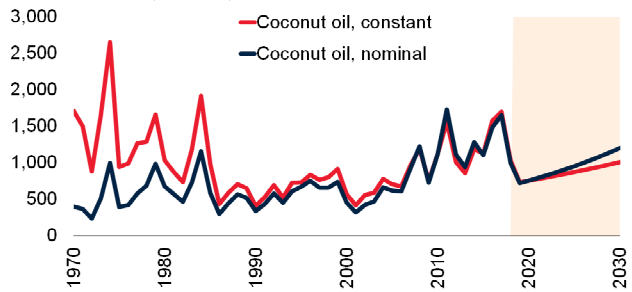
Coconut oil and Palm kernel oil

Monthly Prices (US$/mt)



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

Annual Prices (US$/mt)

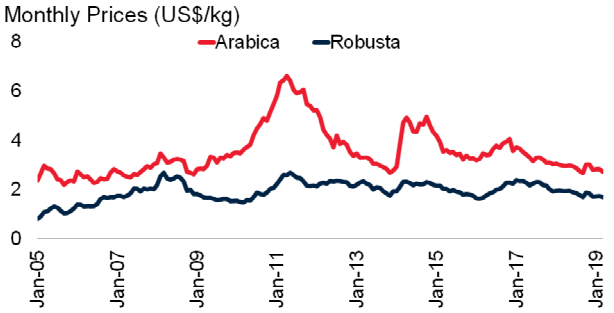


Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

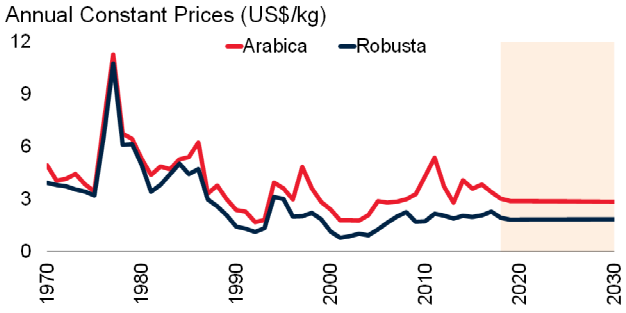
	1980/81	1990/91	2000/01	2010/11	2013/14	2015/16	2016/17	2017/18	2018/19
	(thousand metric tons)								
Coconut oil production									
Philippines	1,159	1,448	1,207	1,240	1,153	1,099	953	1,035	1,171
Indonesia	677	833	825	847	933	937	691	845	863
India	228	292	442	398	390	377	270	302	345
Mexico	99	126	126	131	127	127	129	130	132
Sri Lanka	n/a	n/a	n/a	32	45	49	58	57	59
Malaysia	64	32	38	49	51	51	45	43	47
Vietnam	n/a	n/a	n/a	34	34	34	33	34	35
Others	*596*	*628*	*606*	*363*	*323*	*310*	*297*	*311*	*317*
World	**2,823**	**3,359**	**3,244**	**3,094**	**3,056**	**2,984**	**2,476**	**2,757**	**2,969**
Coconut oil production									
European Union	498	632	734	739	646	536	475	567	626
United States	373	400	585	474	518	531	439	433	457
India	233	301	448	411	392	389	262	296	347
Indonesia	639	600	200	153	377	160	181	195	211
China	27	32	43	216	142	137	133	139	147
Philippines	195	318	297	336	364	238	119	148	174
Mexico	115	139	139	153	129	130	138	134	137
Malaysia	4	4	32	90	49	90	74	79	92
Japan	78	67	45	42	53	54	42	41	42
Others	*497*	*692*	*670*	*629*	*454*	*639*	*591*	*642*	*668*
World	**2,659**	**3,185**	**3,193**	**3,243**	**3,124**	**2,904**	**2,454**	**2,674**	**2,901**
Palmkernel oil production									
Indonesia	36	229	709	2,534	3,264	3,538	3,817	4,140	4,409
Malaysia	250	827	1,289	2,072	2,332	2,280	2,149	2,312	2,366
Thailand	n/a	n/a	n/a	140	176	184	207	271	258
Colombia	n/a	n/a	n/a	80	95	107	127	133	138
Nigeria	82	146	190	108	109	114	118	124	130
Papua New Guinea	n/a	n/a	n/a	43	57	58	70	75	78
Ecuador	n/a	n/a	n/a	35	37	40	49	48	48
Others	*195*	*261*	*349*	*379*	*453*	*466*	*475*	*496*	*535*
World	**563**	**1,463**	**2,537**	**5,391**	**6,523**	**6,787**	**7,012**	**7,599**	**7,962**
Palmkernel oil consumption									
Indonesia	29	66	113	851	1,518	1,670	1,920	2,186	1,920
Malaysia	4	117	686	1,420	1,414	1,504	1,467	1,498	1,542
European Union	238	417	500	537	674	675	777	739	770
China	1	12	31	421	495	578	595	702	751
United States	69	149	224	279	266	274	346	371	369
Brazil	2	10	55	201	249	241	227	254	266
India	1	7	13	198	265	245	124	150	157
Nigeria	24	146	175	107	105	113	111	114	119
Japan	15	39	64	69	78	87	77	76	83
Others	*132*	*426*	*644*	*1,145*	*1,328*	*1,341*	*1,249*	*1,267*	*1,836*
World	**515**	**1,389**	**2,505**	**5,228**	**6,392**	**6,728**	**6,893**	**7,357**	**7,813**

Source: Oil World (March 22, 2019 update), World Bank.
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 1980/81, 1990/91, 2000/01 and EU-28 for 2010-2017.

Coffee



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.



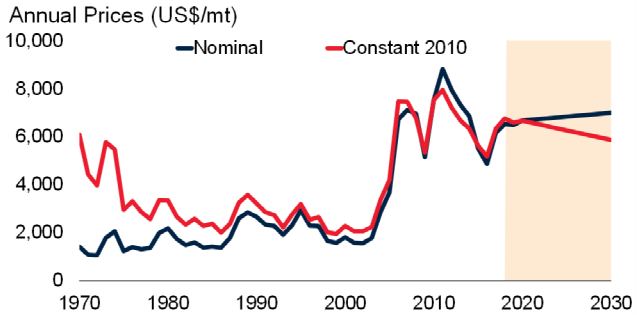
Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2015/16	2016/17	2017/18	2018/19
					(thousand 60kg bags)				
Production									
Brazil	11,000	21,500	31,000	34,100	54,500	49,400	56,100	50,900	63,400
Vietnam	56	77	1,200	15,333	19,415	28,930	26,700	29,300	30,400
Colombia	8,000	13,500	14,500	10,500	8,525	14,000	14,600	13,825	14,300
Indonesia	2,330	5,365	7,480	6,495	9,325	12,100	10,600	10,400	10,900
Honduras	545	1,265	1,685	2,821	3,975	5,300	7,510	7,600	7,600
Ethiopia	2,589	3,264	3,500	2,768	6,125	6,510	6,943	7,055	7,100
India	1,914	1,977	2,970	5,020	5,035	5,800	5,200	5,266	5,200
Uganda	2,667	2,133	2,700	3,097	3,212	3,650	5,200	4,350	4,800
Mexico	3,200	3,862	4,550	4,800	4,000	2,300	3,300	4,075	4,500
Peru	1,114	1,170	1,170	2,824	4,100	3,500	4,225	4,375	4,400
Guatemala	1,965	2,702	3,282	4,564	3,960	3,295	3,570	3,780	3,890
Nicaragua	641	971	460	1,610	1,740	2,125	2,625	2,725	2,525
Malaysia	66	88	75	700	1,100	2,200	2,100	2,100	2,100
China	n/a	n/a	n/a	n/a	827	1,900	1,900	2,000	2,000
Cote d'Ivoire	3,996	6,090	3,300	5,100	1,600	1,600	1,090	1,250	1,400
Costa Rica	1,295	2,140	2,565	2,502	1,575	1,625	1,300	1,500	1,350
Tanzania	909	1,060	763	809	1,050	1,100	1,050	1,150	1,300
Papua New Guinea	401	880	964	1,041	865	750	1,115	810	800
Kenya	999	1,568	1,455	864	710	750	815	715	750
Others	*15,515*	*16,562*	*16,562*	*12,269*	*9,770*	*6,104*	*5,871*	*5,706*	*5,778*
World	**59,202**	**86,174**	**100,181**	**117,217**	**141,409**	**152,939**	**161,814**	**158,882**	**174,493**
Consumption									
European Union	n/a	n/a	n/a	n/a	41,350	44,495	42,345	45,725	46,100
United States	305	297	229	183	22,383	25,083	25,522	25,835	26,509
Brazil	8,890	7,975	9,000	13,100	19,420	20,855	21,625	22,420	23,200
Japan	n/a	n/a	n/a	n/a	7,015	8,060	8,210	8,253	8,252
Philippines	496	432	810	900	2,825	6,210	6,995	6,510	5,625
Russia	n/a	n/a	n/a	n/a	4,355	4,395	4,740	4,485	4,950
Canada	n/a	n/a	n/a	n/a	4,245	4,545	4,550	4,750	4,700
China	n/a	n/a	n/a	n/a	1,106	2,833	3,655	3,825	4,200
Indonesia	888	1,228	1,295	1,335	1,650	3,175	3,203	3,560	3,900
Ethiopia	1,170	1,600	1,900	1,667	2,860	3,110	3,100	3,110	3,120
Vietnam	31	35	100	417	1,337	2,630	2,770	2,880	2,990
Korea, Rep.	n/a	n/a	n/a	n/a	1,910	2,465	2,725	2,735	2,750
Mexico	1,512	1,500	1,400	978	2,620	2,325	2,057	2,280	2,750
Algeria	n/a	n/a	n/a	n/a	1,815	2,320	2,205	2,300	2,340
Australia	n/a	n/a	n/a	n/a	1,445	1,785	1,730	1,875	1,900
Switzerland	n/a	n/a	n/a	n/a	1,570	1,420	1,450	1,525	1,700
Colombia	1,349	1,825	1,615	1,530	1,120	1,415	1,450	1,500	1,600
India	665	887	1,224	959	1,231	1,250	1,200	1,215	1,250
Venezuela	638	1,090	850	735	1,305	1,151	1,133	1,217	1,214
Others	*n/a*	*n/a*	*n/a*	*n/a*	*12,933*	*13,206*	*13,629*	*14,274*	*14,539*
World	**19,408**	**20,438**	**22,265**	**26,303**	**134,495**	**152,728**	**154,294**	**160,274**	**163,589**

Source: USDA (April 9, 2019 update).
Note: n/a implies data not available. European Union includes EU-15 for 1980/81, 1990/91, 2000/01 and EU-28 for 2010-2018.

Copper

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.



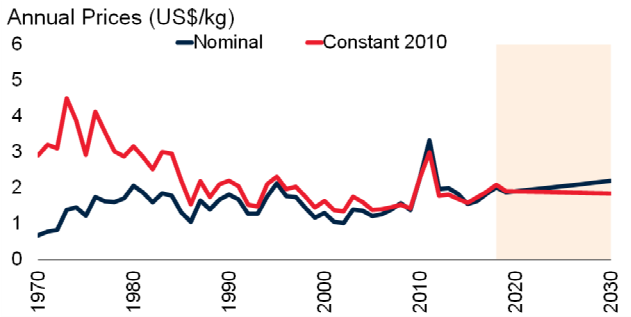
Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1980	1990	2000	2005	2010	2015	2016	2017	2018
					(thousand metric tons)				
Mine Production									
Chile	686	1,068	1,588	4,602	5,419	5,772	5,553	5,504	5,831
Peru	220	367	323	554	1,247	1,701	2,354	2,446	2,437
China	n/a	165	300	593	1,156	1,712	1,900	1,706	1,507
Congo, Dem. Rep.	386	n/a	n/a	33	378	1,039	1,024	1,095	1,222
United States	1,560	1,181	1,588	1,444	1,110	1,416	1,462	1,290	1,208
Zambia	684	610	546	249	767	711	763	900	998
Australia	158	244	330	832	872	996	948	860	980
Kazakhstan	n/a	n/a	n/a	430	381	550	600	750	800
Indonesia	0	59	162	1,012	864	579	728	622	746
Russia	n/a	n/a	n/a	530	703	711	702	705	744
Mexico	61	175	299	365	270	594	766	742	735
Canada	610	716	794	634	522	715	693	595	543
Poland	83	343	370	454	426	426	424	420	402
Others	*1,755*	*2,811*	*3,027*	*1,475*	*1,988*	*2,435*	*2,742*	*2,567*	*2,615*
World	**6,202**	**7,739**	**9,327**	**13,206**	**16,102**	**19,357**	**20,658**	**20,201**	**20,768**
Refined Production									
China	120	295	558	1,371	4,540	7,969	8,436	8,889	8,949
Chile	647	811	1,192	2,668	3,244	2,688	2,613	2,430	2,461
Japan	603	1,014	1,008	1,437	1,549	1,483	1,553	1,488	1,595
United States	1,489	1,730	2,017	1,802	1,095	1,140	1,220	1,080	1,107
Russia	n/a	n/a	n/a	842	900	876	867	949	949
Congo, Dem. Rep.	683	n/a	n/a	29	259	793	737	718	824
Germany	134	425	532	709	704	678	671	694	678
South Korea	5	88	192	471	565	645	645	663	569
India	9	23	46	260	664	790	788	831	555
Zambia	683	608	426	226	767	496	426	466	529
Poland	69	357	346	486	547	574	536	522	502
Kazakhstan	n/a	n/a	n/a	395	323	395	408	426	443
Spain	55	154	171	316	348	420	429	415	432
Others	*2,231*	*3,970*	*4,186*	*3,761*	*3,593*	*4,022*	*4,063*	*4,024*	*4,180*
World	**6,729**	**9,475**	**10,675**	**14,774**	**19,096**	**22,969**	**23,393**	**23,594**	**23,772**
Refined Consumption									
China	180	286	512	1,869	7,385	11,353	11,642	11,790	12,482
United States	1860.2	1,868	2,150	2,979	1,760	1,796	1,811	1,771	1,825
Germany	787.5	870	1,028	1,309	1,312	1,219	1,243	1,180	1,208
Japan	820.6	1,158	1,577	1,351	1,060	997	973	998	1,039
Korea, Rep.	9.8	85	324	862	856	705	759	656	621
Italy	274	388	475	674	619	613	596	635	552
India	55	77	135	246	514	491	499	486	512
Turkey	14.1	33	103	248	369	468	464	445	451
Mexico	54	117	127	464	274	393	423	372	399
Others	*3,236*	*4,502*	*4,349*	*5,094*	*5,197*	*4,857*	*4,789*	*4,947*	*4,730*
World	**7291.3**	**9,385**	**10,780**	**15,096**	**19,347**	**22,893**	**23,200**	**23,280**	**23,820**

Source: 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

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

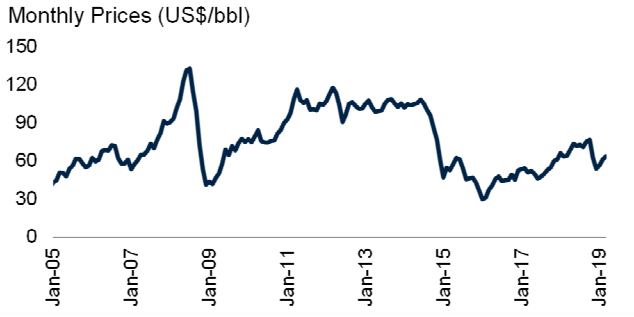


Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

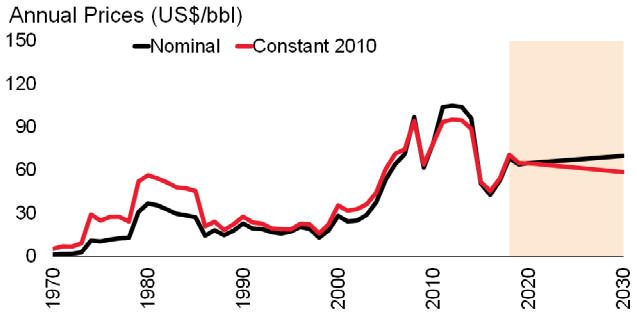
	1970/71	1980/81	1990/91	2000/01	2010/11	2016/17	2017/18	2018/19	2019/20
	(thousand metric tons)								
Production									
India	909	1,322	1,989	2,380	5,865	5,865	6,350	6,408	6,192
China	1,995	2,707	4,508	4,505	6,400	4,900	5,890	5,720	5,655
United States	2,219	2,422	3,376	3,742	3,942	3,738	4,555	4,028	4,899
Brazil	594	623	717	939	1,960	1,530	1,965	2,024	2,565
Pakistan	543	714	1,638	1,816	1,948	1,663	1,795	2,005	1,842
Turkey	400	500	655	880	594	703	840	852	1,018
Australia	19	99	433	804	898	960	1,044	636	710
Uzbekistan	n/a	1,671	1,593	975	910	789	800	800	641
Mexico	312	353	175	72	157	207	335	320	395
Benin	n/a	n/a	253	140	85	151	257	305	325
Mali	n/a	n/a	505	130	109	261	196	275	315
Others	*n/a*	*n/a*	*3,110*	*3,142*	*2,541*	*2,327*	*2,839*	*2,516*	*3,005*
World	**11,740**	**13,831**	**18,951**	**19,524**	**25,408**	**23,094**	**26,866**	**25,889**	**27,561**
Stocks									
China	412	476	1,589	3,755	2,087	10,632	9,217	7,519	7,660
India	376	491	539	922	1,850	1,701	2,183	2,183	1,893
United States	915	581	510	1,306	566	697	899	922	1,633
Brazil	321	391	231	755	1,400	1,045	1,478	1,666	1,426
Pakistan	55	131	313	608	316	734	808	917	845
Turkey	24	112	150	283	412	705	939	857	832
Bangladesh	n/a	8	35	27	216	379	422	450	468
Others	*2,502*	*2,961*	*3,393*	*2,957*	*2,616*	*2,922*	*3,341*	*3,199*	*2,958*
World	**4,605**	**5,151**	**6,761**	**10,614**	**9,463**	**18,815**	**19,287**	**17,713**	**17,714**
Exports									
United States	848	1,290	1,697	1,467	3,130	3,248	3,527	3,266	3,464
Brazil	220	21	167	68	435	607	930	1,118	2,110
Australia	4	53	329	849	545	812	905	789	600
India	34	140	255	24	1,085	991	1,126	1,126	547
Benin			96	42	24	137	299	297	330
Mali	19	35	114	134	92	240	261	321	308
Greece	n/a	n/a	390	71	24	198	234	265	269
Others	*n/a*	*n/a*	*2,021*	*3,150*	*2,382*	*1,957*	*1,793*	*2,284*	*2,031*
World	**3,875**	**4,414**	**5,069**	**5,805**	**7,717**	**8,190**	**9,075**	**9,466**	**9,659**
Imports									
China	108	773	480	52	2,609	1,096	1,358	1,548	2,000
Bangladesh	0	45	80	248	843	1,412	1,671	1,805	1,797
Vietnam	33	40	31	84	350	1,198	1,574	1,717	1,667
Indonesia	36	106	324	570	471	746	797	825	920
Turkey	1	0	46	381	760	801	833	833	652
Pakistan	1	0	43	410	283	538	671	917	595
India	155	9	49	350	87	228	330	330	347
Others	*3,753*	*3,582*	*4,167*	*3,670*	*2,354*	*2,109*	*1,841*	*1,491*	*1,682*
World	**4,086**	**4,555**	**5,220**	**5,764**	**7,756**	**8,128**	**9,075**	**9,466**	**9,659**

Source: ICAC (April 2019 update).
Note: n/a implies data not available.

Crude oil



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

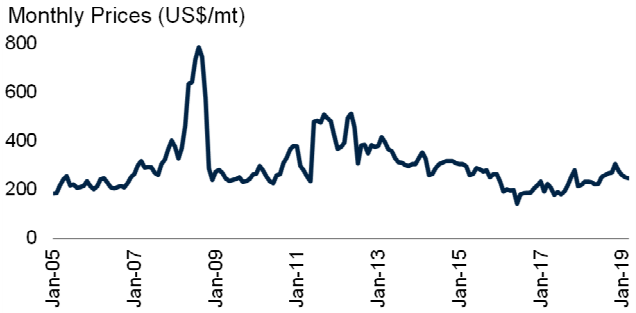


Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

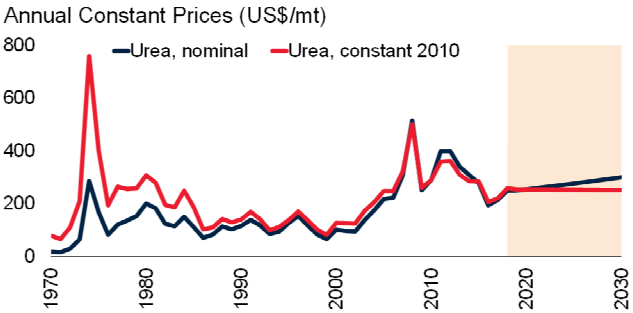
	1970	1980	1990	2000	2010	2014	2015	2016	2017
				(thousand barrels per day)					
Production									
United States	11,297	10,170	8,914	7,732	7,549	11,768	12,750	12,366	13,057
Saudi Arabia	3,851	10,270	7,105	9,470	10,075	11,505	11,994	12,402	11,951
Russia	n/a	n/a	10,342	6,584	10,383	10,860	11,009	11,269	11,257
Iran	3,848	1,479	3,270	3,852	4,430	3,724	3,862	4,602	4,982
Canada	1,473	1,764	1,968	2,703	3,332	4,271	4,389	4,470	4,831
Iraq	1,549	2,658	2,149	2,613	2,469	3,239	3,986	4,423	4,520
United Arab Emirates	780	1,735	1,985	2,599	2,915	3,599	3,873	4,020	3,935
China	616	2,122	2,778	3,257	4,077	4,246	4,309	3,999	3,846
Kuwait	3,036	1,757	964	2,244	2,560	3,101	3,065	3,145	3,025
Brazil	167	188	651	1,276	2,137	2,341	2,525	2,608	2,734
Mexico	487	2,129	2,941	3,456	2,959	2,784	2,587	2,456	2,224
Venezuela	3,754	2,228	2,244	3,112	2,842	2,692	2,631	2,387	2,110
Nigeria	1,083	2,058	1,787	2,175	2,534	2,278	2,204	1,903	1,988
Norway	n/a	528	1,716	3,346	2,137	1,889	1,946	1,995	1,969
Qatar	363	476	434	853	1,638	1,985	1,958	1,970	1,916
Kazakhstan	n/a	n/a	571	740	1,676	1,710	1,695	1,655	1,835
Angola	103	150	475	746	1,812	1,668	1,772	1,755	1,674
Algeria	1,052	1,139	1,347	1,549	1,689	1,589	1,558	1,577	1,540
United Kingdom	4	1,676	1,933	2,696	1,356	852	963	1,013	999
Oman	332	285	695	955	865	943	981	1,004	971
Indonesia	854	1,577	1,539	1,456	1,003	852	841	882	949
India	140	193	715	726	882	887	876	856	865
Libya	3,357	1,862	1,424	1,475	1,659	498	432	426	865
Others	*n/a*	*n/a*	*7,054*	*9,292*	*10,346*	*9,440*	*9,341*	*8,840*	*8,606*
World	**48,072**	**62,947**	**65,001**	**74,907**	**83,325**	**88,721**	**91,547**	**92,023**	**92,649**
Consumption									
United States	14,710	17,062	16,988	19,701	19,180	19,106	19,531	19,687	19,880
China	554	1,707	2,297	4,697	9,436	11,209	11,986	12,302	12,799
India	390	643	1,211	2,259	3,319	3,849	4,164	4,560	4,690
Japan	3,876	4,905	5,240	5,542	4,442	4,303	4,151	4,031	3,988
Saudi Arabia	435	592	1,136	1,627	3,206	3,753	3,875	3,939	3,918
Russia	n/a	n/a	5,042	2,540	2,878	3,301	3,162	3,193	3,224
Brazil	516	1,125	1,417	2,029	2,716	3,242	3,181	3,013	3,017
Korea, Rep.	162	476	1,041	2,260	2,370	2,454	2,577	2,771	2,796
Germany	2,765	3,014	2,685	2,746	2,445	2,348	2,340	2,378	2,447
Canada	1,472	1,898	1,747	2,043	2,306	2,399	2,348	2,401	2,428
Mexico	441	1,072	1,611	1,952	2,040	1,960	1,939	1,977	1,910
Iran	224	570	1,004	1,404	1,791	1,953	1,766	1,722	1,816
Indonesia	138	386	652	1,148	1,411	1,681	1,564	1,580	1,652
France	1,860	2,220	1,895	1,994	1,763	1,616	1,615	1,600	1,615
United Kingdom	2,031	1,649	1,751	1,713	1,623	1,518	1,561	1,592	1,598
Others	*n/a*	*n/a*	*20,810*	*23,146*	*27,609*	*28,294*	*29,083*	*29,742*	*30,408*
World	**45,227**	**61,300**	**66,527**	**76,801**	**88,535**	**92,986**	**94,843**	**96,488**	**98,186**

Source: BP Statistical Review (June 2018 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 2019.
Download data and charts.

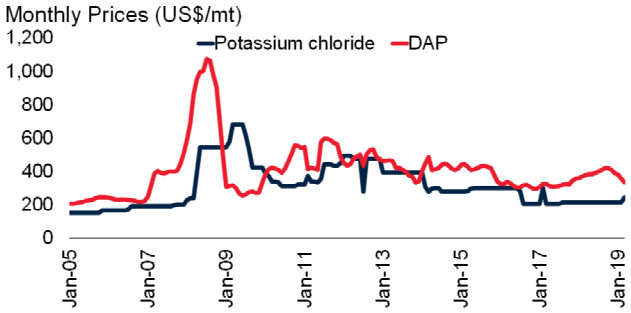


Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

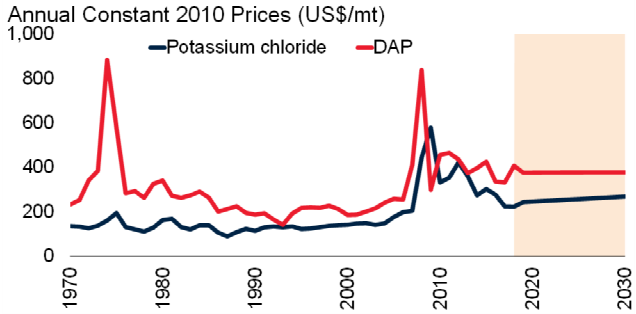
	1970	1980	1990	2000	2010	2013	2014	2015	2016
				(thousand tonnes nutrients)					
Production									
China	1,200	9,993	14,637	22,175	35,678	36,810	35,238	36,312	32,801
India	838	2,164	6,993	10,943	12,178	12,409	12,434	13,476	13,377
United States	8,161	12,053	10,816	8,352	9,587	8,880	9,191	9,315	10,084
Russia	n/a	n/a	n/a	5,452	6,544	6,819	6,678	7,380	8,152
Canada	726	1,755	2,683	3,797	3,364	3,213	3,323	3,604	3,482
Indonesia	45	958	2,462	2,853	3,207	3,442	3,406	3,456	3,404
Pakistan	140	572	1,120	2,054	2,629	2,589	2,647	2,918	3,233
Egypt	118	401	678	1,441	2,761	2,274	1,941	1,721	2,799
Qatar	n/a	295	350	748	1,556	2,535	2,499	2,618	2,603
Saudi Arabia	0	138	568	1,278	1,695	1,920	2,119	2,330	2,588
Iran	31	72	376	726	1,524	1,920	1,733	1,918	2,273
Ukraine	n/a	n/a	3,004	2,130	2,312	2,394	1,866	1,587	1,718
Poland	1,030	1,290	1,233	1,497	1,509	1,456	1,394	1,372	1,368
Netherlands	957	1,624	1,928	1,300	1,175	1,281	1,328	1,226	1,320
Belarus	n/a	n/a	747	574	740	922	1,036	1,074	1,061
Algeria	22	24	80	91	21	68	438	778	1,043
Belgium	594	743	770	935	947	1,053	1,027	1,044	1,002
Lithuania	n/a	n/a	n/a	530	882	810	909	856	994
Germany	1,900	2,380	1,165	1,558	1,289	1,316	1,316	1,253	991
Others	*16,927*	*28,491*	*22,354*	*18,191*	*18,518*	*19,170*	*18,821*	*19,048*	*19,198*
World	**32,690**	**62,951**	**71,964**	**86,623**	**108,116**	**111,282**	**109,344**	**113,285**	**113,489**
Consumption									
China	2,987	11,787	19,233	22,720	25,440	28,240	25,705	27,729	26,064
India	1,310	3,522	7,566	10,911	16,558	16,750	16,950	17,372	16,735
United States	7,363	10,818	10,239	10,467	11,737	12,384	11,861	12,162	11,789
Brazil	276	886	797	1,998	2,855	3,699	3,871	3,533	4,366
Pakistan	264	843	1,472	2,265	3,143	3,177	3,313	2,672	3,730
Indonesia	184	851	1,610	1,964	3,045	2,819	2,981	2,833	2,990
Canada	323	946	1,158	1,592	1,990	2,457	2,557	2,537	2,425
France	1,425	2,146	2,493	2,317	2,337	2,177	2,195	2,212	2,240
Russia	n/a	n/a	4,344	960	1,483	1,537	1,496	1,814	2,025
Turkey	243	782	1,200	1,276	1,344	1,584	1,493	1,487	1,896
Germany	1,642	2,303	1,787	1,848	1,786	1,675	1,823	1,711	1,658
Mexico	406	878	1,346	1,342	1,166	1,518	1,524	1,376	1,577
Australia	123	248	439	951	982	1,315	1,407	1,347	1,514
Vietnam	166	129	425	1,332	1,250	1,261	1,354	1,718	1,462
Ukraine	n/a	n/a	1,836	350	650	1,219	1,181	1,265	1,399
Egypt	331	554	745	1,084	1,159	1,104	1,123	1,219	1,311
Thailand	50	136	577	922	1,311	1,419	1,409	1,240	1,225
Bangladesh	99	266	609	996	1,237	1,132	1,321	1,258	1,209
Poland	785	1,344	671	896	1,090	1,098	1,004	1,043	1,096
Others	*13,446*	*22,054*	*18,231*	*15,880*	*16,683*	*17,895*	*18,199*	*17,872*	*18,617*
World	**31,423**	**60,493**	**76,777**	**82,070**	**97,246**	**104,460**	**102,766**	**104,397**	**105,328**

Source: IFA (http://ifadata.fertilizer.org/ucSearch.aspx, September 2017 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 www.fertilizers.org for details).

Fertilizers—Phosphate and Potash



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

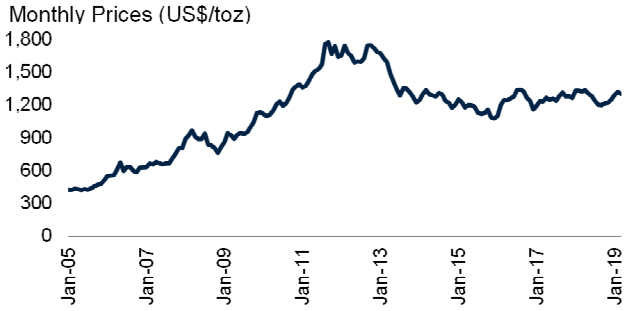


Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

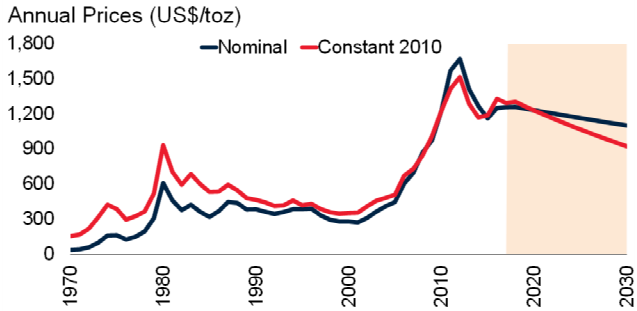
	1970	1980	1990	2000	2010	2013	2014	2015	2016
				(thousand tonnes nutrients)					
Phosphate: Production									
China	907	2,607	4,114	6,759	15,998	16,545	16,576	17,224	17,296
India	228	854	2,077	3,751	4,378	3,973	4,125	4,429	4,560
United States	4,903	7,437	8,105	7,337	6,297	5,861	5,578	5,257	4,266
Morocco	99	174	1,180	1,122	1,875	2,198	2,403	2,169	3,115
Russia	n/a	n/a	4,943	2,320	2,926	2,743	2,698	3,018	3,024
Brazil	169	1,623	1,091	1,496	2,004	2,100	1,990	2,021	1,983
Saudi Arabia	0	0	0	159	119	919	1,220	1,328	1,343
Others	*14,279*	*20,982*	*14,908*	*9,800*	*8,935*	*8,824*	*8,892*	*8,692*	*8,547*
World	**20,585**	**33,677**	**36,417**	**32,744**	**42,532**	**43,162**	**43,481**	**44,139**	**44,134**
Phosphate: Consumption									
China	907	2,952	5,770	8,664	13,093	13,629	13,948	12,112	11,858
India	305	1,091	3,125	4,248	8,050	5,634	6,099	6,979	6,705
Brazil	416	1,965	1,202	2,544	3,384	4,641	4,752	4,401	4,973
United States	4,345	4,926	3,811	3,862	3,890	4,339	4,079	4,302	4,234
Indonesia	45	274	581	263	500	1,260	1,331	1,442	1,471
Pakistan	31	227	389	675	767	880	974	1,007	1,269
Canada	326	634	578	634	723	886	944	1,025	973
Australia	757	853	579	1,107	817	816	919	963	890
Turkey	163	483	625	629	515	623	570	585	792
Others	*13,581*	*18,507*	*19,263*	*10,186*	*9,925*	*11,191*	*11,306*	*11,087*	*11,562*
World	**20,875**	**31,912**	**35,920**	**32,812**	**41,663**	**43,898**	**44,921**	**43,904**	**44,727**
Potash: Production									
Canada	3,179	7,337	7,005	9,174	10,289	9,461	10,636	11,500	10,938
Russia	n/a	n/a	n/a	3,716	6,128	6,086	7,340	8,056	7,509
Belarus	n/a	n/a	4,992	3,372	5,223	4,229	6,286	6,402	6,110
China	0	20	46	275	3,101	4,565	5,680	6,130	5,880
Germany	4,824	6,123	4,967	3,409	2,962	2,968	3,053	3,055	2,394
Israel	576	797	1,296	1,748	1,944	2,150	2,126	1,585	2,350
Chile	21	23	41	408	850	1,187	1,239	1,229	1,203
Jordan	0	0	842	1,162	1,166	1,047	1,255	1,413	1,202
Spain	525	691	642	522	313	692	703	723	670
Others	*8,346*	*12,616*	*3,007*	*2,356*	*1,730*	*1,648*	*-3,820*	*155*	*2,548*
World	**17,471**	**27,608**	**22,838**	**26,141**	**33,706**	**34,033**	**34,497**	**40,247**	**40,803**
Potash: Consumption									
China	25	527	1,761	3,364	5,861	7,050	9,200	10,000	9,850
Brazil	307	1,267	1,210	2,760	3,894	5,094	5,395	5,161	5,727
United States	3,827	5,733	4,537	4,469	4,165	4,819	4,450	4,788	4,790
India	199	618	1,309	1,565	3,514	2,099	2,533	2,402	2,508
Indonesia	18	91	310	266	1,250	1,620	1,772	1,635	1,600
Malaysia	61	250	494	650	1,150	1,290	1,237	1,119	1,119
Vietnam	38	39	29	450	400	570	600	527	591
Others	*11,255*	*15,254*	*14,605*	*8,494*	*7,929*	*9,012*	*9,470*	*9,275*	*9,453*
World	**15,730**	**23,779**	**24,254**	**22,018**	**28,164**	**31,554**	**34,657**	**34,908**	**35,639**

Source: IFA (http://ifadata.fertilizer.org/ucSearch.aspx, September 2017 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 www.fertilizers.org for details).

Gold



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.



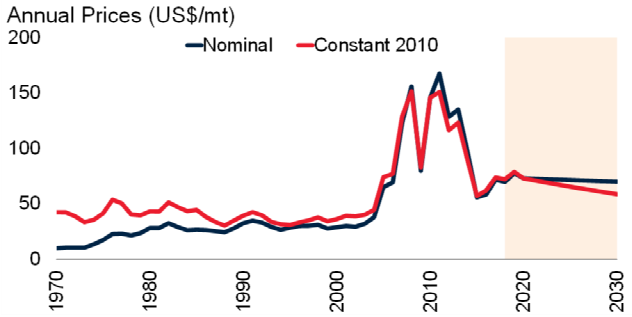
Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1990	2000	2005	2010	2014	2015	2016	2017	2018
					(metric tons)				
Production									
China	100	177	255	341	452	450	453	426	389
Australia	242	296	262	257	274	279	291	294	312
Russia	n/a	143	163	201	249	257	253	270	311
United States	294	353	256	231	210	214	222	237	212
Canada	169	156	121	103	152	163	164	176	187
Ghana	17	78	67	92	138	130	129	137	158
Peru	9	133	208	164	140	147	153	151	143
Sudan	0	6	5	2	73	82	93	107	127
South Africa	605	431	295	189	152	145	142	137	119
Mexico	9	26	27	79	118	135	132	127	117
Indonesia	11	127	143	106	69	92	81	99	106
Uzbekistan	n/a	88	84	90	100	100	100	100	102
Kazakhstan	n/a	28	18	30	50	64	75	85	97
Brazil	102	60	38	62	81	83	80	85	95
Argentina	1	26	28	64	60	63	56	63	63
Papua New Guinea	34	75	68	67	56	58	62	60	54
Mali	2	29	49	42	45	47	47	51	49
Guinea	6	16	25	25	23	21	30	47	47
Burkina Faso	3	1	1	24	36	37	39	46	44
Others	*528*	*308*	*391*	*488*	*583*	*574*	*612*	*627*	*586*
World	**2,133**	**2,555**	**2,504**	**2,657**	**3,063**	**3,139**	**3,215**	**3,325**	**3,320**
Fabrication									
India	n/a	704	695	783	771	812	506	783	n/a
China	46	213	277	523	1,013	920	788	771	n/a
United States	n/a	277	219	179	150	164	168	145	n/a
Turkey	n/a	228	303	109	156	112	101	122	n/a
Japan	205	161	165	158	119	102	99	100	n/a
Italy	n/a	522	290	126	96	94	88	89	n/a
Korea, Rep.	n/a	107	83	93	82	79	78	80	n/a
United Arab Emirates	n/a	50	55	33	42	45	45	56	n/a
South Africa	18	14	10	25	25	31	38	52	n/a
Russia	n/a	34	61	61	70	52	47	46	n/a
Indonesia	84	99	87	45	53	50	45	45	n/a
Iran	n/a	46	41	72	62	56	35	42	n/a
Switzerland	n/a	54	56	41	44	41	34	33	n/a
Germany	n/a	64	52	41	36	32	32	32	n/a
Malaysia	45	86	74	45	45	39	34	30	n/a
Canada	n/a	25	27	44	32	40	41	29	n/a
Singapore	31	26	30	28	29	29	27	28	n/a
Saudi Arabia	n/a	153	125	47	37	41	32	27	n/a
Thailand	86	79	69	27	27	27	24	24	n/a
Others	*n/a*	*819*	*608*	*400*	*356*	*356*	*315*	*310*	*n/a*
World	**3,294**	**3,761**	**3,325**	**2,878**	**3,244**	**3,122**	**2,575**	**2,841**	**n/a**

Source: GFMS, Thomson Reuters, British Geological Survey, 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

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.



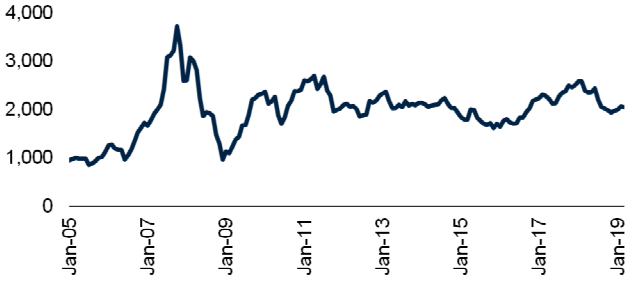
Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1971	1980	1990	2000	2010	2014	2015	2016	2017
					(million metric tons)				
Iron Ore Production									
Australia	62	99	109	176	433	746	811	858	883
Brazil	38	113	152	209	372	399	423	434	436
India	34	41	54	75	209	140	143	185	202
China	55	113	148	105	357	195	124	114	115
Russia	n/a	n/a	n/a	87	99	101	102	104	107
South Africa	10	n/a	30	34	55	67	61	66	62
Ukraine	n/a	n/a	n/a	56	79	82	82	75	60
Iran	n/a	n/a	2	12	33	48	39	43	55
Canada	43	49	37	36	38	44	46	47	49
United States	82	71	55	63	50	54	43	42	48
Sweden	34	27	20	21	25	28	25	27	27
Mexico	5	8	9	11	14	17	20	19	17
Chile	11	9	8	8	10	13	15	16	16
Mauritania	8	9	11	11	11	13	12	13	12
Kazakhstan	n/a	n/a	n/a	15	18	16	11	10	11
Peru	9	6	3	4	9	7	7	8	9
Mongolia	n/a	n/a	n/a	n/a	3	7	6	6	8
Turkey	2	3	6	4	6	11	10	8	6
Venezuela	20	14	20	17	14	6	8	7	5
Liberia	23	18	4	n/a	n/a	5	4	2	2
Norway	4	4	2	0	3	4	3	2	2
Others	*n/a*	*n/a*	*n/a*	*14*	*36*	*73*	*34*	*31*	*32*
World	**781**	**931**	**984**	**959**	**1,874**	**2,077**	**2,030**	**2,116**	**2,163**
Crude steel production									
China	21	37	66	129	639	822	804	808	832
Japan	89	111	110	106	110	101	105	105	105
India	6	10	15	27	69	87	89	95	101
United States	109	101	90	102	80	88	79	78	82
Russia	n/a	n/a	n/a	59	67	71	71	71	71
Korea, Rep.	0	9	23	43	59	72	70	69	71
Germany	40	44	38	46	44	43	43	42	43
Turkey	1	3	9	14	29	34	32	33	38
Brazil	6	15	21	28	33	34	33	31	34
Italy	17	27	25	27	26	24	22	23	24
Taiwan, China	0	3	10	17	20	23	21	22	22
Iran	n/a	1	1	7	12	16	16	18	22
Ukraine	n/a	n/a	n/a	32	33	27	23	24	21
Mexico	4	7	9	16	17	19	18	19	20
France	23	23	19	21	15	16	15	14	16
Spain	8	13	13	16	16	14	15	14	14
Canada	11	16	12	17	13	13	12	13	14
Others	*n/a*	*n/a*	*n/a*	*143*	*151*	*165*	*152*	*147*	*160*
World	**583**	**716**	**770**	**849**	**1,433**	**1,669**	**1,620**	**1,627**	**1,690**

Source: Steel Statistical Yearbook 2018.
Note: n/a implies data not available. Crude steel production includes all qualities: carbon, stainless, and other alloy.

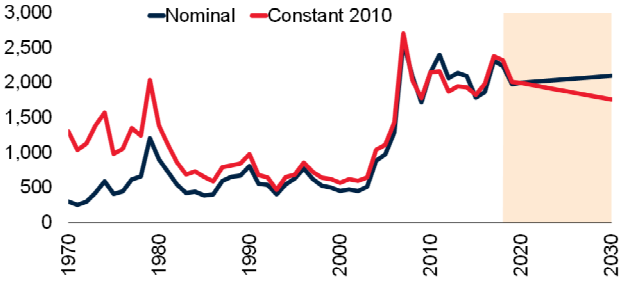
Lead

Monthly Prices (US$/mt)



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

Annual Prices (US$/mt)



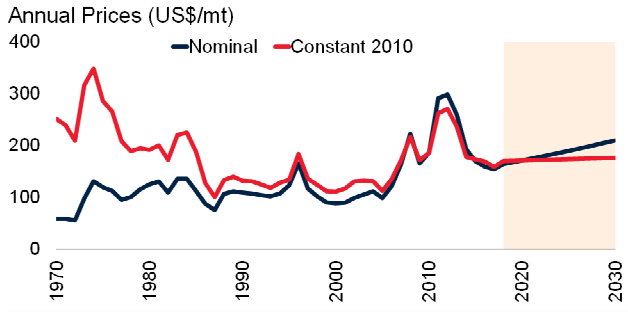
Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970	1980	1990	2000	2010	2015	2016	2017	2018
					(thousand metric tons)				
Mine Production									
China	100	160	350	660	1,981	2,335	2,337	2,300	2,916
Australia	457	397	565	651	711	653	441	459	472
Peru	157	189	188	271	262	316	314	307	289
United States	519	550	497	465	369	367	336	302	260
Mexico	177	146	177	138	192	264	242	243	235
Russia	n/a	n/a	n/a	14	97	180	195	202	206
India	2	14	26	35	84	136	151	173	175
Bolivia	n/a	17	20	10	73	75	90	112	113
Kazakhstan	n/a	n/a	n/a	39	35	41	71	112	86
Turkey	6	8	18	16	39	74	76	70	76
Sweden	78	72	98	107	68	79	76	71	63
Morocco	76	115	72	82	33	32	30	38	51
Tajikistan	n/a	n/a	n/a	2	4	31	47	51	44
Others		*n/a*	*n/a*	*564*	*412*	*386*	*374*	*434*	*417*
World	**3,350**	**3,548**	**3,143**	**3,052**	**4,360**	**4,969**	**4,780**	**4,874**	**5,403**
Refined Production									
China	100	175	300	1,100	4,158	4,422	4,604	4,716	5,113
United States	605	1,150	1,290	1,457	1,255	1,050	1,000	1,010	1,300
Korea, Rep.	n/a	15	63	219	328	641	831	800	795
India	2	26	39	57	367	501	520	565	595
United Kingdom	44	325	329	328	301	357	375	354	354
Mexico	180	184	235	233	257	344	341	343	335
Germany	138	392	394	387	405	378	339	354	289
Brazil	19	85	57	50	115	176	176	180	264
Canada	186	235	184	284	273	269	274	276	252
Japan	175	305	327	312	267	232	240	239	240
Australia	351	234	224	251	213	223	224	211	224
Italy	54	134	171	234	150	210	187	174	174
Spain	69	121	124	120	165	165	166	170	166
Others	*n/a*	*2,066*	*1,782*	*1,601*	*1,594*	*1,727*	*1,780*	*1,891*	*1,797*
World	**3,419**	**5,446**	**5,518**	**6,633**	**9,848**	**10,694**	**11,057**	**11,282**	**11,897**
Refined Consumption									
China	n/a	210	244	660	4,171	4,380	4,593	4,795	5,235
United States	n/a	1,094	1,275	1,660	1,430	1,560	1,610	1,640	1,795
Korea, Rep.	n/a	54	80	309	382	602	622	622	609
India	n/a	33	147	56	420	539	571	551	569
Germany	n/a	433	448	390	343	357	374	413	364
Brazil	n/a	83	75	155	201	240	234	251	317
Japan	n/a	393	416	343	224	269	264	287	274
United Kingdom	n/a	296	302	301	211	217	285	295	272
Spain	n/a	111	115	219	262	238	262	261	249
Others	*n/a*	*2,643*	*2,246*	*2,398*	*2,146*	*2,377*	*2,498*	*2,501*	*2,414*
World	**n/a**	**5,348**	**5,348**	**6,491**	**9,790**	**10,779**	**11,313**	**11,616**	**12,099**

Source: 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

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.



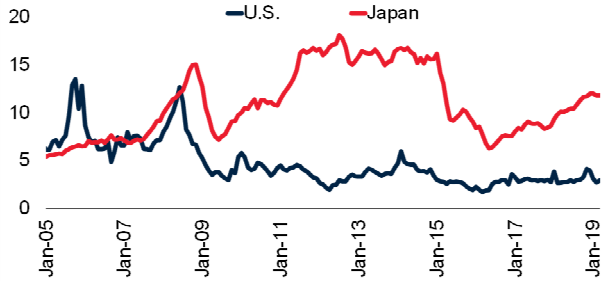
Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2015/16	2016/17	2017/18	2018/19
	(million metric tons)								
Production									
United States	105.5	168.6	201.5	251.9	315.6	345.5	384.8	371.1	366.3
China	33.0	62.6	96.8	106.0	177.2	265.0	263.6	259.1	257.3
Brazil	14.1	22.6	24.3	41.5	57.4	67.0	98.5	82.0	96.0
European Union	29.8	42.5	36.5	51.8	58.6	58.7	61.9	62.1	63.0
Argentina	9.9	12.9	7.7	15.4	25.2	29.5	41.0	32.0	47.0
Ukraine	n/a	n/a	4.7	3.8	11.9	23.3	28.0	24.1	35.8
India	7.5	7.0	9.0	12.0	21.7	22.6	25.9	28.7	27.8
Mexico	8.9	10.4	14.1	17.9	21.1	26.0	27.6	27.6	26.7
Canada	2.6	5.8	7.1	7.0	12.0	13.7	13.9	14.1	13.9
Indonesia	2.8	4.0	5.0	5.9	6.8	10.5	10.9	11.4	12.6
Russia	n/a	n/a	2.5	1.5	3.1	13.2	15.3	13.2	11.4
Nigeria	1.3	1.7	5.8	4.0	7.7	10.6	10.4	11.0	11.0
South Africa	8.6	14.9	8.6	8.0	10.9	8.2	17.6	13.1	11.0
Others	*44.0*	*55.8*	*58.2*	*64.8*	*106.6*	*79.1*	*79.0*	*84.8*	*88.5*
World	**268.1**	**408.7**	**481.8**	**591.6**	**835.9**	**972.9**	**1,078.3**	**1,034.2**	**1,068.3**
Stocks									
China	8.9	42.8	82.8	102.4	43.2	212.0	223.0	222.5	204.8
United States	16.8	35.4	38.6	48.2	28.6	44.1	58.3	54.4	51.7
European Union	2.3	4.8	3.7	3.2	5.2	6.9	7.6	9.9	6.9
Brazil	2.0	1.3	0.8	2.7	6.3	6.8	14.0	7.3	6.8
Argentina	0.0	0.1	0.6	0.9	4.0	1.4	5.3	3.9	6.6
Others	*6.2*	*18.1*	*14.9*	*17.7*	*27.9*	*40.2*	*42.6*	*42.5*	*37.2*
World	**36.1**	**102.5**	**141.4**	**175.1**	**115.4**	**311.5**	**350.7**	**340.4**	**314.0**
Exports									
United States	12.9	60.7	43.9	49.3	46.5	48.2	58.3	61.9	58.4
Brazil	0.9	0.0	0.0	6.3	8.4	14.0	31.6	25.1	31.0
Argentina	6.4	9.1	4.0	9.7	16.3	21.7	26.0	21.0	30.5
Ukraine	n/a	n/a	0.4	0.4	5.0	16.6	21.3	18.0	29.5
Russia	n/a	n/a	0.4	0.0	0.0	4.7	5.6	5.5	3.0
Serbia	0.0	0.0	0.0	0.0	2.0	1.6	2.4	0.8	2.7
Paraguay	0.0	0.0	0.0	0.6	1.8	1.9	1.9	1.8	2.2
Others	*11.9*	*10.5*	*9.8*	*10.5*	*11.4*	*11.2*	*13.0*	*12.8*	*10.8*
World	**32.2**	**80.3**	**58.4**	**76.7**	**91.6**	**119.8**	**160.1**	**147.1**	**168.2**
Imports									
European Union	18.9	26.6	5.7	3.7	7.4	13.8	15.0	18.4	22.5
Mexico	0.1	3.8	1.9	6.0	8.3	14.0	14.6	16.1	16.7
Japan	5.2	14.0	16.3	16.3	15.6	15.2	15.2	15.7	15.5
Korea, South	0.3	2.4	5.6	8.7	8.1	10.1	9.2	10.0	10.2
Vietnam	0.1	0.1	0.0	0.1	1.3	8.0	8.1	8.8	10.0
Egypt	0.1	1.0	1.9	5.3	5.8	8.7	8.8	9.5	9.7
Iran	0.0	0.4	0.8	1.3	3.5	6.6	7.8	8.9	9.5
Others	*3.7*	*25.9*	*26.2*	*33.6*	*43.4*	*62.6*	*56.9*	*62.6*	*67.9*
World	**28.4**	**74.3**	**58.5**	**75.0**	**93.4**	**139.0**	**135.6**	**150.0**	**162.0**

Source: USDA (April 9, 2018 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 1980/81, 1990/91, 2000/01 and EU-28 for 2010-2018.

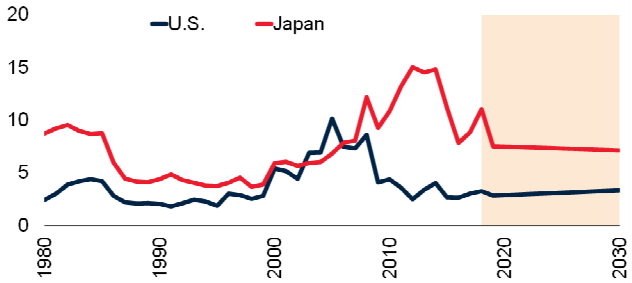
Natural gas

Monthly Prices (US$/mmbtu)



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

Annual Constant Prices (US$/mmbtu)



Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970	1980	1990	2000	2010	2014	2015	2016	2017
					(billion cubic meters)				
Production									
United States	572	525	483	519	575	705	740	729	735
Russia	n/a	n/a	600	537	598	591	584	589	636
Iran	4	5	26	59	150	183	191	203	224
Canada	54	71	103	176	150	159	161	172	176
Qatar	1	5	7	26	124	169	175	177	176
China	3	14	15	27	97	131	136	138	149
Norway	n/a	25	25	49	106	108	116	116	123
Australia	2	11	21	31	54	67	76	96	114
Saudi Arabia	2	9	32	47	83	97	99	105	111
Algeria	2	15	52	92	77	80	81	91	91
Malaysia	-	3	18	50	68	72	74	76	78
Indonesia	1	19	45	71	87	76	76	71	68
Turkmenistan	n/a	n/a	83	42	44	70	73	67	62
United Arab Emirates	1	7	20	37	50	53	59	60	60
Uzbekistan	n/a	n/a	39	53	57	54	55	53	53
Egypt	0	2	8	20	59	47	43	40	49
Nigeria	0	2	4	11	36	43	48	43	47
United Kingdom	11	36	48	114	58	37	41	42	42
Mexico	11	25	26	33	51	51	48	44	41
Thailand	n/a	n/a	7	21	38	44	41	40	39
Venezuela	9	16	24	31	31	32	36	38	37
Argentina	6	8	17	36	39	35	36	37	37
Netherlands	28	80	64	61	74	61	45	42	37
Others	*n/a*	*n/a*	*211*	*262*	*464*	*482*	*486*	*481*	*495*
World	**976**	**1,430**	**1,976**	**2,406**	**3,169**	**3,447**	**3,519**	**3,550**	**3,680**
Consumption									
United States	575	534	517	628	648	722	744	750	740
Russia	n/a	n/a	414	366	423	424	410	420	425
China	3	14	15	25	109	188	195	209	240
Iran	3	5	24	62	151	181	192	201	214
Japan	4	25	50	76	99	121	119	116	117
Canada	35	50	64	89	89	103	103	110	116
Saudi Arabia	2	9	32	47	83	97	99	105	111
Germany	16	61	64	83	88	74	77	85	90
Mexico	10	22	27	36	66	80	78	92	88
United Kingdom	12	47	55	101	99	70	72	81	79
United Arab Emirates	1	5	17	31	59	63	71	73	72
Italy	12	26	45	68	80	59	65	68	72
Egypt	0	2	8	19	43	46	46	49	56
India	1	1	12	25	60	50	46	51	54
Turkey	n/a	n/a	3	14	36	47	46	44	52
Others	*n/a*	*n/a*	*602*	*731*	*1,044*	*1,073*	*1,113*	*1,119*	*1,144*
World	**961**	**1,424**	**1,949**	**2,402**	**3,176**	**3,399**	**3,474**	**3,574**	**3,670**

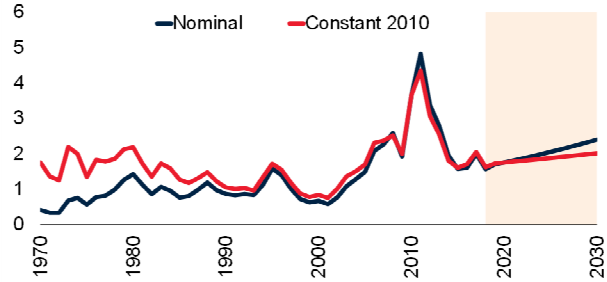
Source: BP Statistical Review (June 2018 update).
Note: n/a implies data not available.

Natural rubber

Monthly Prices (US$/kg)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

Annual Prices (US$/kg)



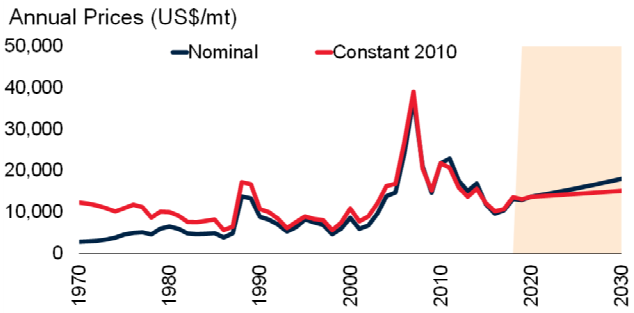
Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970	1980	1990	2000	2010	2015	2016	2017	2018
					(thousand metric tons)				
Production									
Thailand	287	501	1,275	2,346	3,252	4,473	4,519	4,775	5,145
Indonesia	815	822	1,261	1,501	2,736	3,145	3,298	3,499	3,486
Vietnam	28	46	94	291	752	1,013	1,035	1,094	1,110
China	46	113	264	445	687	794	774	798	811
India	90	155	324	629	851	575	624	713	649
Côte d'Ivoire	11	23	69	123	231	351	468	604	624
Malaysia	1,269	1,530	1,291	928	939	722	674	741	603
Myanmar	10	16	15	36	128	212	230	249	270
Brazil	42	53	78	96	136	193	190	187	192
Others	*542*	*591*	*314*	*417*	*691*	*787*	*793*	*892*	*979*
World	**3,140**	**3,850**	**4,985**	**6,811**	**10,403**	**12,264**	**12,604**	**13,551**	**13,869**
Consumption									
China	250	340	600	1,150	3,622	4,680	4,982	5,301	5,504
European Union	991	1,007	1,012	1,293	1,136	1,159	1,186	1,236	1,241
India	86	171	358	638	944	987	1,033	1,082	1,220
United States	568	585	808	1,195	926	936	932	958	1,012
Thailand	8	28	99	243	487	601	650	685	752
Japan	283	427	677	752	749	691	676	679	706
Indonesia	25	46	108	139	421	509	583	608	625
Malaysia	20	45	184	364	458	475	486	489	515
Brazil	37	81	124	227	378	398	412	398	405
Others	*822*	*1,050*	*1,099*	*1,307*	*1,638*	*1,698*	*1,730*	*1,768*	*1,833*
World	**3,090**	**3,780**	**5,068**	**7,306**	**10,759**	**12,134**	**12,670**	**13,203**	**13,813**
Exports									
Thailand	279	457	1,151	2,166	2,866	3,776	3,925	4,433	4,499
Indonesia	790	976	1,077	1,380	2,369	2,680	2,642	3,250	2,961
Vietnam	23	33	80	273	782	1,137	1,254	1,380	1,564
Malaysia	1,304	1,482	1,322	978	1,245	1,119	1,023	1,189	1,096
Côte d'Ivoire	11	23	69	121	226	348	459	591	622
Cambodia	7	15	24	33	43	128	145	189	218
Myanmar	n/a	n/a	n/a	27	67	86	109	147	171
Others	*406*	*284*	*239*	*299*	*448*	*931*	*905*	*999*	*1,071*
World	**2,820**	**3,270**	**3,962**	**5,277**	**8,047**	**10,206**	**10,463**	**12,177**	**12,202**
Imports									
China	178	242	340	820	2,888	3,851	4,131	5,277	5,211
European Union	1,071	1,068	1,072	1,474	1,427	1,536	1,543	1,571	1,614
United States	543	576	820	1,192	931	952	946	972	1,015
Malaysia	45	43	136	548	706	955	931	1,096	1,014
Japan	292	458	663	801	747	682	660	699	694
Vietnam	n/a	n/a	n/a	n/a	127	300	418	526	649
India	3	1	61	11	187	414	460	398	586
Others	*678*	*847*	*1,677*	*1,534*	*1,667*	*1,650*	*1,667*	*1,697*	*1,727*
World	**2,810**	**3,235**	**4,769**	**6,380**	**8,681**	**10,340**	**10,756**	**12,237**	**12,509**

Source: IRSG (January-March 2019 update).
Note: n/a implies data not available. European Union includes EU-15 for 1980/81, 1990/91, 2000/01 and EU-28 for 2010-2018.

Nickel

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

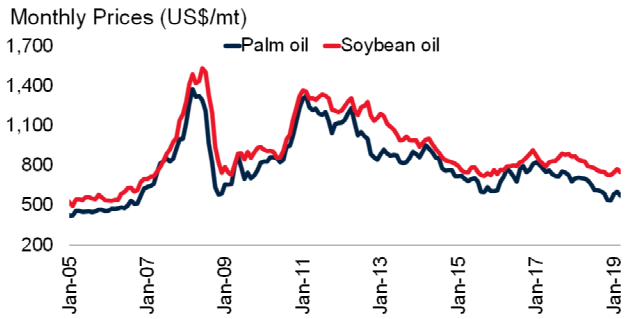


Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970	1980	1990	2000	2010	2015	2016	2017	2018
					(thousand metric tons)				
Mine Production									
Indonesia	11	41	69	98	220	130	180	339	648
Philippines	0	47	16	20	184	418	301	315	345
New Caledonia	139	87	85	126	131	193	204	215	216
Russia	n/a	n/a	n/a	266	270	261	223	221	207
Canada	277	185	196	191	160	235	235	214	180
Australia	30	74	70	166	168	229	203	179	166
China	n/a	11	27	50	80	101	100	98	99
Brazil	3	6	24	45	54	89	79	70	66
Cuba	37	38	39	68	65	54	52	53	51
Colombia	n/a	0	23	59	49	37	37	41	43
South Africa	12	26	28	37	40	57	49	48	43
Finland	5	7	11	4	12	9	21	35	42
Guatemala	n/a	7	0	n/a	0	46	55	45	38
Others		*n/a*	*n/a*	*96*	*170*	*219*	*179*	*224*	*185*
World	**663**	**758**	**906**	**1,227**	**1,605**	**2,078**	**1,917**	**2,098**	**2,329**
Refined Production									
China	n/a	11	28	51	332	600	450	425	748
Indonesia	n/a	4	5	10	19	38	117	205	277
Japan	n/a	109	100	161	166	193	196	187	187
Russia	n/a	n/a	n/a	221	262	231	189	160	149
Canada	n/a	142	135	134	105	150	158	154	146
Australia	n/a	35	45	112	102	153	121	104	116
New Caledonia	n/a	33	32	44	40	78	96	104	108
Norway	n/a	37	58	59	92	91	93	86	91
Brazil	n/a	3	13	23	28	78	77	69	66
Finland	n/a	13	17	54	50	61	85	86	61
Korea, Rep.	n/a	n/a	8	n/a	21	35	45	44	49
Colombia	n/a	0	18	28	49	37	37	41	43
United Kingdom	n/a	19	27	38	32	39	45	26	41
Others		*n/a*	*n/a*	*164*	*170*	*209*	*320*	*435*	*190*
World	**n/a**	**739**	**904**	**1,099**	**1,469**	**1,991**	**2,028**	**2,125**	**2,272**
Refined Consumption									
China	n/a	18	28	58	489	843	898	982	1,074
Japan	99	122	159	192	177	151	162	163	175
United States	149	0	18	153	119	152	136	199	136
Korea, Rep.	n/a	0	24	91	101	88	103	109	118
Taiwan, China	n/a	0	18	106	73	60	66	84	88
India	2	12	14	23	27	37	57	82	72
Germany	40	78	93	102	100	60	58	64	61
Italy	20	27	27	53	62	60	56	60	58
United Kingdom	38	23	33	34	20	18	24	37	52
Others	*228*	*437*	*427*	*340*	*257*	*314*	*363*	*332*	*347*
World	**576**	**717**	**842**	**1,150**	**1,426**	**1,783**	**1,923**	**2,112**	**2,181**

Source: 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



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
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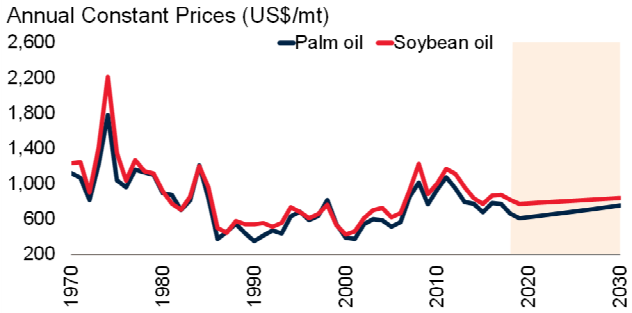
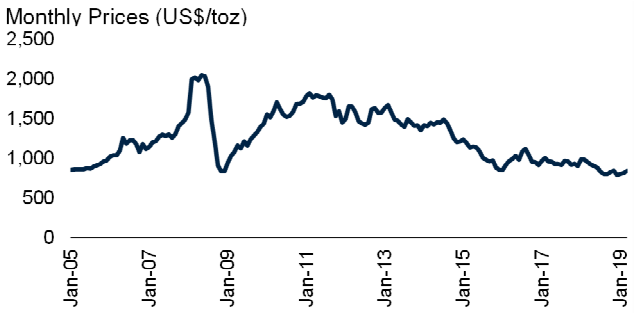


Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2015/16	2016/17	2017/18	2018/19
	(thousand metric tons)								
Palm oil Production									
Indonesia	248	752	2,650	8,300	23,600	32,000	36,000	39,500	41,500
Malaysia	589	2,692	6,031	11,937	18,211	17,700	18,858	19,683	20,500
Thailand	0	19	200	580	1,832	1,804	2,500	2,700	2,900
Colombia	36	80	252	520	753	1,268	1,099	1,633	1,625
Nigeria	432	520	600	730	971	955	990	1,025	1,015
Guatemala	0	0	6	124	231	625	740	852	852
Papua New Guinea	0	45	145	336	488	570	650	630	630
Ecuador	5	44	150	222	380	520	565	573	580
Honduras	0	18	64	148	320	490	620	580	580
Others	*612*	*726*	*936*	*1,352*	*2,420*	*2,936*	*3,205*	*3,287*	*3,299*
World	**1,922**	**4,896**	**11,034**	**24,249**	**49,206**	**58,868**	**65,227**	**70,463**	**73,481**
Palm oil Production									
Indonesia	29	561	1,330	3,263	6,269	9,270	9,160	11,000	13,050
India	1	431	259	3,160	5,910	9,100	9,450	9,180	10,600
European Union	595	607	1,509	2,790	4,750	6,600	6,800	6,750	6,700
China	53	16	1,194	2,028	5,797	4,800	4,750	5,100	6,165
Malaysia	8	420	914	1,571	2,204	3,000	2,587	3,236	3,476
Pakistan	1	231	800	1,245	2,093	2,795	2,995	3,095	3,195
Thailand	0	43	208	508	1,304	1,835	2,106	2,390	2,440
Others	*1,112*	*2,454*	*4,941*	*7,946*	*16,940*	*22,310*	*23,814*	*25,551*	*26,583*
World	**1,799**	**4,763**	**11,155**	**22,511**	**45,267**	**59,710**	**61,662**	**66,302**	**72,209**
Soybean oil production									
China	181	183	599	3,240	9,840	14,605	15,770	16,128	15,770
United States	3,749	5,112	6,082	8,355	8,568	9,956	10,035	10,781	11,145
Argentina	0	158	1,179	3,190	7,181	8,433	8,395	7,236	8,415
Brazil	0	2,601	2,669	4,333	6,970	7,627	7,755	8,535	8,195
European Union	1,260	2,478	2,317	3,033	2,343	2,841	2,736	2,841	3,154
India	2	69	425	810	1,683	990	1,620	1,386	1,620
Mexico	52	255	330	795	648	785	820	937	982
Russia	n/a	n/a	75	62	367	717	788	824	896
Paraguay	10	6	56	170	310	720	711	733	740
Others	*945*	*1,713*	*2,033*	*2,830*	*3,552*	*4,885*	*5,090*	*5,769*	*6,049*
World	**6,199**	**12,575**	**15,765**	**26,818**	**41,462**	**51,559**	**53,720**	**55,170**	**56,966**
Soybean oil consumption									
China	179	256	1,055	3,542	11,409	15,350	16,350	16,500	16,608
United States	2,854	4,134	5,506	7,401	7,506	9,145	9,010	9,696	10,364
Brazil	0	1,490	2,075	2,932	5,205	6,288	6,570	6,940	7,035
India	79	708	445	1,750	2,550	5,250	5,150	4,720	4,900
Argentina	0	56	101	247	2,520	2,840	2,985	3,081	3,075
European Union	1,170	1,926	1,879	2,186	2,400	2,285	2,205	2,225	2,280
Mexico	52	305	404	863	840	1,020	1,070	1,060	1,150
Others	*1,624*	*3,542*	*3,976*	*7,222*	*8,056*	*10,018*	*10,071*	*10,389*	*10,941*
World	**5,958**	**12,417**	**15,441**	**26,143**	**40,486**	**52,196**	**53,411**	**54,611**	**56,353**

Source: USDA (April 9, 2019 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 1980/81, 1990/91, 2000/01 and EU-28 for 2010-2018.

Platinum



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
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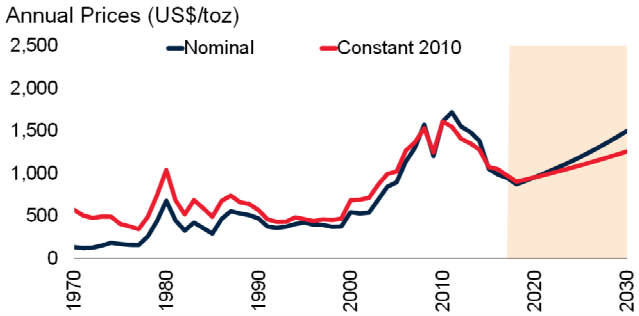
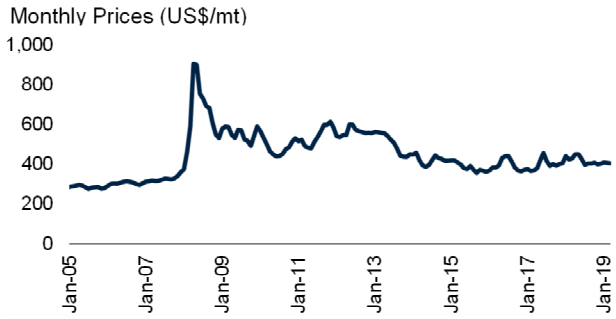


Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	2003	2005	2008	2010	2013	2014	2015	2016	2017
					(metric tons)				
Mine Production									
South Africa	146.1	157.2	145.4	147.7	135.9	100.2	140.7	133.2	132.3
Russia	25.9	29.9	25.8	24.4	23.0	21.4	22.4	21.1	22.0
Zimbabwe	4.3	5.0	5.6	8.9	12.7	12.4	12.4	15.0	14.6
Canada	4.6	7.2	7.1	4.0	6.8	8.7	7.5	8.3	7.2
United States	4.2	3.9	3.6	3.5	3.7	3.7	3.8	4.0	4.1
Others	*2.3*	*2.8*	*4.0*	*3.8*	*4.9*	*4.3*	*4.1*	*4.0*	*4.0*
World	**187.4**	**206.0**	**191.5**	**192.3**	**187.0**	**150.7**	**190.9**	**185.6**	**184.2**
Autocatalyst scrap									
North America	15.1	15.6	17.3	14.0	14.4	13.2	13.5	14.0	14.2
Europe	3.9	5.4	9.2	9.3	11.7	13.5	11.9	12.1	13.2
Japan	2.1	1.7	2.1	1.9	1.9	2.1	2.2	2.2	2.1
China	n/a	0.1	0.2	0.4	0.9	1.1	1.3	1.7	2.0
Others	*1.8*	*2.3*	*2.5*	*2.5*	*3.8*	*4.1*	*4.2*	*5.0*	*5.4*
World	**22.9**	**25.1**	**31.3**	**28.1**	**32.7**	**34.0**	**33.1**	**35.0**	**36.9**
Old jewelry scrap									
China	0.9	5.1	10.4	11.7	15.5	14.5	13.9	15.0	14.3
Japan	4.0	6.0	18.0	8.7	7.3	7.6	6.7	6.2	5.7
North America	0.1	0.2	1.3	0.4	0.3	0.3	0.2	0.2	0.2
Europe	0.1	0.1	0.4	0.3	0.2	0.2	0.2	0.2	0.2
Others	*0.1*	*0.1*	*0.0*	*0.1*	*0.1*	*0.2*	*0.1*	*0.0*	*0.1*
World	**5.2**	**11.5**	**30.1**	**21.2**	**23.4**	**22.8**	**21.1**	**21.6**	**20.5**
TOTAL SUPPLY	**215.5**	**242.6**	**252.9**	**236.7**	**234.9**	**207.4**	**245.1**	**242.2**	**241.6**
Autocatalyst demand									
Europe	41.3	56.1	56.9	44.5	37.6	40.7	43.9	46.2	45.1
North America	26.8	23.3	17.5	12.0	15.4	15.6	14.9	13.4	13.8
Japan	16.6	18.1	17.0	13.5	11.3	11.0	10.3	9.8	10.1
China	4.7	5.5	5.7	6.7	7.0	7.0	7.6	8.6	9.9
Others	*8.0*	*12.5*	*14.1*	*17.1*	*20.5*	*21.7*	*21.5*	*21.4*	*22.3*
World	**97.4**	**115.5**	**111.2**	**93.8**	**91.8**	**96.0**	**98.2**	**99.4**	**101.2**
Jewelry demand									
China	46.1	35.0	34.5	44.8	57.6	54.7	51.7	43.4	39.9
Japan	21.3	20.5	7.7	8.1	10.2	9.9	10.1	9.9	9.8
North America	9.9	8.1	6.4	6.6	7.3	7.6	7.7	7.7	7.6
Europe	8.5	7.9	7.4	6.8	6.9	6.7	6.7	6.6	6.3
Others	*2.4*	*1.2*	*1.4*	*4.9*	*3.4*	*3.9*	*4.6*	*4.5*	*5.0*
World	**88.2**	**72.7**	**57.4**	**71.2**	**85.4**	**82.8**	**80.8**	**72.1**	**68.6**
Other demand									
North America	15.8	15.8	14.2	11.3	13.5	13.6	13.6	15.6	17.3
China	n/a	4.7	9.1	7.6	10.8	8.0	10.1	17.1	15.4
Japan	9.9	13.2	17.9	10.4	1.7	2.6	17.9	17.2	10.9
Europe	11.1	9.5	9.8	9.7	9.7	11.0	11.4	11.8	11.7
Others	*14.0*	*14.0*	*18.7*	*24.1*	*12.5*	*16.9*	*14.5*	*15.0*	*18.2*
World	**50.8**	**57.2**	**69.7**	**63.1**	**48.2**	**52.1**	**67.5**	**76.7**	**73.5**
TOTAL DEMAND	**236.4**	**245.4**	**238.3**	**228.1**	**225.4**	**230.9**	**246.5**	**248.2**	**243.3**

Source: Platinum & Palladium Survey, Thomson Reuters (June 2018 update).
Note: Other demand includes chemical, electronics, glass, petroleum, retail investment and other industrial demand.

Rice



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
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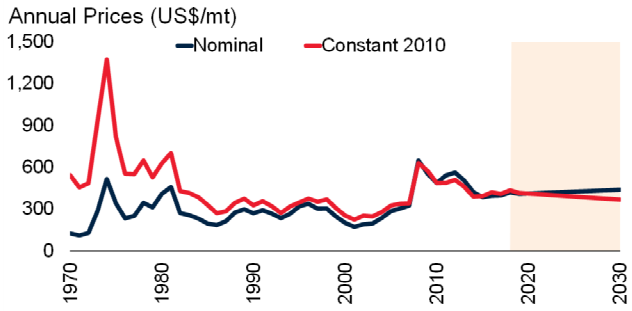


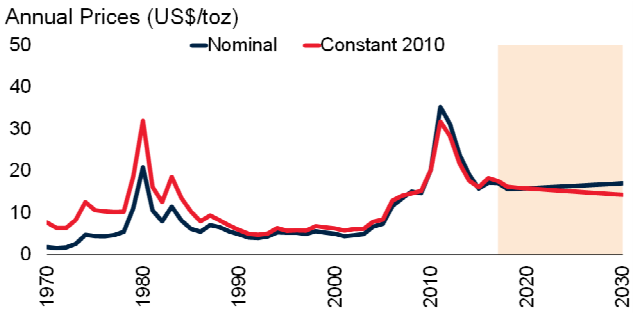
Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2015/16	2016/17	2017/18	2018/19
	(million metric tons)								
Production									
China	77.0	97.9	132.5	131.5	137.0	148.5	147.8	148.9	148.5
India	42.2	53.6	74.3	85.0	96.0	104.4	109.7	112.9	116.0
Indonesia	13.1	22.3	29.0	33.0	35.5	36.2	36.9	37.0	37.1
Bangladesh	11.1	13.9	17.9	25.1	31.7	34.5	34.6	32.7	35.0
Vietnam	6.4	7.7	12.4	20.5	26.4	27.6	27.4	28.5	29.1
Thailand	9.0	11.5	11.3	17.1	20.3	15.8	19.2	20.4	20.7
Myanmar	5.1	6.7	7.9	10.8	11.1	12.2	12.7	13.2	13.1
Philippines	3.4	5.0	6.4	8.1	10.5	11.0	11.7	12.2	12.0
Japan	11.5	8.9	9.6	8.6	7.9	7.9	7.9	7.8	7.7
Brazil	3.7	5.9	6.8	6.9	9.3	7.2	8.4	8.2	7.5
Pakistan	2.2	3.1	3.3	4.8	4.8	6.8	6.8	7.5	7.4
United States	2.8	4.8	5.1	5.9	7.6	6.1	7.1	5.7	7.1
Cambodia	2.5	1.1	1.6	2.5	4.4	4.9	5.3	5.4	5.5
Others	*22.9*	*27.6*	*33.3*	*39.4*	*48.1*	*53.2*	*55.6*	*55.2*	*54.8*
World	**213.0**	**269.9**	**351.4**	**399.2**	**450.5**	**476.3**	**490.9**	**495.5**	**501.4**
Stocks									
China	11.0	28.0	94.0	93.0	42.5	88.0	98.5	109.0	116.0
India	6.0	6.5	14.5	25.0	23.5	18.4	20.6	22.6	25.0
Indonesia	0.6	3.0	2.1	4.6	7.1	8.4	4.2	3.2	3.7
Thailand	1.2	2.0	0.9	2.2	5.6	3.5	2.9	4.1	3.6
Philippines	0.6	1.5	1.8	2.8	2.5	2.1	2.0	2.3	3.0
Others	*9.4*	*11.6*	*13.3*	*19.0*	*18.8*	*22.2*	*21.7*	*21.2*	*20.1*
World	**28.8**	**52.6**	**126.6**	**146.7**	**100.0**	**142.6**	**149.9**	**162.4**	**171.4**
Exports									
India	0.0	0.9	0.7	1.7	2.8	10.4	11.7	12.0	12.5
Thailand	1.6	3.0	4.0	7.5	10.6	9.9	11.6	11.1	10.0
Vietnam	0.0	0.0	1.0	3.5	7.0	5.1	6.5	6.6	7.0
Pakistan	0.2	1.2	1.3	2.4	3.4	4.2	3.5	4.0	4.0
United States	1.5	3.1	2.3	2.6	3.5	3.4	3.6	2.8	3.0
Myanmar	0.8	0.7	0.2	0.7	1.1	1.3	3.4	2.8	2.8
China	1.3	0.5	0.7	1.8	0.5	0.3	0.8	1.4	2.2
Others	*3.1*	*3.0*	*1.9*	*3.7*	*6.3*	*6.0*	*6.1*	*6.5*	*5.8*
World	**8.5**	**12.4**	**12.1**	**24.0**	**35.2**	**40.5**	**47.3**	**47.1**	**47.3**
Imports									
China	0.0	0.2	0.1	0.3	0.5	4.8	5.3	5.5	4.5
Philippines	0.0	0.0	0.4	1.4	1.3	1.6	1.1	1.3	2.5
Nigeria	0.0	0.4	0.2	1.3	2.4	2.1	2.5	2.0	2.2
European Union	0.9	0.5	0.7	1.2	1.4	1.8	1.8	2.0	2.0
Cote d'Ivoire	0.1	0.3	0.3	0.5	0.9	1.3	1.3	1.4	1.5
Saudi Arabia	0.2	0.4	0.5	1.0	1.1	1.3	1.2	1.4	1.4
Iran	0.1	0.6	0.6	0.8	2.0	0.9	1.1	1.2	1.3
Others	*6.5*	*8.9*	*7.9*	*15.7*	*23.6*	*24.7*	*26.8*	*32.2*	*29.0*
World	**7.7**	**11.3**	**10.6**	**22.1**	**33.1**	**38.3**	**41.1**	**46.9**	**44.3**

Source: USDA (April 9, 2019 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 1980/81, 1990/91, 2000/01 and EU-28 for 2010-2018.

Silver

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

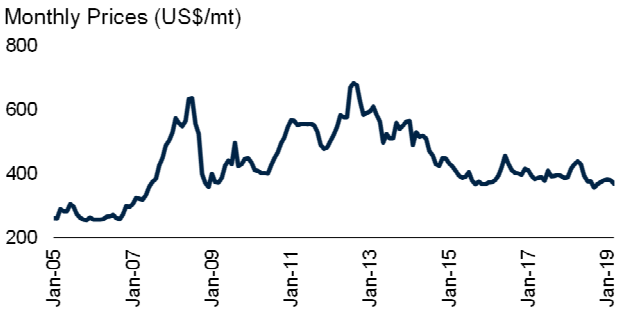


Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

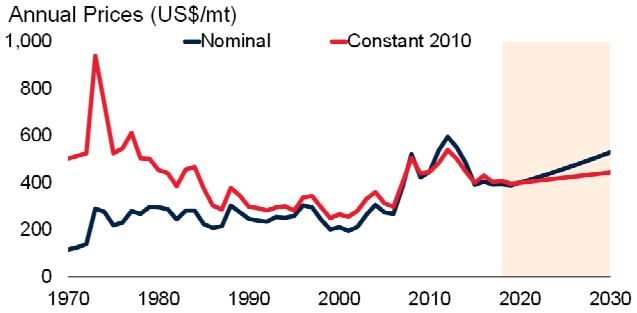
	1990	2000	2005	2010	2014	2015	2016	2017	2018
					(metric tons)				
Production									
Mexico	2,352	2,620	2,894	4,411	5,766	5,955	5,409	5,815	5,624
Peru	1,762	2,438	3,193	3,640	3,768	4,102	4,375	4,304	4,161
China	150	1,569	2,500	3,085	3,673	3,421	3,496	2,500	2,615
Russia	n/a	400	1,350	1,145	1,434	1,580	1,449	1,600	1,571
Poland	832	1,164	1,262	1,183	1,384	1,407	1,482	1,490	1,425
Australia	1,173	2,059	2,417	1,879	1,847	1,430	1,418	1,120	1,257
Chile	655	1,242	1,400	1,287	1,572	1,504	1,501	1,319	1,243
Bolivia	311	434	420	1,259	1,345	1,306	1,353	1,196	1,195
Kazakhstan	n/a	895	883	552	989	1,309	1,187	1,059	969
United States	2,121	1,980	1,226	1,276	1,184	1,090	1,150	1,020	901
India	32	46	28	165	328	490	461	500	614
Argentina	83	78	264	694	905	925	933	650	545
Sweden	243	329	310	302	383	480	499	468	471
Canada	1,501	1,212	1,124	591	495	384	385	390	353
Morocco	241	289	186	243	189	216	237	239	231
Turkey	27	193	219	364	184	191	175	175	174
Dominican Republic	23	n/a	0	23	135	96	122	147	173
Indonesia	67	314	329	290	119	152	115	105	105
Papua New Guinea	115	79	51	84	81	45	90	69	90
Others	*3,143*	*861*	*698*	*915*	*1,660*	*1,713*	*1,877*	*2,394*	*750*
World	**14,828**	**18,202**	**20,753**	**23,388**	**27,440**	**27,795**	**27,715**	**26,559**	**24,468**
Fabrication									
India	47	115	3,116	2,486	6,247	7,374	5,081	5,327	6,864
China	18	36	4,307	6,792	7,784	6,866	5,873	6,241	6,262
United States	137	192	5,891	6,768	6,831	7,383	6,660	5,812	5,818
Japan	116	135	3,860	3,020	2,700	3,056	3,307	3,490	3,246
Germany	54	40	1,260	1,690	1,003	1,121	1,213	1,216	1,224
Canada	7	3	126	667	1,079	1,243	1,182	734	742
Italy	51	67	1,577	1,109	875	878	854	890	855
Thailand	24	31	1,150	991	979	1,063	1,015	914	875
Mexico	14	17	693	556	617	532	494	456	386
Russia	n/a	n/a	795	944	793	724	671	663	673
United Kingdom	25	42	1,330	677	629	677	665	650	646
Australia	5	7	210	450	430	566	583	499	404
Korea, Rep.	7	20	794	929	820	628	516	514	492
Taiwan, China	5	9	380	486	488	467	471	492	502
Belgium	20	35	846	577	447	425	426	345	322
France	27	29	381	697	415	446	439	440	438
Brazil	7	7	232	319	379	358	304	228	234
Indonesia	1	4	159	199	223	234	248	253	262
Turkey	5	7	309	201	240	233	228	228	243
Others	*n/a*	*n/a*	*2,025*	*3,095*	*1,808*	*1,892*	*1,813*	*1,662*	*1,658*
World	**n/a**	**n/a**	**29,441**	**32,653**	**34,787**	**36,166**	**32,043**	**31,054**	**32,146**

Source: GFMS, Thomson Reuters, British Geological Survey, 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



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.



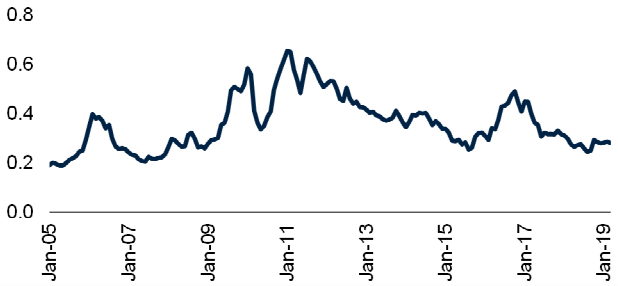
Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2015/16	2016/17	2017/18	2018/19
	(million metric tons)								
Production									
United States	30.7	48.9	52.4	75.1	90.7	106.9	116.9	120.1	123.7
Brazil	0.0	15.2	15.8	39.5	75.3	96.5	114.6	122.0	117.0
Argentina	0.0	3.5	11.5	27.8	49.0	58.8	55.0	37.8	55.0
China	8.7	7.9	11.0	15.4	15.1	12.4	13.6	15.2	15.9
India	0.0	0.4	2.6	5.3	10.1	6.9	11.0	8.4	11.0
Paraguay	0.1	0.6	1.3	3.5	7.1	9.2	10.3	10.3	9.0
Canada	0.3	0.7	1.3	2.7	4.4	6.5	6.6	7.7	7.3
Ukraine	n/a	n/a	0.1	0.1	1.7	3.9	4.3	3.9	4.5
Russia	n/a	n/a	0.7	0.3	1.1	2.7	3.1	3.6	4.0
Bolivia	0.0	0.0	0.4	1.1	2.3	3.2	2.1	2.6	2.7
European Union	0.1	0.5	2.3	1.3	1.2	2.3	2.4	2.7	2.7
Others	*2.3*	*3.1*	*5.0*	*3.7*	*6.3*	*7.3*	*9.3*	*7.5*	*7.8*
World	**42.1**	**80.9**	**104.3**	**175.8**	**264.4**	**316.6**	**349.3**	**341.7**	**360.6**
Crushings									
China	1.5	1.5	3.9	18.9	55.0	81.5	88.0	90.0	88.0
United States	20.7	27.8	32.3	44.6	44.9	51.3	51.7	55.9	57.2
Argentina	0.0	0.9	7.0	17.3	37.6	43.3	43.3	36.9	43.0
Brazil	0.0	13.8	14.2	22.7	36.3	39.7	40.4	44.5	42.7
European Union	7.3	14.1	13.0	16.8	12.3	15.0	14.4	15.0	16.6
India	0.0	0.4	2.4	4.5	9.4	5.5	9.0	7.7	9.0
Mexico	0.3	1.5	1.9	4.5	3.6	4.4	4.6	5.3	5.5
Russia	n/a	n/a	0.4	0.4	2.1	4.0	4.4	4.6	5.0
Paraguay	0.1	0.0	0.3	0.9	1.7	3.8	3.8	3.9	3.9
Others	*5.4*	*9.7*	*11.4*	*15.8*	*19.4*	*26.6*	*27.7*	*31.4*	*32.9*
World	**35.3**	**69.8**	**86.8**	**146.5**	**222.2**	**275.1**	**287.3**	**295.2**	**303.8**
Exports									
Brazil	0.0	1.8	2.5	15.5	30.0	54.4	63.1	76.2	79.5
United States	11.8	19.7	15.2	27.1	41.0	52.9	59.0	57.9	51.0
Argentina	0.0	2.7	4.5	7.3	9.2	9.9	7.0	2.1	6.3
Paraguay	0.0	0.6	1.0	2.4	5.1	5.4	6.1	6.0	5.6
Canada	0.0	0.1	0.2	0.7	2.9	4.2	4.6	4.9	5.4
Others	*0.5*	*0.4*	*2.1*	*0.7*	*3.4*	*5.8*	*7.7*	*5.8*	*6.5*
World	**12.3**	**25.3**	**25.4**	**53.7**	**91.6**	**132.6**	**147.5**	**153.0**	**154.3**
Imports									
China	0.0	0.5	0.0	13.2	52.3	83.2	93.5	94.1	88.0
European Union	7.4	13.6	13.2	17.7	12.5	15.1	13.4	14.6	15.8
Argentina	0.0	0.0	0.0	0.3	0.0	0.7	1.7	5.1	5.4
Mexico	0.1	1.4	1.4	4.4	3.5	4.1	4.1	4.9	5.2
Egypt	0.0	0.0	0.0	0.3	1.6	1.3	2.1	3.3	3.4
Japan	3.2	4.2	4.4	4.8	2.9	3.2	3.2	3.3	3.3
Thailand	0.0	0.0	0.0	1.3	2.1	2.8	3.1	2.5	3.2
Others	*1.9*	*6.5*	*6.5*	*11.1*	*14.8*	*22.9*	*23.1*	*25.7*	*27.0*
World	**12.6**	**26.2**	**25.5**	**53.1**	**89.8**	**133.3**	**144.2**	**153.3**	**151.2**

Source: USDA (April 9, 2019 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 1980/81, 1990/91, 2000/01 and EU-28 for 2010-2018.

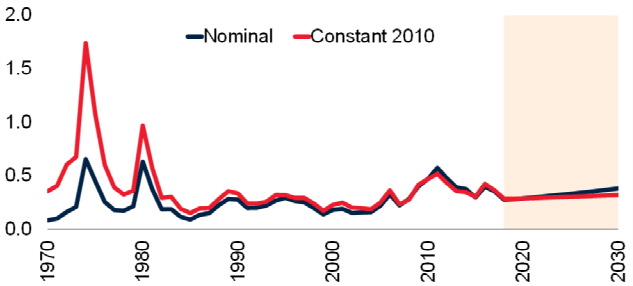
Sugar

Monthly Prices (US$/kg)



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

Annual Prices (US$/kg)



Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2015/16	2016/17	2017/18	2018/19
	(million metric tons)								
Production									
India	4.5	6.5	13.7	20.5	26.6	27.4	22.2	34.1	35.9
Brazil	5.1	8.5	7.9	17.1	38.4	34.7	39.2	38.9	30.6
European Union	15.4	19.0	23.2	0.0	15.9	14.3	18.3	20.9	19.5
Thailand	0.5	1.7	4.0	5.1	9.7	9.7	10.0	14.7	13.8
China	2.1	3.2	6.8	6.8	11.2	9.1	9.3	10.3	10.8
United States	5.6	5.6	6.3	8.0	7.1	8.2	8.1	8.4	8.2
Pakistan	0.0	0.9	2.1	2.6	3.9	5.3	6.8	7.4	6.5
Mexico	2.5	2.5	3.9	5.2	5.5	6.5	6.3	6.4	6.4
Russia	0.0	0.0	2.6	1.6	3.0	5.2	6.2	6.5	6.1
Australia	2.7	3.3	3.6	4.2	3.7	4.9	5.1	4.8	5.0
Guatemala	0.2	0.5	1.0	1.6	2.0	2.8	2.7	2.8	2.7
Others	*31.7*	*36.7*	*39.4*	*58.1*	*35.2*	*36.9*	*39.7*	*39.4*	*40.4*
World	**70.3**	**88.6**	**114.4**	**130.8**	**162.2**	**164.9**	**174.0**	**194.6**	**185.9**
Stocks									
India	1.8	1.1	3.6	12.0	6.3	9.3	6.6	13.7	18.1
Thailand	0.0	0.2	0.2	0.6	3.0	5.3	5.6	7.2	6.9
China	0.3	0.7	1.4	1.0	1.6	9.6	7.8	6.5	5.4
Pakistan	0.0	0.1	0.3	0.4	1.5	1.5	2.8	3.1	2.9
Mexico	0.7	0.7	2.4	1.5	0.8	1.1	1.1	1.5	1.7
Indonesia	0.4	0.3	0.4	1.4	0.6	1.1	1.7	1.8	1.5
European Union	0.0	0.0	0.0	0.0	2.0	1.2	2.2	2.2	1.5
Others	*16.9*	*14.5*	*14.1*	*22.9*	*13.7*	*15.0*	*14.4*	*15.5*	*14.8*
World	**20.2**	**17.6**	**22.4**	**39.9**	**29.5**	**44.1**	**42.2**	**51.5**	**52.9**
Exports									
Brazil	1.2	2.3	1.3	7.7	25.8	24.0	24.4	28.5	28.2
Thailand	0.2	1.0	2.7	3.4	6.6	8.3	7.1	7.0	10.5
India	0.3	0.1	0.2	1.4	3.9	2.6	3.8	2.1	1.8
Australia	1.8	2.6	2.8	3.1	2.8	3.6	3.7	4.0	3.8
European Union	2.7	6.5	8.1	0.0	1.1	1.6	1.5	1.5	3.6
Guatemala	0.1	0.2	0.7	1.2	1.5	2.3	2.0	2.0	1.9
Pakistan	0.0	0.0	0.0	0.0	0.1	0.6	0.3	0.4	1.8
Others	*14.9*	*15.7*	*18.0*	*21.6*	*12.1*	*11.1*	*15.9*	*18.3*	*6.3*
World	**21.3**	**28.4**	**33.9**	**38.3**	**53.9**	**54.0**	**58.6**	**63.9**	**57.9**
Imports									
Indonesia	0.1	0.6	0.2	1.6	3.1	3.7	4.9	4.3	4.3
China	0.4	1.1	1.1	1.1	2.1	6.1	4.6	4.2	4.0
United Arab Emirates	0.0	0.1	0.1	1.1	2.0	1.8	1.9	2.8	2.7
United States	4.8	4.4	2.6	1.4	3.4	3.0	2.9	3.0	2.5
Bangladesh	0.0	0.0	0.0	0.8	1.5	2.3	2.1	2.6	2.5
Algeria	0.0	0.7	1.0	1.0	1.2	1.8	2.1	2.3	2.3
Malaysia	0.0	0.5	0.9	1.3	1.8	2.0	1.9	2.0	2.1
Others	*12.0*	*20.9*	*26.2*	*32.0*	*34.0*	*33.8*	*34.1*	*32.3*	*30.7*
World	**17.3**	**28.2**	**32.1**	**40.4**	**49.1**	**54.7**	**54.5**	**53.5**	**51.0**

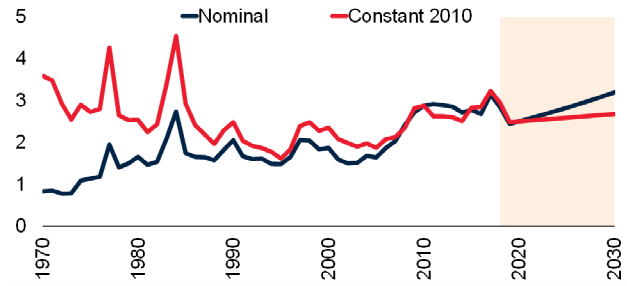
Source: USDA (April 9, 2019 update).
Note: The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971. European Union includes EU-15 for 1980/81, 1990/91, 2000/01 and EU-28 for 2010-2017.

Tea

Monthly Prices (US$/kg)

Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

Annual Prices (US$/kg)

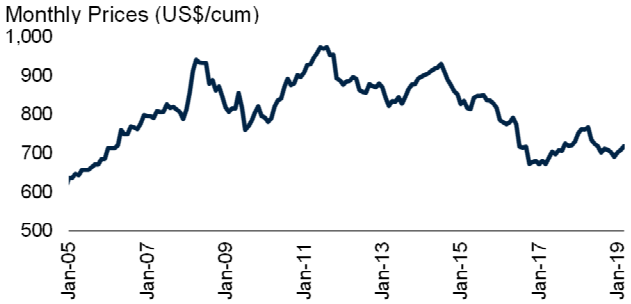


Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

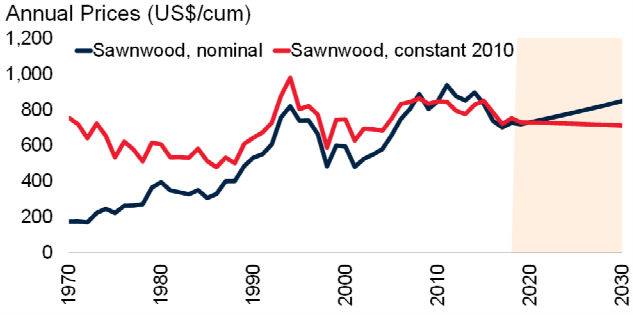
	1970	1980	1990	2000	2010	2014	2015	2016	2017
					(thousand metric tons)				
Production									
China	136	304	540	683	1,450	2,096	2,277	2,313	2,460
India	419	570	688	826	991	1,207	1,233	1,250	1,325
Kenya	41	90	197	236	399	445	399	473	440
Sri Lanka	212	191	233	306	331	338	342	350	350
Turkey	33	96	123	139	235	227	239	243	234
Vietnam	15	21	32	70	198	228	236	240	260
Indonesia	64	106	156	163	150	154	133	144	139
Iran	20	32	37	223	121	72	197	132	101
Japan	91	102	90	85	85	84	80	80	81
Myanmar	11	13	15	63	95	99	100	102	105
Argentina	26	36	51	74	92	83	82	85	81
Bangladesh	31	40	39	46	60	64	66	65	82
Malawi	19	30	39	42	52	45	48	48	48
Uganda	18	2	7	29	49	61	61	63	64
Thailand	0	1	7	32	67	40	49	52	58
Others	*151*	*261*	*272*	*214*	*246*	*267*	*269*	*273*	*274*
World	**1,287**	**1,894**	**2,525**	**3,231**	**4,622**	**5,510**	**5,810**	**5,914**	**6,101**
Consumption									
China	109	220	383	497	1,217	n/a	n/a	n/a	n/a
India	218	331	490	632	774	n/a	n/a	n/a	n/a
Brazil	90	81	133	514	406	n/a	n/a	n/a	n/a
Iran	24	39	79	48	200	n/a	n/a	n/a	n/a
Turkey	26	91	95	137	242	n/a	n/a	n/a	n/a
Argentina	122	132	149	271	219	n/a	n/a	n/a	n/a
United States	68	81	84	145	170	n/a	n/a	n/a	n/a
Russia	n/a	n/a	n/a	158	176	n/a	n/a	n/a	n/a
Japan	105	116	123	144	127	n/a	n/a	n/a	n/a
Pakistan	30	61	106	111	93	n/a	n/a	n/a	n/a
United Kingdom	234	186	142	133	121	n/a	n/a	n/a	n/a
Others	*476*	*748*	*1,055*	*935*	*1,308*	*n/a*	*n/a*	*n/a*	*n/a*
World	**1,502**	**2,086**	**2,839**	**3,725**	**5,053**	**n/a**	**n/a**	**n/a**	**n/a**
Exports									
Sri Lanka	208	185	216	287	313	325	305	287	n/a
Kenya	42	84	166	217	418	271	260	293	n/a
China	38	98	195	228	303	301	325	329	n/a
India	200	239	198	201	235	213	235	230	n/a
Indonesia	41	74	111	106	87	66	62	51	n/a
Argentina	19	33	46	50	86	77	76	78	n/a
Vietnam	2	9	16	56	137	84	72	74	n/a
Malawi	18	31	41	42	50	48	39	41	n/a
Uganda	15	1	5	26	55	60	53	5	n/a
Others	*169*	*230*	*233*	*252*	*341*	*394*	*323*	*313*	*n/a*
World	**752**	**984**	**1,228**	**1,464**	**2,023**	**1,839**	**1,749**	**1,701**	**n/a**

Source: FAO (January 18, 2019 update).
Note: Consumption includes domestic use for food, feed, waste, and other uses.

Timber—Roundwood and Sawnwood



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

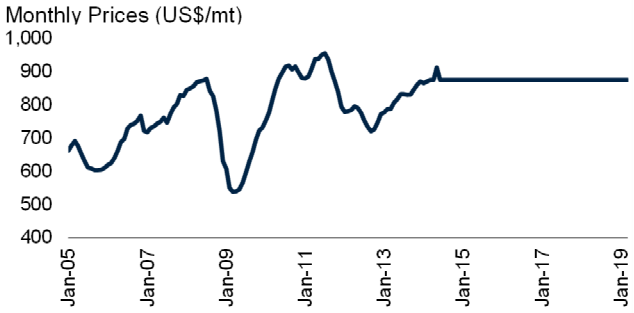


Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

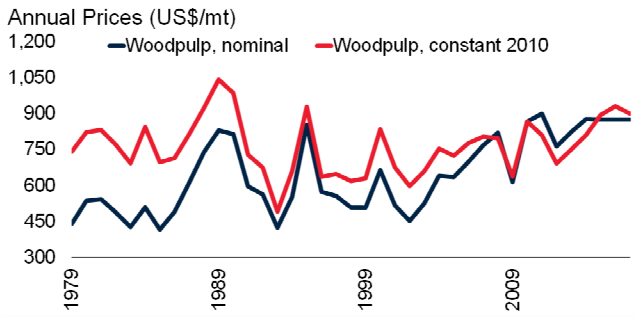
	1970	1980	1990	2000	2010	2014	2015	2016	2017
					(million cubic meters)				
Industrial roundwood: Production									
United States	312.7	327.1	427.2	420.6	336.1	356.8	354.7	356.6	355.2
Russia	n/a	n/a	n/a	145.6	161.6	188.3	190.5	198.2	197.6
China	42.2	79.2	91.2	96.0	161.8	161.0	147.2	163.0	161.7
Canada	117.5	150.8	156.0	198.9	138.8	148.8	151.4	154.7	153.1
Brazil	23.9	61.7	74.3	103.0	128.4	137.7	136.2	145.1	145.1
Indonesia	12.7	30.9	38.4	48.8	54.1	74.0	74.0	74.0	74.0
Sweden	56.7	44.8	49.1	57.4	66.3	67.4	67.3	67.9	68.5
Finland	37.5	43.0	40.2	50.1	46.0	49.2	51.4	54.3	55.3
India	12.7	19.7	35.1	41.2	48.8	49.5	49.5	49.5	49.5
Others	*660.7*	*689.5*	*798.1*	*525.5*	*562.0*	*613.2*	*617.5*	*626.6*	*646.7*
World	**1,276.4**	**1,446.7**	**1,709.5**	**1,687.2**	**1,703.9**	**1,846.0**	**1,839.8**	**1,889.9**	**1,906.8**
Industrial roundwood: Imports									
China	2.0	8.3	7.2	15.7	35.4	51.2	44.2	48.5	55.3
Germany	5.2	3.8	2.0	3.5	7.7	8.4	8.7	8.7	8.7
Austria	2.0	3.7	4.4	8.5	8.0	7.2	7.8	9.2	8.6
Sweden	0.6	3.1	2.0	11.7	6.3	8.1	6.9	6.8	7.7
Canada	2.1	3.0	1.5	6.5	4.7	4.3	4.6	6.2	6.5
India	0.0	0.0	1.3	2.2	5.3	7.0	5.8	5.5	4.9
Finland	2.3	3.8	5.2	9.9	6.3	6.3	5.7	5.9	4.8
Others	*69.0*	*69.7*	*58.9*	*57.2*	*36.1*	*40.3*	*37.6*	*37.8*	*35.3*
World	**83.1**	**95.4**	**82.6**	**115.3**	**109.8**	**132.8**	**121.5**	**128.7**	**131.8**
Sawnwood: Production									
United States	63.7	65.3	86.1	91.1	60.0	68.4	74.3	77.2	86.0
Canada	19.8	32.8	39.7	50.5	38.7	75.8	76.4	78.2	80.4
China	14.8	21.2	23.6	6.7	37.2	43.4	47.1	49.7	49.5
Russia	n/a	n/a	n/a	20.0	28.9	34.6	34.5	36.8	40.6
Germany	11.6	13.0	14.7	16.3	22.1	21.8	21.5	22.2	23.2
Sweden	12.3	11.3	12.0	16.2	16.8	17.5	18.2	18.4	18.4
Brazil	8.0	14.9	13.7	21.3	17.5	15.2	14.8	14.6	14.6
Finland	7.4	10.3	7.5	13.4	9.5	10.9	10.6	11.4	11.7
Austria	5.4	6.7	7.5	10.4	9.6	8.5	8.7	9.4	9.6
Others	*246.3*	*245.4*	*258.1*	*139.0*	*135.5*	*143.2*	*145.6*	*149.0*	*151.1*
World	**389.1**	**420.9**	**463.0**	**384.8**	**375.6**	**439.2**	**451.7**	**466.8**	**485.1**
Sawnwood: Imports									
China	0.1	0.3	1.3	6.1	16.2	27.0	26.6	31.5	37.4
United States	10.6	17.0	22.5	34.4	16.6	22.2	24.4	28.3	27.4
United Kingdom	9.0	6.6	10.7	7.9	5.7	6.4	6.3	6.6	7.6
Japan	3.0	5.6	9.0	10.0	6.4	6.2	6.0	6.3	6.3
Germany	6.0	6.9	6.1	6.3	4.4	4.6	4.8	5.1	5.1
Italy	4.0	5.8	6.0	8.4	6.1	4.7	4.7	4.7	4.9
Egypt	0.4	1.6	1.6	2.0	4.8	6.6	5.8	5.0	4.6
Others	*19.6*	*27.8*	*27.3*	*40.6*	*48.2*	*53.1*	*52.7*	*52.6*	*55.4*
World	**52.6**	**71.5**	**84.5**	**115.6**	**108.4**	**130.9**	**131.3**	**140.2**	**148.7**

Source: FAO (January 10, 2019 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: Last observation is March 2019.
Download data and charts.



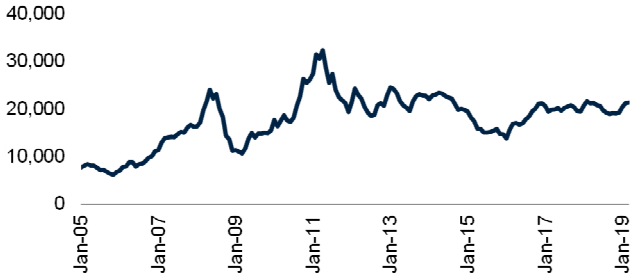
Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970	1980	1990	2000	2010	2014	2015	2016	2017
					(million cubic meters)				
Wood-based panels: Production									
China	0.9	2.3	3.0	19.3	109.2	187.9	197.3	208.2	201.3
United States	23.0	26.4	37.0	45.7	32.6	33.4	33.5	34.1	35.2
Russia	n/a	n/a	n/a	4.8	10.1	12.5	13.5	14.2	15.6
Germany	5.8	8.3	9.6	14.1	12.6	12.2	12.1	12.5	13.1
Canada	3.3	4.8	6.4	15.0	9.9	11.3	11.8	12.0	12.3
Poland	1.0	2.0	1.4	4.7	8.2	9.1	9.7	10.4	11.0
Brazil	0.8	2.5	2.9	5.8	10.2	10.4	10.2	10.5	10.9
Turkey	0.2	0.4	0.8	2.4	6.6	9.6	9.3	9.5	9.3
Thailand	0.1	0.1	0.3	1.2	5.2	5.8	6.1	6.1	6.1
Others	*34.6*	*54.4*	*67.6*	*73.5*	*83.6*	*79.6*	*81.5*	*84.5*	*86.8*
World	**69.8**	**101.3**	**129.0**	**186.4**	**288.3**	**371.8**	**385.1**	**402.0**	**401.5**
Wood-based panels: Imports									
United States	2.5	2.1	4.2	13.9	8.1	9.2	11.2	12.6	14.2
Germany	1.0	2.3	3.3	4.1	4.6	5.2	5.4	5.6	5.7
Japan	0.6	0.3	3.8	6.2	4.2	4.5	4.0	3.9	4.0
United Kingdom	2.0	2.4	3.3	3.3	2.7	3.2	3.2	3.4	3.8
Canada	0.2	0.2	0.5	1.5	2.8	3.4	3.2	3.0	3.3
Poland	0.2	0.4	0.1	0.7	1.7	2.4	2.4	2.7	3.3
Italy	0.1	0.8	0.9	1.7	2.4	2.6	2.6	2.5	2.5
Others	*3.4*	*7.1*	*14.2*	*28.4*	*40.5*	*43.7*	*44.2*	*45.5*	*47.9*
World	**10.0**	**15.7**	**30.3**	**59.9**	**67.0**	**74.2**	**76.1**	**79.1**	**84.6**
Woodpulp: Production									
United States	37.3	46.2	57.2	57.8	50.9	50.1	49.4	49.5	49.2
Brazil	0.8	3.4	4.3	7.3	14.5	16.8	17.8	19.4	20.2
Canada	16.6	19.9	23.0	26.7	18.9	17.3	17.2	17.0	16.8
China	1.1	1.1	1.7	3.3	9.2	11.0	11.0	11.8	12.2
Sweden	8.1	8.7	10.2	11.5	11.9	11.5	11.6	11.6	12.2
Finland	6.2	7.2	8.9	12.0	10.5	10.5	10.5	10.9	10.8
China	1.2	1.3	2.1	3.7	7.5	9.1	8.9	8.8	8.9
Japan	8.8	9.8	11.3	11.4	9.5	7.7	8.1	8.4	8.5
Russia	0.0	0.0	0.0	5.8	7.4	6.7	6.7	6.7	7.7
Others	*21.4*	*28.0*	*36.1*	*31.6*	*30.4*	*36.6*	*36.4*	*37.2*	*37.4*
World	**101.6**	**125.7**	**154.8**	**171.2**	**170.7**	**177.2**	**177.4**	**181.3**	**184.0**
Woodpulp: Imports									
China	0.1	0.4	0.9	4.0	12.1	17.9	19.8	21.0	23.7
United States	3.2	3.7	4.4	6.6	5.6	5.8	5.4	5.6	5.4
Germany	1.8	2.6	3.7	4.1	5.1	4.9	4.7	4.7	4.8
Italy	1.4	1.8	2.1	3.2	3.4	3.4	3.5	3.4	3.4
Korea, Rep.	0.2	0.5	1.1	2.1	2.5	2.3	2.3	2.2	2.3
France	1.3	1.8	1.9	2.4	1.9	2.0	2.0	1.9	2.0
Japan	0.9	2.2	2.9	3.9	1.8	1.8	1.7	1.6	1.8
Others	*7.6*	*7.6*	*8.2*	*11.5*	*15.3*	*20.5*	*20.9*	*22.2*	
World	**16.6**	**20.6**	**25.2**	**37.8**	**47.9**	**58.4**	**60.3**	**62.8**	

Source: FAO (January 10, 2019 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.

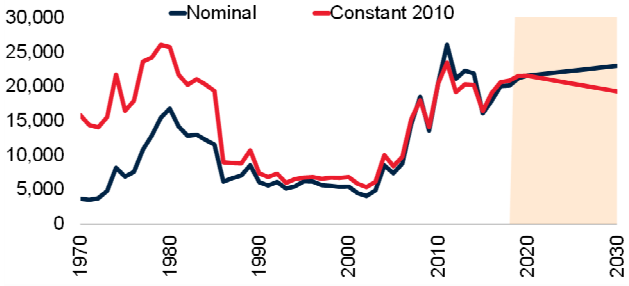
Tin

Monthly Prices (US$/mt)



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

Annual Prices (US$/mt)



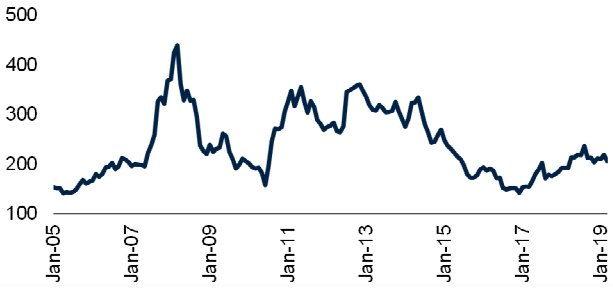
Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970	1980	1990	2000	2010	2015	2016	2017	2018
					(thousand metric tons)				
Mine Production									
China	n/a	16.0	40.0	85.0	129.6	110.2	97.2	93.4	157.5
Indonesia	19.1	32.5	40.0	51.6	92.3	71.3	66.4	83.2	84.0
Myanmar	0.3	1.3	0.5	0.5	0.8	54.0	57.0	68.0	45.9
Peru	0.1	1.1	5.1	37.4	33.8	19.5	18.8	17.8	18.6
Brazil	3.6	6.9	39.1	14.2	10.4	18.9	15.2	13.9	18.0
Bolivia	28.9	27.3	17.2	12.5	20.2	20.1	17.5	18.3	16.9
Congo, Dem. Rep.	6.5	n/a	n/a	1.8	6.7	4.6	6.5	7.0	9.0
Australia	8.8	11.6	7.4	9.1	18.3	7.2	6.6	7.0	6.8
Vietnam	n/a	n/a	0.8	1.8	5.4	4.5	4.6	4.5	4.6
Malaysia	73.8	61.4	28.5	6.3	2.7	4.1	4.2	4.8	4.0
Nigeria	8.0	2.7	0.3	2.8	1.3	2.3	3.4	6.6	3.6
Rwanda	1.4	2.9	0.7	0.4	2.9	2.9	2.7	3.6	2.4
Russia	n/a	n/a	n/a	6.6	0.1	0.6	0.6	1.0	n/a
Others	*n/a*	*n/a*	*n/a*	*19.1*	*3.6*	*-9.9*	*1.6*	*5.7*	*2.6*
World	**184.3**	**228.1**	**210.6**	**249.0**	**328.0**	**310.3**	**302.2**	**334.8**	**373.9**
Refined Production									
China	20.0	16.0	35.8	110.2	149.0	167.2	182.5	182.2	177.7
Indonesia	5.2	30.5	30.4	46.4	64.2	67.4	50.0	70.0	78.5
Malaysia	92.1	71.3	49.0	26.2	38.7	30.2	26.8	27.2	27.2
Brazil	3.1	8.8	37.6	13.8	9.1	16.5	18.0	18.0	18.4
Peru	n/a	n/a	n/a	17.4	36.5	20.4	19.4	17.9	18.3
Bolivia	n/a	17.5	13.4	9.4	15.0	15.5	16.8	16.1	14.6
Thailand	22.0	34.7	15.5	17.1	23.6	10.5	11.1	10.6	10.9
Belgium	4.3	2.8	6.1	8.5	9.9	8.8	8.5	9.7	9.3
Vietnam	0.0	0.0	1.8	1.8	3.0	4.4	4.4	4.5	4.4
Poland	0.0	0.0	0.0	0.0	0.6	2.2	2.9	3.4	3.8
Japan	1.4	1.3	0.8	0.6	0.8	1.7	1.6	1.6	1.6
Nigeria	8.1	2.7	0.3	2.8	0.6	0.6	0.6	0.6	0.6
Argentina	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	n/a
Others	*48.0*	*46.3*	*36.7*	*6.4*	*0.7*	*2.1*	*13.7*	*8.0*	*0.0*
World	**204.2**	**232.2**	**227.5**	**260.7**	**351.8**	**347.5**	**356.3**	**369.8**	**365.3**
Refined Consumption									
China	13	12.5	25.5	49.1	154.3	176.3	191.4	183.4	174.2
United States	53.8	46.5	36.8	51.0	32.0	31.4	29.5	31.5	34.7
Japan	28.6	30.9	34.8	25.2	35.7	26.8	26.1	29.1	28.1
Germany	17.3	19.0	21.7	20.7	17.4	17.9	18.2	20.0	20.2
Korea, Rep.	0.4	1.8	7.8	15.3	17.4	13.1	14.2	13.1	13.9
India	4.8	2.3	2.3	6.4	10.7	8.7	9.1	10.0	11.4
Brazil	2.5	4.7	6.1	7.2	8.7	11.0	11.3	10.0	9.4
France	10.5	10.1	8.3	7.3	5.4	4.4	4.7	5.5	6.1
Spain	3	4.6	4.0	4.1	6.1	5.7	6.5	5.5	6.0
Others	*91.9*	*90.5*	*90.3*	*90.5*	*81.0*	*70.1*	*71.1*	*73.0*	*76.5*
World	**225.8**	**222.9**	**237.6**	**276.9**	**368.8**	**365.2**	**382.1**	**381.1**	**380.4**

Source: 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.

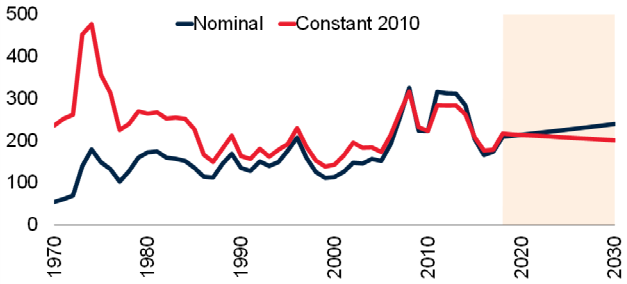
Wheat

Monthly Prices (US$/mt)



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

Annual Prices (US$/mt)



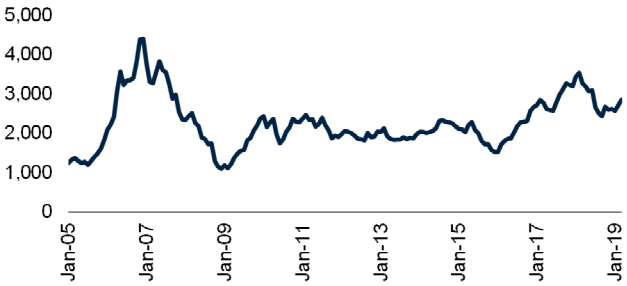
Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2015/16	2016/17	2017/18	2018/19
	(million metric tons)								
Production									
European Union	62.5	93.3	125.0	132.7	136.7	160.5	145.4	151.3	137.6
China	29.2	55.2	98.2	99.6	115.2	132.6	133.3	134.3	131.4
India	20.1	31.8	49.9	76.4	80.8	86.5	87.0	98.5	99.7
Russia	0.0	0.0	49.6	34.5	41.5	61.0	72.5	85.2	71.7
United States	36.8	64.8	74.3	60.6	58.9	56.1	62.8	47.4	51.3
Canada	9.0	19.3	32.1	26.5	23.3	27.6	32.1	30.0	31.8
Pakistan	7.3	10.9	14.4	21.1	23.3	25.1	25.6	26.7	25.5
Ukraine	0.0	0.0	30.4	10.2	16.8	27.3	26.8	27.0	25.1
Argentina	4.9	7.8	11.0	16.3	17.2	11.3	18.4	18.5	19.5
Turkey	8.0	13.0	16.0	18.0	17.0	19.5	17.3	21.0	19.0
Australia	7.9	10.9	15.1	22.1	27.4	22.3	31.8	21.3	17.3
Others	*120.8*	*128.9*	*72.8*	*64.7*	*91.6*	*108.5*	*103.4*	*102.1*	*103.0*
World	**306.5**	**435.9**	**588.8**	**582.8**	**649.7**	**738.4**	**756.4**	**763.2**	**732.9**
Stocks									
China	7.2	31.7	49.9	91.9	59.1	97.0	114.9	131.3	140.0
United States	22.4	26.9	23.6	23.8	23.5	26.6	32.1	29.9	29.6
India	5.0	4.0	5.8	21.5	15.4	14.5	9.8	13.2	17.5
European Union	8.6	13.0	22.5	17.9	11.9	15.5	10.7	14.1	10.7
Russia	n/a	n/a	16.4	1.5	13.7	5.6	10.8	12.0	6.7
Iran	0.7	1.2	3.2	2.9	2.9	11.2	10.4	8.1	6.3
Morocco	0.1	0.5	0.6	1.4	2.8	7.0	4.9	5.1	5.5
Others	*36.6*	*35.4*	*48.8*	*45.2*	*69.7*	*67.7*	*68.6*	*68.2*	*59.3*
World	**80.5**	**112.6**	**170.9**	**206.1**	**198.9**	**245.0**	**262.3**	**281.9**	**275.6**
Exports									
Russia	n/a	n/a	1.2	0.7	4.0	25.5	27.8	41.4	37.0
United States	20.2	41.2	29.1	28.9	35.1	21.2	28.6	24.5	25.7
Canada	11.8	16.3	21.7	17.3	16.6	22.1	20.2	22.0	24.0
European Union	6.7	17.5	23.8	15.7	23.1	34.8	27.4	23.3	24.0
Ukraine	0.0	0.0	2.0	0.1	4.3	17.4	18.1	17.8	16.5
Argentina	1.0	3.8	5.6	11.3	9.5	9.6	13.8	12.2	13.7
Australia	9.1	9.6	11.8	15.9	18.6	16.1	22.6	13.8	10.0
Others	*7.6*	*1.7*	*8.6*	*11.2*	*21.9*	*26.1*	*24.8*	*26.3*	*27.5*
World	**56.5**	**90.1**	**103.8**	**101.2**	**133.0**	**172.8**	**183.4**	**181.2**	**178.5**
Imports									
Egypt	2.8	5.4	5.7	6.1	10.6	11.9	11.2	12.4	12.5
Indonesia	0.5	1.2	2.0	4.1	6.6	10.0	10.2	10.5	10.5
Brazil	1.7	3.9	4.4	7.2	6.7	6.7	7.3	7.0	7.5
Algeria	0.6	2.3	4.4	5.6	6.5	8.2	8.4	8.2	7.4
Philippines	0.6	0.9	1.5	3.1	3.2	4.9	5.7	6.0	7.0
European Union	n/a	n/a	n/a	3.5	4.6	6.9	5.3	5.8	6.0
Japan	4.8	5.8	5.6	5.9	5.9	5.7	5.9	5.9	5.8
Others	*44.8*	*69.9*	*75.4*	*64.0*	*87.9*	*115.3*	*125.1*	*123.1*	*118.9*
World	**55.8**	**89.5**	**99.0**	**99.3**	**132.0**	**169.8**	**179.2**	**178.9**	**175.6**

Source: USDA (April 9, 2019 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 1980/81, 1990/91, 2000/01 and EU-28 for 2010-2018.

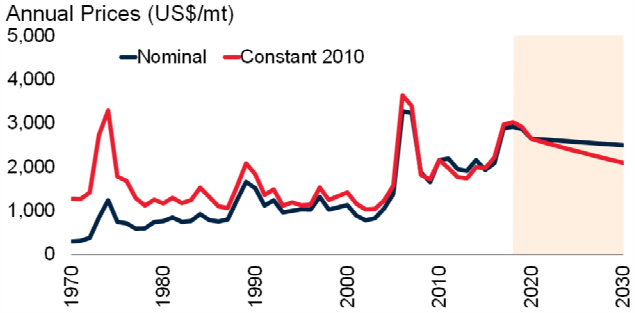
Zinc

Monthly Prices (US$/mt)



Source: See World Bank Commodities Price Data.
Note: Last observation is March 2019.
Download data and charts.

Annual Prices (US$/mt)



Source: World Bank.
Note: 2019-30 are forecasts.
Download data and charts.

	1970	1980	1990	2000	2010	2015	2016	2017	2018
					(thousand metric tons)				
Mine Production									
China	100	150	750	1,780	3,842	4,749	4,711	5,000	4,193
Peru	299	488	584	910	1,470	1,421	1,337	1,473	1,475
Australia	487	495	933	1,419	1,475	1,610	884	841	1,068
United States	485	317	543	852	748	825	805	730	790
India	8	32	70	199	730	741	682	784	696
Mexico	263	238	322	393	570	680	662	671	637
Bolivia	46	50	104	149	411	442	487	504	583
Turkey	24	23	39	48	196	174	202	365	368
Kazakhstan	n/a	n/a	n/a	322	454	384	366	375	359
Canada	1,253	1,059	1,203	1,002	649	290	301	344	286
Russia	n/a	n/a	n/a	136	214	206	220	279	279
Algeria	17	8	4	6	n/a	25	165	250	250
Sweden	93	176	164	177	199	247	258	251	234
Others	*n/a*	*n/a*	*n/a*	*1,414*	*1,531*	*1,594*	*1,471*	*631*	*1,621*
World	**5359**	**6,189**	**7,117**	**8,807**	**12,489**	**13,387**	**12,550**	**12,499**	**12,837**
Refined Production									
China	100	155	550	1,957	5,209	6,116	6,196	6,220	5,681
Korea, Rep.	2	79	257	475	750	940	1,009	962	1,099
India	23	44	79	204	740	759	672	791	776
Canada	413	592	592	780	691	683	691	598	696
Japan	676	735	687	654	574	567	534	524	521
Spain	89	152	253	391	517	509	507	510	510
Australia	261	306	303	498	499	489	464	462	500
Peru	71	64	118	200	223	335	342	312	334
Mexico	85	145	199	235	328	327	321	327	333
Kazakhstan	n/a	n/a	n/a	263	319	324	326	329	329
Finland	57	147	163	223	307	306	291	285	295
Belgium	241	249	300	264	260	260	236	249	275
Netherlands	47	170	209	217	264	291	283	248	275
Others	*n/a*	*n/a*	*n/a*	*2,710*	*2,228*	*1,957*	*1,917*	*1,897*	*1,777*
World	**5095**	**6183**	**6971**	**9070**	**12910**	**13862**	**13788**	**13715**	**13,400**
Refined Consumption									
China	150	200	369	1,402	5,350	6,448	6,484	6,965	6,179
United States	1074	810	992	1,315	907	931	789	829	880
Korea, Rep.	11	68	230	419	540	585	627	716	716
India	97	95	135	224	538	616	676	653	714
Japan	623	752	814	674	516	479	474	482	529
Germany	448	474	530	532	494	479	483	452	440
Spain	77	91	119	195	206	219	270	217	287
Turkey	9	12	53	92	182	230	231	267	248
Italy	178	236	270	348	339	259	261	220	222
Others	*2,375*	*3,393*	*3,056*	*3,689*	*3,460*	*3,529*	*3,503*	*3,408*	*3,115*
World	**5042**	**6,131**	**6,568**	**8,889**	**12,532**	**13,774**	**13,799**	**14,209**	**13,330**

Source: 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.

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. NW Europe.

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

Groundnut oil. US crude, FOB South-East.

Fishmeal. German, 64% protein, EXW Hamburg.

Palm oil (Malaysia). RBD, c.i.f Rotterdam.

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

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

Soybean oil. Dutch crude, degummed, f.o.b. NW Europe.

Soybeans. US No. 2 yellow meal, 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. US 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 US 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 - 1/2 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 US.

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 (West 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 (West 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.

Woodpulp (Sweden). Softwood, sulphate, bleached, air-dry weight, c.i.f. North Sea ports.

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

bcf/d = billion cubic feet per day

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

c.f.r. = cost and freight

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)

mtoe = millions of tonnes of oil equivalent

toz = troy ounce

Acronyms

AEs	advanced economies
DAP	diammonium phosphate
EIA	Energy Information Administration
EU	European Union
EMDEs	Emerging markets and developing economies
FAO	Food and Agriculture Organization
FRED	Federal Reserve Bank of St. Louis Economic Data
GDP	gross domestic product
ICAC	International Cotton Advisory Committee
IEA	International Energy Agency
IFA	International Fertilizer Industry Association
IRSG	International Rubber Study Group
LME	London Metal Exchange
LNG	liquefied natural gas
MOP	muriate of potash, or potassium chloride
MUV	Manufacture Unit Value
NGLs	Natural gas liquids
OECD	Organisation of Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
TSP	triple superphosphate

USDA	United States Department of Agriculture
WTI	West Texas Intermediate

Data sources

Africa Tea Brokers Limited

Agribusiness Intelligence from Informa

Banana Market Review

Baker Hughes

Bloomberg

BP Statistical Review

British Geological Survey

Cotton Outlook

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

Food and Agriculture Organization (FAO)

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 Industry Association (IFA)

International Rubber Study Group (IRSG)

International Tropical Timber Organization (ITTO)

International Sugar Organization (ISO)

ISTA Mielke GmbH Oil World

Japan Lumber Journal

Kennedy Information LLC

Meat Trade Journal

Metallgesellschaft

Official Statistics of Japan

Platinum and Palladium Survey

Singapore Commodity Exchange Ltd

Steel Statistical Yearbook

Tea Board India

Tea Exporters Association Sri Lanka

Thomson Reuters

Urner Barry

U.S. Department of Agriculture (USDA)

U.S. Energy Information Administration (EIA)

U.S. Geological Survey

World Bureau of Metal Statistics

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, 2011-18

Topics	Date
Food Price Shocks: Channels and Implications	April 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	April 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	April 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	April 2015
Oil price plunge 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

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Energy prices were down 8 percent in 2019 Q1 (q/q) with sharp falls in coal and natural gas prices, while oil prices have risen steadily since the start of the year. Non-energy prices were up in the first quarter. Crude oil prices, which averaged $68/bbl in 2018, are expected to average $66/bbl over 2019 and $65/bbl in 2020, although the forecast remains highly dependent on policy outcomes. In 2019, non-energy prices are expected to remain below 2018 levels before rising moderately in 2020.

A S*pecial Focus* analyzes the nature of policy intervention by countries in the event of large swings in world food prices. It concludes that while individual countries can succeed at insulating their domestic markets, the collective intervention of many countries may amplify movements in world prices.

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

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