

APRIL 2016

# Commodity Markets Outlook

*Resource development in an era of  
cheap commodities*



WORLD BANK GROUP

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APRIL 2016

# Commodity Markets Outlook



WORLD BANK GROUP

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The World Bank's *Commodity Markets Outlook* is published quarterly, in January, April, July, and October. The report provides detailed market analysis for major commodity groups, including energy, agriculture, fertilizers, metals, and precious metals. A *Special Focus* section examines current topics and issues in commodity markets. Price forecasts to 2025 for 46 commodities are presented, together with historical price data. The report also contains production, consumption, and trade balances 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 price indexes rebounded in February-March from their January lows on improved market sentiment and a weakening dollar. Still, average prices for the first quarter fell compared to the last quarter of 2015, with energy prices down 21 percent and non-energy prices lower by 2 percent. Given the recent rebound in oil prices and expected supply tightening in the second half of the year, the crude oil price forecast for 2016 has been raised to \$41 per barrel (bbl), up from \$37/bbl in the January assessment (and represents a drop of 19 percent from 2015.) Metals prices are projected to decline 8 percent, a slightly smaller drop than anticipated in January due to supply reductions. Agricultural prices have been revised marginally lower on signs of adequate harvests in major producers, and are expected to register a decline of 4 percent from last year. Looking to 2017, a modest price recovery is projected for most commodities as demand strengthens. Crude oil is projected to rise to \$50/bbl as the market moves into balance. This issue of the Commodity Markets Outlook examines the implications of resource development in an era of lower commodity prices and concludes that ambitious improvements in governance and sounder macroeconomic policies are required to mitigate delays and risks.

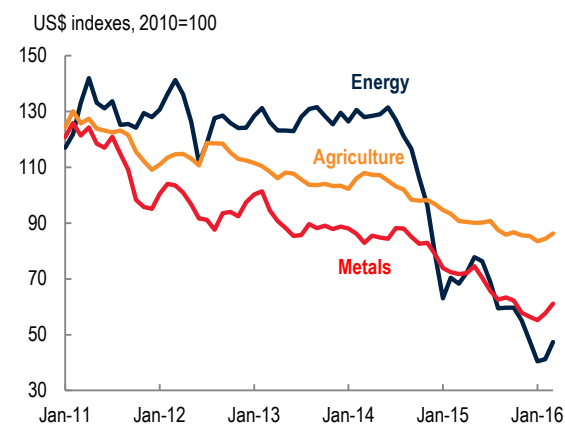
**Trends.** Energy prices fell 21 percent in the first quarter of 2016 (Figure 1). Oil prices led the decline by dropping 22 percent owing to resilient non-OPEC oil production, expanding supplies from Iran, and weak seasonal demand. Natural gas and coal prices are down 15 and 3 percent, respectively, due to oversupply. Oil prices rose from \$25/bbl in mid-January to more than \$40/bbl in mid-April due to a number of supply issues, notably outages in Iraq and Nigeria. In addition, oil production in the U.S. fell in December, the first year-on-year drop in several years, and there are indications that output declines may accelerate during 2016. A proposal by key OPEC and non-OPEC producers to freeze production at January levels failed to materialize at the Doha meeting on April 17.

Non-energy commodity prices fell 2 percent in the first quarter on persistently large inventories and ample supplies. Metal prices declined on weakening growth prospects in China and increasing supplies.

Cost reductions, largely stemming from lower energy prices, have delayed closures of higher-cost mines. On early indications of favorable harvests in major producers, agricultural commodity prices fell 1 percent, marking the eighth consecutive quarterly decline, though prices of some agricultural commodities reversed the downward trend in March/April. El Niño-related problems reduced production of a few commodities (for example, rice and palm oil), but the reductions were not large enough to materially affect the agricultural price index. Fertilizer prices fell 12 percent amid surplus production capacity and slower seasonal demand. Precious metals prices rose 6 percent in the quarter (the only index with a sizeable increase), on stronger investment demand amid growing concerns about global growth prospects.

**Outlook and risks.** All main commodity price indexes are expected to decline in 2016 due to persistently abundant supplies and, in the case of industrial commodities, weak growth prospects in emerging

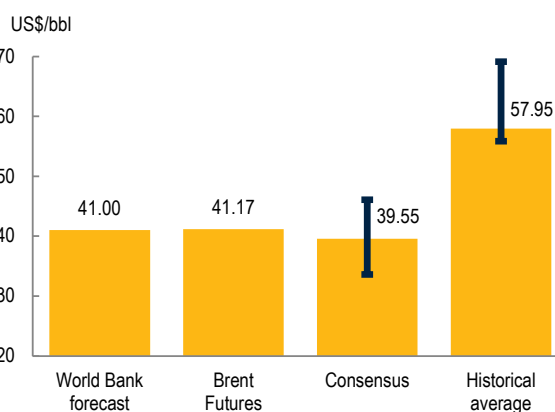
**FIGURE 1** Commodity price indexes



Source: World Bank.

Note: Last observation is March 2016.

**FIGURE 2** Crude oil price for 2016



Source: World Bank, Consensus Forecast, Bloomberg.

Notes: World Bank forecast, average of Brent, WTI, Dubai. Average Brent futures closing for the week of April 18, including actuals to date. Consensus median and range for Brent as of April 22. Historical average represents the 12-month recovery (median and range) since the lows of 07/86, 12/98, and 12/08 applied to 01/16 average of \$29.78/bbl.

market and developing economies (EMDE). Energy prices are expected to fall 19 percent, with average oil prices projected at \$41/bbl in 2016 (compared with \$37/bbl in the January 2016 *Commodity Markets Outlook*). This implies marginally higher prices for the rest of the year as the oversupply in the oil market diminishes. The rebound in oil prices from the January lows will be weaker than previous recoveries (Figure 2). Downside risks to the energy price forecast include higher-than-expected output from OPEC producers and weaker global growth. On the other hand, higher oil prices could result because of supply disruptions among key OPEC producers, stronger-than-expected demand, or an agreement by major oil producers to curtail supplies.

Non-energy prices are expected to fall 5 percent in 2016, 1 percentage point lower than the January 2016 *Commodity Markets Outlook* forecast (Table 1). Metals prices are projected to decline 8 percent following last year's 21 percent drop, due to weak demand prospects and new capacity coming on line. Downside price risks include a further slowdown in China, larger-than-expected production, and depreciation of currencies of key suppliers.

Agricultural prices have been revised lower, and are projected to decline 4 percent in 2016 with prices falling in most commodity groups. This agricultural price outlook reflects adequate supplies in anticipation of another favorable crop year for most grain and oilseed commodities. Agricultural commodity markets are also aided by lower energy costs and plateauing demand for biofuels. The largest price drop is for

grains and beverages (-5 percent each) and oils and meals (-3 percent). Other food items and agricultural raw material prices are expected to fall as well. Upside risks to agricultural price forecasts include the likely development of La Niña (unusually cold weather in the equatorial Eastern Central Pacific Ocean). Its overall impact on commodity markets—if it materializes—will be less than the impact of El Niño. Downside risks reflect policies favoring support to agricultural commodity producers. Fertilizer prices could retreat as much as 13 percent in 2016 due to surplus capacity and weak demand. Precious metal prices are projected to fall 2 percent.

**Special Focus on resource development in an era of low commodity prices.** During the commodities super cycle that began in the early 2000s, many resource-rich countries benefitted from surging exploration, investment, and production activities, which transformed growth prospects. In 2016, with oil and metals prices 50-70 percent below their early-2011 peaks, these patterns have been reversed, adversely affecting many commodity-exporting countries. Project development has already been put on hold or delayed in several emerging and developing countries. It would take ambitious governance improvements in EMDEs (e.g., to the levels prevailing in advanced markets) to mitigate the delays in ongoing development of large mines resulting from falling metals prices (up to four years for some of the largest mines in EMDEs). Governments seeking to newly develop natural resources may consider delaying new initiatives until the price outlook turns more favorable.

**TABLE 1 Nominal price indexes (actual and forecasts) and forecast revisions**

	Price Indexes (2010=100)						Change (%)		Revision <sup>2</sup>	
	2012	2013	2014	2015	2016F <sup>1</sup>	2017F <sup>1</sup>	2015-16	2016-17	2016F	2017F
<b>Energy</b>	128	127	118	65	52	63	-19.3	20.0	3.5	1.3
<b>Non-Energy<sup>3</sup></b>	110	102	97	82	78	80	-5.1	2.3	-1.1	-1.0
<b>Agriculture</b>	114	106	103	89	86	88	-3.5	1.8	-1.9	-1.7
Beverages	93	83	102	94	89	89	-4.6	-0.5	-3.5	-3.1
Food	124	116	107	91	88	90	-3.4	2.1	-1.5	-1.4
Oils and meals	126	116	109	85	82	85	-3.4	3.0	-1.1	-1.0
Grains	141	128	104	89	84	86	-5.3	2.8	-1.6	-1.5
Other food	107	104	108	100	98	99	-1.9	0.5	-2.0	-1.8
Raw Materials	101	95	92	83	81	83	-2.9	2.4	-2.0	-1.8
<b>Fertilizers</b>	138	114	100	95	83	84	-13.2	1.4	-8.9	-8.0
<b>Metals and minerals</b>	96	91	85	67	61	64	-8.2	3.7	1.4	1.1
<b>Precious Metals<sup>3</sup></b>	138	115	101	91	89	88	-1.7	-1.0	5.7	5.0
<b>Memorandum items</b>										
Crude oil (\$/bbl)	105	104	96	51	41	50	-19.2	21.9	4.0	2.0
Gold (\$/toz)	1,670	1,411	1,266	1,161	1,150	1,132	-0.9	-1.5	75.0	65.9

Source: World Bank.

Notes: (1) "F" denotes forecasts. (2) "Revision" denotes change to the forecast from the January 2016 report (expressed in percentage points for the price indexes, \$/bbl for crude oil, and \$/toz for gold). (3) The non-energy price index excludes precious metals. See Appendix C for definitions of price and indexes.



## SPECIAL FOCUS:

Resource development in an era  
of cheap commodities



## Resource development in an era of cheap commodities<sup>1</sup>

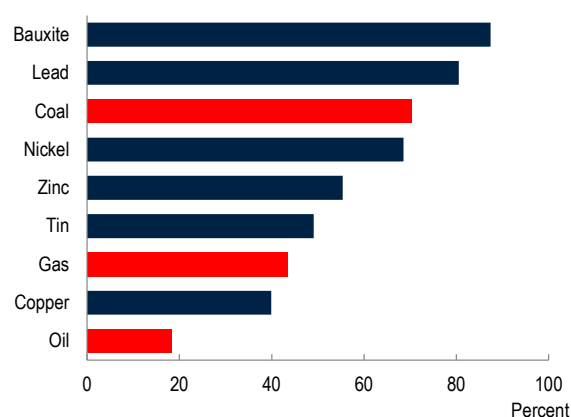
*During the commodities super cycle that began in the early 2000s, many resource-rich countries benefitted from surging exploration, investment, and production activities, which transformed growth prospects. In 2016, with oil and metals prices 50-70 percent below their early-2011 peaks, these patterns have been reversed, adversely affecting many commodity-exporting countries. Project development has already been put on hold or delayed in several Emerging Markets and Developing Economies (EMDEs). It would take ambitious governance improvements in EMDEs—for example, to the levels prevailing in advanced markets—to mitigate the delays in ongoing development of large mines resulting from falling metals prices (up to four years for some of the largest mines in EMDEs). Governments seeking to develop natural resources may consider delaying new initiatives until the price outlook turns more favorable.*

### Introduction

The post-2000 commodity price increases, in part a reflection of demand growing faster than supply and concerns about the security of supply, set in motion a boom in commodities exploration, investment, and production, especially in mining and hydrocarbons (Figure F1). Less is known about the scale of investment that flowed into agriculture, but private sector investment in farmland in Africa increased significantly (FAO 2012).<sup>2</sup>

With oil and metals price declines of 50-70 percent between 2011 and early 2016, many resource development projects have been delayed or put on hold. Lead times—the time it takes from resource discovery to production—are a critical issue in many countries as these periods are associated with heightened macro-economic vulnerabilities. This raises concerns about the ability of commodity-exporting emerging market and developing economies (EMDEs) to withstand shocks in the global economy.

**FIGURE F1 Global metal and hydrocarbon production (change from 2000 to 2014)**



Source: BP Statistical Review, World Bureau of Metal Statistics.

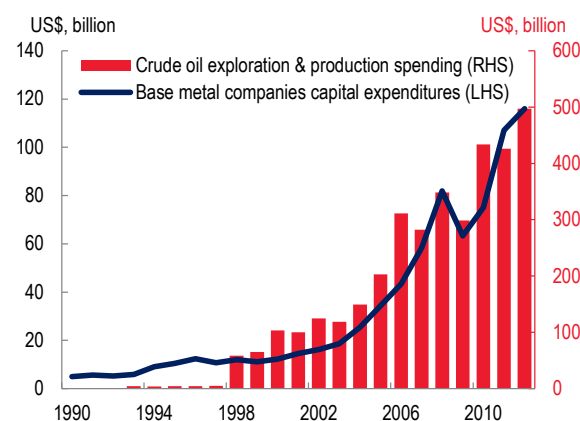
Notes: Detailed data are reported in the Annex Table. Blue and red bars refer to metals and energy commodities, respectively.

This *Special Focus* addresses the following three questions: (1) How did resource development evolve through the post-2000 price super-cycle? (2) What are the main drivers of resource development? (3) What are the implications of the decline in metal prices for resource development?

### How did resource development evolve through the post-2000 price super-cycle?

**Exploration.** Between 2000 and 2012, investment spending by global oil, gas, and base-metal mining companies rose five-fold (Figure F2), especially in Latin American and the Caribbean, and Sub-Saharan Africa. Including investment in other mined products, global investment in 2011–12 amounted to over \$1 trillion; in Africa, mining investment alone amounted to \$100 billion in 2011 (or 15 percent of global mining investment) and was a key driver of growth (ICMM 2012).

**FIGURE F2 Global investment spending on exploration and production**



Source: International Energy Agency, MinEx Consulting.

Note: Last observation is 2012.

**Discoveries.** Several major discoveries transformed country prospects in Sub-Saharan Africa, and Latin America and the Caribbean (Figure F3). Since 2000, 120 “giant” oil and gas fields (fields with recoverable reserves of more than 500 million barrels of oil equivalent) have been discovered world-wide, with estimated “proved plus probable” reserves of almost 250 billion barrels of oil. The fields are located in seven clusters (Figure F4), two of which are in Africa, mostly offshore in East and West Africa. In Tanzania alone (which accounts for almost 7 percent of these reserves) there have been 13 giant oil and gas discoveries. Other major discoveries are in Kenya, Madagascar, Mozambique, and Uganda, as well as in six countries in West Africa and in the Gulf of Guinea. Another major frontier for giant oil and gas fields has emerged in the Krishna and Rakhine basins in the Bay of Bengal in South Asia (Bai and Xu 2014; Basu et al. 2010).

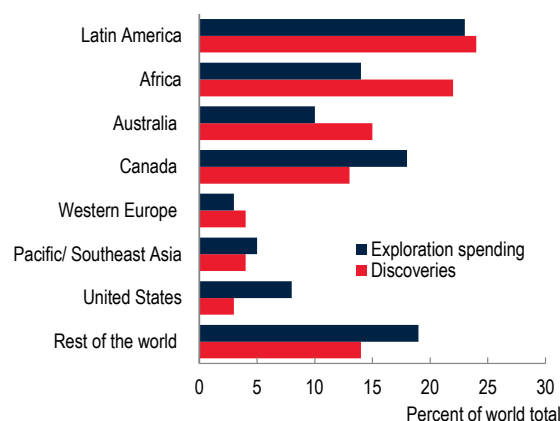
**Lead times from discovery to production.** Bringing discoveries to actual production is a process that requires large upfront and sustained investment that varies across regions and time (Figure F5). Currently, there is high uncertainty about prices, as well as macroeconomic and policy environments (IMF 2012a). The process of developing most mines generally has five major stages. It begins with exploration to establish the existence of a *potentially* commercially viable deposit. Once a deposit is confirmed, feasibility, environmental, and other impact studies are conducted, and financing plans are developed to establish commercial viability. Following confirmation of commercial viability, a mining license is obtained, which can take several years in some countries (on average, three years in Africa; Gajigo, Mutambatsere, and Ndiaye 2012). Finally, investments are made in constructing the physical facility, with the amount of time needed

depending mainly on the accessibility of the deposit. All steps depend on the quality of governance, the reliability of institutions, and macroeconomic stability. Investment risks tend to be high in the exploration, pre-feasibility, and feasibility stages, and decline as a deposit gets closer to production.

While resource development tends to have lengthy lead times, there are differences across commodities and regions:

- **Oil and gas.** Conventional discoveries can take 30–40 years to develop (Clo 2000), but lead times for giant oil and gas discoveries can be shorter (Arezki, Ramey, and Sheng 2015). For oil deposits, such as shale, the lead times are much shorter (2–3 years), a reflection of technological improvements and reduced entry barriers for small, agile firms (Wang and Xue 2014, World Bank 2015a).<sup>3</sup> Monetizing discoveries in natural gas is harder than oil because the former require investment in transport infrastructure (in addition to drilling) as well as long-term contractual arrangements with end-users (Huurdeeman 2014).
- **Mining.** The time to develop resources ranges from a few years to decades, depending on the type of mineral, the size and grade of the deposit, financing conditions, country factors, availability of key inputs like electricity, and commodity prices (UNECA 2011, Schodde 2014, World Bank 2015b). For example, resource development takes an average of ten years for gold but more than 15 years for base metals such as zinc, lead, copper, and nickel (Schodde 2014). Development of most gold deposits tends to begin immediately, whereas a significant share of copper discoveries takes several decades due to their

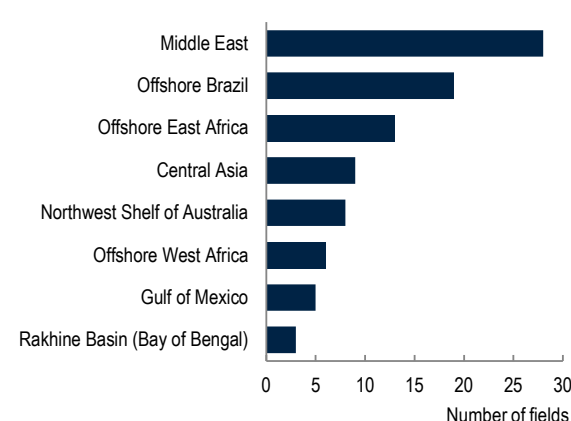
**FIGURE F3 Mining exploration spending and discoveries during 2003–12**



Source: MinEx Consulting.

Note: “Rest of World” includes Middle East, South West Asia (including India and Pakistan) and Mongolia.

**FIGURE F4 Giant oil and gas discoveries during 2000–09**



Source: Bai and Xu (2014).

Note: “Giant” fields are those with recoverable reserves of more than 500 million barrels of oil equivalent.

complexity and larger infrastructure investment to move ore to export ports (Figure F7).<sup>4</sup> Location has a major impact on processing. For instance, it is less costly to ship concentrates from Chile's copper mines due to their proximity to the sea, than, say, from Central Africa where, because of infrastructure impediments, it is more profitable to smelt and refine the ore locally in order to reduce the volumes transported to ports (Crowson 2011).

## What are the main drivers of resource development?

Surging resource exploration and development during the 2000s was driven by rising commodity prices (in part due to increasing scarcity and availability concerns), lower cost of capital, better technologies, and improved domestic policies and investment climates (Arbache and Page 2010). These factors varied by commodity and country over time, and remain important determinants of resource development in general, and lead times in particular.

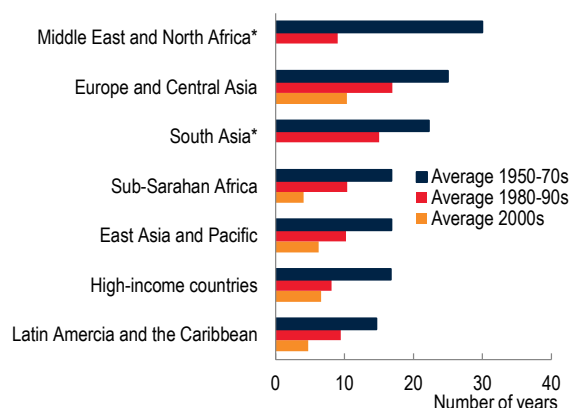
**Commodity prices.** Between 2000 and 2010, real energy and metal prices doubled, real precious metal prices tripled, and real agricultural prices increased more than 60 percent. Surging prices stimulated a sharp increase in industry spending on exploration, investment, and production, including in many low-income countries and difficult-to-reach places.<sup>5</sup> For example, mining exploration expenditures in Africa reached an estimated \$4.5 billion in 2012, up from just \$0.3 billion in 2000 (UNECA 2011, Schodde 2014). Conversely, lower commodity prices have a negative impact on resource development. For exam-

ple, the rig count in Africa and Latin America responded quickly to rising oil prices, but also declined sharply following the oil price plunge (Figure F6).

**Cost of capital.** Global mining, oil, and gas production has been dominated by large transnational companies, but the structure of the industry has changed over the past decade. Smaller, younger companies have emerged as risk takers at the forefront of exploration, whereas larger developers and operators tended to enter projects only after the discovery of deposits (UNECA 2011; Gelb, Kaiser, and Vinuela 2012). Spending by junior companies is primarily driven by the availability of funding, facilitated by favorable global financing conditions in recent years (Schodde 2013). In addition, China has emerged as a major source of exploration and development finance in Africa, broadening choices for governments in the region.

**Technologies.** Technological innovations have allowed extraction in previously inaccessible or less-developed regions (including deepwater). The development of large shipping carriers has reduced the cost of transporting bulk commodities such as iron ore, coal, and bauxite (ICMM 2012, Lusty and Gunn 2015). As a result, the location of production and exploration has increasingly shifted towards frontier regions such as Africa and the Arctic (ICMM 2012). Mining exploration in Sub-Saharan Africa has been particularly attractive because it is seen as a relatively unexplored frontier with low cost (African discoveries are found closer to the surface than anywhere else except Latin America). Africa had the largest discoveries per dollar of exploration cost during 2003–12; it accounted for 22 percent of discoveries but only 15 percent of global exploration expenditures (Schodde 2013).

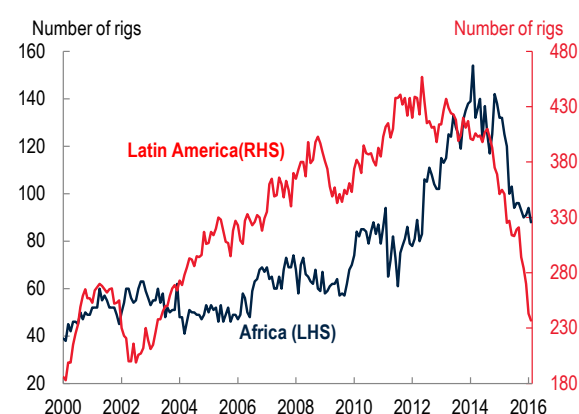
**FIGURE F5** Number of years from discovery to production for gold and copper



Source: <http://pumpkinhollowcopper.com/project-timeline/>.

Notes: Based on a sample of 46 countries with copper discoveries and 73 countries with gold discoveries. Regions refer to World Bank classification. (\*) indicates that data is not available for 2000s.

**FIGURE F6** Rig counts in Africa and Latin America



Source: Baker Hughes.

Note: Last observation is April 15, 2016.

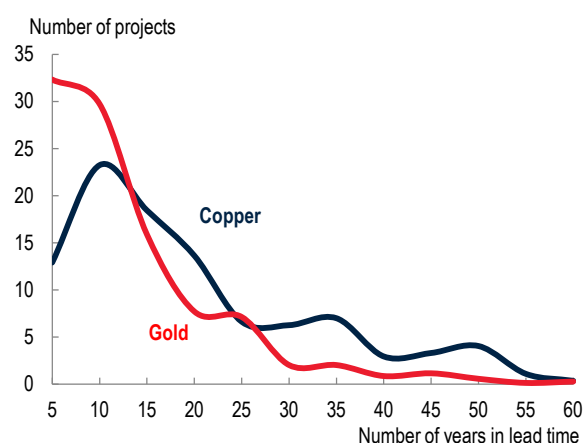


**Domestic conditions.** The business environment for resource development has benefited from the moderation of conflict and internal political tensions (Central African Republic, Democratic Republic of Congo, Eritrea, Myanmar, and Rwanda) as well as strengthening of investment climate (Eritrea, Myanmar, and Rwanda). Improved macroeconomic policies, including easing of fiscal deficits and debt burdens, have also aided resource developments (World Bank 2015a, IMF 2014a). Anecdotal evidence suggests that lead times for exploration, discovery, investment, and production are shorter in countries with more conducive policy environments.

### What are the implications of the decline in commodities prices for resource development?

In the same way that high prices spurred activity in the resources sector, the sharp decline in commodity prices over the past few years may delay resource development. Lower commodity prices reduce the apparent commercial feasibility of marginal projects, and could slow the start of development after discovery (Schodde 2014). Once started, however, sunk costs may make mining companies reluctant to disrupt ongoing projects, particularly if development is already well advanced (McIntosh 2015, Crowson 2011).<sup>6</sup> In addition, other drivers like the accessibility and quality of the discovery, as well as the policy environment, play an important role. Larger discoveries that are closer to the surface and in more predictable policy environments appear to see faster development (World Bank 2015a).

**FIGURE F7** Distribution of discovery-to-production time



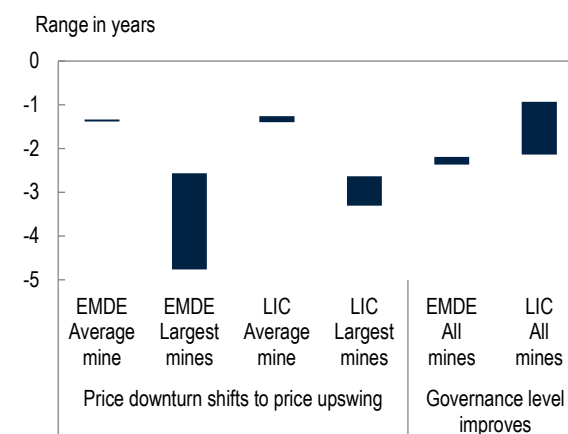
Source: <http://pumpkinhollowcopper.com/project-timeline/>.  
Note: Number of discoveries for each number of years.

A “duration analysis” has been developed to assess the relative importance of these drivers (Jenkins 2006, World Bank 2016). Based on a dataset of 273 copper discoveries in 46 countries and 687 gold discoveries in 73 countries during 1950–2015, the probability of a particular mine reaching production in any given year was examined.<sup>7</sup> Explanatory variables include real gold and copper prices and two indicators of the policy environment. A number of physical characteristics of the deposit were used as controls. The policy environment is proxied by the Worldwide Governance Indicators for Control of Corruption and by the Quality of Government Institute’s Index of the Quality of Government. These proxies capture policy conditions that help avoid the “resource curse” – the macroeconomic volatility and stunted institutional development that often plague resource-based economies (Sachs and Warner 2001; Mehlum, Moene, and Torvik 2002; Humphreys, Sachs, and Stiglitz 2007).

Three key results emerge from the analysis.

- **Commodity prices.** The findings on the role of commodity prices are mixed depending on the commodity. An upswing in copper prices at the time of discovery – the crucial period when licenses are obtained and exploration and extraction rights are negotiated – is found to accelerate development. For example, for the average copper deposit discovered in EMDEs since 2000, rising copper prices at the time of discovery may have shaved off more than a year from lead times. For an EMDE mine in the largest quartile, higher prices can reduce lead times by more than four years. Although mines in LICs tend to be smaller, high and rising prices reduced lead times for aver-

**FIGURE F8** Reductions in lead times for copper mines under two scenarios



Source: <http://pumpkinhollowcopper.com/project-timeline/>.  
Notes: The bars indicate a range of reduction in lead times. The governance scenarios are: EMDE governance level reaches that of Canada, and LIC governance level reaches that of Chile.



age sized copper mines by a year, and for their largest mines by more than three years (Figure F8, left panel).

- **Governance.** If the average EMDE had the same readings on the Quality of Government Index or Control of Corruption Index as Canada (the world's ninth largest copper producer), the lead times for the development of copper discoveries since 2000 might have been shortened by more than two years. Similarly, if the average low-income country had the same readings on these indexes as Chile (the world's largest copper producer), the lead time of the average copper mine since 2000 might have been shortened by one to two years (Figure F8, right panel).
- **Macroeconomic policies.** Lowering government debt below 40 percent of GDP, or reducing inflation below 10 percent, is found to accelerate development times by about 10 percent. Indeed, a more stable macroeconomic environment is typically associated with more predictable tax and expenditure decisions.

Extended lead times prolong the period of inflation, fiscal, and balance of payments vulnerabilities that are

often associated with resource development, as governments and private sectors borrow and invest in anticipation of future income growth. Such vulnerabilities are especially sizeable in small, low-income countries where resource development accounts for a sizeable share of economic activity. In countries where resource development is still in initial stages, further delays may contain vulnerabilities and reduce the long-term risk of stranded assets (Stevens, Lahn, and Kooroshy 2015).

## Conclusion

Given that resource development, production, and revenue streams take place over decades, with substantial sunk costs along the way, longer term commodity price prospects are critical in deciding whether to develop a discovery into production. In 2016, the outlook for an era of low commodity prices had already set back many resource development projects. Ambitious improvements in business climates along with better and more predictable macroeconomic policies will be needed to offset these headwinds to resource development. Governments seeking to develop natural resources may consider delaying new initiatives until the price outlook turns more favorable.

**ANNEX TABLE Global metal, ore and hydrocarbon production**

	Metals (million metric tons)						Energy (mb/d equivalent)		
	Bauxite	Copper	Lead	Nickel	Tin	Zinc	Coal	Gas	Oil
<b>2000</b>									
Africa	18.42	0.46	0.17	0.07	0.00	0.29	2.61	2.33	7.76
Asia	17.21	1.90	0.77	0.19	0.15	2.18	18.46	4.45	7.07
Europe	3.87	0.81	0.35	0.02	0.00	0.89	4.73	5.12	6.98
FSU	8.73	1.09	0.05	0.27	0.01	0.46	4.03	11.73	8.03
Latin America	36.17	5.70	0.45	0.16	0.06	1.67	0.79	2.51	10.11
Middle East	0.49	0.15	0.02	0.00	0.00	0.08	0.01	3.73	23.72
Oceania	53.80	1.04	0.68	0.30	0.01	1.42	3.38	0.56	0.82
US and Canada	0.20	2.07	0.60	0.19	0.00	1.83	12.18	13.19	10.44
<b>Total</b>	<b>138.89</b>	<b>13.21</b>	<b>3.08</b>	<b>1.19</b>	<b>0.23</b>	<b>8.82</b>	<b>46.20</b>	<b>43.62</b>	<b>74.93</b>
<b>2014</b>									
Africa	21.31	2.06	0.09	0.10	0.01	0.33	3.04	3.65	8.26
Asia	91.50	2.82	3.09	0.68	0.27	6.28	48.79	8.57	7.88
Europe	2.63	0.87	0.29	0.06	0.00	0.80	3.53	4.36	3.40
FSU	10.10	1.32	0.26	0.26	0.00	0.65	5.31	13.69	13.80
Latin America	53.12	8.07	0.67	0.22	0.06	2.74	1.44	4.20	10.40
Middle East	2.86	0.22	0.05	0.00	0.00	0.16	0.01	10.82	28.55
Oceania	78.63	1.04	0.73	0.44	0.01	1.56	5.67	1.00	0.45
US and Canada	0.13	2.08	0.39	0.24	0.00	1.18	10.89	16.28	15.94
<b>Total</b>	<b>260.29</b>	<b>18.48</b>	<b>5.56</b>	<b>2.01</b>	<b>0.35</b>	<b>13.71</b>	<b>78.67</b>	<b>62.55</b>	<b>88.67</b>
<b>Change, 2000-14 (percent)</b>	<b>87.4</b>	<b>39.9</b>	<b>80.5</b>	<b>68.9</b>	<b>52.2</b>	<b>55.4</b>	<b>70.3</b>	<b>43.4</b>	<b>18.3</b>

Source: BP Statistical Review, World Bureau of Metal Statistics.

## Endnotes

1. This section draws from the following: World Bank (2015b, pp. 93-101, "After the Commodities Boom—What Next for Low-Income Countries," authored by Tehmina Khan and Gerard Kambou) and World Bank (2016, pp. 45-60, "From Commodity Discovery to Production: Vulnerabilities and Policies in LICs," authored by Tehmina Khan, Trang Nguyen, Franziska Ohnsorge and Richard Schodde).
2. Total foreign direct investment in agriculture and agribusiness in developing countries was estimated at \$13 billion in 2006/07, with Africa receiving \$1 billion.
3. The U.S. is by far the largest producer of oil and gas from shale formations, with smaller amounts coming from Canada, China, and Argentina (EIA 2013). A number of other countries possess relatively large shale oil reserves, and several have actively drilled these formations including Algeria, Australia, Columbia, Norway, Mexico, and Russia (IER 2015). Related, the U.S. shale oil industry turned out to be more resilient than originally anticipated following the post-2014 oil price collapse, a reflection of technological advances and lower input costs (Decker et al. 2016).
4. One-third of copper discoveries since 1950 have had lead times to eventual production of 30 or more years, compared with only 4.5 percent of gold discoveries. Similarly, industry estimates place the period from early exploration to final production of copper mines at close to 25 years (McIntosh 2015).
5. Average annual returns for the top ten global mining companies are estimated to have risen from \$3 billion in 2005 to just under \$8 billion in 2010 (UNECA 2011). Returns in the oil and gas sector are even larger, since country conditions matter less, transportation (including in unprocessed form) is easier, and the sector is less dependent on the conditions of infrastructure such as roads, railways, and power stations (UNECA 2013).
6. In general, the cost of delaying projects may be lower in the resource sector than in non-resource sectors due to a limited number of alternative feasible projects and heavy involvement of the state, which provides some insulation from political shocks (Crowson 2011).
7. The dataset, which is proprietary, was provided by MinEx Consulting.

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# COMMODITY MARKET DEVELOPMENTS AND OUTLOOK

Energy  
Agriculture  
Fertilizers  
Metals and minerals  
Precious metals



## Energy

The World Bank Energy Price Index fell 21 percent in the first quarter of 2016 from the previous quarter. Oil led the decline by dropping 22 percent on weak demand and well-supplied markets. Natural gas and coal dropped 15 and 3 percent, respectively. However, oil prices recovered from lows in mid-January on improving market sentiment.

### Crude oil

After dropping to \$25/bbl in mid-January, oil prices rebounded to more than \$40/bbl in mid-April on improved sentiment and investor short covering (Figure 3). However, average oil prices were down 22 for the quarter and 70 percent from June 2014.

The rally during the quarter reflected a number of supply side factors, notably disruptions in Iraq and Nigeria. In addition, the United States reported that oil production in December fell year-on-year for the first time in several years, and the U.S. Energy Information Administration (EIA) projections show falling output accelerating in 2016. Expectations of a production freeze among a number of OPEC and non-OPEC countries at a meeting in Doha on April 17 ended without an agreement. A weaker dollar and improved oil demand sentiment also contributed to the rally.

Despite the improved sentiment, the oil market remains oversupplied with stocks near record levels. Given that crude oil demand typically weakens in late winter and spring due to refinery maintenance, stocks are likely to stay high until demand picks up in the second quarter.

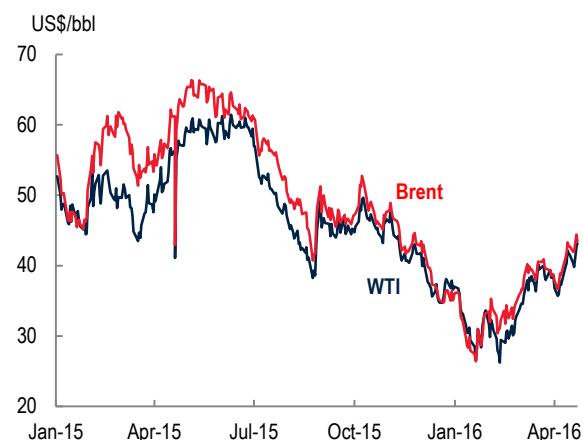
The differential between West Texas Intermediate (WTI) and Brent spot crude oil prices began the year

with WTI at a small premium. WTI was supported by declining domestic production and the lifting of the U.S. export ban on crude oil, while Brent was relatively suppressed due to weak seasonal demand. WTI subsequently slipped back into a modest discount throughout much of the quarter, reflecting crude oil stocks rising to ever-higher record levels and lower refinery production. Futures prices show the WTI discount to Brent widening to more than \$3/bbl, or about 6 percent, several years forward. This compares to a discount of \$25/bbl or 23 percent at its most extreme in September 2011, and with an average historical premium of \$1.2/bbl or 4 percent on average over 1986-2010.

World oil demand in 2015 grew by 1.8 mb/d or 2.0 percent, the highest growth in five years, in part aided by low prices. OECD oil demand grew by more than 0.4 mb/d (1 percent), after falling nearly 5 mb/d (10 percent) on a cumulative basis during the previous nine years. All of the OECD growth last year was in North America and Europe. Non-OECD oil demand trended modestly higher, rising by 1.4 mb/d (3 percent), with most of the growth in Asia. Among products, gasoline led the way, particularly in the U.S. and Asia, due to lower prices and increased miles driven. Gasoil/diesel demand was subdued, however, due to slower economic activity, lower freight travel, and reduced industrial activity.

Robust world oil demand growth slowed in the fourth quarter of 2015 and into the first quarter of 2016, in part because of mild weather in the northern hemisphere and waning effects of lower prices (Figure 4). World oil demand is projected to increase by 1.2 mb/d to 95.9 mb/d in 2016. OECD oil demand is projected to be flat, with modest gains in North America offset by losses elsewhere. Non-OECD oil demand is projected to rise by 1.2 mb/d (2.4 percent),

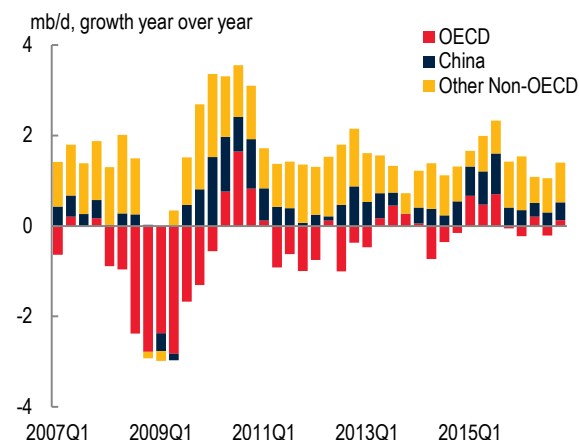
**FIGURE 3 Crude oil prices**



Source: Bloomberg.

Notes: Daily frequency. Last observation is April 22, 2016.

**FIGURE 4 World oil demand growth**



Source: International Energy Agency.

somewhat slower than last year. Growth is projected to slow in Asia, notably in China, but the region still accounts for the bulk of non-OECD growth, rising by 0.9 mb/d or 3.7 percent.

Global oil supply in 2015 increased by 2.7 mb/d, far exceeding the pace of demand. The gains were split between OPEC at 1.3 mb/d (mainly Iraq and Saudi Arabia) and non-OPEC 1.4 mb/d (of which 0.9 mb/d was in the United States). Other increases were in Brazil, Canada, the North Sea, and Russia—mainly from earlier investments in large projects. While OPEC maintained strong production growth throughout the year, non-OPEC growth declined steadily from 2.3 mb/d in the first quarter to just 0.4 mb/d in the fourth quarter, mainly due to a sharp slowdown in the United States. In the first quarter of 2016, non-OPEC supply is estimated to have fallen by 0.3 mb/d, the first reduction in 14 consecutive quarters. Declines are expected to steepen during the year to more the 1 mb/d in the fourth quarter, resulting in an average annual fall of 0.7 mb/d—the bulk of which will be from on-shore U.S. producers. Some annual increases are anticipated, with Canada and Russia raising output by more than 0.1 mb/d each.

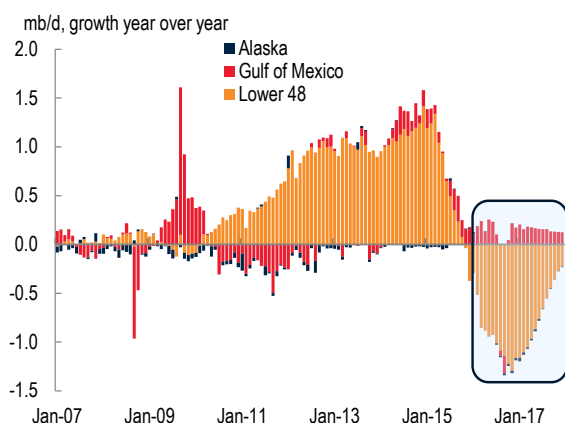
Slowing output growth from higher-cost, short-cycle, unconventional oil in the U.S. is expected to help rebalance supply. This output includes but is not limited to shale plays. Production from unconventional oil rose from 0.5 mb/d in 2009 to 4.6 mb/d at its high in 2015, and accounted for about half of U.S. oil output in last year. U.S. shale production has held up remarkably well—despite low prices and large declines in investment and drilling—through significant cost reductions, productivity improvements, technology innovations, an emphasis on the most productive assets, and hedging programs. Some of the important

operating improvements include shorter drilling cycles, longer laterals, multi-well drilling pads, tighter well spacing, greater proppant use, better geo-steering, and re-fracking of wells. There is also a significant backlog of drilled but uncompleted wells that can be completed at roughly two-thirds the cost of a new well.

U.S. oil production recorded a year-on-year decline in December, the first material drop in nearly 10 years (Figure 5). The U.S. EIA projects that production will decline from 9.3 mb/d in the fourth quarter of 2015 to 7.9 mb/d in third quarter of 2017 before trending upward. U.S. upstream investment is estimated to have declined by at least one-third last year, and is likely to fall another 40 percent this year. Consequently, rigs drilling for oil have plunged by more than three-quarters from their October 2014 high (Figure 6).

Still, there is large uncertainty as to how far production will decline, or when it may start rising again. The recent oil price rally brought some relief to producers' cash flow, and many hedged production forward at higher prices, thereby delaying supply rebalancing. Higher prices and continued efficiency improvements could further impinge on required rebalancing. On the other hand, the industry borrowed heavily during the boom years, outspending cash flow, and many companies are encumbered with debt, selling assets, and entering into bankruptcy (and not confined to U.S. producers). With external financing increasingly closed, companies will need greater cash flow generation to fund drilling and completion of wells—which will depend on the level of prices. In addition, cost reductions and efficiency improvements may be more difficult going forward as much as the potential gains have already been achieved.

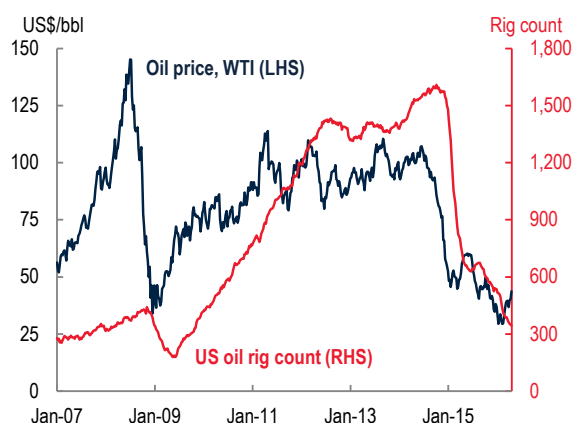
**FIGURE 5 U.S. crude oil production**



Source: U.S. Energy Information Administration.

Notes: Last actual is January 2016. February 2016 to December 2017 are forecasts.

**FIGURE 6 U.S. oil rig count and oil prices**



Source: Baker Hughes, Bloomberg.

Notes: Weekly frequency. Last observation is April 22, 2016.



OPEC crude oil production averaged 32.6 mb/d in the first quarter of 2016, up 1.4 mb/d from a year earlier, with all of the increase coming from Middle East Gulf countries (Figure 7). Saudi Arabia has maintained output at around 10.2 mb/d for much of the past year, rising only in summer to meet peak summer domestic power demand. Iraq's production surged to a high of 4.4 mb/d in January, but slipped in February as sabotage halted flows on the northern export pipeline through Turkey. Nigerian production was also disrupted due to an attack on a sub-sea pipeline. The Islamic Republic of Iran has increased output 0.4 mb/d following the lifting of sanctions in January. Iran's exports have resumed to Europe, and Asian buyers have also increased purchases. The country's output is expected to continue climbing, from 2.9 mb/d at end-2015 toward its estimated capacity of 3.6 mb/d. The International Energy Agency states that with foreign investment and technology, the Islamic Republic of Iran could increase capacity to 4 mb/d by the end of the decade.

At a meeting in Doha on April 17th, sixteen OPEC and non-OPEC countries failed to freeze production, as many anticipated. Non-OPEC members were Azerbaijan, Colombia, Mexico, Oman, and Russia. OPEC members Libya and the Islamic Republic of Iran did not attend. This failure was attributed to disagreement over whether to include the Islamic Republic of Iran and other producers in the freeze. An agreement was not expected to materially affect supply in the near term, as most countries were producing at relatively high levels and were not expected to produce much more in 2016. OPEC next meets on June 2 to discuss market developments.

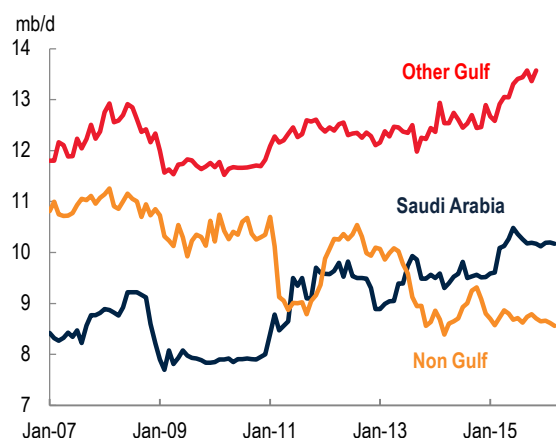
The large supply overhang continues to result in near record OECD crude oil inventories (Figure 8). Much

of the increase has been in North America, but stocks are elevated in Europe and the Pacific regions as well. In the fourth quarter of 2015—a period when stocks typically fall—implied inventories soared by a record 1.8 mb/d. Global stocks are estimated to have risen by a 1.5 mb/d in first quarter, again with continued gains in North America. The stock buildup slowed significantly in March, suggesting a beginning of a tightening of oil balances. The flattening of futures prices curves this year further suggests the process is underway.

Crude oil prices are projected to average \$41/bbl in 2016, a decline of 19 percent from last year. This implies small increases through the rest of the year as the oversupply in the oil market diminishes. The market surplus is expected to extend in the first half of the year amid weak seasonal demand, but stocks are expected to fall during the second half of the year as refinery demand increases and U.S. production declines steepen. OPEC production excluding the Islamic Republic of Iran is expected to remain flat, while Iranian output is expected to climb by some 0.5 mb/d.

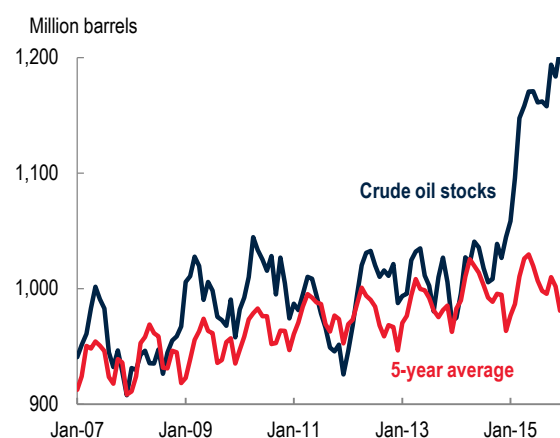
Near-term upside risks to the price forecast include larger non-OPEC supply declines and slow expansion of Iranian exports. In addition, there are risks of supply disruptions among key OPEC producers (Iraq, Nigeria, and the República Bolivariana de Venezuela) due to internal conflict and financial constraints. Higher global demand, particularly for transport, would also help reduce the stock overhang. Downside price risks include a slower rebalancing because of weak demand, and continued resilience of U.S. producers to sustain output and develop uncompleted wells. A large increase in the Islamic Republic of Iran's exports and higher production from the rest of OPEC could help sustain the surplus.

**FIGURE 7 OPEC crude oil production**



Source: International Energy Agency.  
Note: Last observation is March 2016.

**FIGURE 8 OECD crude oil stocks**



Source: International Energy Agency.  
Notes: Previous 5-year average for each month. Last observation is February, 2016.

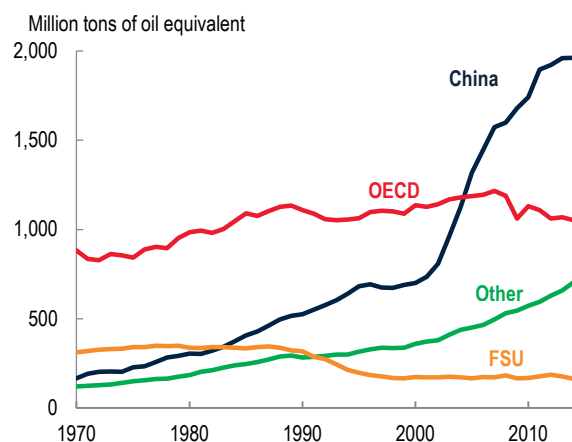
## Coal

Thermal coal prices fell 3 percent in the first quarter of 2016—and down 60 percent over past five years—on continued weak import demand and excess supply. Prices rose slightly in February and March on somewhat firmer seasonal demand and low stocks at Chinese ports, but surplus conditions are expected to remain due to falling imports into China—the world's largest consumer of coal (Figure 9). High cost production has been reduced, notably in Indonesia, and new capacity continues to be developed, boosted in part by falling costs and depreciating producer currencies.

China's thermal coal imports fell by one-third last year due to slowing power demand, increases in other energy sources to generate electricity, and government policies to reduce pollution and limit coal use. The government's planned closure of high-cost, low-quality mines will improve the country's overall power plant efficiency, further reducing thermal coal imports. Coal markets are contracting in many developed economies under government initiatives to shift away from coal. New climate change commitments may accelerate that transition. Growing supplies of low-priced natural gas are also prompting substitution away from coal.

Coal prices are expected to decline by 13 percent in 2016, averaging \$50/ton, on continued weak demand and oversupply. Import demand in China is expected to continue to fall, and will partly be offset by rising demand in India and other emerging markets. However, production in India is rising under new government policies that plan to significantly reduce imports in the next few years. Coal supply is expected to be ample, and there is also significant spare capacity that could be brought back on-line in countries such as Australia and Indonesia. China is also seeking to boost exports, further bloating the seaborne market.

**FIGURE 9 Coal consumption**



Source: BP Statistical Review.  
Note: Last observation is 2014.

## Natural gas

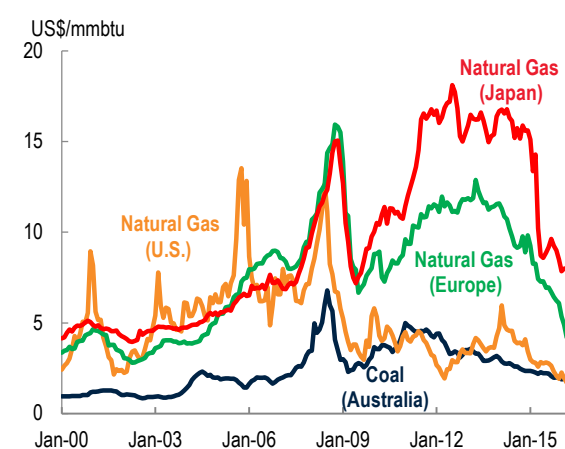
Natural gas prices fell 15 percent in the first quarter of 2016 amid weak demand and large stocks (Figure 10). European gas prices plunged 23 percent to \$4.8/mmbtu on weak demand; gas has been too expensive to compete with coal in power generation. Most gas is delivered at a spot or hub basis.

Gas delivered to Japan fell 11 percent to \$8.0/mmbtu, owing to weak demand and strong seaborne supply from the Pacific and Atlantic Basins. Spot cargoes of liquefied natural gas (LNG) flowing into Asia and Europe have collapsed to around \$4/mmbtu because of excess supply, but they only account for about 1 percent of global LNG trade. Significant new liquefaction capacity is expected from Australia and the U.S. in the next few years.

U.S. gas prices fell 6 percent to under \$2.0/mmbtu due to record high stocks and weak demand from a mild winter. Natural gas use in the power sector continues to increase and is expected to overtake coal this year. U.S. gas production finally shows signs of plateauing. The country shipped its first two cargoes of LNG to Brazil and India, and is on track to be a net exporter of gas by mid-2017.

Natural gas prices are projected to fall in 2016, led by large declines in Europe (-38 percent to \$4.2/mmbtu) and Japan (-23 percent to \$8.0/mmbtu) on continued weak demand and surplus supply. Gas prices in the U.S. are expected to fall by 4 percent and average \$2.5/mmbtu due to high stocks. However, strong growth in the power sector, rising exports, and slowing production growth are expected to underpin prices. Risks to the forecast are mainly to the downside, given a global supply surplus and forthcoming increases in new LNG capacity.

**FIGURE 10 Coal and natural gas prices**



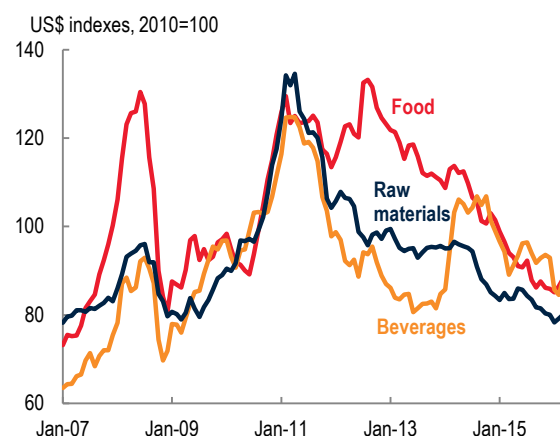
Source: World Bank.  
Note: Last observation is March 2016.

## Agriculture

Agricultural prices continued their broad-based decline in the first quarter of 2016, with the overall index down 1.4 percent—the eighth consecutive quarterly decline—and 9 percent lower than a year ago (Figure 11). The decline was driven primarily by a 7.5 percent drop in the Beverage Price Index and a 1.8 percent decline in the Agricultural Raw Material Index. The two key food price indexes, grains, and oils and meals, increased marginally in the quarter as a whole as their January-February weakness was offset by a recovery in March, which continued into early April. The rebound of these two price indexes later in the quarter reflects El Niño-related production shortfalls in some commodities, notably rice and palm oil (both dominated by producers in Southeast Asia, where El Niño had its strongest impact) and wheat (following a switch to maize by U.S. producers, as indicated by the planting intentions survey data published by the U.S. Department of Agriculture).

Most agricultural commodity prices are expected to fall in 2016, before recovering marginally in 2017. Grain prices are projected to decline by 5.3 percent in 2016 (a downward revision from a 3.4 percent drop projected in the January 2016 *Commodity Markets Outlook*), while oils and meals are expected to fall 3.4 percent (down from a 2.2 percent decline projected in January). Beverages and raw material prices are projected to drop as well, by 4.6 and 2.9 percent, respectively. Downside risks to the price forecast for agricultural commodity prices include a deterioration of weather due to La Niña—a cooling of the equatorial Pacific Ocean. The main upside risk to the forecast is greater engagement in farm support policies. Upside or downside risks could also stem from energy prices, given the energy-intensive nature of agriculture.

**FIGURE 11 Agriculture price indexes**



Source: World Bank.  
Note: Last observation is March 2016.

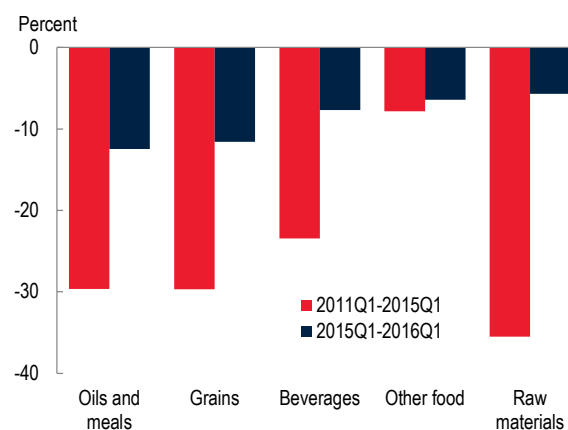
## Food

Grain prices changed very little in the first quarter of 2016 (up 0.3 percent from the fourth quarter of 2015), but stood 12 percent lower than a year ago and 30 percent below their early 2011 peaks (Figure 12). Wheat and rice prices gained 6 and 3 percent, respectively, in the quarter, but maize prices declined 4 percent.

Global production of wheat is expected to reach a new record in the 2015-16 season, 1.4 percent higher than last season. Early assessment for the next season, released in April by the Agricultural Marketing Information System (AMIS) and the International Grains Council (IGC), however, show that next season's global production may fall by as much as 3 percent, with notable declines in the Russian Federation and Ukraine, both key wheat exporters. Consumption during 2016-17 is projected to remain largely unchanged, with some decline in feed use offset by increasing food consumption. As a result of tighter wheat supplies, the stocks-to-use ratio (a measure of the abundance of supplies relative to demand) is anticipated to decline, after reaching a 14-year high of almost 34 percent in 2014-15. Trade volume for next season is expected to increase marginally.

Production of maize, down 4 percent from the previous season, is projected to increase by more than 1 percent in 2016-17, reflecting good crop conditions in the United States, the world's top maize supplier, as well in the European Union and Ukraine. The rate of increase in maize production, however, is expected to be outstripped by a 2 percent uptick in consumption. Together, these forecasts imply that maize stocks at the end of next season could fall by as much as 5 percent. Trade volume of maize is expected to remain unchanged.

**FIGURE 12 Changes in nominal commodity price indexes, 2011-16**



Source: World Bank.  
Note: Price changes are based on quarterly averages.

Rice production, which began the current crop year on a positive note, has been gradually declining due to the El Niño-related shortfall in various East Asian rice producers, notably Thailand, the world's dominant rice exporter. Global rice production, which is expected to decline by 2 percent this season, will partly recover in 2016-17, perhaps by as much as 1 percent, according to the AMIS and IGC assessment. Increased production is expected to materialize in India, the Philippines, and Thailand, which together account for more than one-quarter of global rice supplies. The stock-to-use ratio, however, is likely to decline as consumption is projected to outpace production growth and a stock drawdown is expected to take place in India and Thailand.

Global supplies (beginning stocks plus production) for all three grains will reach 2.70 billion tons in 2015-16, slightly up from last season's record production. Next season's assessment is that global supplies will remain at the same levels, as higher maize and rice crops will offset lower wheat production (Figure 13).

The World Bank's Oils and Meals Price Index changed little in the first quarter as increases in palm oil (+11 percent), coconut oil (+15 percent), and palm kernel oil (+24 percent) were offset by a decline in soybean meal (-8 percent) and some other oils. The overall index is down 13 percent from a year ago and is one-third lower than its early 2011 peak. As was the case for rice, the price of edible oils, which are produced primarily in East Asia (notably palm oil and coconut oil), were affected by El Niño.

The oilseed supply outlook is healthy, with current season global supplies for the 10 major oilseeds expected to exceed 621 million tons, 12 million tons higher than last season. Most of the increase in current supplies comes from elevated stock carry-over,

which is projected to reach 104 million tons, up from last season's 100 million tons. Most of the stocks come from the large soybean crop.

This season's outlook is also favorable for the 17 most consumed edible oils (Figure 14). Despite the shortfall from key producers in East Asia, global production in 2015-16 (October to September) will reach 206.9 million tons, up from last season's 204.7 million tons, with most of the increase coming from soybean oil.

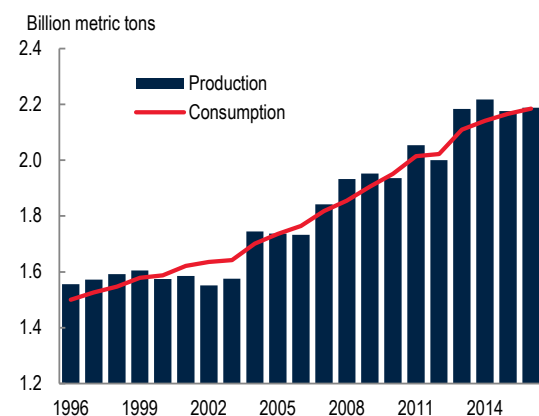
In view of adequately supplied food commodity markets, together with the projection of lower energy and fertilizer prices, the World Bank's Food Commodity Price Index is expected to fall by 3.4 percent in 2016, a downward revision from the 1.9 percent decline projected in the January assessment. A moderate gain of 2.1 percent is expected in 2017.

## Risks

This forecast for food prices is subject to a number of short- and long-term risks. The most important are the evolution of energy prices; weather patterns (especially the possibility of a La Niña episode in late 2016); and trade policies, including policies aimed at supporting commodity producers and biofuel production.

Food commodity prices are affected by energy prices through a number of channels, including fuel costs and chemicals, and indirectly through fertilizers (some fertilizers are made directly from natural gas). Overall, agriculture has been estimated to be four to five times more energy intensive than manufacturing. The transmission elasticity from energy to food commodity prices has been estimated at between 0.15 and 0.20, implying that a halving of energy prices could precipitate a 10 percent permanent decline in food prices

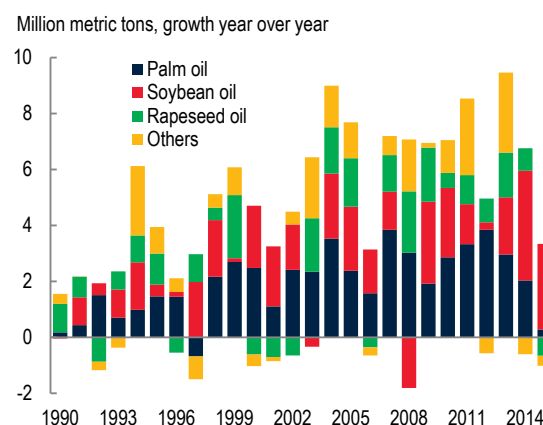
**FIGURE 13 Global grain production and consumption**



Source: U.S. Department of Agriculture, AMIS-FAO, IGC.

Note: Grains include maize, wheat, and rice.

**FIGURE 14 Global production of key edible oils**



Source: U.S. Department of Agriculture.

Note: Data is based on USDA's April 2016 update.

over the longer term, assuming everything else remains constant.

Oil prices are expected to average \$41/bbl in 2016 (27 percent lower than 2015), while fertilizer prices are projected to fall 13 percent, on top of a similar decline in 2015. Low energy prices will ease input cost pressure for food commodity producers, especially in countries where energy intensity in agriculture is highest, such as North America, Europe, China, and Brazil (Figure 15).

El Niño, a key weather risk, reached its maximum strength in December 2015. By most accounts is the largest, or second largest after 1997, this year's episode of the past 30 years. (The October 2015 edition of the *Commodity Markets Outlook* has an extensive discussion on El Niño.) El Niño has had diverse impacts on food commodity producers. In East Asian countries, especially for rice and palm oil producers, the impact has been detrimental. On the other hand, the delayed onset of rains in Southern Africa and the increased precipitation in Central Asia that El Niño has brought about is expected to aid agricultural production in these regions. Although the effects are expected to dissipate by June 2016, it is possible (with a current probability of 50 percent) that La Niña will develop toward the end of 2016. Typically, the impacts of La Niña are milder than those of El Niño.

In the current weak commodity price environment, governments are increasingly shifting from trade policies aimed at reducing consumer prices (frequent during the food price spikes of 2007-08 and 2010-11) to domestic and trade policies designed to raise producer prices. India, for instance, has extended a 15-percent import duty on wheat from March to June 2016.

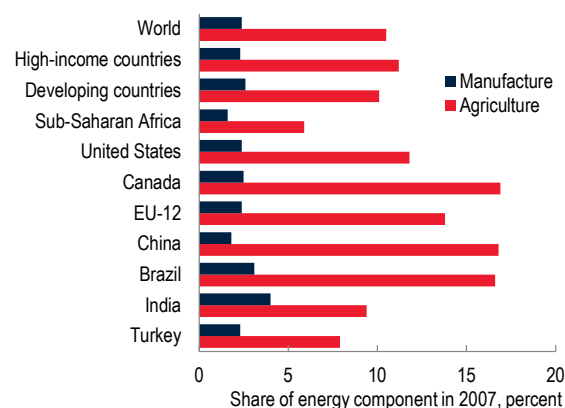
The most important policy change is China's decision to end its maize stockpiling program, beginning in

October 2016. The quantity of stocks under government control is not known with certainty, nor is the quality. As of mid-April, the U.S. Department of Agriculture estimates that China is holding 109 million metric tons, or 53 percent of global stocks. China's stockpiling program is intended to be replaced by a less distortionary program. Although details of the new support mechanism are unknown, it appears that China will follow the footsteps of agricultural policy reforms introduced by the European Union (1992), Mexico (1994), and the United States (1996). These replaced earlier stockpiling and price support programs by direct income support mechanisms (often referred to as "decoupled support"). China's stockpiling policies are not restricted to maize by they have been implemented to other agricultural commodities as well. For example, China accounts for more than half of global stocks for cotton and rice and 40 percent of global wheat stocks (Figure 16). In the case of cotton and wheat, China's stocks have been twice as high compared to past decade's average.

While policy changes such as the above have been isolated so far, and therefore have not affected global commodity prices in a major way, they could play a key role if implemented by several major exporters (or numerous smaller suppliers).

Finally, the outlook assumes that biofuels will continue to be a source of demand for food commodities—mainly maize for ethanol in the United States, sugar cane for ethanol in Brazil, and edible oils for biodiesel in Europe. Biofuels currently account for 3-4 percent of global arable land and 1.5 mb/d in crude oil equivalent terms. Yet, the role of biofuels will be less important in the long term as policymakers increasingly realize that the environmental and energy independence benefits stemming from biofuels policies are not as strong as originally envisaged.

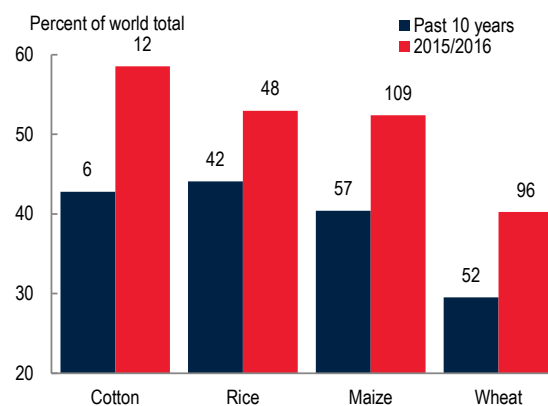
**FIGURE 15 Energy intensities: cost of energy component in 2007**



Source: World Bank.

Note: Calculations based on the Global Trade Analysis Project database.

**FIGURE 16 China's stocks of key commodities**



Source: U.S. Department of Agriculture.

Note: Figures on top of columns represent million metric tons.



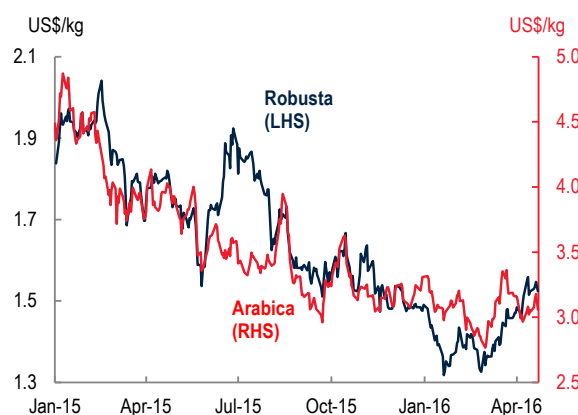
## Beverages

The World Bank's Beverage Price Index declined 7 percent in the first quarter of 2016. Although arabica coffee prices have been broadly stable during the first quarter, robusta prices declined sharply to reach a six-year low in February, and 25 percent lower than a year ago. The global coffee market is expected to be over-supplied in the 2015-16 season, with production of 153 million bags compared to consumption of 151 million bags. The weakness in robusta prices reflects record output by Vietnam, whose exports increased by 20 percent over the first five months of the season. Based on early assessments, 2016-17 will be another surplus production year, which combined with depreciated exchange rates by Brazil and Colombia, makes the coffee outlook bearish: arabica and robusta are projected to average 6 and 12 percent lower, respectively, compared to 2015.

Although cocoa prices declined 10 percent in the quarter, they are still 2 percent higher than a year ago. The recent weakness in cocoa prices reflects, in part, strong exports from Côte d'Ivoire, the world's dominant cocoa producer, and better-than-expected mid-crop production, despite a late start. The demand side, however, has been weak, especially by European chocolate and confectionary companies. Cocoa prices are expected to register only a marginal decline in 2016.

Tea prices fell almost 15 percent in the first quarter of 2016, with large declines at Mombasa and Kolkata auctions. In addition to strong supplies in key East African tea producing countries and India, the tea market has been facing headwinds from weak consumption in several tea-consuming countries. Tea prices are projected to decline 4 percent in 2016 but gain 2 percent in 2017.

**FIGURE 17 Coffee prices**



Source: Bloomberg.

Notes: Daily frequency. Last observation is April 22, 2016.

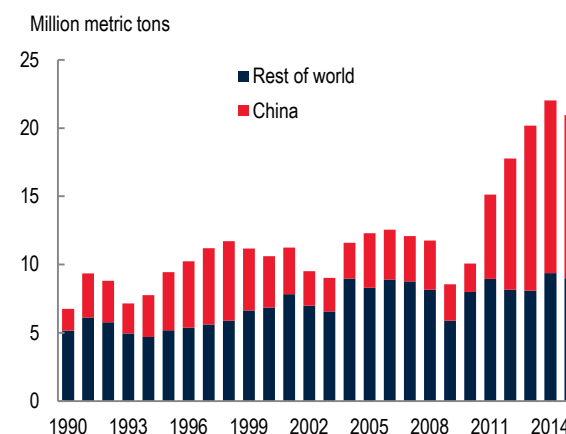
## Agricultural raw materials

The World Bank's Raw Material Price index declined almost 2 percent in the first quarter of 2016. The index is down 6 percent from a year earlier and 40 percent lower than its early 2011 peak. This pattern is remarkably similar to the other two industrial commodity price indexes—energy and metals—and mainly reflects a slowing global economy (see the “special focus” of the January edition of the *Commodity Markets Outlook*) and the scale-up in production capacity (see *Special Focus*).

Cotton prices declined 4 percent in the quarter. The weakness accelerated in February and March as early indications for the upcoming 2016-17 season suggest a 3 percent increase in global production from the current season. Although consumption is projected to be higher than production for a second consecutive year, the cotton market is mired by unusually high stocks, the equivalent of almost one year's worth of consumption. More than half of those stocks are held by China (Figure 18); fears that they could be released will prevent any significant recovery in cotton prices. No change is expected in cotton prices for 2016 and only a marginal increase is projected in 2017.

Natural rubber prices increased 4 percent in the quarter with most of the gains realized in March (up 15 percent from February). The strengthening in rubber prices reflects a seasonal decline in production by Malaysia and Thailand, stronger demand by China, and, perhaps most importantly, the International Tripartite Rubber Council's export quota scheme which began in March and is expected to withhold 615,000 tons of natural rubber from the world market over the next six months. Despite the recent uptick, natural rubber prices are expected to remain weak in 2016 and increase only marginally in 2017.

**FIGURE 18 Cotton stocks**



Source: International Cotton Advisory Committee.

## Fertilizers

Fertilizer prices plunged 12 percent in the first quarter (Figure 19), down a fifth consecutive quarter, due to weak import demand, high stocks, and ample supply. Urea prices led the decline by dropping 17 percent, down for a sixth straight quarter, on weak demand and increasing capacity. Phosphate prices fell 13-14 percent, while potash prices declined 2 percent. Demand weakness stems from poor farmer profitability, low crop prices, and depreciated currencies of key importing countries—although these reversed slightly during the quarter on a weaker dollar. Supply surpluses continue to be impacted by falling costs and cheaper feedstock prices (e.g., natural gas).

Urea prices dropped 17 percent, mainly due to oversupply amid weak seasonal demand, including the impact of drought in south-east Asia. However, prices rose in March on strong purchases in the United States for spring application. Chinese demand continues to decline on lower crop prices and a desire to reduce unsustainably high application rates. The U.S. Department of Agriculture reported sharply higher planting intentions for rice and corn, which should benefit urea consumption. Increases in new export capacity are expected this year, especially in Africa and the Middle East. However, continued large increases in the U.S. are expected to keep downward pressure on prices, unless there are reductions in high-cost capacity. China's exports are also expected to increase.

Phosphate prices fell by 14 percent (TSP) and 13 percent (DAP) due to weak demand in Brazil and India amid high stocks and weak currencies. Higher U.S. planting intentions for cotton and corn—the latter mainly at the expense of wheat—could increase phosphate consumption, as both consume more fertilizer than wheat. Some producers have curtailed output

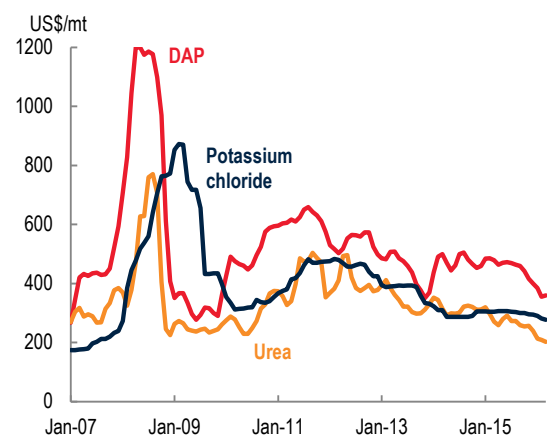
but there is little indication of further cuts. Chinese exports are set to pick up just as the domestic demand season comes to an end—which has also been slower than expected. Production capacity continues to expand globally, with significant expansions expected in Morocco and Saudi Arabia.

Potash (potassium chloride) prices fell 5 percent owing to weak demand, high stocks, and ample supply. March was an exception, however, thanks to stronger demand in Brazil aided by increased credit made available to farmers on February 1. Major potash producers also withheld shipments to Brazil. Near-term demand could be buoyed in Brazil and the U.S., but reduced in Asia because of dry weather. The annual contract negotiations with Chinese buyers is expected to be settled later in the second quarter, as high inventory levels in China have delayed discussions. The price is also expected to be settled significantly lower than the current contract price of \$315/mt, with various estimates at \$220-240/mt owing to weak demand and surplus global capacity. The Indian annual contract is expected to be settled soon after at some \$10/mt higher.

Fertilizer prices are projected to decline by 13 percent in 2016 due to weak demand, rising supply capacity, and destocking. Nutrient application, which has been on a rising trend (Figure 20), remains constrained as farmers face both weak crop prices and domestic currencies. Prices are generally expected to increase moderately over the medium term due to expected growth in demand, higher energy costs, and needed new capacity of primary and processed supply.

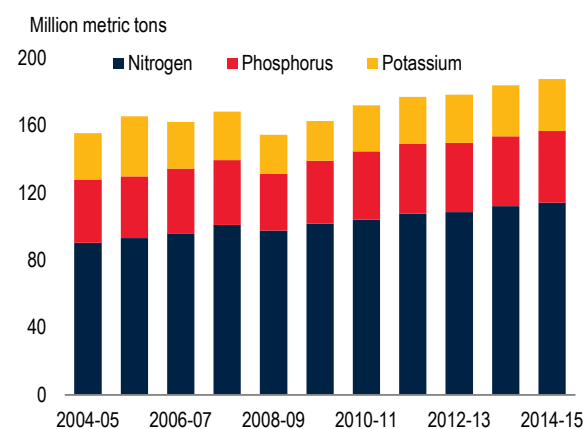
Risks to the forecast are skewed to the downside on low farm margins and expected increases in new production capacity. On the upside, higher agriculture prices and currency appreciation could boost fertilizer demand and prices.

**FIGURE 19 Fertilizer prices**



Source: World Bank.  
Note: Last observation is March 2016.

**FIGURE 20 Global nutrient consumption**



Source: Agrium Fact Book, International Fertilizer Association.

## Metals and minerals

Metals prices fell 1 percent in the first quarter, a sixth straight quarterly decline (Figure 21). Prices rebounded in mid-January, and average prices in March were 11 percent higher than January. Most metals prices recorded strong gains in February and March—particularly iron ore, tin, and zinc—mainly driven by improved market sentiment, short covering, and a weaker dollar. Expectations of rising demand in China followed strong imports in January and February, and improving macro indicators. Prices were also buoyed by falling stocks, production cuts, and a few supply interruptions. Most markets remain oversupplied, however, with large stocks and lingering uncertainty over demand.

China's share of world metal consumption rose above 50 percent in 2015 (Figure 22), and the country accounted for the majority of global growth over the past 15 years (Figure 23). Metals consumption growth in the country has begun to retreat due to ongoing rebalancing to a consumer-based and less metal-intensive economy. Construction growth, for example, is expected to remain constrained this year as the government attempts to reduce the current large overhang of housing in lower-tiered cities by tightening credit.

On the supply side, production cuts among some high-cost operations and supply disruptions have helped support prices. Global mining investment has fallen by more than half since peaking in 2012, although new lower-cost supply continues to expand for some metals from legacy investment. Supply at existing operations has been supported by significant cost reductions (notably for energy), producer currency devaluations, and better management practices. The recent price rally has likely delayed closure of

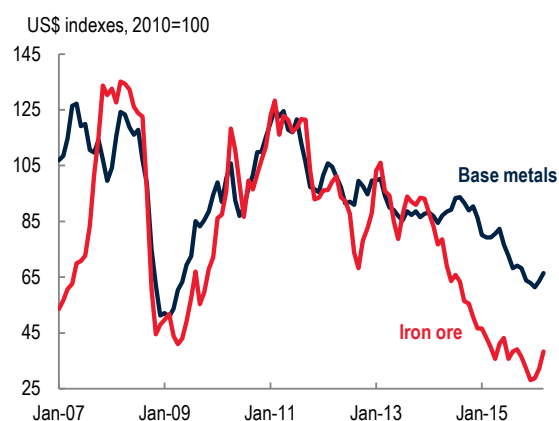
high-cost operations and may create incentives to restart idled capacity.

Iron ore prices rose 3 percent in the quarter, but soared 33 percent in February/March on a spike in steel prices and restocking at Chinese mills ahead of the construction season. In addition, there were some disruptions to iron ore seaborne supply which further tightened the market. Prices continued to rally in April driven by renewed growth prospects in China, especially following government's added stimulus measures and revival of construction. Significant volumes of low-cost capacity are expected over the next 2-3 years, while high-cost capacity is being shut down. Further closure of high-cost capacity is required to balance the market.

Tin prices rose 2 percent in the quarter, but surged 22 percent in February/March on production cuts, low LME inventories, and stockpiling in China. China's nine major tin producers—which account for 40 percent of world production—agreed to cut output in response to low prices. New regulations in Indonesia to curb environmental degradation and illegal trade has also reduced exports. Shipments from Myanmar continue to fill the gap, while Chinese demand in the key electronics sector (solder) remains weak. Although supply growth remains limited, higher prices would likely reactivate idled capacity.

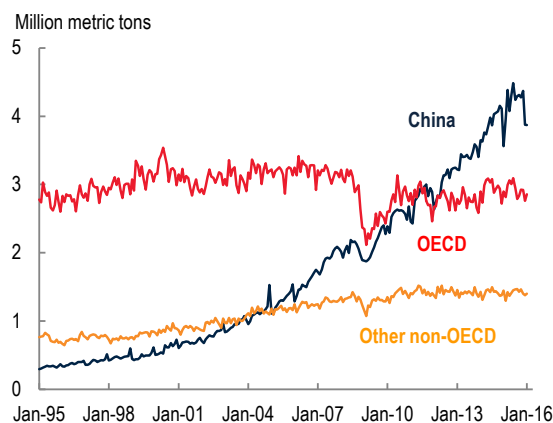
Zinc prices rose 4 percent in the quarter, but jumped 19 percent in February/March on expected market tightening due to large mine closures and Glencore's production cuts. LME stocks fell slightly but remain high, and stocks rose in China because of weak demand to galvanize steel—which accounts for more than half of global zinc end-use consumption (Figure 24). With large mine closures in Australia (Century) and Ireland (Lisheen) in 2015, no new major projects are expected in the near-to-medium term, and stocks

**FIGURE 21 Metal and mineral prices**



Source: World Bank.  
Note: Last observation is March 2016.

**FIGURE 22 World refined metal consumption**



Source: World Bureau of Metal Statistics.  
Note: Last observation is January 2016.



are expected to fall and tighten the market. Key uncertainties are demand growth in China and future mine capacity additions.

Lead prices rose 3 percent in the quarter and 9 percent in February/March, but retreated in April due to weak seasonal demand for replacement batteries. The lead market is expected to tighten going forward from closure of large zinc/lead mines. With more than half of refined supply coming from recycled batteries, a key uncertainty is the supply of scrap material. Also uncertain is the pace of demand, given China's maturing e-bike market and the growth of electric vehicles. One positive development is the increase of stop-start vehicles, which require 25 percent more lead per battery.

Aluminum prices rose 1 percent in the quarter. After rising modestly in February, prices reverted to below \$1500/mt toward the quarter's end on continued oversupply in China. The rest of the world, however, remains in deficit due to significant capacity closures. While demand growth has slowed in China's property and manufacturing sectors, the outlook for global aluminum consumption is robust due to its many uses, favorable properties, and substitution attractiveness. Low prices have curtailed high-cost capacity in China, but new capacity continues to come online there and elsewhere. Further closure of high-cost supply is required to bring the market into balance and reduce the large inventory overhang, but restart of idle capacity will continue to overhang the market.

Although copper prices average 4 percent lower in the first quarter of 2016, they rallied in February/March on declining LME inventories and strong import demand in China. However, the imports likely boosted Chinese inventories, as did part of the LME outflows, as China's end-use consumption growth has slowed. The global market remains oversupplied, despite a

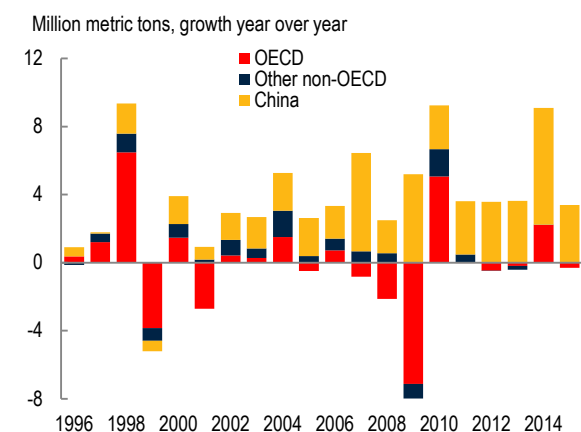
number of production cuts. Furthermore, new capacity will continue to come on-line in the next 2-3 years from earlier investment. The market is expected to remain in surplus, especially as Chinese demand growth slows, with additional risks from cost-saving measures and substitution of other materials.

Nickel prices dropped 10 percent and did not rise significantly during the quarter, as the market remains oversupplied amid record high stocks and weak stainless steel demand (which consumes about two-thirds of the world's refined nickel). Other than China's nickel pig iron sector, production cuts have been limited despite prices falling deep into the cost curve. A group of Philippine producers agreed in March to cut exports by up to 20 percent this year, but further cuts are required to reduce excess supply.

Metals prices are projected to decline by 8 percent in 2016 due to slowing demand in emerging economies, notably China, and increases in new production capacity. The largest decline is for nickel, which is expected to fall by 22 percent due to weak demand and insufficient production cuts. Sizable declines are also expected for iron ore (down 10 percent) and copper (down 9 percent). Most other prices are expected to fall as markets remain in surplus amid high stocks. Markets are expected to tighten in the medium term due to reduced investment in supply capacity, rising global demand, and some specific factors, including Indonesia's ore export ban and closure of large zinc mines due to exhaustion.

Downside risks to the forecast include slower demand in China and higher-than-expected production due to further cost reductions. Upside risks are centered on stronger global demand growth and supply shortfalls from project delays, operational disruptions, falling ore grades, environmental constraints, and greater closure of high-cost capacity.

**FIGURE 23 World metal consumption growth**



**FIGURE 24 Zinc price and LME stocks**



Notes: Daily frequency. Last observation is April 21, 2016.

## Precious metals

Precious metals prices rose 6 percent in the first quarter on stronger investment demand and safe-haven buying (Figure 15). Gold rose by 7 percent, while silver and platinum prices each increased 1 percent. All prices rose strongly in February and March, aided in part by U.S. dollar depreciation, declining real interest rates, and a more cautious U.S. Federal Reserve position on future interest rate hikes.

Gold prices increased 7 percent in the first quarter, and jumped 13 percent in second and third months, averaging \$1,245/toz in March. Investor sentiment reversed due to the U.S. Federal Reserve interest rate hike deferral, a weaker dollar, increased macro risks, and a rise in safe-haven demand. The adoption of negative interest rates in a number of developed economies increased gold's attractiveness by reducing its holding costs. Conversely, rising interest rates typically have negative implications for gold prices, as investors seek yield-bearing assets.

Physical gold demand was weak in the two largest consuming countries. In India, higher prices and uncertainty over the government's end-February budget restrained purchases. An excise tax of 1 percent was announced in March and many Indian jewelers went on strike. In China, demand was weak due to New Year holidays and a slowing economy. Global gold mine supply growth has trended lower due to declining investment, but has been partly offset by cost reductions and depreciating producer currencies. Nevertheless, significant new production is expected this year as mines commissioned last year continue to ramp up (Figure 16).

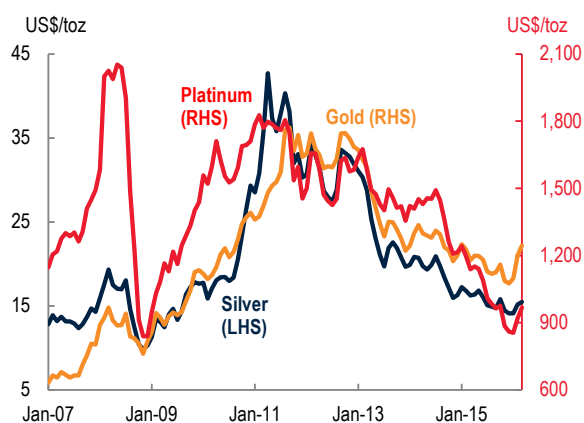
Silver prices rose 1 percent in the quarter. After a weak January performance, prices surged 10 percent in February and March, in line with investor sentiment to-

ward gold. Physical demand was weighed down by slowing industrial activity, partly reducing its attractiveness as a safe-haven asset. Falling silver intensity in electronic and photovoltaic sectors, and declining trends in photographic applications are also contributing to lower consumption. Mine supply is contracting mainly in Australia and the Americas, and in part reflects lower by-product output from declines in zinc and other metals production.

Platinum prices also rose 1 percent in the quarter. As with gold and silver, platinum's surge (13 percent) came in February and March, with rising gold prices and a stronger Rand (South Africa produces about 60 percent of global production) sparking the rally. However, mine supply is facing headwinds due to sharply lower investment, upcoming labor negotiations, and adverse effects from drought. Demand from the auto sector remains robust, boosted by low fuel prices and easing credit.

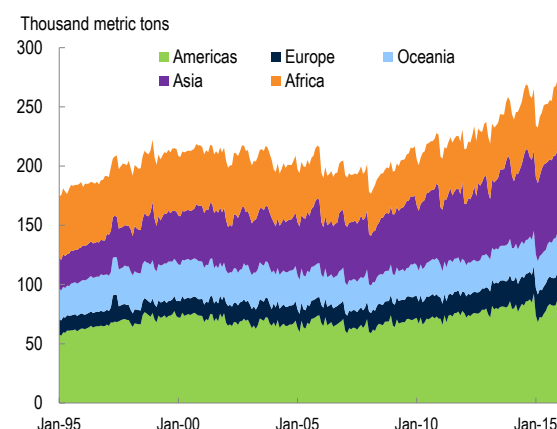
Precious metals prices are projected to decline 2 percent in 2016, mainly due to lower investment demand. Platinum is expected to lead the decline, falling 10 percent on surplus supply. Silver prices are expected to fall 5 percent due to slowing physical demand, as the metal is more vulnerable than gold to shifts in industrial production. Gold prices are projected to fall just 1 percent, reflecting strong investment demand in the first quarter, but is expected to decline going forward on expectations of a rising dollar and tightening in U.S. monetary policy. Physical demand is expected to remain robust in India and China, while mine production continues to benefit from cost reductions. Downside risks to the forecast include stronger-than-expected monetary tightening and dollar strength. Upside risks include weaker global growth, financial stress in key economies, heightened geopolitical events, and stronger demand from consumers, central banks, and investors.

**FIGURE 25 Precious metal prices**



Source: World Bank.  
Note: Last observation is March 2016.

**FIGURE 26 Global gold production**



Source: World Bureau of Metal Statistics.  
Note: Last observation is January 2016.



## APPENDIX A

Historical commodity prices  
Price forecasts



**TABLE A.1 Commodity prices**

Commodity	Unit		2014	2015	Q1 2015	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Jan 2016	Feb 2016	Mar 2016
<b>Energy</b>												
Coal, Australia	\$/mt	*	70.1	57.5	61.2	59.0	57.5	52.3	50.9	49.8	50.7	52.1
Coal, Colombia	\$/mt		65.9	52.5	57.3	54.3	50.4	48.0	42.7	43.0	41.4	43.8
Coal, South Africa	\$/mt		72.3	57.0	62.1	60.7	54.3	51.1	51.6	49.9	51.5	53.2
Crude oil, average	\$/bbl		96.2	50.8	51.6	60.5	48.8	42.2	32.7	29.8	31.0	37.3
Crude oil, Brent	\$/bbl	*	98.9	52.4	53.9	62.1	50.0	43.4	34.4	30.8	33.2	39.1
Crude oil, Dubai	\$/bbl	*	96.7	51.2	52.2	61.4	49.9	41.2	30.6	27.0	29.5	35.2
Crude oil, WTI	\$/bbl	*	93.1	48.7	48.6	57.8	46.4	42.0	33.2	31.5	30.4	37.8
Natural gas, Index	2010=100		111.7	73.3	85.4	74.2	72.2	61.4	52.3	58.4	52.5	46.1
Natural gas, Europe	\$/mmbtu	*	10.05	7.26	8.60	7.33	6.86	6.26	4.82	5.35	4.90	4.20
Natural gas, US	\$/mmbtu	*	4.37	2.61	2.87	2.73	2.75	2.11	1.98	2.27	1.96	1.70
Natural gas, Japan	\$/mmbtu	*	16.04	10.40	14.26	9.18	9.23	8.94	7.95	7.85	8.00	8.00
<b>Non-Energy</b>												
<b>Agriculture</b>												
<b>Beverages</b>												
Cocoa	\$/kg	**	3.06	3.14	2.92	3.07	3.25	3.30	2.98	2.95	2.92	3.07
Coffee, arabica	\$/kg	**	4.42	3.53	3.89	3.54	3.36	3.31	3.31	3.20	3.26	3.47
Coffee, robusta	\$/kg	**	2.22	1.94	2.12	1.98	1.87	1.79	1.65	1.65	1.63	1.67
Tea, average	\$/kg		2.72	2.71	2.43	2.79	2.85	2.76	2.36	2.50	2.31	2.28
Tea, Colombo	\$/kg	**	3.54	2.96	3.16	3.00	2.83	2.85	2.82	2.84	2.79	2.82
Tea, Kolkata	\$/kg	**	2.58	2.42	1.82	2.56	2.78	2.52	1.89	2.07	1.78	1.81
Tea, Mombasa	\$/kg	**	2.05	2.74	2.31	2.80	2.95	2.91	2.38	2.58	2.37	2.21
<b>Food</b>												
<b>Oils and Meals</b>												
Coconut oil	\$/mt	**	1,280	1,110	1,147	1,115	1,067	1,109	1,273	1,155	1,216	1,448
Copra	\$/mt		854	735	760	737	708	737	855	763	813	990
Fishmeal	\$/mt		1,709	1,558	1,712	1,523	1,472	1,524	1,465	1,476	1,472	1,448
Groundnuts	\$/mt		1,296	1,248	1,333	1,290	1,193	1,175	1,158	1,175	1,150	1,150
Groundnut oil	\$/mt	**	1,313	1,337	1,371	1,346	1,332	1,298	1,277	1,274	1,271	1,286
Palm oil	\$/mt	**	821	623	683	664	574	570	631	566	640	686
Palmkernel oil	\$/mt		1,121	909	1,046	957	802	831	1,032	894	988	1,213
Soybean meal	\$/mt	**	528	395	432	391	398	358	328	333	326	325
Soybean oil	\$/mt	**	909	757	774	774	736	743	749	727	758	761
Soybeans	\$/mt	**	492	390	411	394	385	372	370	367	369	375
<b>Grains</b>												
Barley	\$/mt	**	138	194	189	201	200	187	183	185	187	176
Maize	\$/mt	**	193	170	174	168	169	167	160	161	160	159
Rice, Thailand 5%	\$/mt	**	423	386	417	385	374	368	379	369	384	384
Rice, Thailand 25%	\$/mt		382	373	397	372	362	359	370	361	374	375
Rice, Thailand A1	\$/mt		425	386	416	388	376	365	373	366	377	375
Rice, Vietnam 5%	\$/mt		407	352	363	351	337	356	362	365	360	360
Sorghum	\$/mt		207	205	237	215	190	176	174	174	174	174
Wheat, US HRW	\$/mt	**	285	204	239	216	183	180	191	193	187	191
Wheat, US SRW	\$/mt		245	206	223	205	196	201	190	192	188	190
<b>Other Food</b>												
Bananas, EU	\$/kg		1.04	0.90	0.92	0.92	0.90	0.88	0.91	0.86	0.93	0.94
Bananas, US	\$/kg	**	0.93	0.96	0.98	0.97	0.95	0.93	1.03	1.04	1.05	1.01
Meat, beef	\$/kg	**	4.95	4.42	4.76	4.47	4.55	3.91	3.72	3.50	3.77	3.88
Meat, chicken	\$/kg	**	2.43	2.53	2.51	2.55	2.55	2.50	2.47	2.48	2.47	2.46
Meat, sheep	\$/kg		6.39	5.22	5.60	5.38	5.07	4.82	4.51	4.54	4.51	4.48
Oranges	\$/kg	**	0.78	0.68	0.70	0.62	0.65	0.73	0.69	0.69	0.69	0.68
Shrimp	\$/kg		17.25	14.36	15.84	15.65	15.43	10.50	10.83	10.44	11.02	11.02
Sugar, EU	\$/kg	**	0.43	0.36	0.37	0.36	0.36	0.36	0.36	0.35	0.36	0.36
Sugar, US	\$/kg	**	0.53	0.55	0.54	0.54	0.54	0.56	0.57	0.57	0.56	0.58
Sugar, World	\$/kg	**	0.37	0.30	0.32	0.29	0.27	0.32	0.31	0.31	0.29	0.34

**TABLE A.1 Commodity prices**

Commodity	Unit	2014	2015	Q1 2015	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Jan 2016	Feb 2016	Mar 2016
<b>Raw Materials</b>											
<b>Timber</b>											
Logs, Africa	\$/cum	465	389	395	387	389	383	386	380	388	389
Logs, S.E. Asia	\$/cum **	282	246	250	245	244	245	258	252	259	264
Plywood	¢/sheets	517	451	458	450	447	450	474	462	476	484
Sawnwood, Africa	\$/cum	789	733	726	734	743	727	686	691	686	681
Sawnwood, S.E. Asia	\$/cum **	898	833	826	835	845	827	780	786	780	775
Woodpulp	\$/mt	877	875	875	875	875	875	875	875	875	875
<b>Other Raw Materials</b>											
Cotton	\$/kg **	1.83	1.55	1.52	1.59	1.56	1.53	1.48	1.52	1.47	1.44
Rubber, RSS3	\$/kg **	1.96	1.56	1.73	1.79	1.46	1.26	1.31	1.22	1.26	1.45
Rubber, TSR20	\$/kg	1.71	1.37	1.42	1.52	1.34	1.20	1.15	1.08	1.09	1.28
<b>Fertilizers</b>											
DAP	\$/mt **	472	459	483	469	464	419	367	385	355	360
Phosphate rock	\$/mt **	110	117	115	115	117	123	116	118	115	115
Potassium chloride	\$/mt **	297	303	305	307	303	297	283	290	282	277
TSP	\$/mt **	388	385	400	380	380	380	328	380	329	275
Urea, E. Europe	\$/mt **	316	273	296	277	268	251	209	214	209	203
<b>Metals and Minerals</b>											
Aluminum	\$/mt **	1,867	1,665	1,802	1,770	1,592	1,494	1,514	1,481	1,531	1,531
Copper	\$/mt **	6,863	5,510	5,833	6,057	5,267	4,885	4,675	4,472	4,599	4,954
Iron ore	\$/dmt **	96.9	55.8	63.0	58.3	55.0	47.0	48.3	42.0	47.0	56.0
Lead	\$/mt **	2,095	1,788	1,810	1,942	1,717	1,682	1,738	1,646	1,766	1,802
Nickel	\$/mt **	16,893	11,863	14,393	13,056	10,579	9,423	8,508	8,507	8,299	8,717
Tin	\$/mt **	21,899	16,067	18,370	15,590	15,230	15,077	15,439	13,808	15,610	16,898
Zinc	\$/mt **	2,161	1,932	2,080	2,192	1,843	1,612	1,677	1,520	1,710	1,802
<b>Precious Metals</b>											
Gold	\$/toz ***	1,266	1,161	1,219	1,193	1,124	1,107	1,181	1,098	1,200	1,245
Platinum	\$/toz ***	1,384	1,053	1,193	1,127	986	907	914	855	919	968
Silver	\$/toz ***	19.07	15.72	16.75	16.42	14.91	14.80	14.91	14.11	15.17	15.47
<b>Commodity Price Indexes (2010=100)</b>											
Energy		118.3	64.9	67.3	75.5	62.7	54.2	43.0	40.5	41.2	47.4
Non-energy		97.0	82.4	86.7	84.8	80.6	77.6	76.2	74.6	75.8	78.0
Agriculture		102.7	89.3	92.9	90.2	88.0	85.9	84.7	83.5	84.4	86.2
Beverages		101.8	93.5	93.4	93.6	94.0	93.1	86.2	85.7	84.6	88.2
Food		107.4	90.9	96.5	91.6	88.8	86.6	86.7	85.1	86.5	88.3
Oils and Meals		109.0	85.2	91.3	86.7	83.1	79.6	79.9	77.3	80.0	82.5
Grains		103.9	88.8	95.4	89.9	85.7	84.1	84.3	84.3	84.3	84.4
Other Food		108.4	100.3	104.3	99.7	99.2	98.0	97.6	96.1	97.1	99.6
Raw Materials		91.9	83.2	84.0	85.1	83.1	80.7	79.2	78.3	79.2	80.1
Timber		104.9	96.1	95.7	96.2	96.9	95.4	92.2	92.1	92.2	92.1
Other Raw Materials		77.8	69.2	71.1	73.1	67.9	64.5	65.0	63.2	64.8	67.0
Fertilizers		100.5	95.4	99.3	95.6	94.4	92.3	81.6	86.0	81.5	77.2
Metals and Minerals		84.8	66.9	72.7	72.4	63.9	58.8	58.0	55.2	57.7	61.2
Base Metals	****	89.0	73.6	79.5	79.9	70.0	65.0	63.8	61.4	63.6	66.5
Precious Metals		101.1	90.6	95.6	93.5	87.4	86.1	90.9	84.7	92.3	95.6

Source: See Appendix C.

Notes: (\*) Included in the energy index; (\*\*) Included in the non-energy index; (\*\*\*) Included in the precious metals index; (\*\*\*\*) Metals and Minerals excluding iron ore.

**TABLE A.2** Commodity price forecasts in nominal U.S. dollars

Commodity	Unit	2013	2014	2015	Forecasts					
					2016	2017	2018	2019	2020	2025
Energy										
Coal, Australia	\$/mt	84.6	70.1	57.5	50.0	51.0	52.1	53.1	54.2	60.0
Crude oil, avg, spot	\$/bbl	104.1	96.2	50.8	41.0	50.0	53.3	56.7	60.4	82.6
Natural gas, Europe	\$/mmbtu	11.79	10.05	7.26	4.50	4.80	5.11	5.45	5.81	8.00
Natural gas, US	\$/mmbtu	3.73	4.37	2.61	2.50	3.00	3.50	3.68	3.88	5.00
Natural gas, Japan	\$/mmbtu	15.96	16.04	10.40	8.00	8.20	8.41	8.62	8.83	10.00
Non-Energy										
Agriculture										
Beverages										
Cocoa	\$/kg	2.44	3.06	3.14	3.10	3.01	2.93	2.85	2.77	2.40
Coffee, Arabica	\$/kg	3.08	4.42	3.53	3.30	3.32	3.34	3.37	3.39	3.50
Coffee, robusta	\$/kg	2.08	2.22	1.94	1.70	1.72	1.74	1.76	1.79	1.90
Tea, average	\$/kg	2.86	2.72	2.71	2.60	2.65	2.70	2.76	2.81	3.10
Food										
Oils and Meals										
Coconut oil	\$/mt	941	1,280	1,110	1,300	1,263	1,226	1,191	1,157	1,000
Groundnut oil	\$/mt	1,773	1,313	1,337	1,300	1,339	1,380	1,422	1,465	1,700
Palm oil	\$/mt	857	821	623	630	647	664	682	701	800
Soybean meal	\$/mt	545	528	395	340	353	367	381	396	480
Soybean oil	\$/mt	1,057	909	757	775	797	820	844	868	1,000
Soybeans	\$/mt	538	492	390	390	403	416	429	443	520
Grains										
Barley	\$/mt	202	138	194	185	187	188	190	192	200
Maize	\$/mt	259	193	170	165	170	176	182	188	220
Rice, Thailand, 5%	\$/mt	506	423	386	375	379	383	386	390	410
Wheat, US, HRW	\$/mt	312	285	204	180	188	197	206	216	270
Other Food										
Bananas, EU	\$/kg	0.92	0.93	0.96	1.00	0.99	0.98	0.97	0.96	0.92
Meat, beef	\$/kg	4.07	4.95	4.42	3.80	3.84	3.89	3.93	3.97	4.20
Meat, chicken	\$/kg	2.29	2.43	2.53	2.50	2.46	2.43	2.40	2.36	2.20
Oranges	\$/kg	0.97	0.78	0.68	0.70	0.72	0.75	0.78	0.80	0.95
Shrimp	\$/kg	13.84	17.25	14.36	11.00	11.21	11.42	11.63	11.85	13.00
Sugar, World	\$/kg	0.39	0.37	0.30	0.32	0.33	0.33	0.34	0.35	0.38
Raw Materials										
Timber										
Logs, Africa	\$/cum	464	465	389	390	401	412	424	436	500
Logs, S.E. Asia	\$/cum	305	282	246	250	259	268	277	287	340
Sawnwood, S.E. Asia	\$/cum	853	898	833	800	820	841	862	883	1,000
Other Raw Materials										
Cotton A	\$/kg	1.99	1.83	1.55	1.55	1.61	1.68	1.74	1.81	2.20
Rubber, RSS3	\$/kg	2.79	1.96	1.56	1.35	1.43	1.52	1.61	1.71	2.30
Tobacco	\$/mt	4,589	4,991	4,908	5,000	4,942	4,884	4,827	4,771	4,500
Fertilizers										
DAP	\$/mt	445	472	459	360	368	376	385	394	440
Phosphate rock	\$/mt	148	110	117	120	119	118	117	115	110
Potassium chloride	\$/mt	379	297	303	285	288	290	293	296	310
TSP	\$/mt	382	388	385	310	315	320	326	331	360
Urea, E. Europe	\$/mt	340	316	273	220	226	232	238	245	280
Metals and Minerals										
Aluminum	\$/mt	1,847	1,867	1,665	1,600	1,649	1,700	1,752	1,806	2,100
Copper	\$/mt	7,332	6,863	5,510	5,000	5,190	5,388	5,593	5,807	7,000
Iron ore	\$/dmt	135.4	96.9	55.8	50.0	51.5	53.0	54.6	56.2	65.0
Lead	\$/mt	2,140	2,095	1,788	1,775	1,827	1,880	1,935	1,992	2,300
Nickel	\$/mt	15,032	16,893	11,863	9,200	10,029	10,933	11,918	12,992	20,000
Tin	\$/mt	22,283	21,899	16,067	15,000	15,652	16,333	17,043	17,783	22,000
Zinc	\$/mt	1,910	2,161	1,932	1,800	1,858	1,919	1,981	2,046	2,400
Precious Metals										
Gold	\$/toz	1,411	1,266	1,161	1,150	1,132	1,115	1,098	1,081	1,000
Silver	\$/toz	23.85	19.07	15.72	15.00	15.11	15.22	15.33	15.44	16.00
Platinum	\$/toz	1,487	1,384	1,053	950	999	1,051	1,106	1,164	1,500

Next update: July 2016.

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

Commodity	Unit	2013	2014	2015	Forecasts					
					2016	2017	2018	2019	2020	2025
Energy										
Coal, Australia	\$/mt	79.7	66.2	54.4	46.5	46.6	46.8	47.0	47.3	48.1
Crude oil, avg, spot	\$/bbl	98.1	90.9	48.0	38.1	45.7	47.9	50.2	52.6	66.3
Natural gas, Europe	\$/mmbtu	11.11	9.49	6.87	4.18	4.38	4.60	4.83	5.06	6.42
Natural gas, US	\$/mmbtu	3.52	4.13	2.47	2.32	2.74	3.15	3.26	3.38	4.01
Natural gas, Japan	\$/mmbtu	15.04	15.15	9.85	7.43	7.50	7.56	7.63	7.70	8.02
Non-Energy										
Agriculture										
Beverages										
Cocoa	\$/kg	2.30	2.89	2.97	2.88	2.75	2.63	2.52	2.41	1.92
Coffee, Arabica	\$/kg	2.90	4.18	3.34	3.07	3.04	3.01	2.98	2.95	2.81
Coffee, robusta	\$/kg	1.96	2.09	1.84	1.58	1.57	1.57	1.56	1.56	1.52
Tea, avgerage	\$/kg	2.70	2.57	2.56	2.42	2.42	2.43	2.44	2.45	2.49
Food										
Oils and Meals										
Coconut oil	\$/mt	887	1,209	1,050	1,208	1,154	1,103	1,055	1,008	802
Groundnut oil	\$/mt	1,672	1,240	1,265	1,208	1,224	1,241	1,259	1,276	1,363
Palm oil	\$/mt	808	776	589	585	591	598	604	611	642
Soybean meal	\$/mt	514	499	374	316	323	330	338	345	385
Soybean oil	\$/mt	996	859	716	720	729	738	747	756	802
Soybeans	\$/mt	508	464	370	362	368	374	380	386	417
Grains										
Barley	\$/mt	191	130	184	172	171	169	168	167	160
Maize	\$/mt	245	182	161	153	156	158	161	163	176
Rice, Thailand, 5%	\$/mt	477	399	365	348	346	344	342	340	329
Wheat, US, HRW	\$/mt	294	269	194	167	172	177	182	188	217
Other Food										
Bananas, EU	\$/kg	0.87	0.88	0.91	0.93	0.91	0.88	0.86	0.84	0.74
Meat, beef	\$/kg	3.84	4.67	4.19	3.53	3.51	3.49	3.48	3.46	3.37
Meat, chicken	\$/kg	2.16	2.29	2.39	2.32	2.25	2.19	2.12	2.06	1.76
Oranges	\$/kg	0.91	0.74	0.64	0.65	0.66	0.67	0.69	0.70	0.76
Shrimp	\$/kg	13.05	16.29	13.59	10.22	10.24	10.27	10.30	10.32	10.43
Sugar, World	\$/kg	0.37	0.35	0.28	0.30	0.30	0.30	0.30	0.30	0.30
Raw Materials										
Timber										
Logs, Africa	\$/cum	437	439	368	362	366	371	375	380	401
Logs, S.E. Asia	\$/cum	288	266	233	232	236	241	245	250	273
Sawnwood, S.E. Asia	\$/cum	804	848	789	743	750	756	763	770	802
Other Raw Materials										
Cotton A	\$/kg	1.88	1.73	1.47	1.44	1.47	1.51	1.54	1.58	1.76
Rubber, RSS3	\$/kg	2.63	1.85	1.48	1.25	1.31	1.37	1.43	1.49	1.84
Tobacco	\$/mt	4,327	4,714	4,646	4,645	4,517	4,393	4,274	4,158	3,609
Fertilizers										
DAP	\$/mt	419	446	434	334	336	339	341	343	353
Phosphate rock	\$/mt	140	104	111	111	109	106	103	101	88
Potassium chloride	\$/mt	357	281	287	265	263	261	260	258	249
TSP	\$/mt	360	367	364	288	288	288	288	289	289
Urea, E. Europe	\$/mt	321	299	258	204	207	209	211	213	225
Metals and Minerals										
Aluminum	\$/mt	1,741	1,764	1,576	1,486	1,507	1,529	1,551	1,573	1,684
Copper	\$/mt	6,913	6,482	5,216	4,645	4,744	4,847	4,952	5,060	5,614
Iron ore	\$/dmt	127.6	91.6	52.8	46.5	47.0	47.7	48.3	49.0	52.1
Lead	\$/mt	2,018	1,979	1,692	1,649	1,670	1,691	1,713	1,736	1,845
Nickel	\$/mt	14,173	15,955	11,228	8,547	9,166	9,834	10,552	11,322	16,041
Tin	\$/mt	21,010	20,683	15,207	13,936	14,305	14,691	15,089	15,497	17,645
Zinc	\$/mt	1,801	2,041	1,828	1,672	1,699	1,726	1,754	1,783	1,925
Precious Metals										
Gold	\$/toz	1,331	1,195	1,099	1,068	1,035	1,003	972	942	802
Silver	\$/toz	22.49	18.01	14.88	13.94	13.81	13.69	13.57	13.45	12.83
Platinum	\$/toz	1,402	1,307	997	883	913	946	979	1,014	1,203

Sources and Notes: See Appendix C.

Next update: July 2016.



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

Commodity	Unit	2013	2014	2015	Forecasts					
					2016	2017	2018	2019	2020	2025
Nominal US dollars (2010=100)										
Energy		127.4	118.3	64.9	52.4	62.9	67.2	71.4	75.9	102.6
Non-energy commodities		101.7	97.0	82.4	78.2	80.0	81.9	83.8	85.8	97.3
Agriculture		106.3	102.7	89.3	86.2	87.8	89.4	91.1	92.9	102.9
Beverages		83.3	101.8	93.5	89.2	88.8	88.4	88.1	87.8	86.8
Food		115.6	107.4	90.9	87.8	89.6	91.5	93.4	95.5	106.8
Oils and meals		115.9	109.0	85.2	82.3	84.7	87.3	89.9	92.6	107.7
Grains		128.2	103.9	88.8	84.1	86.5	88.9	91.5	94.1	108.8
Other food		103.9	108.4	100.3	98.3	98.8	99.3	99.9	100.5	103.8
Raw materials		95.4	91.9	83.2	80.8	82.7	84.8	86.9	89.1	101.7
Timber		102.6	104.9	96.1	93.3	95.9	98.5	101.1	103.9	118.8
Other Raw Materials		87.6	77.8	69.2	67.1	68.4	69.8	71.3	73.0	82.9
Fertilizers		113.7	100.5	95.4	82.8	84.0	85.2	86.4	87.6	94.4
Metals and minerals *		90.8	84.8	66.9	61.4	63.7	66.1	68.6	71.2	86.0
Base Metals **		90.3	89.0	73.6	67.7	70.3	73.0	75.9	78.8	95.6
Precious Metals		115.1	101.1	90.6	89.1	88.1	87.2	86.4	85.5	81.6
Constant 2010 US dollars (2010=100), deflated by the MUV Index										
Energy		120.1	111.7	61.4	48.7	57.5	60.5	63.2	66.1	82.3
Non-energy commodities		95.9	91.6	78.0	72.7	73.1	73.7	74.2	74.8	78.0
Agriculture		100.2	97.0	84.5	80.1	80.2	80.4	80.6	80.9	82.5
Beverages		78.5	96.1	88.5	82.9	81.2	79.5	78.0	76.5	69.6
Food		109.0	101.4	86.0	81.5	81.9	82.3	82.7	83.2	85.7
Oils and meals		109.3	103.0	80.6	76.4	77.4	78.5	79.6	80.7	86.4
Grains		120.9	98.1	84.0	78.1	79.0	80.0	81.0	82.0	87.3
Other food		98.0	102.3	94.9	91.4	90.3	89.4	88.4	87.5	83.2
Raw materials		90.0	86.8	78.8	75.1	75.6	76.3	76.9	77.7	81.6
Timber		96.7	99.0	90.9	86.7	87.6	88.6	89.6	90.5	95.3
Other Raw Materials		82.6	73.5	65.5	62.3	62.5	62.8	63.2	63.6	66.5
Fertilizers		107.2	94.9	90.3	77.0	76.8	76.6	76.5	76.4	75.7
Metals and minerals *		85.6	80.1	63.4	57.1	58.2	59.5	60.7	62.0	69.0
Base Metals **		85.2	84.1	69.7	62.9	64.3	65.7	67.2	68.7	76.7
Precious Metals		108.5	95.5	85.8	82.8	80.6	78.5	76.5	74.5	65.4
Inflation indexes, 2010=100										
MUV index ***		106.1	105.9	105.7	107.6	109.4	111.2	112.9	114.8	124.7
% change per annum		-1.4	-0.2	-0.2	1.9	1.7	1.6	1.6	1.6	1.7
US GDP deflator		105.4	106.9	108.5	110.7	113.0	115.3	117.6	120.0	132.6
% change per annum		1.5	1.3	1.6	2.0	2.0	2.0	2.0	2.0	2.0

Source: See Appendix C.

Notes: (\*) 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.

Next update: July 2016.





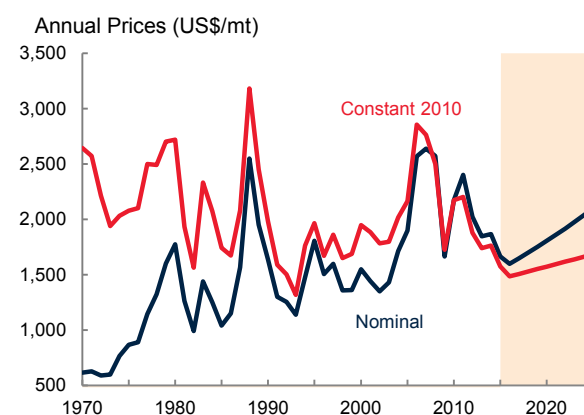
## APPENDIX B

### Commodity Balances

Aluminum	45	Nickel	58
Coal	46	Nitrogen Fertilizers	59
Cocoa	47	Palm oil and Soybean oil	60
Coffee	48	Phosphate and Potash Fertilizers	61
Copper	49	Rice	62
Cotton	50	Silver	63
Crude oil	51	Soybeans	64
Gold	52	Sugar	65
Industrial roundwood and Sawnwood	53	Tin	66
Lead	54	Wheat	67
Maize	55	Wood-based panels and Woodpulp	68
Natural gas	56	Zinc	69
Natural rubber	57		



# Aluminum



	1980	1990	2000	2005	2010	2012	2013	2014	2015
<b>Bauxite Production (thousand metric tons)</b>									
Australia	27,179	40,697	53,801	59,959	68,535	76,282	81,119	78,633	80,910
China	1,700	3,655	7,900	17,408	36,837	44,052	50,339	65,000	65,000
Brazil	4,152	9,876	14,379	22,365	32,028	34,988	33,849	35,410	31,231
India	1,785	5,277	7,562	12,385	12,662	15,320	20,421	20,688	26,383
Malaysia	920	398	123	5	124	122	220	963	22,867
Guinea	13,911	16,150	17,992	19,237	17,633	19,974	18,763	19,178	20,414
Jamaica	12,064	10,937	11,127	14,118	8,540	9,339	9,435	9,677	9,629
Russian Federation	n/a	n/a	5,000	6,409	5,475	5,166	5,322	5,589	6,580
Kazakhstan	n/a	n/a	3,729	4,815	5,310	5,170	5,193	4,515	4,683
Greece	3,286	2,496	1,991	2,495	1,902	1,815	1,844	1,876	2,100
Saudi Arabia	n/a	n/a	0	0	0	760	1,044	1,965	1,964
Surinam	4,903	3,267	3,610	4,757	3,097	2,873	2,706	2,708	1,871
Venezuela, RB	0	786	4,361	5,815	3,126	2,285	2,341	2,316	1,770
Others	n/a	n/a	7,315	7,038	33,532	39,538	64,212	11,775	10,080
<b>World</b>	<b>93,326</b>	<b>114,835</b>	<b>138,889</b>	<b>176,807</b>	<b>228,802</b>	<b>257,685</b>	<b>296,808</b>	<b>260,291</b>	<b>285,483</b>
<b>Refined Production (thousand metric tons)</b>									
China	358	854	2,647	7,759	16,244	20,251	23,153	27,517	31,410
Russian Federation	n/a	n/a	3,258	3,647	3,947	4,024	3,724	3,488	3,524
Canada	1,075	1,567	2,373	2,894	2,963	2,781	2,967	2,858	2,880
United Arab Emirates	35	174	536	722	1,400	1,861	1,848	2,296	2,464
India	185	433	647	942	1,610	1,714	1,597	1,767	1,886
Australia	304	1,233	1,761	1,903	1,928	1,864	1,778	1,704	1,645
United States	4,654	4,048	3,668	2,480	1,728	2,070	1,948	1,710	1,587
Norway	662	867	1,026	1,376	1,090	1,111	1,155	1,331	1,241
Bahrain	126	212	509	708	851	890	913	931	961
Saudi Arabia	0	0	0	0	0	0	187	665	835
Brazil	261	931	1,271	1,498	1,536	1,436	1,304	962	773
Iceland	75	88	226	272	826	803	736	749	756
South Africa	87	157	683	851	806	665	822	745	695
Others	n/a	n/a	5,699	6,788	6,630	6,766	6,569	6,526	6,686
<b>World</b>	<b>16,036</b>	<b>19,362</b>	<b>24,304</b>	<b>31,841</b>	<b>41,559</b>	<b>46,236</b>	<b>48,701</b>	<b>53,249</b>	<b>57,342</b>
<b>Refined Consumption (thousand metric tons)</b>									
China	550	861	3,352	7,072	15,854	20,224	21,955	27,204	31,068
United States	4,454	4,330	6,161	6,114	4,242	4,875	4,632	5,250	5,325
Germany	1,272	1,379	1,632	1,758	1,912	2,086	2,083	2,289	2,126
Japan	1,639	2,414	2,223	2,276	2,025	1,982	1,772	2,034	1,779
India	234	433	601	958	1,475	1,690	1,559	1,523	1,476
Korea, Rep.	68	369	823	1,201	1,255	1,278	1,241	1,282	1,366
Turkey	45	152	211	390	703	925	867	915	952
United Arab Emirates	0	0	34	85	650	835	835	835	835
Brazil	296	341	514	759	985	1,021	988	1,027	801
Others	6,754	8,947	9,456	11,022	11,317	11,013	10,563	10,945	11,353
<b>World</b>	<b>15,312</b>	<b>19,227</b>	<b>25,007</b>	<b>31,636</b>	<b>40,419</b>	<b>45,929</b>	<b>46,495</b>	<b>53,305</b>	<b>57,080</b>

Source: World Bureau of Metal Statistics.

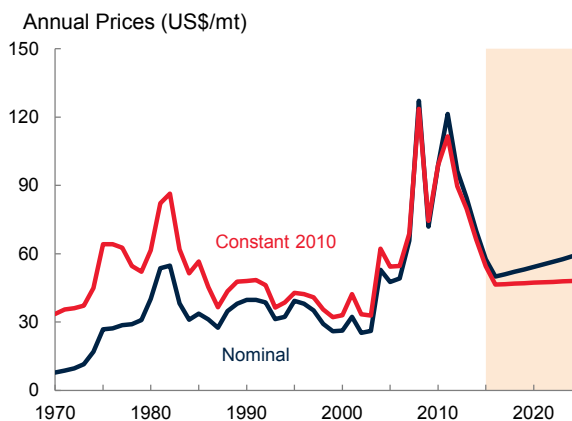
Note: n/a implies data not available.

# Coal



Source: World Bank.

Note: Last observation is March 2015.



Source: World Bank.

Note: 2016-25 are forecasts.

	1981	1990	2000	2005	2010	2011	2012	2013	2014
<b>Production (million metric tons oil equivalent)</b>									
China	311	540	707	1,241	1,665	1,853	1,872	1,894	1,845
United States	463	566	570	580	551	556	518	501	508
Indonesia	0	7	47	94	169	217	237	276	282
Australia	65	109	167	206	241	233	250	268	281
India	63	92	132	162	218	216	229	229	244
Russian Federation	n/a	178	117	140	151	159	170	169	171
South Africa	75	100	127	138	144	143	147	145	148
Colombia	3	14	25	38	48	56	58	56	58
Kazakhstan	n/a	68	38	44	54	56	59	58	55
Poland	98	94	71	69	55	57	59	58	55
Germany	149	125	61	57	46	47	48	45	44
Canada	23	40	39	35	35	35	36	37	37
Ukraine	n/a	84	42	41	40	44	45	44	32
Vietnam	3	3	7	19	25	26	24	23	23
Turkey	7	12	12	11	18	18	17	15	18
Czech Republic	43	37	25	24	21	22	21	18	17
United Kingdom	76	55	19	12	11	11	10	8	7
Mexico	2	3	5	6	7	9	7	8	7
Greece	3	7	8	9	7	8	8	7	6
Bulgaria	5	5	4	4	5	6	6	5	5
Thailand	0	4	5	6	5	6	5	5	5
Romania	8	9	6	7	6	7	6	5	4
Brazil	3	2	3	2	2	2	3	3	3
Others	n/a	111	71	72	79	83	79	86	80
<b>World</b>	<b>1,855</b>	<b>2,265</b>	<b>2,310</b>	<b>3,018</b>	<b>3,604</b>	<b>3,869</b>	<b>3,913</b>	<b>3,961</b>	<b>3,933</b>
<b>Consumption (million metric tons oil equivalent)</b>									
China	303	525	700	1,318	1,741	1,896	1,922	1,961	1,962
United States	401	483	569	574	525	495	438	455	453
India	63	95	144	184	260	270	302	324	360
Japan	64	76	99	121	124	118	124	129	127
South Africa	51	67	75	80	93	90	88	89	89
Russian Federation	n/a	182	106	95	91	94	98	91	85
Korea, Rep.	15	24	43	55	76	84	81	82	85
Germany	144	132	85	81	77	78	80	82	77
Indonesia	0	3	13	24	39	47	53	58	61
Poland	91	80	58	56	56	56	54	56	53
Australia	27	37	48	54	51	50	47	45	44
Taiwan, China	4	11	29	38	40	41	41	41	41
Turkey	7	16	23	22	31	34	36	32	36
Kazakhstan	n/a	40	23	27	32	34	37	36	35
Ukraine	n/a	75	39	38	38	41	43	41	33
Others	n/a	386	316	354	337	348	352	347	341
<b>World</b>	<b>1,834</b>	<b>2,233</b>	<b>2,369</b>	<b>3,122</b>	<b>3,611</b>	<b>3,777</b>	<b>3,799</b>	<b>3,867</b>	<b>3,882</b>

Source: BP Statistical Review.

Notes: 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 included in consumption.

# Cocoa

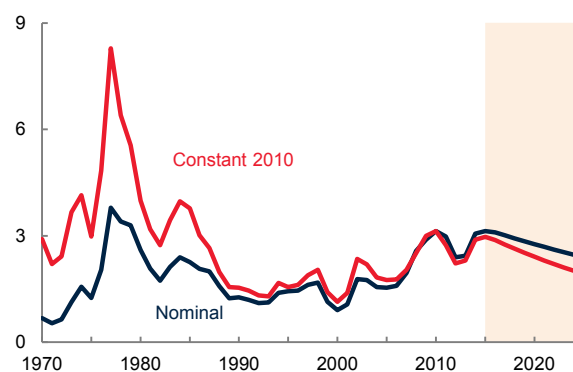
Monthly Prices (US\$/kg)



Source: World Bank.

Note: Last observation is March 2016.

Annual Prices (US\$/kg)



Source: World Bank.

Note: 2016-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
<b>Production (thousand metric tons)</b>									
Côte d'Ivoire	179.6	417.2	804.4	1,212.4	1,511.3	1,449.0	1,746.2	1,795.9	1,690.0
Ghana	406.0	258.0	293.4	395.0	1,024.6	835.5	896.9	740.3	840.0
Indonesia	1.7	12.4	150.0	385.0	440.0	410.0	375.0	325.0	300.0
Ecuador	71.6	86.7	111.1	88.9	160.5	191.5	234.0	250.0	230.0
Cameroon	112.0	117.1	115.0	133.0	228.5	225.0	211.0	232.3	230.0
Brazil	182.4	353.0	368.1	162.8	199.8	185.3	228.2	230.0	210.0
Nigeria	304.8	155.9	160.0	180.0	240.0	238.0	248.0	195.0	200.0
Peru	2.0	7.0	11.0	16.9	54.4	69.8	80.2	83.0	85.0
Dominican Republic	34.6	34.5	42.0	44.9	54.3	68.0	70.0	82.0	72.0
Colombia	21.0	38.3	52.0	37.1	35.2	48.4	48.8	51.0	53.0
Others	212.3	213.9	399.8	195.5	360.6	222.9	233.4	245.1	244.1
<b>World</b>	<b>1,528.0</b>	<b>1,694.0</b>	<b>2,506.8</b>	<b>2,851.5</b>	<b>4,309.0</b>	<b>3,943.4</b>	<b>4,371.6</b>	<b>4,229.6</b>	<b>4,154.1</b>
<b>Grindings (thousand metric tons)</b>									
Côte d'Ivoire	34.7	60.0	118.1	285.0	360.9	471.1	519.4	558.8	575.0
Netherlands	116.4	139.6	267.7	451.9	540.0	545.0	530.0	508.0	510.0
Germany	150.7	180.0	294.2	226.6	438.5	402.0	412.0	415.0	430.0
United States	278.7	185.6	267.9	444.7	401.3	429.2	446.0	398.0	395.0
Indonesia	1.2	10.0	32.0	83.0	190.0	290.0	340.0	335.0	370.0
Ghana	48.0	27.0	29.9	70.0	229.5	225.1	234.2	233.7	235.0
Others	801.3	963.8	1,314.9	1,479.9	1,777.8	1,810.3	1,840.0	1,698.0	1,710.3
<b>World</b>	<b>1,431.0</b>	<b>1,566.0</b>	<b>2,324.7</b>	<b>3,041.1</b>	<b>3,938.1</b>	<b>4,172.7</b>	<b>4,321.6</b>	<b>4,146.5</b>	<b>4,225.3</b>
<b>Exports (thousand metric tons)</b>									
Côte d'Ivoire	138.0	405.6	688.1	903.4	1,079.3	1,045.2	1,191.8	n/a	n/a
Ghana	347.6	181.8	245.2	306.8	694.4	600.6	709.2	n/a	n/a
Ecuador	46.5	19.0	55.9	57.2	135.7	165.4	196.8	n/a	n/a
Nigeria	215.5	75.9	142.0	149.4	219.0	182.9	191.6	n/a	n/a
Cameroon	74.6	96.0	96.3	101.6	204.1	186.4	160.0	n/a	n/a
Indonesia	0.6	6.3	113.4	326.5	275.2	173.6	99.0	n/a	n/a
Others	296.2	315.3	396.2	141.9	388.3	288.7	371.9	n/a	n/a
<b>World</b>	<b>1,118.9</b>	<b>1,099.8</b>	<b>1,737.1</b>	<b>1,986.7</b>	<b>2,995.9</b>	<b>2,642.9</b>	<b>2,920.2</b>	<b>n/a</b>	<b>n/a</b>
<b>Imports (thousand metric tons)</b>									
Netherlands	116.2	167.0	267.0	549.0	805.5	671.9	641.4	n/a	n/a
United States	269.0	246.3	319.7	354.7	472.0	427.9	475.2	n/a	n/a
Germany	154.7	187.4	299.9	228.2	433.8	272.6	318.2	n/a	n/a
Malaysia	0.9	n/a	0.9	109.6	320.4	305.4	315.4	n/a	n/a
Belgium	18.4	28.0	49.7	101.3	193.8	224.6	257.9	n/a	n/a
France	41.7	58.8	74.1	157.2	149.2	114.0	141.3	n/a	n/a
Spain	33.8	36.9	45.4	48.8	87.9	98.9	107.5	n/a	n/a
Italy	41.2	31.7	56.2	72.2	85.7	87.7	89.5	n/a	n/a
Turkey	1.2	2.0	5.9	39.1	71.1	78.3	87.8	n/a	n/a
Singapore	2.6	21.8	126.6	67.0	87.8	79.9	80.7	n/a	n/a
Others	459.7	418.2	516.0	682.3	649.4	635.0	656.1	n/a	n/a
<b>World</b>	<b>1,139.4</b>	<b>1,198.1</b>	<b>1,761.4</b>	<b>2,409.5</b>	<b>3,356.6</b>	<b>2,996.2</b>	<b>3,171.0</b>	<b>n/a</b>	<b>n/a</b>

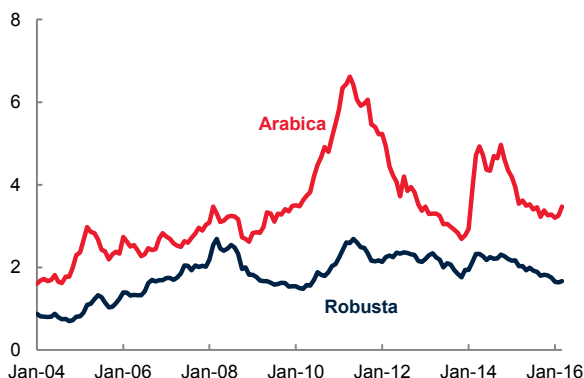
Source: Quarterly Bulletin of Cocoa Statistics.

Notes: n/a implies data not available. 1970/71 data are average of 1968-1972.



# Coffee

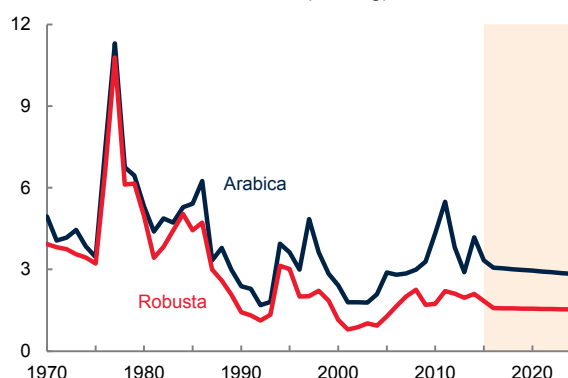
Monthly Prices (US\$/kg)



Source: World Bank.

Note: Last observation is March 2016.

Annual Constant 2010 Prices (US\$/kg)



Source: World Bank.

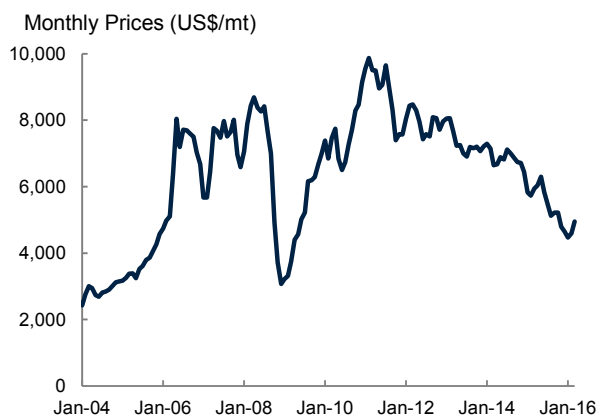
Note: 2016-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
<b>Production (thousand 60kg bags)</b>									
Brazil	11,000	21,500	31,000	34,100	54,500	57,600	57,200	54,300	49,400
Vietnam	56	77	1,200	15,333	19,415	26,500	29,833	27,400	29,300
Colombia	8,000	13,500	14,500	10,500	8,525	9,927	12,075	13,300	13,400
Indonesia	2,330	5,365	7,480	6,495	9,325	10,500	9,500	8,800	10,605
Ethiopia	2,589	3,264	3,500	2,768	6,125	6,325	6,345	6,475	6,500
Honduras	545	1,265	1,685	2,821	3,975	4,725	4,400	5,000	5,900
India	1,914	1,977	2,970	5,020	5,035	5,303	5,075	5,440	5,300
Uganda	2,667	2,133	2,700	3,097	3,212	3,600	3,850	3,550	3,800
Mexico	3,200	3,862	4,550	4,800	4,000	4,650	3,950	3,300	3,400
Guatemala	1,965	2,702	3,282	4,564	3,960	4,010	3,515	3,365	3,315
Peru	1,114	1,170	1,170	2,824	4,100	4,300	4,250	2,900	3,000
Nicaragua	641	971	460	1,610	1,740	1,925	2,000	2,100	2,200
Malaysia	66	88	75	700	1,100	1,400	1,500	1,750	1,800
Costa Rica	1,295	2,140	2,565	2,502	1,575	1,675	1,450	1,400	1,350
Côte d'Ivoire	3,996	6,090	3,300	5,100	1,600	1,750	1,675	1,400	1,325
Tanzania, United Rep.	909	1,060	763	809	1,050	1,180	800	800	900
Thailand	19	201	785	1,692	850	850	850	900	900
Papua New Guinea	401	880	964	1,041	865	825	855	810	850
Kenya	999	1,568	1,455	864	710	660	850	780	840
Others	15,496	16,361	15,777	10,577	8,755	7,053	5,698	5,765	6,037
<b>World</b>	<b>59,202</b>	<b>86,174</b>	<b>100,181</b>	<b>117,217</b>	<b>140,417</b>	<b>154,758</b>	<b>155,671</b>	<b>149,535</b>	<b>150,122</b>
<b>Consumption (thousand 60kg bags)</b>									
European Union	n/a	n/a	n/a	n/a	41,350	43,275	41,475	43,630	43,850
United States	n/a	n/a	n/a	n/a	22,383	23,027	23,811	23,577	24,067
Brazil	8,890	7,975	9,000	13,100	19,420	20,110	20,210	20,330	20,330
Japan	n/a	n/a	n/a	n/a	7,015	7,505	7,750	7,825	8,125
Canada	n/a	n/a	n/a	n/a	4,245	4,230	4,605	4,505	4,800
Philippines	496	432	810	900	2,825	4,405	3,630	4,265	4,600
Russian Federation	n/a	n/a	n/a	n/a	4,355	4,130	4,230	4,050	4,075
Indonesia	888	1,228	1,295	1,335	1,690	2,670	2,790	3,050	3,090
Ethiopia	1,170	1,600	1,900	1,667	2,860	3,055	3,120	2,985	2,972
Vietnam	31	35	100	417	1,337	1,825	2,008	2,217	2,600
Korea, Rep.	n/a	n/a	n/a	n/a	1,910	1,825	2,160	2,305	2,350
Algeria	n/a	n/a	n/a	n/a	1,815	1,945	2,300	2,155	2,280
Mexico	1,512	1,500	1,400	978	2,470	2,030	2,331	1,776	2,173
China	n/a	n/a	n/a	n/a	965	1,560	1,705	1,940	1,925
Australia	n/a	n/a	n/a	n/a	1,445	1,660	1,615	1,775	1,800
Thailand	93	118	160	500	683	1,130	1,260	1,700	1,550
Switzerland	n/a	n/a	n/a	n/a	1,570	1,500	1,410	1,445	1,450
Colombia	1,349	1,825	1,615	1,530	1,120	1,200	1,300	1,515	1,350
India	665	887	1,224	959	1,231	1,100	1,200	1,200	1,250
Others	n/a	n/a	n/a	n/a	13,698	14,089	13,843	13,276	13,630
<b>World</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>134,387</b>	<b>142,271</b>	<b>142,753</b>	<b>145,521</b>	<b>148,267</b>

Source: U.S. Department of Agriculture (April 2016 update).

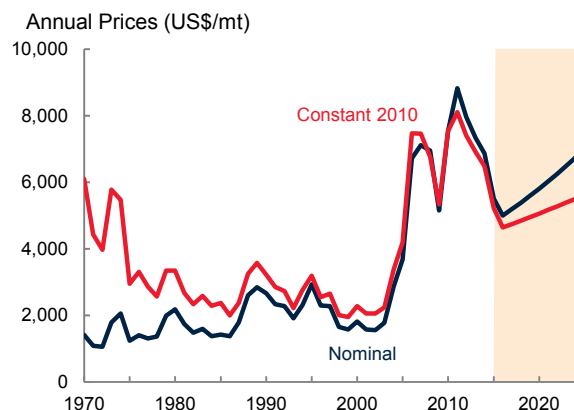
Note: n/a implies data not available.

# Copper



Source: World Bank.

Note: Last observation is March 2016.



Source: World Bank.

Note: 2016-25 are forecasts.

	1980	1990	2000	2005	2010	2012	2013	2014	2015
<b>Mine Production (thousand metric tons)</b>									
Chile	1,068	1,588	4,602	5,321	5,419	5,434	5,776	5,750	5,764
Peru	367	318	553	1,010	1,247	1,299	1,376	1,380	1,705
China	177	296	549	639	1,180	1,552	1,681	1,632	1,669
United States	1,181	1,587	1,440	1,157	1,129	1,196	1,279	1,383	1,373
Congo, Dem. Rep.	460	356	33	98	378	608	817	996	1,039
Australia	244	327	832	930	870	914	999	965	957
Zambia	596	496	249	441	732	782	839	756	754
Russian Federation	n/a	n/a	580	805	703	720	720	720	720
Canada	716	794	634	595	522	580	632	696	697
Indonesia	59	169	1,006	1,064	871	398	494	366	580
Kazakhstan	n/a	n/a	433	436	404	491	538	501	566
Mexico	175	291	365	391	270	500	480	514	540
Poland	343	370	454	523	425	427	429	421	426
Others	n/a	n/a	1,476	1,619	1,985	2,088	2,251	2,399	2,517
<b>World</b>	<b>7,864</b>	<b>8,997</b>	<b>13,207</b>	<b>15,029</b>	<b>16,135</b>	<b>16,989</b>	<b>18,311</b>	<b>18,478</b>	<b>19,308</b>
<b>Refined Production (thousand metric tons)</b>									
China	314	562	1,312	2,566	4,540	5,879	6,667	7,959	7,964
Chile	811	1,192	2,669	2,824	3,244	2,902	2,755	2,729	2,688
Japan	1,014	1,008	1,437	1,395	1,549	1,516	1,468	1,554	1,483
United States	1,686	2,017	1,802	1,257	1,093	1,001	1,040	1,095	1,135
Russian Federation	n/a	n/a	824	968	900	880	874	874	874
India	23	39	265	518	647	689	619	764	792
Congo, Dem. Rep.	144	173	29	3	254	453	643	742	775
Zambia	607	479	226	465	767	700	629	710	710
Germany	425	533	709	639	585	534	680	673	678
Korea, Rep.	79	187	471	527	556	590	604	604	604
Poland	357	346	486	560	547	566	565	577	574
Australia	182	274	484	471	424	461	480	511	489
Spain	154	171	316	308	347	408	351	428	426
Others	n/a	n/a	3,731	4,135	3,640	3,627	3,737	3,707	3,905
<b>World</b>	<b>9,390</b>	<b>10,809</b>	<b>14,761</b>	<b>16,635</b>	<b>19,094</b>	<b>20,207</b>	<b>21,112</b>	<b>22,927</b>	<b>23,097</b>
<b>Refined Consumption (thousand metric tons)</b>									
China	286	512	1,869	3,621	7,385	8,896	9,830	11,303	11,451
United States	1,868	2,150	2,979	2,264	1,760	1,758	1,826	1,767	1,792
Germany	870	1,028	1,309	1,115	1,312	1,114	1,136	1,162	1,219
Japan	1,158	1,577	1,351	1,229	1,060	985	996	1,072	993
Korea, Rep.	85	324	862	868	856	721	722	759	705
Italy	388	475	674	680	619	570	552	622	611
India	77	135	246	397	514	456	423	434	491
Turkey	33	103	248	319	369	429	453	453	475
Taiwan, China	85	265	628	638	532	432	437	465	471
Others	n/a	n/a	4,929	5,516	4,932	4,772	4,626	4,774	4,529
<b>World</b>	<b>9,385</b>	<b>10,780</b>	<b>15,096</b>	<b>16,649</b>	<b>19,340</b>	<b>20,133</b>	<b>21,002</b>	<b>22,811</b>	<b>22,736</b>

Source: World Bureau of Metal Statistics.

Notes: n/a implies data not available. Refined production and consumption include significant recycled material.

# Cotton

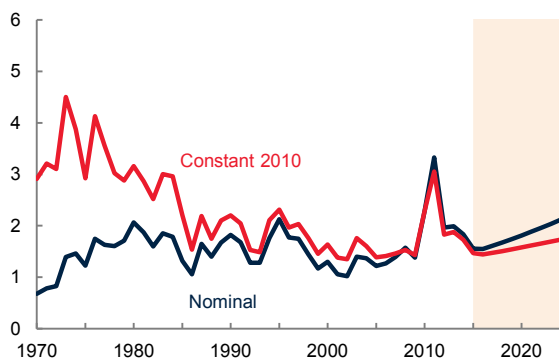
Monthly Prices (US\$/kg)



Source: World Bank.

Note: Last observation is March 2016.

Annual Prices (US\$/kg)



Source: World Bank.

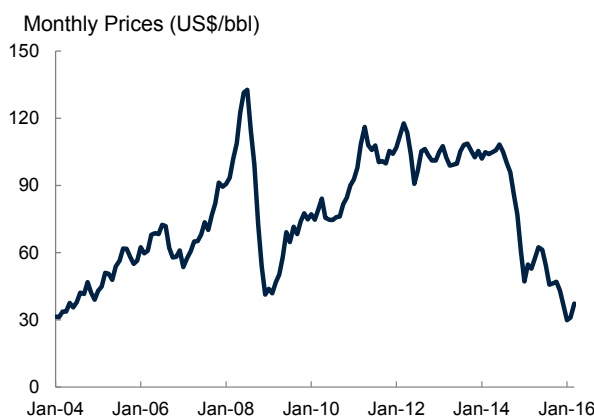
Note: 2016-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2013/14	2014/15	2015/16	2016/17
<b>Production (thousand metric tons)</b>									
India	909	1,322	1,989	2,380	5,865	6,770	6,630	6,150	6,447
China	1,995	2,707	4,508	4,505	6,400	6,929	6,444	5,166	4,572
United States	2,219	2,422	3,376	3,742	3,942	2,811	3,549	2,817	3,162
Pakistan	543	714	1,638	1,816	1,948	2,076	2,300	1,611	2,074
Brazil	594	623	717	939	1,960	1,734	1,509	1,500	1,446
Uzbekistan	n/a	1,671	1,593	975	910	940	940	855	884
Australia	19	99	433	804	898	890	470	560	696
Turkey	400	500	655	880	611	760	847	682	672
Burkina Faso	8	23	77	116	141	274	285	271	287
Turkmenistan	n/a	n/a	437	187	380	329	327	300	286
Greece	110	115	213	421	180	296	274	218	258
Argentina	84	84	258	167	295	302	302	240	235
Others	n/a	n/a	3,141	2,688	1,896	2,190	2,459	2,091	2,056
<b>World</b>	<b>11,740</b>	<b>13,831</b>	<b>18,951</b>	<b>19,524</b>	<b>25,425</b>	<b>26,300</b>	<b>26,337</b>	<b>22,461</b>	<b>23,075</b>
<b>Stocks (thousand metric tons)</b>									
China	412	476	1,589	3,755	2,087	12,088	12,447	12,021	10,854
India	376	491	539	922	1,889	1,714	2,257	2,078	2,094
Brazil	321	391	231	755	1,400	1,230	1,128	1,030	1,030
United States	915	581	510	1,306	566	651	1,078	816	925
Turkey	24	112	150	283	453	440	655	798	798
Pakistan	55	131	313	608	316	416	742	496	562
Others	2,502	2,969	3,428	2,984	2,775	2,986	3,498	3,298	3,221
<b>World</b>	<b>4,605</b>	<b>5,151</b>	<b>6,761</b>	<b>10,614</b>	<b>9,486</b>	<b>19,523</b>	<b>21,806</b>	<b>20,537</b>	<b>19,484</b>
<b>Exports (thousand metric tons)</b>									
United States	848	1,290	1,697	1,467	3,130	2,293	2,330	2,199	2,267
India	34	140	255	24	1,085	2,014	1,048	1,013	1,085
Brazil	220	21	167	68	435	485	785	825	702
Australia	4	53	329	849	545	1,037	560	545	608
Uzbekistan	n/a	n/a	n/a	750	600	650	605	526	524
Burkina Faso	9	22	73	112	136	274	188	275	303
Others	n/a	n/a	n/a	2,535	1,798	2,133	1,957	1,990	2,189
<b>World</b>	<b>3,875</b>	<b>4,414</b>	<b>5,069</b>	<b>5,805</b>	<b>7,729</b>	<b>8,886</b>	<b>7,473</b>	<b>7,373</b>	<b>7,678</b>
<b>Imports (thousand metric tons)</b>									
Vietnam	33	40	31	84	350	691	844	1,098	1,356
Bangladesh	0	45	80	248	843	987	965	1,078	1,131
China	108	773	480	52	2,609	3,075	1,625	1,078	1,015
Turkey	1	0	46	381	729	876	773	755	896
Indonesia	36	106	324	570	471	651	734	782	769
Thailand	46	86	354	342	383	337	362	312	315
Pakistan	1	1	0	101	314	402	385	418	291
Korea, Rep.	121	332	447	304	230	280	266	270	284
Others	3,741	3,172	3,458	3,682	1,797	1,437	1,518	1,582	1,621
<b>World</b>	<b>4,086</b>	<b>4,555</b>	<b>5,220</b>	<b>5,764</b>	<b>7,726</b>	<b>8,735</b>	<b>7,473</b>	<b>7,373</b>	<b>7,678</b>

Source: International Cotton Advisory Committee (January-February 2016 update).

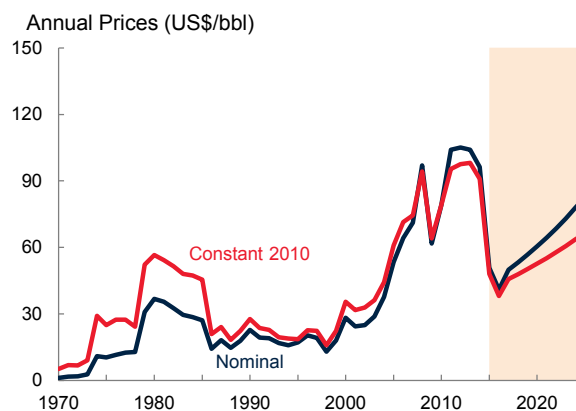
Note: n/a implies data not available.

## Crude oil



Source: World Bank.

Note: Last observation is March 2016.



Source: World Bank.

Note: 2016-25 are forecasts.

	1970	1980	1990	2000	2010	2011	2012	2013	2014
<b>Production (thousand barrels per day)</b>									
United States	11,297	10,170	8,914	7,732	7,556	7,861	8,904	10,069	11,644
Saudi Arabia	3,851	10,270	7,105	9,470	10,075	11,144	11,635	11,393	11,505
Russian Federation	n/a	n/a	10,342	6,583	10,366	10,516	10,640	10,777	10,838
Canada	1,473	1,764	1,968	2,703	3,332	3,515	3,740	3,977	4,292
China	616	2,122	2,778	3,257	4,077	4,074	4,155	4,216	4,246
United Arab Emirates	762	1,745	2,283	2,660	2,895	3,325	3,406	3,648	3,712
Iran, Islamic Rep.	3,848	1,479	3,270	3,852	4,352	4,373	3,742	3,525	3,614
Iraq	1,549	2,658	2,149	2,613	2,490	2,801	3,116	3,141	3,285
Kuwait	3,036	1,757	964	2,244	2,562	2,915	3,172	3,135	3,123
Mexico	487	2,129	2,941	3,456	2,959	2,940	2,911	2,875	2,784
Venezuela, RB	3,754	2,228	2,244	3,097	2,838	2,734	2,704	2,687	2,719
Nigeria	1,084	2,059	1,870	2,159	2,509	2,450	2,395	2,302	2,361
Brazil	167	188	650	1,271	2,137	2,193	2,149	2,114	2,346
Qatar	363	476	434	853	1,655	1,850	1,968	1,998	1,982
Norway	0	528	1,716	3,346	2,136	2,040	1,917	1,838	1,895
Angola	103	150	475	746	1,863	1,726	1,784	1,799	1,712
Kazakhstan	n/a	n/a	571	740	1,672	1,684	1,662	1,720	1,701
Algeria	1,052	1,139	1,347	1,549	1,689	1,642	1,537	1,485	1,525
Colombia	226	131	446	687	786	915	944	1,004	990
Oman	332	285	695	961	865	885	918	942	943
India	140	193	715	726	882	916	906	906	895
Indonesia	854	1,577	1,539	1,456	1,003	952	918	882	852
United Kingdom	4	1,676	1,933	2,714	1,361	1,116	949	867	850
Others	n/a	n/a	8,037	10,051	11,128	9,413	9,977	9,280	8,857
<b>World</b>	<b>48,056</b>	<b>62,959</b>	<b>65,385</b>	<b>74,925</b>	<b>83,190</b>	<b>83,980</b>	<b>86,150</b>	<b>86,579</b>	<b>88,673</b>
<b>Consumption (thousand barrels per day)</b>									
United States	14,710	17,062	16,988	19,701	19,180	18,882	18,490	18,961	19,035
China	556	1,690	2,320	4,766	9,266	9,791	10,231	10,664	11,056
Japan	3,876	4,905	5,240	5,542	4,442	4,439	4,688	4,521	4,298
India	391	644	1,213	2,261	3,319	3,488	3,685	3,727	3,846
Brazil	523	1,163	1,478	2,056	2,701	2,813	2,860	3,048	3,229
Russian Federation	n/a	n/a	5,042	2,542	2,895	3,096	3,137	3,179	3,196
Saudi Arabia	408	607	1,158	1,578	2,793	2,838	2,991	3,000	3,185
Korea, Rep.	162	476	1,042	2,263	2,370	2,394	2,458	2,455	2,456
Germany	2,774	3,020	2,689	2,746	2,445	2,369	2,356	2,408	2,371
Canada	1,472	1,898	1,747	2,043	2,316	2,404	2,372	2,383	2,371
Iran, Islamic Rep.	222	591	1,070	1,457	1,874	1,910	1,928	2,038	2,024
Mexico	412	1,048	1,580	1,965	2,014	2,043	2,063	2,020	1,941
Indonesia	138	396	653	1,137	1,458	1,567	1,599	1,615	1,641
France	1,867	2,221	1,895	1,994	1,763	1,730	1,676	1,664	1,615
United Kingdom	2,030	1,647	1,754	1,704	1,588	1,532	1,520	1,494	1,501
Others	n/a	n/a	20,868	23,112	27,442	27,679	27,789	28,065	28,320
<b>World</b>	<b>45,348</b>	<b>61,233</b>	<b>66,737</b>	<b>76,868</b>	<b>87,867</b>	<b>88,974</b>	<b>89,846</b>	<b>91,243</b>	<b>92,086</b>

Source: BP Statistical Review.

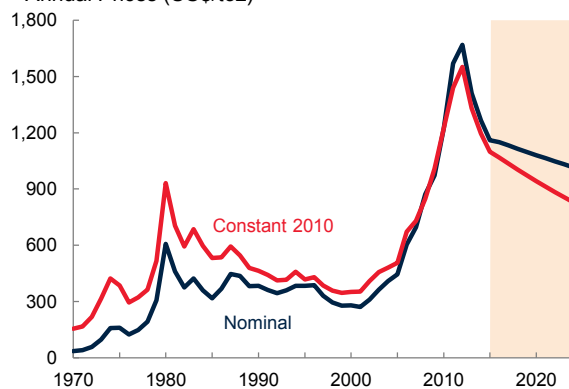
Notes: n/a implies data not available. Production includes crude oil and natural gas liquids but excludes liquid fuels from other sources such as biomass and derivatives of coal and natural gas included in consumption.

# Gold

Monthly Prices (US\$/toz)



Annual Prices (US\$/toz)

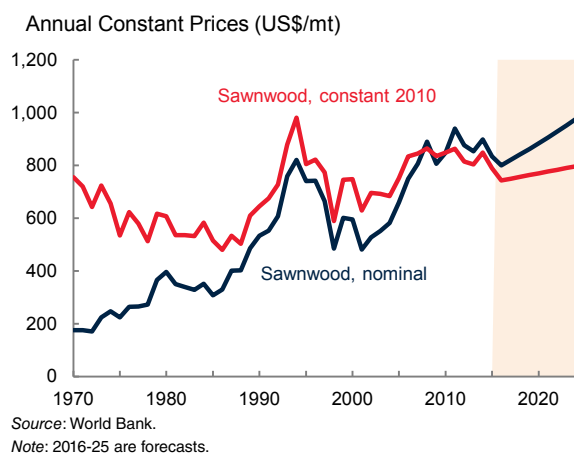
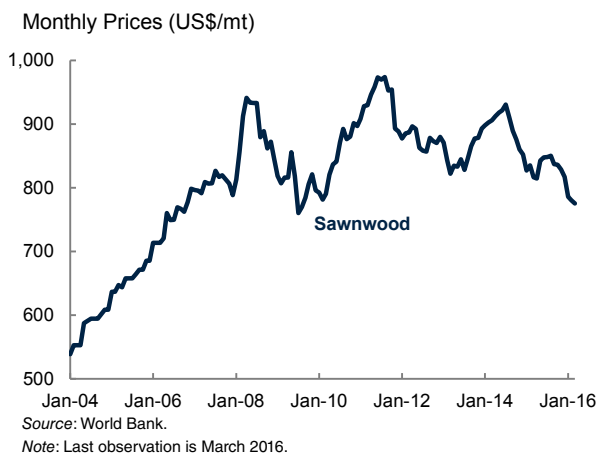


	1995	2000	2005	2010	2011	2012	2013	2014	2015
<b>Production (metric tons)</b>									
China	136	175	209	341	361	403	428	452	450
Australia	247	296	263	260	258	252	267	274	285
Russian Federation	128	144	163	201	185	183	230	249	249
United States	317	353	256	231	234	235	230	210	213
Canada	152	156	121	91	100	105	125	152	159
Peru	56	134	206	164	164	162	151	141	145
South Africa	522	428	297	191	187	154	169	152	144
Mexico	20	24	30	79	89	103	120	118	125
Ghana	53	72	67	93	88	99	95	136	113
Uzbekistan	70	88	84	90	91	93	98	102	102
Indonesia	63	125	158	106	77	69	60	69	97
Argentina	1	26	28	64	59	55	52	72	71
Kazakhstan	11	27	18	30	37	40	42	49	64
Papua New Guinea	52	73	67	67	62	58	63	56	62
Colombia	22	37	36	54	56	66	56	57	58
Tanzania	0	15	48	39	37	40	43	41	46
Mali	8	29	44	39	36	41	41	45	44
Brazil	64	61	38	62	65	67	80	78	42
Chile	44	54	40	39	45	50	49	46	41
Others	206	242	291	352	404	439	482	563	519
<b>World</b>	<b>2,174</b>	<b>2,560</b>	<b>2,464</b>	<b>2,594</b>	<b>2,635</b>	<b>2,713</b>	<b>2,881</b>	<b>3,061</b>	<b>3,027</b>
<b>Fabrication (metric tons)</b>									
India	426	704	695	783	761	736	716	771	812
China	217	213	277	523	651	698	1,058	731	668
Turkey	126	228	303	109	136	114	178	156	112
United States	245	277	219	179	167	147	160	152	164
Japan	189	161	165	158	147	126	124	119	102
Italy	458	522	290	126	103	96	92	96	94
Russian Federation	n/a	34	61	61	66	72	74	70	51
South Korea	82	107	83	68	62	54	49	61	56
Switzerland	47	54	56	41	48	48	48	44	41
Indonesia	133	99	87	39	39	44	52	49	43
Egypt, Arab Rep.	61	107	71	43	30	39	42	42	39
Malaysia	78	86	74	44	37	35	45	41	36
Saudi Arabia	156	153	125	47	37	33	41	37	41
Germany	71	64	52	41	39	36	37	36	36
United Arab Emirates	30	50	55	33	28	28	38	36	39
South Africa	12	14	10	25	27	27	31	25	31
Canada	28	25	27	44	45	32	45	32	40
Iran, Islamic Rep.	37	46	41	39	37	37	42	36	30
Singapore	22	26	30	25	24	22	25	26	26
Others	877	791	605	401	373	344	373	334	331
<b>World</b>	<b>3,294</b>	<b>3,761</b>	<b>3,325</b>	<b>2,827</b>	<b>2,858</b>	<b>2,767</b>	<b>3,269</b>	<b>2,891</b>	<b>2,790</b>

Sources: World Bureau of Metal Statistics and Thomson Reuters.

Notes: n/a implies data not available. Fabrication includes the use of scrap. Fabrication of "Saudi Arabia" includes Saudi Arabia and Yemen in 1995 and 2000.

## Industrial roundwood and Sawnwood



	1970	1980	1990	2000	2010	2011	2012	2013	2014
<b>Industrial roundwood: production (million cubic meters)</b>									
United States	312.7	327.1	427.2	420.6	336.1	354.7	347.1	354.9	356.8
Russian Federation	n/a	n/a	n/a	145.6	161.6	175.6	177.5	180.4	188.3
China	42.2	79.2	91.2	96.0	161.8	160.9	159.6	168.7	162.5
Canada	117.5	150.8	156.0	198.9	138.8	146.7	146.7	147.8	149.9
Brazil	23.9	61.7	74.3	103.0	128.4	140.0	146.8	142.6	149.5
Sweden	56.7	44.8	49.1	57.4	66.3	66.0	63.6	63.7	66.8
Indonesia	12.7	30.9	38.4	48.8	54.1	60.7	62.6	62.6	62.6
Finland	37.5	43.0	40.2	50.1	46.0	45.5	44.6	49.3	50.7
Others	673.4	708.4	832.9	563.9	609.4	618.1	617.8	624.5	649.4
<b>World</b>	<b>1,276.4</b>	<b>1,446.0</b>	<b>1,709.2</b>	<b>1,684.4</b>	<b>1,702.5</b>	<b>1,768.3</b>	<b>1,766.3</b>	<b>1,794.5</b>	<b>1,836.5</b>

<b>Industrial roundwood: imports (million cubic meters)</b>									
China	2.0	8.3	7.2	15.7	35.4	43.3	38.7	45.9	53.7
Germany	5.2	3.8	2.0	3.5	7.7	7.0	6.6	8.4	8.3
Sweden	0.6	3.1	2.0	11.7	6.3	6.7	6.9	7.5	8.1
Austria	2.0	3.7	4.4	8.5	8.0	7.4	7.3	8.2	7.3
India	0.0	0.0	1.3	2.2	5.3	6.3	6.5	6.5	6.5
Finland	2.3	3.8	5.2	9.9	6.3	5.7	5.5	6.7	6.3
Belgium	n/a	n/a	n/a	4.0	4.2	4.3	4.3	4.5	4.5
Canada	2.1	3.0	1.5	6.5	4.7	4.3	4.5	4.9	4.3
Others	69.0	69.7	58.9	53.2	32.0	35.5	32.5	33.5	35.0
<b>World</b>	<b>83.1</b>	<b>95.4</b>	<b>82.6</b>	<b>115.3</b>	<b>109.9</b>	<b>120.6</b>	<b>112.8</b>	<b>126.1</b>	<b>133.9</b>

<b>Sawnwood: production (million cubic meters)</b>									
United States	63.7	65.3	86.1	91.1	60.0	63.2	67.5	71.1	74.8
China	14.8	21.2	23.6	6.7	37.2	44.6	55.7	63.0	68.4
Canada	19.8	32.8	39.7	50.5	38.7	38.9	40.6	42.8	43.4
Russian Federation	n/a	n/a	n/a	20.0	28.9	31.2	32.2	33.5	33.9
Germany	11.6	13.0	14.7	16.3	22.1	22.6	21.1	21.5	21.8
Sweden	12.3	11.3	12.0	16.2	16.8	16.5	16.3	16.2	17.8
Brazil	8.0	14.9	13.7	21.3	17.5	16.2	15.2	15.4	15.2
Finland	7.4	10.3	7.5	13.4	9.5	9.8	9.4	10.4	10.9
Others	251.6	252.1	265.6	149.4	145.1	145.5	146.1	148.7	152.6
<b>World</b>	<b>389.1</b>	<b>420.9</b>	<b>463.0</b>	<b>384.8</b>	<b>375.6</b>	<b>388.5</b>	<b>404.0</b>	<b>422.7</b>	<b>438.7</b>

<b>Sawnwood: imports (million cubic meters)</b>									
China	0.1	0.3	1.3	6.1	16.2	23.1	22.0	25.5	27.4
United States	10.6	17.0	22.5	34.4	16.6	16.4	17.4	20.5	22.2
Japan	3.0	5.6	9.0	10.0	6.4	6.8	6.6	7.5	6.8
United Kingdom	9.0	6.6	10.7	7.9	5.7	4.9	5.2	5.5	6.4
Egypt, Arab Rep.	0.4	1.6	1.6	2.0	4.8	4.7	4.5	4.4	4.7
Germany	6.0	6.9	6.1	6.3	4.4	4.6	4.4	4.5	4.7
Italy	4.0	5.8	6.0	8.4	6.1	6.0	4.9	4.7	4.6
Uzbekistan	n/a	n/a	n/a	0.0	1.7	2.0	2.1	2.7	2.8
Others	19.6	27.8	27.3	40.6	46.5	48.1	46.6	46.9	50.0
<b>World</b>	<b>52.6</b>	<b>71.5</b>	<b>84.5</b>	<b>115.6</b>	<b>108.4</b>	<b>116.7</b>	<b>113.6</b>	<b>122.1</b>	<b>129.5</b>

Source: Food and Agriculture Organization.

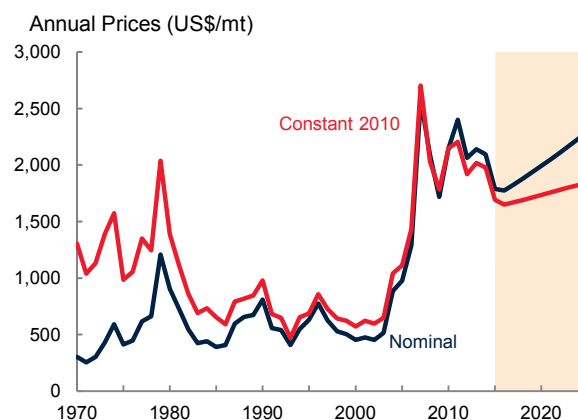
Notes: n/a implies data not available. Industrial roundwood, reported in cubic meters solid volume underbark (i.e. excluding bark), is an aggregate comprising sawlogs and veneer logs; pulpwood, round and split; and other industrial roundwood except wood fuel. Sawnwood, reported in cubic meters solid 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.

## Lead



Source: World Bank.

Note: Last observation is March 2016.



Source: World Bank.

Note: 2016-25 are forecasts.

	1980	1990	2000	2005	2010	2012	2013	2014	2015
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### Mine Production (thousand metric tons)

China	160	364	660	1,142	1,981	2,613	2,697	2,853	2,340
Australia	398	570	678	767	712	639	711	728	689
United States	562	493	447	437	356	336	343	385	375
Peru	189	188	271	319	262	249	266	278	316
Mexico	146	174	138	134	192	238	253	250	254
Russian Federation	n/a	n/a	13	36	97	151	165	194	188
India	15	26	38	60	91	115	106	105	139
Sweden	72	84	107	61	68	64	60	71	79
Bolivia	16	20	10	11	73	81	82	76	79
Poland	48	45	51	51	48	73	74	77	77
Turkey	8	18	16	19	39	54	78	65	77
Korea, Dem. People's Rep.	125	70	26	20	27	38	59	45	48
Iran, Islamic Rep.	12	9	17	22	32	36	40	45	46
Others	n/a	n/a	610	372	396	427	384	388	352
<b>World</b>	<b>3,595</b>	<b>3,150</b>	<b>3,080</b>	<b>3,453</b>	<b>4,374</b>	<b>5,115</b>	<b>5,317</b>	<b>5,561</b>	<b>5,059</b>

### Refined Production (thousand metric tons)

China	175	297	1,100	2,359	4,157	4,591	4,935	4,740	3,858
United States	1,151	1,291	1,431	1,293	1,255	1,221	1,308	1,120	1,127
Korea, Rep.	15	80	222	254	321	460	522	670	616
India	26	39	57	56	366	461	462	477	442
Germany	392	394	387	342	405	426	400	380	377
United Kingdom	325	329	328	304	301	312	296	267	351
Mexico	149	238	332	272	317	334	321	313	310
Canada	231	184	284	230	273	279	284	282	269
Japan	305	327	312	275	267	259	252	240	232
Australia	234	229	223	267	210	206	233	226	223
Italy	134	171	237	211	150	138	180	210	210
Spain	121	124	120	110	163	160	160	162	162
Brazil	85	76	86	121	115	165	152	160	160
Others	2,083	1,683	1,582	1,572	1,531	1,572	1,675	1,670	1,768
<b>World</b>	<b>5,424</b>	<b>5,460</b>	<b>6,701</b>	<b>7,665</b>	<b>9,832</b>	<b>10,585</b>	<b>11,180</b>	<b>10,917</b>	<b>10,106</b>

### Refined Consumption (thousand metric tons)

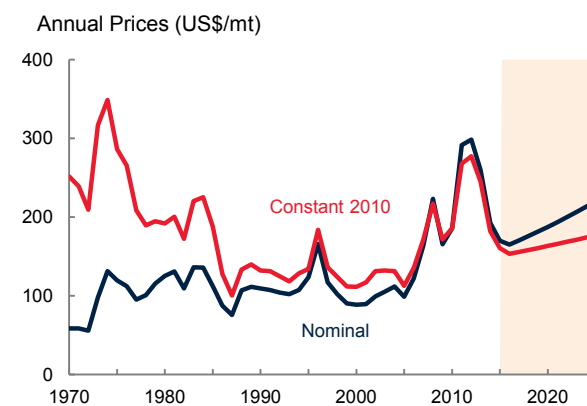
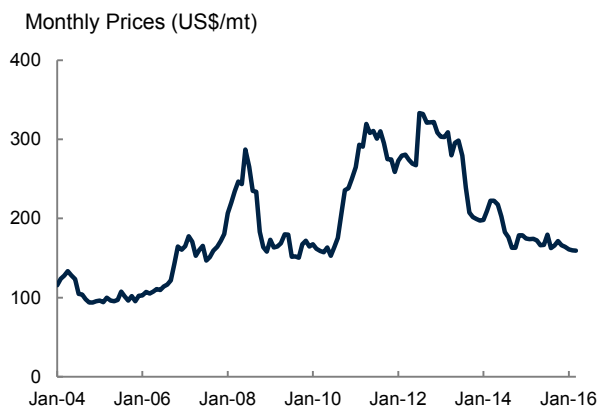
China	210	244	660	1,974	4,171	4,618	4,927	4,718	3,816
United States	1,094	1,275	1,660	1,490	1,430	1,360	1,750	1,670	1,608
Korea, Rep.	54	80	309	376	382	429	550	601	536
India	33	147	56	139	420	524	428	521	484
Germany	433	448	390	330	343	381	392	337	357
Japan	393	416	343	291	224	273	252	254	263
Italy	275	258	283	262	245	195	235	258	232
Spain	111	115	219	279	262	244	257	245	228
Brazil	83	75	155	189	201	238	234	229	224
Others	2,663	2,290	2,416	2,447	2,130	2,126	2,195	2,121	2,227
<b>World</b>	<b>5,348</b>	<b>5,348</b>	<b>6,491</b>	<b>7,777</b>	<b>9,807</b>	<b>10,388</b>	<b>11,222</b>	<b>10,955</b>	<b>9,976</b>

Source: World Bureau of Metal Statistics.

Notes: n/a implies data not available. Refined production and consumption include significant recycled material.



# Maize



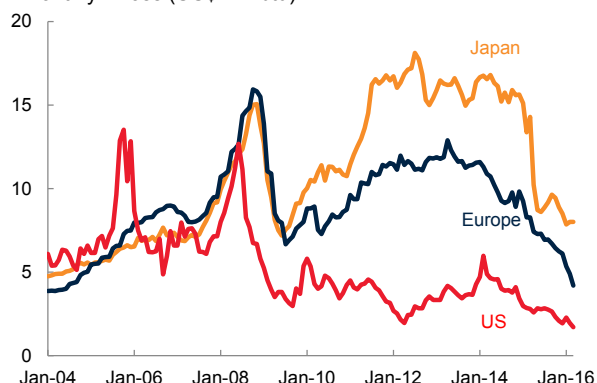
	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
<b>Production (million metric tons)</b>									
United States	105.5	168.6	201.5	251.9	315.6	273.2	351.3	361.1	345.5
China	33.0	62.6	96.8	106.0	177.2	205.6	218.5	215.6	224.6
Brazil	14.1	22.6	24.3	41.5	57.4	81.5	80.0	85.0	84.0
European Union	29.8	42.5	36.6	51.9	58.3	58.9	64.6	75.5	57.5
Argentina	9.9	12.9	7.7	15.4	25.2	27.0	26.0	28.7	28.0
Mexico	8.9	10.4	14.1	17.9	21.1	21.6	22.9	25.5	24.0
Ukraine	n/a	n/a	4.7	3.8	11.9	20.9	30.9	28.5	23.3
India	7.5	7.0	9.0	12.0	21.7	22.3	24.3	24.2	21.0
Canada	2.6	5.8	7.1	7.0	12.0	13.1	14.2	11.5	13.6
Russian Federation	n/a	n/a	2.5	1.5	3.1	8.2	11.6	11.3	13.2
Indonesia	2.8	4.0	5.0	5.9	6.8	8.5	9.1	9.0	9.4
Philippines	2.0	3.1	5.1	4.5	7.3	7.3	7.5	7.7	7.5
Nigeria	1.3	1.7	5.8	4.0	8.8	7.6	7.7	7.5	7.0
Others	80.4	110.1	98.4	68.5	109.1	113.9	121.9	121.8	113.6
<b>World</b>	<b>297.9</b>	<b>451.3</b>	<b>518.6</b>	<b>591.8</b>	<b>835.5</b>	<b>869.5</b>	<b>990.5</b>	<b>1,012.8</b>	<b>972.1</b>
<b>Stocks (million metric tons)</b>									
China	8.9	42.8	82.8	102.4	49.4	67.6	81.3	100.5	109.5
United States	16.8	35.4	38.6	48.2	28.6	20.9	31.3	44.0	47.3
Brazil	2.0	1.3	0.8	2.7	6.3	9.2	14.0	7.9	6.5
European Union	2.3	4.8	3.7	3.2	5.2	5.1	6.8	9.3	6.4
Iran, Islamic Rep.	n/a	0.1	0.0	0.9	2.8	3.2	4.5	5.8	5.5
Others	8.4	22.9	19.1	17.8	31.2	27.4	37.1	40.1	33.8
<b>World</b>	<b>38.4</b>	<b>107.4</b>	<b>145.1</b>	<b>175.3</b>	<b>123.6</b>	<b>133.4</b>	<b>175.0</b>	<b>207.6</b>	<b>208.9</b>
<b>Exports (million metric tons)</b>									
United States	12.9	60.7	43.9	49.3	46.5	18.5	48.8	47.4	41.9
Brazil	0.9	0.0	0.0	6.3	8.4	24.9	21.0	34.5	28.0
Argentina	6.4	9.1	4.0	9.7	16.3	18.7	17.1	18.9	19.0
Ukraine	n/a	n/a	0.4	0.4	5.0	12.7	20.0	19.7	15.7
Russian Federation	n/a	n/a	0.4	0.0	0.0	1.9	4.2	3.2	4.1
Paraguay	0.0	0.0	0.0	0.6	1.6	2.8	2.4	3.3	2.3
Serbia	n/a	n/a	n/a	n/a	2.0	0.6	1.7	3.0	1.7
Others	11.9	10.5	9.8	10.5	11.4	14.9	15.9	11.8	9.6
<b>World</b>	<b>32.2</b>	<b>80.3</b>	<b>58.4</b>	<b>76.7</b>	<b>91.3</b>	<b>95.1</b>	<b>131.1</b>	<b>141.7</b>	<b>122.3</b>
<b>Imports (million metric tons)</b>									
European Union	18.9	26.6	5.7	3.7	7.4	11.4	16.0	8.6	15.0
Japan	5.2	14.0	16.3	16.3	15.6	14.4	15.1	14.7	14.7
Mexico	0.1	3.8	1.9	6.0	8.3	5.7	11.0	11.3	12.0
Korea, Rep.	0.3	2.4	5.6	8.7	8.1	8.2	10.4	10.2	10.0
Egypt, Arab Rep.	0.1	1.0	1.9	5.3	5.8	5.1	8.7	7.8	8.3
Vietnam	0.1	0.1	0.0	0.1	1.3	1.7	2.4	3.5	5.0
Iran, Islamic Rep.	0.0	0.4	0.8	1.3	3.5	3.7	5.5	6.2	5.0
Others	22.6	52.6	32.0	33.5	42.6	49.7	54.9	61.2	60.0
<b>World</b>	<b>47.3</b>	<b>100.9</b>	<b>64.3</b>	<b>74.9</b>	<b>92.6</b>	<b>99.8</b>	<b>124.0</b>	<b>123.5</b>	<b>130.0</b>

Source: U.S. Department of Agriculture (April 2016 update).

Notes: n/a implies data not available. The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971.

## Natural gas

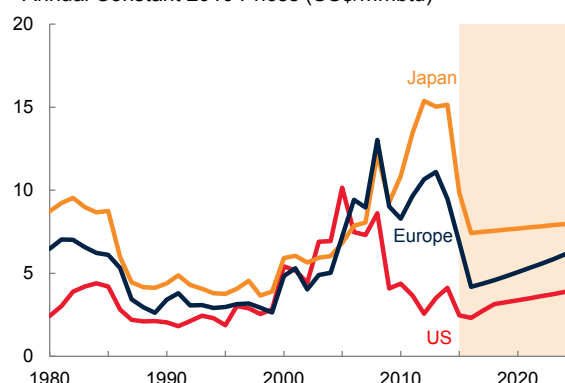
Monthly Prices (US\$/mmbtu)



Source: World Bank.

Note: Last observation is March 2016.

Annual Constant 2010 Prices (US\$/mmbtu)



Source: World Bank.

Note: 2016-25 are forecasts.

	1970	1980	1990	2000	2010	2011	2012	2013	2014
<b>Production (billion cubic metres)</b>									
United States	595	549	504	543	604	649	681	689	728
Russian Federation	n/a	n/a	590	529	589	607	592	605	579
Qatar	1	5	6	24	126	161	170	176	177
Iran, Islamic Rep.	4	5	26	60	152	160	166	164	173
Canada	57	75	109	182	160	160	156	156	162
China	3	15	16	28	99	109	114	125	134
Norway	0	25	25	50	107	101	115	109	109
Saudi Arabia	2	10	34	50	88	92	99	100	108
Algeria	3	14	49	84	80	83	82	82	83
Indonesia	1	19	44	70	86	81	77	72	73
Turkmenistan	n/a	n/a	79	43	42	60	62	62	69
Malaysia	0	2	17	47	63	62	62	67	66
Mexico	11	26	27	38	58	58	57	58	58
United Arab Emirates	1	8	20	38	51	52	54	55	58
Uzbekistan	n/a	n/a	37	51	54	57	57	57	57
Netherlands	27	76	61	58	71	64	64	69	56
Australia	2	11	21	31	46	47	52	53	55
Egypt, Arab Rep.	0	2	8	21	61	61	61	56	49
Thailand	0	0	7	20	36	37	41	42	42
Trinidad & Tobago	2	3	5	16	45	43	43	43	42
Pakistan	3	7	12	22	42	42	44	43	42
Nigeria	0	2	4	12	37	41	43	36	39
United Kingdom	10	35	45	108	57	45	39	36	37
Others	n/a	n/a	236	293	448	443	450	454	464
<b>World</b>	<b>992</b>	<b>1,435</b>	<b>1,983</b>	<b>2,416</b>	<b>3,203</b>	<b>3,316</b>	<b>3,380</b>	<b>3,409</b>	<b>3,461</b>

### Consumption (billion cubic metres)

United States	599	563	543	661	682	693	723	740	759
Russian Federation	n/a	n/a	408	360	414	425	416	413	409
China	3	15	16	25	110	135	151	171	185
Iran, Islamic Rep.	3	5	24	63	153	162	162	159	170
Japan	3	24	48	72	95	105	114	114	112
Saudi Arabia	2	10	34	50	88	92	99	100	108
Canada	36	52	67	93	95	101	100	104	104
Mexico	10	23	28	41	72	77	80	85	86
Germany	15	57	60	79	83	75	78	82	71
United Arab Emirates	1	5	17	31	61	63	66	67	69
United Kingdom	11	45	52	97	94	78	74	73	67
Italy	14	25	43	65	76	71	69	64	57
Thailand	0	0	7	22	45	47	51	52	53
India	1	1	12	26	63	64	59	51	51
Uzbekistan	n/a	n/a	36	46	41	48	47	47	49
Others	n/a	n/a	565	686	1,021	1,030	1,057	1,058	1,042
<b>World</b>	<b>980</b>	<b>1,436</b>	<b>1,958</b>	<b>2,418</b>	<b>3,194</b>	<b>3,265</b>	<b>3,346</b>	<b>3,381</b>	<b>3,393</b>

Source: BP Statistical Review.

Note: n/a implies data not available.

## Natural rubber

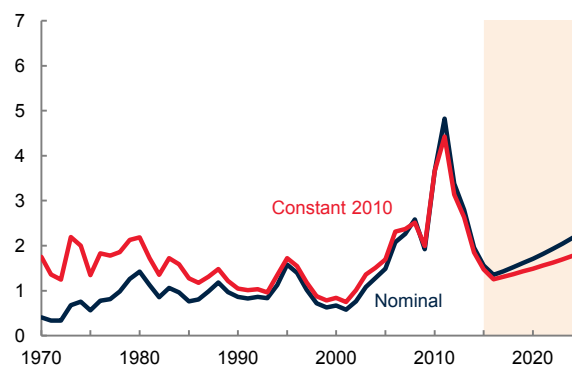
Monthly Prices (US\$/kg)



Source: World Bank.

Note: Last observation is March 2016.

Annual Prices (US\$/kg)



Source: World Bank.

Note: 2016-25 are forecasts.

	1970	1980	1990	2000	2010	2011	2012	2013	2014
<b>Production (thousand metric tons)</b>									
Thailand	287	501	1,275	2,346	3,252	3,569	3,778	4,170	4,324
Indonesia	815	822	1,261	1,501	2,736	2,990	3,012	3,237	3,153
Vietnam	28	46	94	291	752	789	877	949	954
China	46	113	264	445	687	727	802	865	857
India	90	155	324	629	851	893	919	796	705
Malaysia	1,269	1,530	1,291	928	939	996	923	827	668
Cote d'Ivoire	11	23	69	123	231	234	254	289	317
Brazil	25	28	31	88	136	166	171	187	185
Others	569	632	376	461	811	853	893	931	908
<b>World</b>	<b>3,140</b>	<b>3,850</b>	<b>4,985</b>	<b>6,811</b>	<b>10,395</b>	<b>11,217</b>	<b>11,629</b>	<b>12,251</b>	<b>12,070</b>
<b>Consumption (thousand metric tons)</b>									
China	250	340	600	1,150	3,668	3,622	3,857	4,210	4,760
European Union	991	1,007	1,012	1,293	1,136	1,242	1,077	1,060	1,139
India	86	171	358	638	944	957	988	962	1,012
United States	568	585	808	1,195	926	1,029	950	913	932
Japan	283	427	677	752	749	772	728	710	709
Indonesia	25	46	108	139	421	460	465	509	540
Thailand	8	28	99	243	459	487	505	521	541
Malaysia	20	45	184	364	458	402	441	434	447
Korea, Rep.	26	118	255	332	384	402	396	396	402
Brazil	37	81	124	227	378	382	343	409	413
Others	796	932	845	975	1,268	1,242	1,271	1,264	1,264
<b>World</b>	<b>3,090</b>	<b>3,780</b>	<b>5,068</b>	<b>7,306</b>	<b>10,792</b>	<b>10,997</b>	<b>11,020</b>	<b>11,388</b>	<b>12,159</b>
<b>Exports (thousand metric tons)</b>									
Thailand	279	457	1,151	2,166	2,866	2,890	3,024	3,649	3,615
Indonesia	790	976	1,077	1,380	2,369	2,566	2,525	2,770	2,662
Malaysia	1,304	1,482	1,322	978	1,245	1,239	1,291	1,332	1,192
Vietnam	23	33	80	273	782	817	1,023	1,076	1,067
Cote d'Ivoire	11	23	69	121	226	234	255	285	323
Others	413	299	263	359	533	582	589	661	814
<b>World</b>	<b>2,820</b>	<b>3,270</b>	<b>3,962</b>	<b>5,277</b>	<b>8,022</b>	<b>8,327</b>	<b>8,707</b>	<b>9,773</b>	<b>9,672</b>
<b>Imports (thousand metric tons)</b>									
China	178	242	340	820	2,590	2,665	3,176	3,652	3,809
European Union	1,071	1,068	1,072	1,474	1,427	1,664	1,459	1,451	1,546
India	3	1	61	11	187	158	250	336	402
United States	543	576	820	1,192	931	1,049	969	927	946
Japan	292	458	663	801	747	785	700	722	689
Malaysia	45	43	136	548	706	667	871	1,005	914
Korea, Rep.	26	118	254	331	388	402	397	396	403
Brazil	11	56	95	139	249	223	181	224	230
Others	641	673	1,328	1,065	1,157	1,170	1,310	1,235	1,263
<b>World</b>	<b>2,810</b>	<b>3,235</b>	<b>4,769</b>	<b>6,380</b>	<b>8,382</b>	<b>8,784</b>	<b>9,314</b>	<b>9,948</b>	<b>10,202</b>

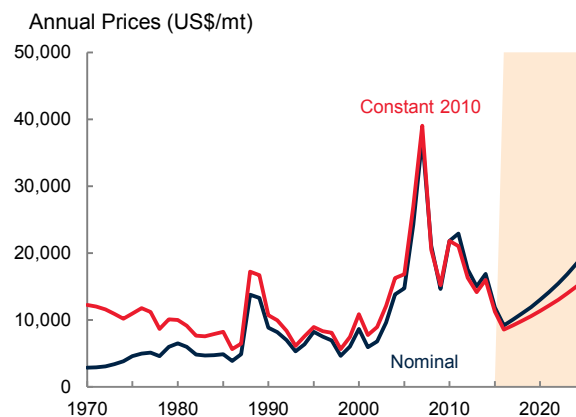
Source: International Rubber Study Group (January 2016 update).

# Nickel



Source: World Bank.

Note: Last observation is March 2016.



Source: World Bank.

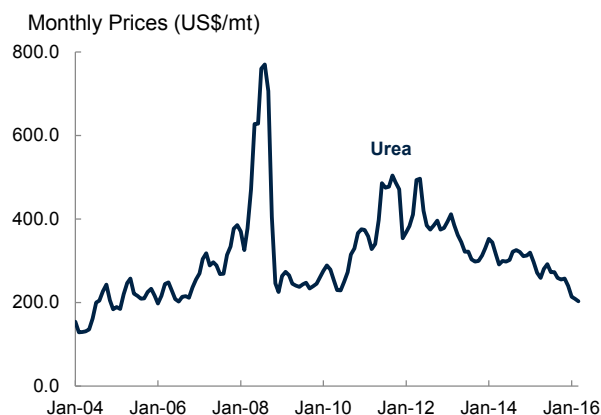
Note: 2016-25 are forecasts.

	1980	1990	2000	2005	2010	2012	2013	2014	2015
<b>Mine Production (thousand metric tons)</b>									
Philippines	38	16	17	27	184	318	316	411	317
Russian Federation	n/a	n/a	266	289	274	269	264	264	264
Canada	189	196	191	200	160	212	223	235	235
Australia	74	67	170	186	170	244	256	245	220
New Caledonia	87	85	129	112	130	132	150	178	186
Indonesia	41	69	117	156	216	622	811	146	106
China	11	33	51	59	80	93	93	92	92
Brazil	3	13	32	38	54	90	74	86	83
South Africa	26	30	37	42	40	46	51	55	57
Cuba	38	41	71	74	65	65	62	50	49
Madagascar	0	0	0	0	0	6	25	37	47
Guatemala	7	0	0	0	0	2	9	36	46
Colombia	0	0	28	53	49	52	49	41	37
Others	n/a	n/a	82	120	95	117	118	131	145
<b>World</b>	<b>749</b>	<b>888</b>	<b>1,191</b>	<b>1,356</b>	<b>1,518</b>	<b>2,266</b>	<b>2,504</b>	<b>2,006</b>	<b>1,884</b>
<b>Refined Production (thousand metric tons)</b>									
China	11	28	52	97	314	591	711	644	575
Russian Federation	n/a	n/a	242	264	263	254	242	239	233
Japan	109	103	161	164	166	170	178	178	193
Canada	145	127	134	140	105	152	153	151	163
Australia	35	43	112	122	102	129	142	138	128
Norway	37	58	59	85	92	92	91	91	91
New Caledonia	33	32	44	47	40	45	48	62	78
Brazil	3	13	23	30	28	59	56	73	72
Madagascar	0	0	0	0	0	6	25	37	47
Finland	13	17	54	41	49	46	44	43	43
United Kingdom	19	27	38	38	32	39	42	39	39
Korea, Rep.	n/a	n/a	0	0	23	24	28	25	37
Colombia	0	18	28	53	49	52	49	41	37
Others	n/a	n/a	164	208	174	200	194	186	181
<b>World</b>	<b>743</b>	<b>858</b>	<b>1,110</b>	<b>1,288</b>	<b>1,437</b>	<b>1,858</b>	<b>2,005</b>	<b>1,946</b>	<b>1,916</b>
<b>Refined Consumption (thousand metric tons)</b>									
China	18	28	58	197	489	805	909	761	964
Japan	122	159	192	180	177	159	159	157	159
United States	142	127	153	128	119	126	123	152	152
Taiwan, China	0	18	106	84	73	57	53	66	87
Korea, Rep.	0	24	91	118	101	108	107	100	83
Italy	27	27	53	85	62	65	59	60	60
Germany	78	93	102	116	100	89	66	62	60
India	12	14	23	16	27	33	37	27	37
Belgium	4	21	32	50	21	19	26	29	35
Others	n/a	n/a	342	344	257	275	259	285	295
<b>World</b>	<b>717</b>	<b>842</b>	<b>1,150</b>	<b>1,317</b>	<b>1,427</b>	<b>1,734</b>	<b>1,798</b>	<b>1,700</b>	<b>1,933</b>

Source: World Bureau of Metal Statistics.

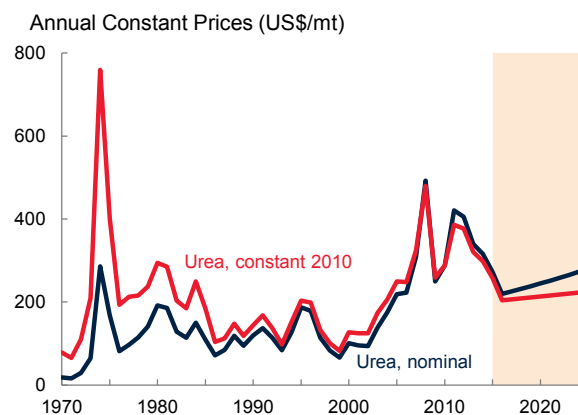
Note: n/a implies data not available.

## Nitrogen Fertilizers



Source: World Bank.

Note: Last observation is March 2016.



Source: World Bank.

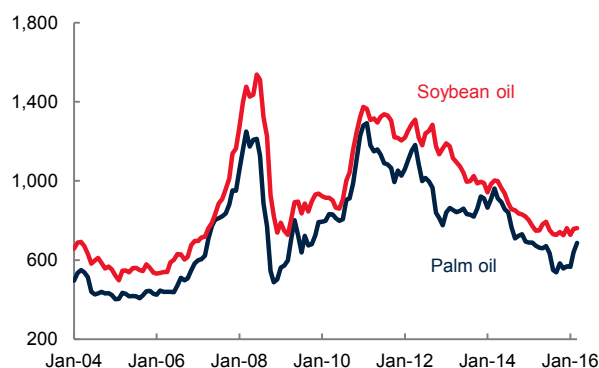
Note: 2016-25 are forecasts.

	1970	1980	1990	2000	2009	2010	2011	2012	2013
<b>Production (thousand tonnes nutrients)</b>									
China	1,200	9,993	14,637	22,175	36,009	35,678	36,323	36,056	36,810
India	838	2,164	6,993	10,943	11,924	12,178	12,288	12,237	12,409
United States	8,161	12,053	10,816	8,352	9,722	9,587	9,414	10,150	9,280
Russian Federation	n/a	n/a	n/a	5,452	6,052	6,544	6,917	6,605	6,819
Canada	726	1,755	2,683	3,797	3,509	3,364	3,565	3,344	3,225
Indonesia	45	958	2,462	2,853	3,261	3,207	3,375	3,313	3,173
Pakistan	140	572	1,120	2,054	2,594	2,629	2,534	2,232	2,589
Qatar	n/a	295	350	748	1,379	1,556	1,480	2,095	2,535
Ukraine	n/a	n/a	3,004	2,130	2,154	2,312	2,985	3,072	2,489
Egypt, Arab Rep.	118	401	678	1,441	2,779	2,761	2,709	2,474	2,308
Iran, Islamic Rep.	31	72	376	726	1,311	1,524	1,904	2,058	1,975
Saudi Arabia	0	138	568	1,278	1,619	1,695	1,737	1,923	1,920
Poland	1,030	1,290	1,233	1,497	1,320	1,509	1,445	1,529	1,466
Netherlands	957	1,624	1,928	1,300	1,216	1,175	1,322	1,293	1,381
Germany	1,900	2,380	1,165	1,558	1,165	1,289	1,275	1,326	1,326
Vietnam	0	15	18	227	431	479	503	861	999
Belgium	594	743	770	935	884	947	956	932	911
Turkey	82	600	1,026	400	557	747	929	905	865
Belarus	n/a	n/a	747	574	670	740	773	832	862
Others	16,868	27,900	21,389	18,185	17,017	18,195	18,739	18,344	18,126
<b>World</b>	<b>32,690</b>	<b>62,951</b>	<b>71,964</b>	<b>86,624</b>	<b>105,573</b>	<b>108,116</b>	<b>111,170</b>	<b>111,580</b>	<b>111,468</b>
<b>Consumption (thousand tonnes nutrients)</b>									
China	2,987	11,787	19,233	22,720	33,600	32,599	33,800	34,294	34,250
India	1,310	3,522	7,566	10,911	15,582	16,558	17,300	16,821	16,731
United States	7,363	10,818	10,239	10,467	11,117	11,737	12,231	12,050	12,247
Brazil	276	886	797	1,998	2,554	2,855	3,366	3,435	3,699
Pakistan	264	843	1,472	2,265	3,476	3,143	3,209	2,853	3,179
Indonesia	184	851	1,610	1,964	3,215	3,045	2,940	3,063	2,820
Canada	323	946	1,158	1,592	1,901	1,990	2,297	2,479	2,457
France	1,425	2,146	2,493	2,317	2,069	2,337	2,020	2,140	2,191
Germany	1,642	2,303	1,787	1,848	1,569	1,786	1,640	1,648	1,675
Turkey	243	782	1,200	1,276	1,412	1,344	1,259	1,432	1,584
Russian Federation	n/a	n/a	4,344	960	1,494	1,483	1,577	1,576	1,537
Thailand	50	136	577	922	1,228	1,311	1,386	1,382	1,480
Ukraine	n/a	n/a	1,836	350	700	650	1,159	1,254	1,382
Australia	123	248	439	951	849	982	1,099	1,099	1,315
Vietnam	166	129	425	1,332	1,190	1,250	1,300	1,407	1,261
Mexico	406	878	1,346	1,342	1,113	1,166	1,168	1,201	1,246
Poland	785	1,344	671	896	1,113	1,090	1,095	1,204	1,172
Bangladesh	99	266	609	996	1,149	1,237	1,122	1,112	1,133
Egypt, Arab Rep.	331	554	745	1,084	1,193	1,159	1,207	1,087	1,114
Others	13,446	22,054	18,231	15,880	15,928	16,800	16,660	17,006	17,665
<b>World</b>	<b>31,423</b>	<b>60,493</b>	<b>76,777</b>	<b>82,070</b>	<b>102,453</b>	<b>104,522</b>	<b>107,835</b>	<b>108,543</b>	<b>110,136</b>

Sources: International Fertilizer Industry Association (<http://ifadata.fertilizer.org/ucSearch.aspx>).Notes: 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](http://www.fertilizers.org) for details).

## Palm oil and Soybean oil

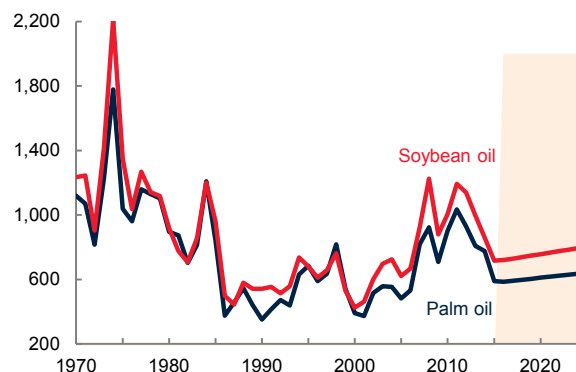
Monthly Prices (US\$/mt)



Source: World Bank.

Note: Last observation is March 2016.

Annual Constant 2010 Prices (US\$/mt)



Source: World Bank.

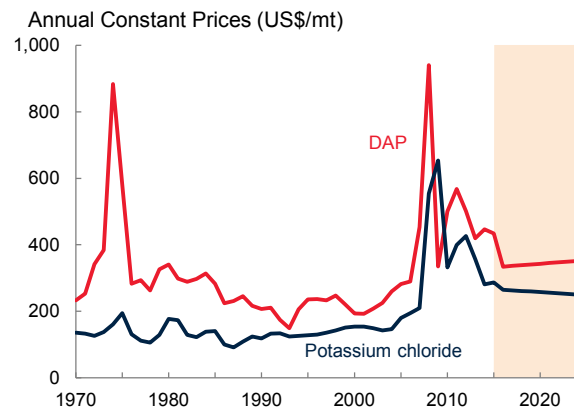
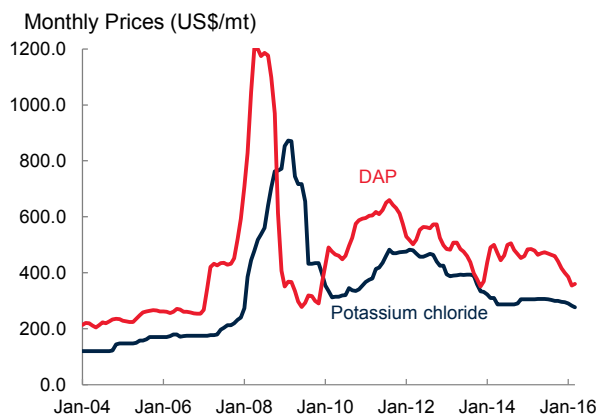
Note: 2016-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
<b>Palm oil: production (thousand metric tons)</b>									
Indonesia	248	752	2,650	8,300	23,600	28,500	30,500	33,000	33,000
Malaysia	589	2,692	6,031	11,937	18,211	19,321	20,161	19,879	19,500
Thailand	0	19	200	580	1,832	2,135	2,000	1,800	2,200
Colombia	36	80	252	520	753	974	1,041	1,110	1,174
Nigeria	432	520	600	730	971	970	970	970	970
Papua New Guinea	0	45	145	336	488	520	500	520	580
Ecuador	5	44	150	222	380	540	565	485	510
Ghana	21	19	24	108	426	471	493	495	500
Honduras	0	18	64	148	320	425	460	470	490
Guatemala	0	0	6	124	231	365	434	448	470
Others	591	707	912	1,234	2,021	2,183	2,244	2,222	2,285
<b>World</b>	<b>1,922</b>	<b>4,896</b>	<b>11,034</b>	<b>24,239</b>	<b>49,233</b>	<b>56,404</b>	<b>59,368</b>	<b>61,399</b>	<b>61,679</b>
<b>Palm oil: consumption (thousand metric tons)</b>									
India	1	431	259	4,100	7,090	8,250	8,452	9,100	9,800
Indonesia	29	561	1,330	3,263	6,414	7,851	9,019	7,327	8,520
European Union	595	607	1,509	2,790	5,110	6,560	6,850	6,730	6,630
China	53	16	1,194	2,028	5,797	6,389	5,700	5,750	5,600
Malaysia	8	420	914	1,571	2,204	2,451	2,868	2,941	3,280
Pakistan	1	231	800	1,245	2,077	2,285	2,490	2,890	3,185
Others	1,707	3,104	6,658	8,618	18,940	21,383	22,906	23,507	24,559
<b>World</b>	<b>2,394</b>	<b>5,370</b>	<b>12,664</b>	<b>23,615</b>	<b>47,632</b>	<b>55,169</b>	<b>58,285</b>	<b>58,245</b>	<b>61,574</b>
<b>Soybean oil: production (thousand metric tons)</b>									
China	181	183	599	3,240	9,840	11,626	12,335	13,347	14,655
United States	3,749	5,112	6,082	8,355	8,568	8,990	9,131	9,706	9,857
Argentina	0	158	1,179	3,190	7,181	6,364	6,785	7,687	8,740
Brazil	n/a	2,601	2,669	4,333	6,970	6,760	7,070	7,760	7,680
European Union	1,260	2,478	2,317	3,033	2,318	2,375	2,546	2,584	2,622
India	2	69	425	805	1,646	1,752	1,478	1,211	1,086
Paraguay	10	6	56	174	300	564	640	697	783
Mexico	52	255	330	795	648	653	720	745	760
Others	2,205	4,191	4,425	2,887	3,915	3,993	4,415	5,303	5,913
<b>World</b>	<b>7,459</b>	<b>15,053</b>	<b>18,082</b>	<b>26,812</b>	<b>41,386</b>	<b>43,077</b>	<b>45,120</b>	<b>49,040</b>	<b>52,096</b>
<b>Soybean oil: consumption (thousand metric tons)</b>									
China	179	256	1,055	3,542	11,409	12,545	13,650	14,200	15,450
United States	2,854	4,134	5,506	7,401	7,506	8,522	8,576	8,600	8,891
Brazil	n/a	1,490	2,075	2,932	5,205	5,534	5,705	6,275	6,365
India	79	708	445	2,080	2,610	2,950	3,300	4,000	4,750
Argentina	0	56	101	247	2,520	2,275	2,729	2,501	2,560
European Union	1,170	1,926	1,879	2,186	2,400	1,900	1,950	1,950	1,950
Mexico	52	305	404	863	840	860	890	1,001	1,036
Iran, Islamic Rep.	95	343	431	873	620	600	630	720	800
Others	2,699	5,120	5,417	6,335	7,409	7,482	7,774	8,627	9,398
<b>World</b>	<b>7,128</b>	<b>14,338</b>	<b>17,313</b>	<b>26,459</b>	<b>40,519</b>	<b>42,668</b>	<b>45,204</b>	<b>47,874</b>	<b>51,200</b>

Source: U.S. Department of Agriculture (April 2016 update).

Notes: The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971.

## Phosphate and Potash Fertilizers



	1970	1980	1990	2000	2009	2010	2011	2012	2013
<b>Phosphate: production (thousand tonnes nutrients)</b>									
China	907	2,607	4,114	6,759	14,374	15,998	17,631	16,387	16,620
United States	n/a	7,437	8,105	7,337	5,817	6,297	6,123	6,456	6,055
India	228	854	2,077	3,751	4,390	4,378	4,370	3,825	3,973
Russian Federation	n/a	n/a	4,943	2,320	2,578	2,926	3,070	2,940	2,929
Morocco	99	174	1,180	1,122	1,288	1,875	2,242	2,433	2,198
Brazil	169	1,623	1,091	1,496	1,813	2,004	2,011	2,183	2,100
Saudi Arabia	0	n/a	n/a	159	71	119	298	826	919
Tunisia	177	408	664	885	859	997	398	528	631
Others	14,102	20,574	14,244	8,915	6,787	8,102	8,323	8,171	8,036
<b>World</b>	<b>15,682</b>	<b>33,677</b>	<b>36,417</b>	<b>32,744</b>	<b>37,977</b>	<b>42,697</b>	<b>44,466</b>	<b>43,749</b>	<b>43,460</b>
<b>Phosphate: consumption (thousand tonnes nutrients)</b>									
China	907	2,952	5,770	8,664	11,000	12,100	12,300	12,400	11,480
India	305	1,091	3,125	4,248	7,278	8,050	7,914	6,653	5,695
Brazil	416	1,965	1,202	2,544	3,342	3,384	3,860	4,325	4,641
United States	4,671	4,926	3,811	3,862	3,719	3,890	3,946	4,215	4,335
Canada	326	634	578	634	630	723	799	831	886
Pakistan	31	227	389	675	860	767	633	747	881
Indonesia	45	274	581	263	450	500	584	695	849
Australia	757	853	579	1,107	641	817	873	803	816
Others	13,743	18,990	19,887	10,815	9,556	10,343	10,642	10,732	11,405
<b>World</b>	<b>21,202</b>	<b>31,912</b>	<b>35,920</b>	<b>32,812</b>	<b>37,477</b>	<b>40,574</b>	<b>41,551</b>	<b>41,401</b>	<b>40,988</b>
<b>Potash: production (thousand tonnes nutrients)</b>									
Canada	3,179	7,337	7,005	9,174	4,414	10,289	9,919	9,877	9,461
Russian Federation	n/a	n/a	n/a	3,716	3,691	6,128	6,526	5,403	6,086
China	n/a	20	46	275	2,600	3,101	3,390	4,007	4,565
Belarus	n/a	n/a	4,992	3,372	2,485	5,223	5,332	4,831	4,229
Germany	4,824	6,123	4,967	3,409	1,789	2,962	3,106	3,056	2,968
Israel	576	797	1,296	1,748	1,653	1,944	1,700	2,100	2,150
Chile	21	23	41	408	662	850	964	1,244	1,187
Jordan	n/a	n/a	842	1,162	672	1,166	1,355	1,094	1,047
Others	8,871	13,307	3,649	2,878	1,801	2,043	2,482	2,409	2,604
<b>World</b>	<b>17,471</b>	<b>27,608</b>	<b>22,838</b>	<b>26,141</b>	<b>19,767</b>	<b>33,706</b>	<b>34,775</b>	<b>34,022</b>	<b>34,297</b>
<b>Potash: consumption (thousand tonnes nutrients)</b>									
China	25	527	1,761	3,364	4,300	5,200	5,700	6,000	6,500
Brazil	307	1,267	1,210	2,760	3,149	3,894	4,431	4,844	5,094
United States	3,827	5,733	4,537	4,469	4,044	4,165	4,186	4,461	4,717
India	199	618	1,309	1,565	3,632	3,514	2,576	2,062	2,058
Indonesia	18	91	310	266	801	1,250	1,401	1,490	1,580
Malaysia	61	250	494	650	700	1,150	1,250	1,290	1,290
Belarus	n/a	n/a	986	450	663	660	787	720	683
Viet Nam	38	39	29	450	300	400	440	552	570
Others	11,289	15,302	13,685	8,121	6,011	7,243	7,369	7,531	7,874
<b>World</b>	<b>15,764</b>	<b>23,826</b>	<b>24,320</b>	<b>22,095</b>	<b>23,601</b>	<b>27,477</b>	<b>28,140</b>	<b>28,950</b>	<b>30,365</b>

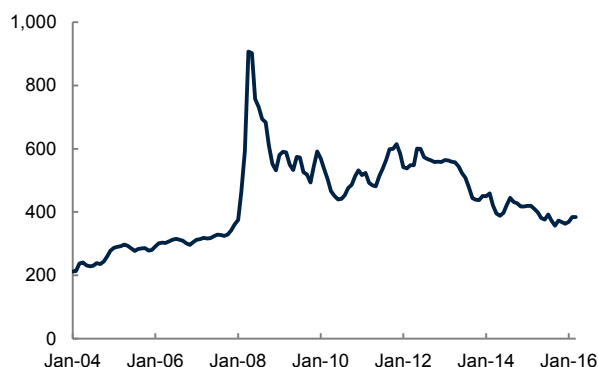
Sources: International Fertilizer Industry Association (<http://ifadata.fertilizer.org/ucSearch.aspx>).

Notes: 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](http://www.fertilizers.org) for details).



# Rice

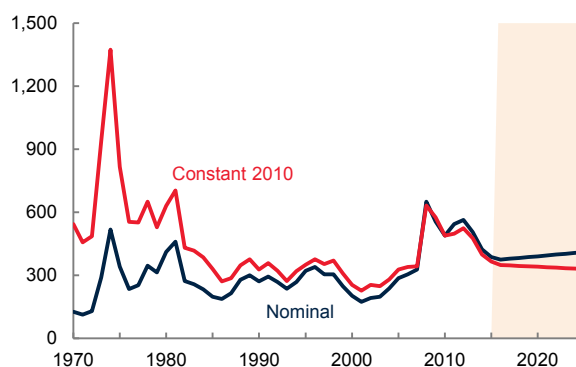
Monthly Prices (US\$/mt)



Source: World Bank.

Note: Last observation is March 2016.

Annual Prices (US\$/mt)



Source: World Bank.

Note: 2016-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
<b>Production (million metric tons)</b>									
China	77.0	97.9	132.5	131.5	137.0	143.0	142.5	144.6	145.8
India	42.2	53.6	74.3	85.0	96.0	105.2	106.6	105.5	103.0
Indonesia	13.1	22.3	29.0	33.0	35.5	36.6	36.3	35.6	35.3
Bangladesh	11.1	13.9	17.9	25.1	31.7	33.8	34.4	34.5	34.5
Vietnam	6.4	7.7	12.4	20.5	26.4	27.5	28.2	28.2	28.1
Thailand	9.0	11.5	11.3	17.1	20.3	20.2	20.5	18.8	15.8
Burma	5.1	6.7	7.9	10.8	11.1	11.7	12.0	12.6	12.2
Philippines	3.4	5.0	6.4	8.1	10.5	11.4	11.9	11.9	11.4
Japan	11.5	8.9	9.6	8.6	7.8	7.9	7.9	7.8	7.7
Brazil	3.7	5.9	6.8	6.9	9.3	8.0	8.3	8.5	7.6
Pakistan	2.2	3.1	3.3	4.8	4.8	5.5	6.8	6.9	6.7
United States	2.8	4.8	5.1	5.9	7.6	6.3	6.1	7.1	6.1
Cambodia	2.5	1.1	1.6	2.5	4.2	4.7	4.7	4.7	4.4
Others	22.9	27.6	33.3	39.4	48.3	50.4	52.2	52.2	52.2
<b>World</b>	<b>213.0</b>	<b>269.9</b>	<b>351.4</b>	<b>399.3</b>	<b>450.4</b>	<b>472.4</b>	<b>478.4</b>	<b>478.8</b>	<b>470.6</b>
<b>Stocks (million metric tons)</b>									
China	11.0	28.0	94.0	93.0	42.6	46.8	46.8	47.6	47.8
India	6.0	6.5	14.5	25.1	23.5	25.4	22.8	17.8	13.3
Thailand	1.2	2.0	0.9	2.2	5.6	12.8	11.7	10.1	5.2
Indonesia	0.6	3.0	2.1	4.6	7.1	6.5	5.5	4.0	3.2
Japan	6.1	4.0	1.0	2.6	2.9	2.9	3.0	2.8	2.5
Philippines	0.6	1.5	1.8	2.8	2.5	1.5	1.7	2.2	2.3
Others	3.4	7.6	12.4	16.4	15.9	14.7	15.9	19.1	16.0
<b>World</b>	<b>28.8</b>	<b>52.6</b>	<b>126.7</b>	<b>146.7</b>	<b>100.0</b>	<b>110.6</b>	<b>107.4</b>	<b>103.6</b>	<b>90.2</b>
<b>Exports (million metric tons)</b>									
Thailand	1.6	3.0	4.0	7.5	10.6	6.7	11.0	9.8	10.0
India	0.0	0.9	0.7	1.7	2.8	10.9	10.6	12.2	9.0
Vietnam	0.0	0.0	1.0	3.5	7.0	6.7	6.3	6.6	7.0
Pakistan	0.2	1.2	1.3	2.4	3.4	3.6	3.2	4.0	4.4
United States	1.5	3.1	2.3	2.6	3.5	3.4	3.0	3.2	3.2
Others	5.2	4.2	2.8	6.2	7.8	8.1	8.1	8.1	8.0
<b>World</b>	<b>8.5</b>	<b>12.4</b>	<b>12.1</b>	<b>24.0</b>	<b>35.1</b>	<b>39.4</b>	<b>42.2</b>	<b>44.0</b>	<b>41.6</b>
<b>Imports (million metric tons)</b>									
China	0.0	0.2	0.1	0.3	0.5	3.2	4.0	4.7	5.0
Nigeria	0.0	0.4	0.2	1.3	2.4	2.8	2.8	3.5	2.5
Philippines	0.0	0.0	0.4	1.4	1.3	1.4	1.2	1.8	2.0
Indonesia	0.5	0.5	0.2	1.5	3.1	0.7	1.2	1.2	2.0
European Union	0.9	0.5	0.7	1.2	1.4	1.4	1.5	1.7	1.6
Saudi Arabia	0.2	0.4	0.5	1.0	1.1	1.3	1.4	1.4	1.5
Iran, Islamic Rep.	0.1	0.6	0.6	0.8	2.0	2.1	1.6	1.4	1.5
Iraq	0.1	0.4	0.3	1.0	1.2	1.4	1.0	1.2	1.2
Others	6.8	8.8	8.3	13.7	20.0	22.4	23.7	24.2	22.4
<b>World</b>	<b>8.6</b>	<b>11.8</b>	<b>11.3</b>	<b>22.1</b>	<b>33.0</b>	<b>36.7</b>	<b>38.4</b>	<b>41.1</b>	<b>39.6</b>

Source: U.S. Department of Agriculture (April 2016 update).

Notes: The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971.

# Silver

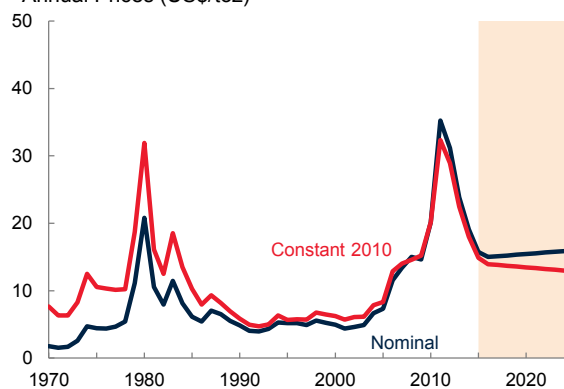
Monthly Prices (US\$/toz)



Source: World Bank.

Note: Last observation is March 2016.

Annual Prices (US\$/toz)



Source: World Bank.

Note: 2016-25 are forecasts.

	1995	2000	2005	2009	2010	2011	2012	2013	2014
<b>Production (metric tons)</b>									
Mexico	2,334	2,483	2,894	3,554	4,411	4,778	5,358	5,821	5,766
Peru	1,881	2,418	3,193	3,854	3,640	3,414	3,481	3,674	3,777
China	1,000	1,600	2,500	2,900	3,085	3,232	3,639	3,673	3,673
Australia	920	2,060	2,417	1,633	1,880	1,725	1,728	1,840	1,847
Chile	1,036	1,245	1,400	1,301	1,276	1,311	1,151	1,174	1,572
Russian Federation	250	400	1,350	1,313	1,145	1,134	1,400	1,412	1,412
Bolivia	425	434	420	1,326	1,259	1,214	1,207	1,287	1,345
Poland	1,001	1,164	1,262	1,207	1,183	1,167	1,149	1,403	1,200
United States	1,565	2,017	1,230	1,250	1,280	1,120	1,060	1,050	1,160
Kazakhstan	371	927	883	618	552	651	963	964	982
Argentina	48	78	264	533	723	641	750	768	905
Guatemala	0	0	7	129	195	273	205	284	857
Canada	1,285	1,204	1,124	631	596	572	705	618	493
Sweden	268	329	310	289	302	302	309	341	401
India	38	40	32	138	165	203	374	367	338
Morocco	204	290	186	210	243	227	230	255	277
Turkey	70	110	80	352	348	292	236	187	187
Finland	29	24	47	70	65	73	128	101	148
Dominican Republic	21	n/a	n/a	19	23	19	23	80	128
Others	1,436	1,372	1,099	1,002	1,069	1,042	1,088	1,061	954
<b>World</b>	<b>14,183</b>	<b>18,194</b>	<b>20,697</b>	<b>22,328</b>	<b>23,440</b>	<b>23,389</b>	<b>25,185</b>	<b>26,362</b>	<b>27,422</b>
<b>Fabrication (metric tons)</b>									
China	n/a	n/a	4,307	5,843	6,792	7,534	7,711	8,448	7,808
India	n/a	n/a	3,116	1,793	2,823	4,477	3,119	5,756	6,676
United States	n/a	n/a	5,891	5,297	4,147	3,705	4,155	3,293	4,022
Japan	n/a	n/a	3,860	2,145	3,050	2,806	2,404	2,440	2,329
Canada	n/a	n/a	126	404	667	816	644	1,011	1,032
Italy	n/a	n/a	1,577	1,095	1,117	894	815	828	882
South Korea	n/a	n/a	794	763	929	941	927	895	820
Germany	n/a	n/a	1,260	1,028	1,193	1,052	856	818	803
Russian Federation	n/a	n/a	795	854	944	864	845	832	793
United Kingdom	n/a	n/a	1,330	588	634	694	631	641	629
Thailand	n/a	n/a	1,150	967	957	808	673	702	622
Mexico	n/a	n/a	693	504	556	689	657	517	501
Taiwan, China	n/a	n/a	380	397	486	510	463	471	488
Australia	n/a	n/a	210	368	450	535	387	471	430
Belgium	n/a	n/a	846	614	556	453	419	374	358
France	n/a	n/a	381	299	346	325	298	277	273
Indonesia	n/a	n/a	159	166	199	225	245	254	243
Turkey	n/a	n/a	309	221	201	181	184	209	241
Brazil	n/a	n/a	232	199	241	219	216	236	218
Others	n/a	n/a	2,025	3,216	5,770	5,703	4,311	6,126	4,011
<b>World</b>	<b>n/a</b>	<b>n/a</b>	<b>29,441</b>	<b>26,761</b>	<b>32,058</b>	<b>33,431</b>	<b>29,960</b>	<b>34,599</b>	<b>33,179</b>

Sources: World Bureau of Metal Statistics and Thomson Reuters.

Notes: n/a implies data not available. Fabrication: jewelry and silverware including the use of scrap.

# Soybeans

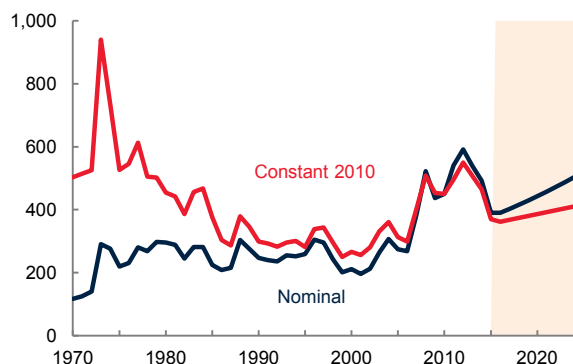
Monthly Prices (US\$/mt)



Source: World Bank.

Note: Last observation is March 2016.

Annual Prices (US\$/mt)



Source: World Bank.

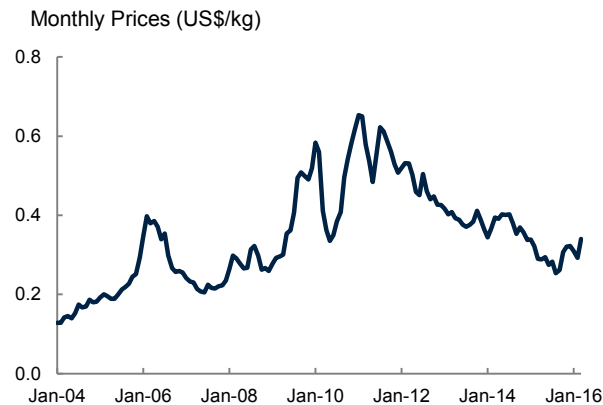
Note: 2016-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
<b>Production (million metric tons)</b>									
United States	30.7	48.9	52.4	75.1	90.7	82.8	91.4	106.9	106.9
Brazil	0.0	15.2	15.8	39.5	75.3	82.0	86.7	97.2	100.0
Argentina	0.0	3.5	11.5	27.8	49.0	49.3	53.4	61.4	59.0
China	8.7	7.9	11.0	15.4	15.1	13.1	12.0	12.2	11.8
Paraguay	0.1	0.6	1.3	3.5	7.1	8.2	8.2	8.1	8.8
India	0.0	0.4	2.6	5.3	10.1	12.2	9.5	8.7	7.5
Canada	0.3	0.7	1.3	2.7	4.4	5.1	5.4	6.0	6.2
Ukraine	n/a	n/a	0.1	0.1	1.7	2.4	2.8	3.9	3.9
Uruguay	0.0	0.0	0.0	0.0	1.9	3.7	3.3	3.1	3.1
Bolivia	0.0	0.0	0.4	1.2	2.3	2.6	2.4	2.7	3.1
Others	2.4	3.5	7.9	5.4	6.7	7.3	7.6	9.4	9.7
<b>World</b>	<b>42.1</b>	<b>80.9</b>	<b>104.3</b>	<b>175.8</b>	<b>264.3</b>	<b>268.6</b>	<b>282.6</b>	<b>319.5</b>	<b>320.2</b>
<b>Crushings (million metric tons)</b>									
China	1.5	1.5	3.9	18.9	55.0	65.0	68.9	74.5	81.8
United States	20.7	27.8	32.3	44.6	44.9	46.0	47.2	51.0	50.9
Argentina	0.0	0.9	7.0	17.3	37.6	33.6	36.2	40.2	45.7
Brazil	0.0	13.8	14.2	22.7	36.3	35.2	36.9	40.4	40.0
European Union	7.3	14.1	13.0	16.8	12.2	12.5	13.4	13.6	13.8
India	0.0	0.4	2.4	4.5	9.3	9.9	8.3	6.8	6.1
Mexico	0.3	1.5	1.9	4.5	3.6	3.7	4.0	4.2	4.3
Paraguay	0.1	0.0	0.3	0.9	1.6	3.0	3.4	3.7	4.1
Russian Federation	n/a	n/a	0.4	0.4	2.1	2.2	3.4	3.7	4.0
Bolivia	0.0	0.0	0.3	0.9	1.8	2.2	2.3	2.5	2.7
Others	12.7	23.8	24.1	15.0	16.5	16.3	17.5	21.6	24.4
<b>World</b>	<b>42.5</b>	<b>83.9</b>	<b>99.7</b>	<b>146.4</b>	<b>220.9</b>	<b>229.5</b>	<b>241.3</b>	<b>262.1</b>	<b>277.7</b>
<b>Exports (million metric tons)</b>									
Brazil	0.0	1.8	2.5	15.5	30.0	41.9	46.8	50.6	59.5
United States	11.8	19.7	15.2	27.1	41.0	36.1	44.6	50.2	46.4
Argentina	0.0	2.7	4.5	7.3	9.2	7.7	7.8	10.6	11.4
Paraguay	0.0	0.6	1.0	2.5	5.2	5.5	4.8	4.5	4.6
Canada	0.0	0.1	0.2	0.7	2.9	3.5	3.5	3.9	4.2
Others	0.5	0.4	2.1	0.7	3.4	6.0	5.2	6.3	6.3
<b>World</b>	<b>12.3</b>	<b>25.3</b>	<b>25.4</b>	<b>53.8</b>	<b>91.7</b>	<b>100.8</b>	<b>112.7</b>	<b>126.0</b>	<b>132.4</b>
<b>Imports (million metric tons)</b>									
China	0.0	0.5	0.0	13.2	52.3	59.9	70.4	78.4	83.0
European Union	7.4	13.6	13.2	17.7	12.5	12.5	13.3	13.4	13.2
Mexico	0.1	1.4	1.4	4.4	3.5	3.4	3.8	3.8	4.0
Japan	3.2	4.2	4.4	4.8	2.9	2.8	2.9	3.0	3.1
Taiwan, China	0.5	1.1	2.2	2.3	2.5	2.3	2.3	2.5	2.6
Turkey	0.0	0.0	0.0	0.4	1.4	1.2	1.6	2.2	2.4
Thailand	0.0	0.0	0.0	1.3	2.1	1.9	1.8	2.4	2.4
Others	8.8	19.0	17.6	9.0	11.6	12.1	15.7	16.4	19.3
<b>World</b>	<b>20.0</b>	<b>39.8</b>	<b>38.8</b>	<b>53.1</b>	<b>88.8</b>	<b>96.1</b>	<b>111.9</b>	<b>122.1</b>	<b>129.8</b>

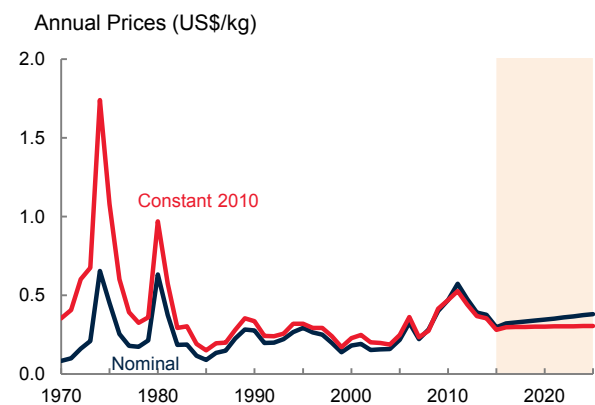
Source: U.S. Department of Agriculture (April 2016 update).

Notes: The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971.

# Sugar



Source: World Bank.  
Note: Last observation is March 2016.



Source: World Bank.  
Note: 2016-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
<b>Production (million metric tons)</b>									
Brazil	5.1	8.5	7.9	17.1	38.4	38.6	37.8	36.0	35.0
India	4.5	6.5	13.7	20.5	26.6	27.3	26.6	30.2	28.5
European Union	15.4	19.0	23.2	22.1	15.9	16.7	16.0	16.8	16.1
Thailand	0.5	1.7	4.0	5.1	9.7	10.0	11.3	10.8	10.8
China	2.1	3.2	6.8	6.8	11.2	14.0	14.3	11.0	10.6
United States	5.6	5.6	6.3	8.0	7.1	8.1	7.7	7.8	8.0
Mexico	2.5	2.5	3.9	5.2	5.5	7.4	6.4	6.3	6.4
Pakistan	0.0	0.9	2.1	2.6	3.9	5.0	5.6	5.2	5.4
Australia	2.7	3.3	3.6	4.2	3.7	4.3	4.4	4.7	5.0
Russian Federation	n/a	n/a	2.6	1.6	3.0	5.0	4.4	4.4	4.7
Guatemala	0.2	0.5	1.0	1.6	2.0	2.8	2.9	2.9	3.0
Turkey	0.6	0.9	1.9	2.8	2.3	2.1	2.3	2.1	2.3
Others	46.5	54.8	60.6	55.3	33.0	36.3	35.9	36.9	36.3
<b>World</b>	<b>85.7</b>	<b>107.6</b>	<b>137.6</b>	<b>152.9</b>	<b>162.2</b>	<b>177.6</b>	<b>175.6</b>	<b>175.1</b>	<b>172.1</b>
<b>Stocks (million metric tons)</b>									
India	1.8	1.1	3.6	12.0	6.3	9.4	8.2	9.9	8.9
China	0.3	0.7	1.4	1.0	1.6	6.8	8.8	7.3	5.8
Thailand	0.0	0.2	0.2	0.6	3.0	3.6	5.3	5.5	4.9
United States	2.9	1.4	1.4	2.0	1.3	2.0	1.6	1.6	1.7
Pakistan	0.0	0.1	0.3	0.4	1.5	0.9	1.3	1.2	1.6
Mexico	0.7	0.7	2.4	1.5	0.8	1.5	0.9	0.9	1.0
Others	14.4	13.4	13.2	22.4	15.1	18.3	17.7	17.1	15.6
<b>World</b>	<b>20.2</b>	<b>17.6</b>	<b>22.4</b>	<b>39.9</b>	<b>29.5</b>	<b>42.5</b>	<b>43.8</b>	<b>43.6</b>	<b>39.6</b>
<b>Exports (million metric tons)</b>									
Brazil	1.2	2.3	1.3	7.7	25.8	27.7	26.2	24.0	23.8
Thailand	0.2	1.0	2.7	3.4	6.6	6.7	7.2	8.0	8.8
Australia	1.8	2.6	2.8	3.1	2.8	3.1	3.2	3.6	3.7
India	0.3	0.1	0.2	1.4	3.9	1.3	2.8	2.4	2.5
Guatemala	0.1	0.2	0.7	1.2	1.5	1.9	2.1	2.2	2.4
European Union	2.7	6.5	8.1	7.3	1.1	1.7	1.6	1.6	1.5
Others	17.7	22.2	26.1	21.6	12.2	13.2	14.6	12.4	12.1
<b>World</b>	<b>24.0</b>	<b>34.9</b>	<b>42.0</b>	<b>45.6</b>	<b>53.9</b>	<b>55.5</b>	<b>57.6</b>	<b>54.1</b>	<b>54.7</b>
<b>Imports (million metric tons)</b>									
China	0.4	1.1	1.1	1.1	2.1	3.8	4.3	5.1	5.5
Indonesia	0.1	0.6	0.2	1.6	3.1	3.6	3.6	3.1	3.2
United States	4.8	4.4	2.6	1.4	3.4	2.9	3.4	3.2	3.1
European Union	5.4	3.8	4.1	3.3	3.8	3.8	3.3	2.6	2.8
United Arab Emirates	0.0	0.1	0.1	1.1	2.0	2.6	2.1	2.4	2.5
Malaysia	0.0	0.5	0.9	1.3	1.8	2.0	1.9	2.1	2.1
Bangladesh	0.0	0.0	0.0	0.8	1.5	1.5	2.1	2.0	2.1
Korea, Rep.	0.0	0.8	1.2	1.6	1.7	1.8	1.9	1.9	1.9
Others	12.0	20.8	25.9	31.4	29.7	30.0	28.7	28.2	29.0
<b>World</b>	<b>22.7</b>	<b>32.0</b>	<b>36.2</b>	<b>43.6</b>	<b>49.1</b>	<b>52.0</b>	<b>51.2</b>	<b>50.4</b>	<b>52.2</b>

Source: U.S. Department of Agriculture (April 2016 update).

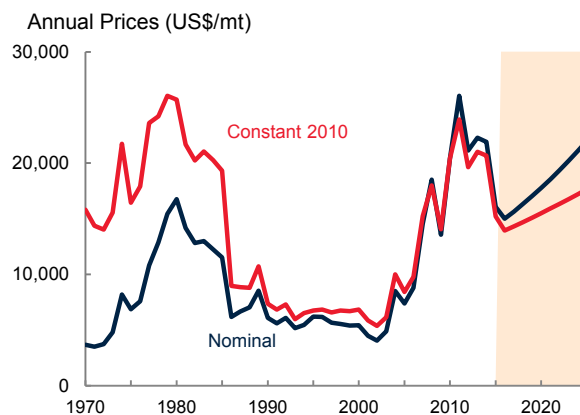
Notes: The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971.

# Tin



Source: World Bank.

Note: Last observation is March 2016.



Source: World Bank.

Note: 2016-25 are forecasts.

	1980	1990	2000	2005	2010	2011	2012	2013	2014
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## Mine Production (thousand metric tons)

China	16.0	42.2	87.7	113.1	129.6	115.7	149.0	177.3	146.6
Indonesia	32.5	39.3	51.6	120.0	84.0	90.0	84.0	69.6	68.4
Myanmar	1.2	0.6	1.6	0.7	0.8	2.1	9.0	17.5	24.0
Bolivia	22.5	17.3	12.5	18.6	20.2	19.7	19.3	19.8	20.2
Peru	1.1	4.8	36.4	42.5	33.8	26.1	23.7	23.1	19.5
Brazil	6.9	39.1	14.2	11.7	10.4	13.7	13.8	13.8	13.8
Australia	11.6	7.4	9.1	2.7	18.6	6.2	6.5	7.2	7.1
Malaysia	61.4	28.5	6.3	2.9	2.7	3.7	3.7	3.8	3.7
Vietnam	0.4	0.8	1.8	5.4	5.4	5.4	5.4	5.4	3.6
Congo, Dem. Rep.	3.2	1.6	0.0	7.6	7.4	2.5	5.2	4.1	3.0
Nigeria	2.5	0.3	2.0	0.9	1.3	2.4	2.6	2.5	2.1
Rwanda	1.5	0.7	0.4	3.3	2.9	3.5	3.6	4.2	2.0
Lao PDR	0.6	0.3	0.4	0.6	0.4	0.6	0.5	0.8	0.8
Others	69.7	41.6	10.4	3.1	0.6	0.5	0.6	0.5	0.6
<b>World</b>	<b>231.1</b>	<b>224.5</b>	<b>234.5</b>	<b>333.1</b>	<b>318.1</b>	<b>292.0</b>	<b>326.9</b>	<b>349.6</b>	<b>315.5</b>

## Refined Production (thousand metric tons)

China	15.0	35.8	109.9	112.2	149.0	147.9	159.6	186.9	166.9
Indonesia	30.5	38.0	46.4	78.0	64.2	79.8	63.0	64.8	67.4
Malaysia	71.3	49.0	26.2	39.2	38.7	37.8	32.7	36.7	31.2
Peru	0.0	0.0	17.4	38.3	36.4	24.8	24.2	24.5	20.4
Bolivia	17.5	13.1	9.4	15.6	15.0	14.3	14.9	15.4	15.1
Brazil	8.8	37.6	13.8	9.0	9.1	12.0	12.0	12.0	12.0
Thailand	34.8	15.5	17.2	29.4	23.5	22.8	23.0	16.3	10.5
Belgium	3.1	6.1	8.5	7.7	9.9	11.4	10.3	9.7	8.8
Vietnam	0.0	1.8	1.8	1.8	3.0	4.8	5.5	5.5	5.5
India	0.1	0.3	3.6	3.6	3.6	3.6	3.8	4.2	4.2
Poland	0.0	0.0	0.0	0.0	0.6	1.4	1.9	2.3	2.1
Japan	1.3	0.8	0.6	0.8	0.8	1.1	1.8	1.7	1.7
Nigeria	2.7	0.3	0.1	0.6	0.6	0.6	0.6	0.6	0.6
Others	n/a	n/a	7.4	4.4	2.0	1.8	0.5	0.1	0.1
<b>World</b>	<b>244.6</b>	<b>248.0</b>	<b>262.3</b>	<b>340.5</b>	<b>356.6</b>	<b>364.0</b>	<b>353.7</b>	<b>380.8</b>	<b>346.4</b>

## Refined Consumption (thousand metric tons)

China	12.5	25.5	49.1	108.7	154.3	176.2	169.3	192.6	176.4
United States	46.5	36.8	51.0	42.3	32.0	30.7	29.2	28.8	31.3
Japan	30.9	34.8	25.2	33.2	35.7	27.7	28.3	27.1	26.8
Germany	19.0	21.7	20.7	19.1	17.4	17.6	18.0	18.8	17.9
Korea, Rep.	1.8	7.8	15.3	17.9	17.4	16.2	14.5	13.8	13.1
India	2.3	2.3	6.4	8.4	10.7	10.0	10.4	11.9	12.9
Vietnam	0.0	0.0	0.8	1.2	2.0	2.0	3.6	5.5	6.0
Netherlands	5.0	6.9	3.6	3.5	5.4	4.5	7.4	7.2	6.0
Spain	4.6	4.0	4.1	7.0	6.1	2.9	4.7	6.4	5.7
Others	100.3	97.8	100.6	97.4	87.7	70.0	69.7	66.8	67.2
<b>World</b>	<b>222.9</b>	<b>237.6</b>	<b>276.9</b>	<b>338.6</b>	<b>368.8</b>	<b>357.8</b>	<b>355.1</b>	<b>378.8</b>	<b>363.1</b>

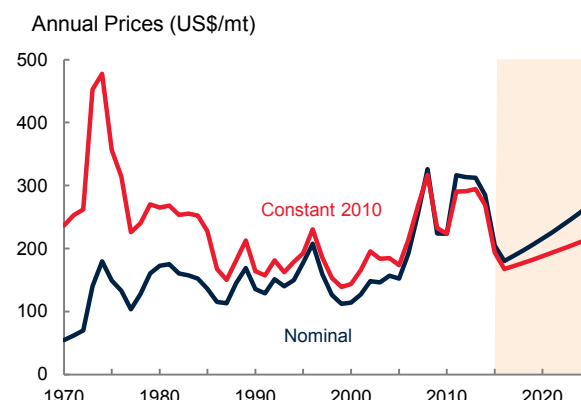
Source: World Bureau of Metal Statistics.

Notes: n/a implies data not available. Refined production and consumption include significant recycled material.

# Wheat



Source: World Bank.  
Note: Last observation is March 2016.



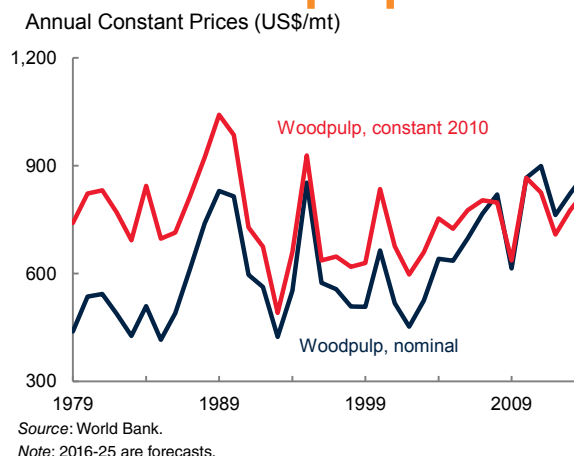
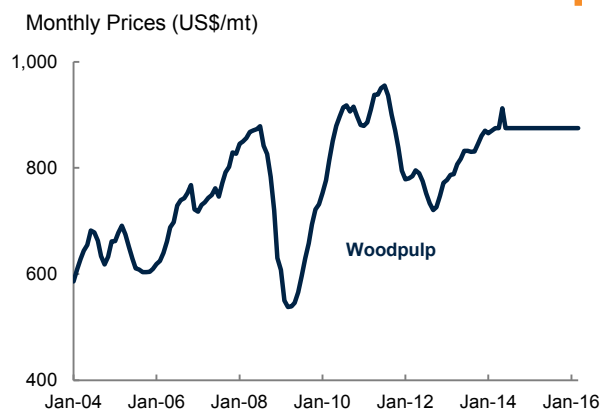
Source: World Bank.  
Note: 2016-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
<b>Production (million metric tons)</b>									
European Union	62.5	93.3	125.0	132.7	136.7	133.9	144.6	156.8	160.0
China	29.2	55.2	98.2	99.6	115.2	121.0	121.9	126.2	130.2
India	20.1	31.8	49.9	76.4	80.8	94.9	93.5	95.9	86.5
Russian Federation	n/a	n/a	49.6	34.5	41.5	37.7	52.1	59.1	61.0
United States	36.8	64.8	74.3	60.6	58.9	61.3	58.1	55.1	55.8
Canada	9.0	19.3	32.1	26.5	23.3	27.2	37.5	29.4	27.6
Ukraine	n/a	n/a	30.4	10.2	16.8	15.8	22.3	24.8	27.3
Pakistan	7.3	10.9	14.4	21.1	23.3	23.5	24.2	26.0	25.1
Australia	7.9	10.9	15.1	22.1	27.4	22.9	25.3	23.1	24.5
Turkey	8.0	13.0	16.0	18.0	17.0	16.0	18.8	15.3	19.5
Iran, Islamic Rep.	3.8	5.9	8.0	8.1	13.5	13.8	14.5	13.0	14.0
Kazakhstan	n/a	n/a	16.2	9.1	9.6	9.8	13.9	13.0	13.7
Argentina	4.9	7.8	11.0	16.3	17.2	9.3	10.5	12.5	11.3
Egypt, Arab Rep.	1.5	1.8	4.3	6.4	7.2	8.5	8.3	8.3	8.1
Others	178.0	214.5	169.4	41.7	60.9	62.7	69.4	67.1	68.4
<b>World</b>	<b>369.1</b>	<b>529.2</b>	<b>713.8</b>	<b>583.3</b>	<b>649.3</b>	<b>658.3</b>	<b>714.9</b>	<b>725.4</b>	<b>733.1</b>
<b>Stocks (million metric tons)</b>									
China	7.2	31.7	49.9	91.9	59.1	54.0	65.3	76.1	96.3
United States	22.4	26.9	23.6	23.8	23.5	19.5	16.1	20.5	26.6
European Union	8.6	13.0	22.5	17.9	11.9	10.7	9.9	13.8	19.3
India	5.0	4.0	5.8	21.5	15.4	24.2	17.8	17.2	13.2
Russian Federation	n/a	n/a	16.4	1.5	13.7	4.9	5.2	6.3	8.0
Iran, Islamic Rep.	0.7	1.2	3.2	2.9	2.9	5.1	7.2	7.8	7.1
Others	45.2	48.8	72.2	47.0	72.1	58.5	72.4	73.1	68.7
<b>World</b>	<b>89.1</b>	<b>125.6</b>	<b>193.7</b>	<b>206.5</b>	<b>198.7</b>	<b>176.9</b>	<b>193.9</b>	<b>214.8</b>	<b>239.3</b>
<b>Exports (million metric tons)</b>									
European Union	6.7	17.5	23.8	15.7	23.1	22.8	32.0	35.4	32.0
Russian Federation	n/a	n/a	1.2	0.7	4.0	11.3	18.6	22.8	23.0
Canada	11.8	16.3	21.7	17.3	16.6	19.0	23.3	24.1	22.0
United States	20.2	41.2	29.1	28.9	35.1	27.5	32.0	23.2	21.1
Australia	9.1	9.6	11.8	15.9	18.6	18.6	18.6	16.6	17.0
Ukraine	n/a	n/a	2.0	0.1	4.3	7.2	9.8	11.3	15.5
Others	15.3	23.1	38.0	22.6	31.0	31.1	31.6	30.6	32.5
<b>World</b>	<b>63.2</b>	<b>107.6</b>	<b>127.7</b>	<b>101.3</b>	<b>132.7</b>	<b>137.5</b>	<b>165.9</b>	<b>164.1</b>	<b>163.1</b>
<b>Imports (million metric tons)</b>									
Egypt, Arab Rep.	2.8	5.4	5.7	6.1	10.6	8.3	10.1	11.1	11.0
Indonesia	0.5	1.2	2.0	4.1	6.6	7.1	7.4	7.5	8.1
Algeria	0.6	2.3	4.4	5.6	6.5	6.5	7.5	7.3	8.1
European Union	18.9	26.6	5.7	3.7	4.6	5.3	4.0	6.0	6.3
Brazil	1.7	3.9	4.4	7.2	6.7	7.4	7.1	5.4	6.0
Japan	4.8	5.8	5.6	5.9	5.9	6.6	6.1	5.9	5.7
Others	45.3	70.8	76.9	67.0	91.1	104.0	116.2	115.8	115.3
<b>World</b>	<b>74.7</b>	<b>116.1</b>	<b>104.7</b>	<b>99.5</b>	<b>132.0</b>	<b>145.2</b>	<b>158.4</b>	<b>158.8</b>	<b>160.5</b>

Source: U.S. Department of Agriculture (April 2016 update).

Notes: n/a implies data not available. The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971.

## Wood-based panels and Woodpulp



	1970	1980	1990	2000	2010	2011	2012	2013	2014
<b>Wood-based panels: production (million cubic meters)</b>									
China	0.9	2.3	3.0	19.3	109.2	134.0	149.3	177.0	191.2
United States	23.0	26.4	37.0	45.7	32.6	32.0	31.5	33.5	34.0
Russian Federation	n/a	n/a	n/a	4.8	10.1	12.1	12.8	12.7	13.1
Canada	3.3	4.8	6.4	15.0	9.9	10.5	11.1	11.7	12.4
Germany	5.8	8.3	9.6	14.1	12.6	12.1	12.1	12.2	12.3
Brazil	0.8	2.5	2.9	5.8	10.2	11.1	12.1	11.7	11.8
Turkey	0.2	0.4	0.8	2.4	6.6	7.4	8.1	8.8	9.6
Poland	1.0	2.0	1.4	4.6	8.2	8.4	8.5	9.0	9.4
Others	34.7	54.6	67.9	74.7	88.8	89.5	89.3	90.9	93.8
<b>World</b>	<b>69.8</b>	<b>101.3</b>	<b>129.0</b>	<b>186.3</b>	<b>288.3</b>	<b>317.2</b>	<b>334.7</b>	<b>367.4</b>	<b>387.6</b>

### Wood-based panels: imports (million cubic meters)

United States	2.5	2.1	4.2	13.9	7.7	7.9	8.8	8.8	9.6
Germany	1.0	2.3	3.3	4.1	4.6	5.1	5.3	5.1	5.1
Japan	0.6	0.3	3.8	6.2	4.2	5.0	4.8	5.0	4.9
China	0.1	0.3	3.2	6.6	3.0	3.0	2.8	3.0	3.4
United Kingdom	2.0	2.4	3.3	3.3	2.7	2.8	2.6	3.0	3.3
Korea, Rep.	n/a	n/a	1.2	2.1	2.6	2.3	2.3	2.5	2.9
Canada	0.2	0.2	0.5	1.5	2.8	2.9	2.9	2.5	2.8
Italy	0.1	0.8	0.9	1.7	2.4	2.1	2.2	2.4	2.8
Others	3.5	7.1	9.9	20.4	36.6	39.3	40.7	42.1	43.1
<b>World</b>	<b>10.0</b>	<b>15.7</b>	<b>30.3</b>	<b>59.9</b>	<b>66.7</b>	<b>70.5</b>	<b>72.5</b>	<b>74.5</b>	<b>77.8</b>

### Woodpulp: production (million metric tons)

United States	37.3	46.2	57.2	57.8	50.9	51.1	50.2	49.1	47.8
Canada	16.6	19.9	23.0	26.7	18.9	18.3	17.8	18.1	17.7
Brazil	0.8	3.4	4.3	7.3	14.5	14.3	14.3	15.5	16.8
Sweden	8.1	8.7	10.2	11.5	11.9	11.9	12.0	11.7	11.5
Finland	6.2	7.2	8.9	12.0	10.5	10.4	10.2	10.5	10.5
China	1.2	1.3	2.1	3.7	7.5	8.9	8.8	9.6	10.4
Japan	8.8	9.8	11.3	11.4	9.5	9.1	8.7	8.8	9.1
Russian Federation	n/a	n/a	n/a	5.8	7.4	7.9	7.7	7.2	7.5
Others	22.5	29.1	37.8	34.9	39.5	41.8	42.6	41.4	41.7
<b>World</b>	<b>101.6</b>	<b>125.7</b>	<b>154.8</b>	<b>171.3</b>	<b>170.6</b>	<b>173.6</b>	<b>172.5</b>	<b>171.9</b>	<b>172.9</b>

### Woodpulp: imports (million metric tons)

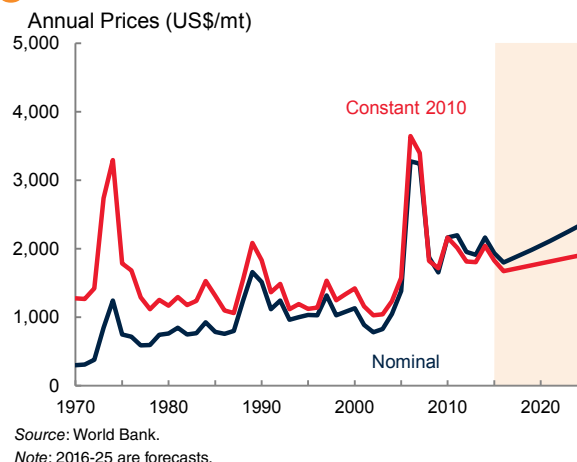
China	0.1	0.4	0.9	4.0	12.1	15.2	17.2	17.6	18.7
United States	3.2	3.7	4.4	6.6	5.6	5.5	5.2	5.5	5.8
Germany	1.8	2.6	3.7	4.1	5.1	5.0	4.8	5.0	4.8
Italy	1.4	1.8	2.1	3.2	3.4	3.5	3.3	3.5	3.4
Netherlands	0.6	0.6	0.6	0.9	1.2	1.6	1.6	2.5	2.4
Korea, Rep.	0.2	0.5	1.1	2.1	2.5	2.5	2.4	2.4	2.3
France	1.3	1.8	1.9	2.4	1.9	1.9	2.0	2.1	2.0
Japan	0.9	2.2	2.9	3.1	1.8	1.9	1.8	1.7	1.8
Others	7.0	7.0	7.6	11.4	14.1	14.4	15.4	16.3	16.9
<b>World</b>	<b>16.6</b>	<b>20.6</b>	<b>25.2</b>	<b>37.8</b>	<b>47.9</b>	<b>51.4</b>	<b>53.7</b>	<b>56.6</b>	<b>57.8</b>

Source: Food and Agriculture Organization of the United Nations.

Notes: n/a implies data not available. 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.



# Zinc



	1980	1990	2000	2005	2010	2012	2013	2014	2015
<b>Mine Production (thousand metric tons)</b>									
China	150	763	1,780	2,061	3,842	4,859	5,188	5,200	4,750
Australia	495	940	1,420	1,367	1,480	1,507	1,523	1,560	1,691
Peru	488	584	910	1,202	1,470	1,281	1,351	1,319	1,422
India	32	70	208	447	740	725	817	729	826
United States	349	571	829	748	748	738	784	832	810
Mexico	243	307	401	476	570	660	643	660	677
Bolivia	50	108	149	160	411	390	407	449	480
Kazakhstan	n/a	n/a	322	364	405	371	417	386	384
Canada	1,059	1,203	1,002	667	649	612	426	353	278
Sweden	167	160	177	216	199	188	177	222	247
Ireland	229	167	263	429	354	338	327	283	236
Russian Federation	n/a	n/a	132	186	214	189	193	217	236
Brazil	70	110	100	168	211	164	152	193	193
Others	n/a	n/a	1,129	1,079	1,163	1,253	1,251	1,306	1,142
<b>World</b>	<b>6,172</b>	<b>7,176</b>	<b>8,823</b>	<b>9,569</b>	<b>12,457</b>	<b>13,274</b>	<b>13,655</b>	<b>13,708</b>	<b>13,372</b>
<b>Refined Production (thousand metric tons)</b>									
China	155	552	1,957	2,725	5,209	4,881	5,280	5,827	6,155
Korea, Rep.	76	248	473	650	750	877	895	915	978
India	44	79	176	266	701	691	773	700	817
Canada	592	592	780	724	690	649	652	648	678
Japan	735	688	654	638	574	571	587	583	567
Spain	152	253	386	501	517	528	529	529	529
Australia	301	309	489	457	498	496	492	482	479
Peru	64	118	200	166	223	319	346	336	335
Kazakhstan	n/a	n/a	263	357	319	320	320	325	324
Mexico	145	199	337	334	322	324	323	321	318
Finland	147	175	223	282	307	315	312	302	306
Netherlands	170	208	217	225	264	257	275	290	291
Russian Federation	n/a	n/a	241	206	260	247	262	265	267
Others	n/a	n/a	2,757	2,587	2,275	2,086	2,012	2,030	1,930
<b>World</b>	<b>6,159</b>	<b>6,698</b>	<b>9,153</b>	<b>10,119</b>	<b>12,909</b>	<b>12,561</b>	<b>13,058</b>	<b>13,553</b>	<b>13,975</b>
<b>Refined Consumption (thousand metric tons)</b>									
China	200	369	1,402	3,040	5,350	5,396	5,962	6,420	6,487
United States	810	992	1,315	1,080	907	892	935	962	924
Korea, Rep.	68	230	419	448	540	553	578	644	633
India	95	135	224	389	538	561	640	638	612
Germany	474	530	532	514	494	474	479	477	479
Japan	752	814	674	602	516	479	498	503	457
Belgium	155	178	394	256	321	239	222	388	442
Australia	100	114	193	239	225	104	180	174	289
Russian Federation	n/a	n/a	138	166	203	222	265	242	255
Others	n/a	n/a	3,599	3,662	3,432	3,139	3,195	3,314	3,334
<b>World</b>	<b>6,131</b>	<b>6,568</b>	<b>8,889</b>	<b>10,396</b>	<b>12,526</b>	<b>12,059</b>	<b>12,954</b>	<b>13,762</b>	<b>13,911</b>

Source: World Bureau of Metal Statistics.

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. piers, Newcastle/Port Kembla, 6,700 kcal/kg, 90 days forward delivery.

**Coal** (Colombia). Thermal, f.o.b. Bolivar, 6,450 kcal/kg, (11,200 btu/lb), less than .8% sulfur, 9% ash, 90 days forward delivery.

**Coal** (South Africa). Thermal, f.o.b. Richards Bay, 6,000 kcal/kg, 90 days forward delivery.

**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). Average import border price with a component of spot price, including U.K.

**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 Organization 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, average of quotations at Kolkata, Colombo, and Mombasa/Nairobi.

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

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

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

#### Oils and meals

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

**Copra** (Philippines/Indonesia). Bulk, c.i.f. N.W. Europe.

**Groundnuts** (U.S.). Runners 40/50, shelled basis, c.i.f. Rotterdam.

**Groundnut oil** (any origin). C.i.f. Rotterdam.

**Fishmeal** (any origin). 64-65%, c&f Bremen, estimates based on wholesale price.

**Palm oil** (Malaysia). 5% bulk, c.i.f. N. W. Europe.

**Palmkernel Oil** (Malaysia). C.i.f. Rotterdam.

**Soybean meal** (any origin), Argentine 45/46% extraction, c.i.f. Rotterdam.

**Soybean oil** (any origin). Crude, f.o.b. ex-mill Netherlands.

**Soybeans** (U.S.). 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, US import price, f.o.t. US 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.). Broiler/fryer, whole birds, 2-1/2 to 3 pounds, USDA grade "A", ice-packed, Georgia Dock preliminary weighted average, wholesale.

**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** (Mexico). West coast, frozen, white, No. 1, shell-on, headless, 26 to 30 count per pound, wholesale price at New York.

**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. UK 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** (Cotton Outlook "CotlookA 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). Standard size, bulk, spot, f.o.b. US Gulf.

**Phosphate rock** (Morocco). 70% BPL, contract, f.a.s. Casablanca.

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

TSP (triple superphosphate). Bulk, spot, granular, f.o.b. Tunisia.

Urea (Black Sea). Bulk, spot, f.o.b. Black Sea (primarily Yuzhnyy).

## 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, United Kingdom, and 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  
 cif = cost, insurance, freight  
 cum = cubic meter  
 dmt = dry metric ton  
 f.o.b. = free on board  
 f.o.t. = free on track  
 kg = kilogram  
 mb/d = million barrels per day  
 mmbtu = million British thermal units  
 mt = metric ton (1,000 kilograms)  
 toz = troy oz

### Acronyms

AMIS Agricultural Market Information System  
 DAP diammonium phosphate  
 EIA Energy Information Administration  
 EMDE emerging and developing economies  
 FAO Food and Agriculture Organization  
 GDP gross domestic product  
 ICMM International Council on Mining and Metals  
 IEA International Energy Agency

IER Institute for Energy Research  
 IGC International Growth Centre  
 ITRC International Tripartite Rubber Council  
 LIC Low-income country  
 LME London Metal Exchange  
 LNG liquefied natural gas  
 OECD Organization of Economic Cooperation and Development  
 OPEC Organization of Petroleum Exporting Countries  
 TSP triple superphosphate  
 UN United Nations  
 UNECA United Nations Economic Commission for Africa  
 USDA United States Department of Agriculture  
 WTI West Texas Intermediate

### Data sources

Baker Hughes  
 Bloomberg  
 BP Statistical Review  
 Concensus Forecast  
 Cotton Outlook  
 FAO  
 Fertilizer Week  
 INFOFISH  
 INTERFEL Fel Actualités Hebdo  
 International Cocoa Organization (ICCO)  
 International Coffee Organization (ICO)  
 International Cotton Advisory Committee  
 International Energy Agency (IEA)  
 International Fertilizer Industry Association (IFA)  
 International Rubber Study Group (IRSG)  
 International Tea Committee (ITC)  
 International Tropical Timber Organization (ITTO)  
 International Sugar Organization (ISO)  
 ISTA Mielke GmbH Oil World  
 Japan Lumber Journal  
 MinEx Consulting  
 MLA Meat & Livestock Weekly  
 Platts International Coal Report  
 Quarterly Bulleting of Cocoa Statistics  
 Singapore Commodity Exchange  
 Sopisco News  
 Sri Lanka Tea Board  
 Thomson Reuters  
 U.S. Department of Agriculture  
 U.S. Energy Information Administration (EIA)  
 U.S. NOAA Fisheries Service  
 World Bureau of Metal Statistics  
 World Gas Intelligence

## Weights for commodity price indexes

Commodity group	Share of energy and non-energy indexes	Share of sub-group indexes
<b>ENERGY</b>	<b>100.0</b>	<b>100.0</b>
Coal	4.7	4.7
Crude Oil	84.6	84.6
Natural Gas	10.8	10.8
<b>NON-ENERGY</b>	<b>100.0</b>	
<b>Agriculture</b>	<b>64.9</b>	
<b>Beverages</b>	<b>8.4</b>	<b>100.0</b>
Coffee	3.8	45.7
Cocoa	3.1	36.9
Tea	1.5	17.4
<b>Food</b>	<b>40.0</b>	
<b>Grains</b>	<b>11.3</b>	<b>100.0</b>
Rice	3.4	30.2
Wheat	2.8	25.3
Maize (includes sorghum)	4.6	40.8
Barley	0.5	3.7
<b>Oils and Meals</b>	<b>16.3</b>	<b>100.0</b>
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
<b>Other Food</b>	<b>12.4</b>	<b>100.0</b>
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
<b>Agricultural Raw Materials</b>	<b>16.5</b>	
<b>Timber</b>	<b>8.6</b>	<b>100.0</b>
Hardwood	8.6	100.0
Logs	1.9	22.1
Sawnwood	6.7	77.9
<b>Other Raw Materials</b>	<b>7.9</b>	<b>100.0</b>
Cotton	1.9	24.7
Natural Rubber	3.7	46.7
Tobacco	2.3	28.7
<b>Fertilizers</b>	<b>3.6</b>	<b>100.0</b>
Natural Phosphate Rock	0.6	16.9
Phosphate	0.8	21.7
Potassium	0.7	20.1
Nitogenous	1.5	41.3
<b>Metals and Minerals</b>	<b>31.6</b>	<b>100.0</b>
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
<b>PRECIOUS METALS</b>		<b>100.0</b>
Gold		77.8
Silver		18.9
Platinum		3.3

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





Most commodity prices rebounded from their January lows on improved market sentiment and a weakening dollar. Still, average prices fell in the first quarter—energy down 21 percent and non-energy down 2 percent. The crude oil price forecast has been raised to \$41/bbl for 2016 (up from \$37/bbl in January) on expected supply tightening in the second half of the year, but represents a 19 percent drop from 2015. Metals prices are projected to decline 8 percent on weak demand and increases in new capacity. Agriculture prices are projected to decline 4 percent in 2016 on early signs of good harvests for next season. Looking to 2017, a modest price recovery is expected for most commodities. Crude oil price is projected to rise to \$50/bbl as supply tightens. The Special Focus of this edition examines the implications of resource development in an era of cheaper commodities, and concludes that ambitious improvements in governance and sounder macroeconomic policies are required to mitigate delays and risks.

The World Bank's *Commodity Markets Outlook* is published quarterly, in January, April, July, and October. The report provides detailed market analysis for major commodity groups, including energy, metals, agriculture, precious metals, and fertilizers. Price forecasts to 2025 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](http://www.worldbank.org/commodities)

