A World Bank
Quarterly Report

JULY 2015

Commodity Markets Outlook

WORLD BANK GROUP

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The cutoff date for the data used in this report was July 21, 2015.

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Acknowledgments

This World Bank Group Report is a product of the Prospects Group in the Development Economics Vice Presidency. The project was managed by John Baffes under the general guidance of Ayhan Kose and Franziska Ohnsorge.

Several people contributed substantively to the report. John Baffes authored the *Special Focus* section and agriculture. Shane Streifel authored the sections on energy, metals, precious metals, and fertilizers. Xinghao Gong assisted with price data and Annex tables. Betty Dow consulted on prices and Annex tables. The design and production of the report was managed by Maria Hazel Macadangdang, Keisha Lynn Mc Gee and Katherine Rollins. Graeme Littler edited the report. Mark Felsenthal provided extensive editorial comments. Tito Cordella reviewed the report. Phillip Jeremy Hay, Vamsee Krishna Kanchi, and Mikael Reventar managed the media relations and dissemination. The accompanying website was produced by Mikael Reventar and Katherine Rollins.

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. 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:
www.worldbank.org/commodities

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

Executive Summary

Most commodity prices declined in the second quarter of 2015 due to ample supplies and weak demand, especially in industrial commodities (Figure 1). One main exception was the price of crude oil which rebounded early in the quarter on stronger demand but has since weakened owing to a still large global surplus. These trends are expected to persist for the rest of the year, with a modest recovery in 2016 (Figure 2). This issue's Special Focus looks at China's and India's commodity consumption patterns. It concludes that demand from China, and to a lesser extent India, significantly raised global demand for metals and energy—especially coal—and less so for food commodities. This pattern reflected the countries' different growth models and the way in which consumption responds to income growth.

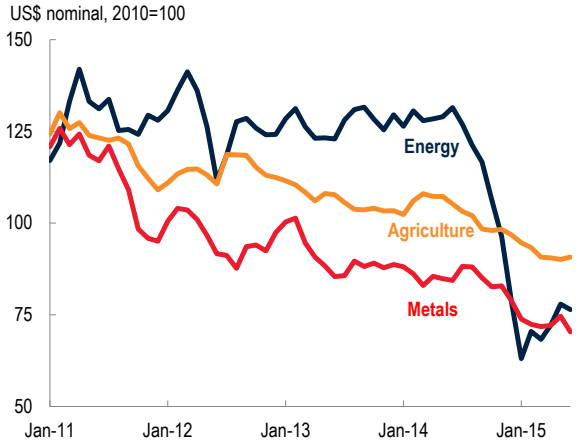
Trends. Energy prices rose 12 percent in the second quarter of 2015, reflecting a 17 percent increase in oil prices on stronger demand and some expected supply tightening. The increase in oil prices more than offset continued declines in natural gas and coal prices (down 13 and 4 percent, respectively) due to weak demand and excess supply. Despite higher than expected demand, the oil market remains oversupplied with large inventories, especially in the United States. The U.S. rig count is down 60 percent since its November high, but oil production continues to climb by more than 1 mb/d year-on-year. OPEC output also continues to surge, with June production 1.5 mb/d higher than a year earlier, with most of the gains in Iraq and Saudi Arabia.

Non-energy commodity prices fell 2 percent in the second quarter of 2015, down almost one-third from their early 2011 high, due to abundant supply and large inventories. *Metals* prices declined marginally as most metal markets are still in surplus. This is especially the case for iron ore whose prices are off two-thirds from their 2011 high. *Agricultural* prices fell 2.6 percent due to large declines in food commodities—edible oils & meals and grains are down roughly 5 percent each since last quarter—despite some adverse weather in North America and El Niño fears. *Fertilizer* prices declined almost 4 percent on weak demand. *Precious metals* prices fell more than 2 percent on reduced investor demand and expectations of higher U.S. interest rates later this year.

Outlook and risks. All main commodity price indices are expected to decline in 2015, mainly due to abundant supplies and, in the case of industrial commodities, weak demand (Table 1). Energy prices are projected to average 39 percent below 2014 levels, largely reflecting the drop in oil prices. The earlier projection of $53/bbl (April *Commodity Markets Outlook*) has been revised upwards to $57/bbl, reflecting stronger demand, especially in the United States. Natural gas prices are expected to decline across all three main markets—U.S., Europe, and Asia. Coal prices are projected to fall 17 percent due to weak import demand and surplus supply.

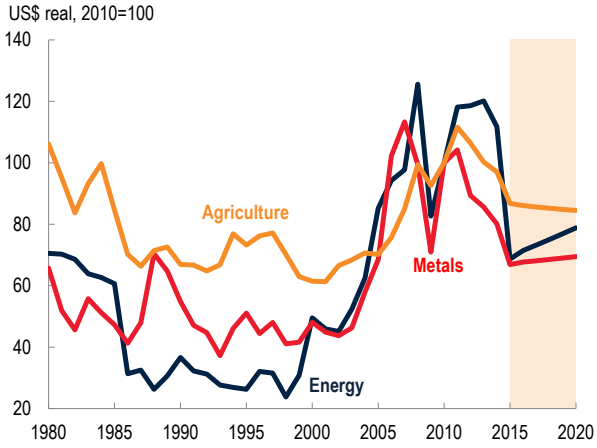
Downside risks to the energy forecast include higher-than-expected non-OPEC production (supported by falling costs) and continuing gains in OPEC output, notably from Iraq, Saudi Arabia, and Iran (especially in view of the recent agreement on its nuclear program). Upside risks include earlier-than-expected closure of high-cost operations, supply restraint by major producers, and unexpected disruptions in supply stemming from geopolitical risks.

FIGURE 1 Commodity price indices, monthly



Source: World Bank.
Note: Last observation is June 2015.

FIGURE 2 Commodity price indices, annual



Source: World Bank.
Note: Shaded area denotes price forecast.

TABLE 1 Nominal price indices, actual and forecasts (2010 = 100)

	ACTUAL					FORECAST		CHANGE (%)		
	2010	2011	2012	2013	2014	2015	2016	2013-14	2014-15	2015-16
Energy	100	129	128	127	118	73	77	-7.2	-38.7	6.0
Non-Energy	100	120	110	102	97	85	86	-4.6	-12.2	1.5
Metals	100	113	96	91	85	71	73	-6.6	-16.7	3.1
Agriculture	100	122	114	106	103	92	93	-3.4	-10.8	1.1
Food	100	123	124	116	107	94	95	-7.1	-12.3	1.2
Grains	100	138	141	128	104	94	95	-19.0	-9.4	1.4
Oils and meals	100	121	126	116	109	89	91	-5.9	-18.1	1.9
Other food	100	111	107	104	108	101	101	4.3	-7.1	0.3
Beverages	100	116	93	83	102	93	92	22.2	-8.2	-1.2
Raw Materials	100	122	101	95	92	85	86	-3.6	-7.9	1.9
Fertilizers	100	143	138	114	100	96	95	-11.6	-4.9	-0.5
Precious metals	100	136	138	115	101	92	91	-12.1	-9.3	-1.1
Memorandum items										
Crude oil ($/bbl)	79	104	105	104	96	57	61	-7.5	-40.3	6.4
Gold ($/toz)	1,225	1,569	1,670	1,411	1,266	1,175	1,156	-10.3	-7.2	-1.6

Source: World Bank.

Note: Definitions of prices and indices can be found in Appendix C.

Non-energy prices are expected to fall 12 percent in 2015 with declines in all main indices. *Metals* prices are projected to decline 17 percent (in April, the projected decline was 12 percent) due to capacity increases and slowing demand in China. The largest decline is expected for iron ore (down 46 percent) due to new low-cost mining capacity coming online this year and next, mainly in Australia. Metals markets are adjusting by closure of high-cost operations and reduced investment. Markets will eventually tighten, in part due to large zinc mines closures, and as Indonesia's ore export ban weighs on supplies, notably nickel.

Risks to the metal price forecasts include slower demand in China and likely tightening of environmental regulations to contain pollution. Lower production costs and currency depreciation are helping sustain output and delay market rebalancing.

Agricultural prices are projected to decline almost 11 percent in 2015 (in April, the projected decline was 9 percent), with notable declines in all indices amid abundant supply and high levels of stocks. The largest price decline is projected for edible oils and meals (down 18 percent) mainly owing to ample harvests in the Americas and rising stocks. *Beverage* and agricultural raw material prices will decline by about 8 percent each. *Fertilizer* prices, a key cost for most agricultural commodities, are expected to decline 5 percent on weaker demand and ample supply.

Risks to the agriculture price forecasts are on the downside as well. In its July assessment, the U.S. Department of Agriculture confirmed an improved outlook in 2015-16 for grains and oilseeds, with stock-to-use ratios increasing for most commodities. Adverse weather conditions in the mid-western United States and fears of a strong El Niño are unlikely to have a significant effect on global production. On trade policies, restrictions are unlikely to be imposed given that markets are well-supplied. Lastly, the decline in oil prices weakens pressures to divert food commodities to production of biofuels. The quantity of diverted food crops is expected to grow only marginally (around 2 percent) in 2016 and beyond.

Focus. The surge in commodity prices during the 2000s has been attributed to rising demand from China and India. Indeed, demand from China and, to a lesser extent India, significantly raised global demand for metals and energy—especially coal—and less so for food commodities. These patterns reflect different growth models and commodity consumption patterns in the two countries. If the two countries catch up to OECD levels of per capita commodity consumption, or if India's growth shifts towards industry, demand for metals, oil, and coal could remain strong. In contrast, given that the level of per capita consumption of food in China and India is already comparable with the world, pressures on food commodity prices are likely to ease as their population growth—one of the key determinants of food commodity demand—slows.

Special Focus

How important are China and India in global commodity consumption?

How important are China and India in global commodity consumption?

The surge in commodity prices during the 2000s has at times been attributed to rising demand from China and India. There are important, lesser-known nuances, however, to the role of China and India in commodity markets, which are explored in this Focus. First, demand from China and, to a lesser extent India, significantly raised global demand for metals and energy—especially coal—and less so for food commodities. China's consumption of metals and coal surged to roughly 50 percent of world consumption in this period, and India's consumption to a more modest 3 percent (metals) and 9 percent (coal). Second, this pattern reflected differences in growth models and income elasticities. In particular, an increase in GDP or industrial production has tended to raise metals and energy demand more so than food. Third, if the two countries catch up to OECD levels of per capita commodity consumption, or if India's growth shifts towards industry, demand for metals, oil, and coal could remain strong. In contrast, given that the level of per capita consumption of food in China and India is already comparable with the world, pressures on food commodity prices are likely to ease as their population growth—one of the key determinants of food commodity demand—slows.

The super-cycle

Global commodity prices underwent an exceptionally strong and sustained boom beginning in 2000. Unlike a typical price cycle, this boom has been characterized as a "super cycle", i.e., a demand-driven surge in commodity prices lasting possibly decades rather than years (Figure F.1). Some researchers say this is the fourth "super cycle" of the past 150 years (Cuddington and Jerrett 2008; Erten and Ocampo 2013; Jacks 2013; and Stürmer 2013).[1]

The price boom has been attributed to strong growth in emerging markets. During 2002-12 emerging markets grew 6 percent per year, the highest rate in any 10 -year period over the past four decades. Analysts have focused on the two most populous countries, China and India, which grew at an annual pace of 10.3 and 7.4 percent, respectively. By 2014, the two countries together accounted for over one-third of global population and one-sixth of global GDP. Over the medium-term, growth in both countries is likely to continue to outpace advanced country growth, despite a carefully managed slowdown in China.

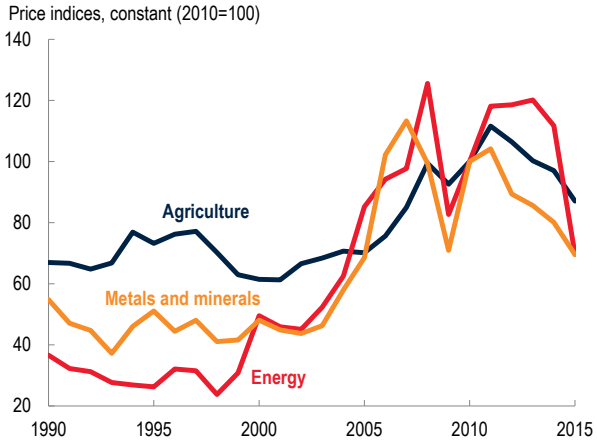
The role of China and India in global commodity markets came to the fore in the context of the 2008 food price spikes. Some argue that rapid income growth in emerging economies, including China and India, was a key factor behind increases in food commodity prices after 2007 (Krugman 2008; Wolf 2008; and Bourne 2009). Others point to the broadly stable share of China and India in agricultural food commodity consumption (Alexandratos 2008; FAO 2008; Alexandratos and Bruinsma 2012; Sarris 2010; Baffes and Haniotis 2010; FAO 2009; and Lustig 2008).[2]

TABLE F.1 Consumption growth during the commodity price boom

	China	India	ROW	World
Change from 2001-02 to 2011-12, percent				
Primary energy	329.2	136.9	3.2	57.8
Crude oil	97.8	52.6	7.3	14.6
Coal	147.4	92.7	3.9	54.4
Metals	329.2	136.9	3.2	57.8
Grains	25.0	16.5	24.6	23.9
Edible oils	94.4	65.2	65.2	70.4
Population	*5.6*	*15.1*	*14.3*	*12.6*
GDP	*171.6*	*107.8*	*24.9*	*33.5*
Industrial production	*298.3*	*112.5*	*14.6*	*34.5*
Share of world during 2011-12, percent				
Primary energy	21.9	4.4	73.7	100
Crude oil	11.2	4.0	84.8	100
Coal	50.4	7.6	42.0	100
Metals	42.9	3.5	53.6	100
Grains	22.8	9.6	67.6	100
Edible oils	20.2	11.4	68.4	100
Population	*19.2*	*17.5*	*63.2*	*100*
GDP	*10.0*	*2.6*	*87.4*	*100*
Industrial production	*19.1*	*2.6*	*78.3*	*100*

Source: World Bank, BP Statistical Review, of World Energy World Bureau of Metals Statistics, U.S. Department of Agriculture.
Note: ROW refers to the World excluding China and India.

FIGURE F.1 Commodity price indices



Source: World Bank.
Note: Last observation is 2015 (as of June 2015).

This *Special Focus* explores the role of China and India in global commodity consumption since 2000. In particular, it seeks to address the following questions:

- How have China and India contributed to global commodity consumption?
- What explains diverging contributions of these countries to global commodity consumption?
- How will growth in China and India impact global commodity consumption?

How have China and India contributed to global commodity consumption?

Demand from China and, to a significantly lesser extent India, has tilted global commodity consumption towards coal and metals during 2000-14. In contrast, their consumption of agricultural commodities has grown broadly in line with global averages.

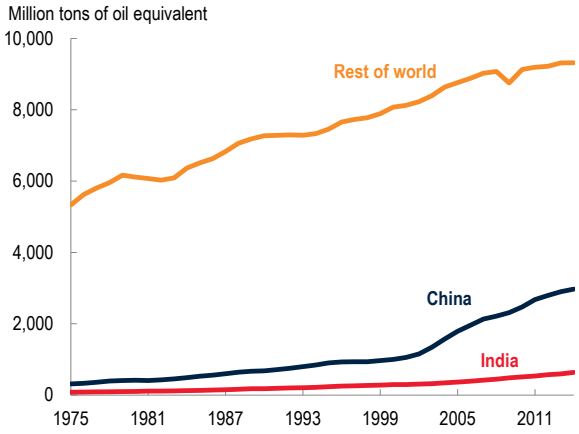
Energy. China's primary energy consumption during 2000-14 tripled and India's doubled (though from a much lower base, Figure F.2). Together they account for 28 percent of global energy consumption. China's energy demand growth has slowed to 3 percent in 2014 while India's growth has remained robust.

China's and India's energy consumption growth has been driven mainly by coal (Figure F.3). Together, the two countries accounted for nearly all of the increase in global coal consumption over the period. Today, China consumes half of the world's coal, up from less than one-third in 2000, and India consumes almost one-tenth, more than double its 2000 share. In recent years coal consumption in China has slowed significantly as a result of slower economic activity, efforts to improve air quality, and increased use of other fuels such as oil, natural gas, nuclear, renewables, and hydropower.

Although China's share in global oil consumption has more than doubled since 2000 (from 4.8 to 11.1 mb/d), it remains a modest 12 percent while India's share amounts to 4 percent (Figure F.4).

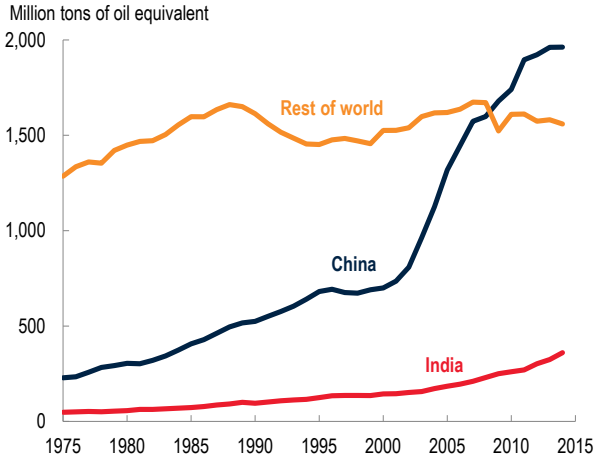
Metals. China's metal consumption soared during 2000-14 while India's grew at a measured pace. China's metal consumption growth alone accounted for nearly all of the net increase in global consumption in 2000-14, whereas India accounted only for 5 percent of the global increase. As a result, China's share of world metals consumption more than tripled from 13 percent in 2000 to 47 percent in 2014 (Figure F.5).

FIGURE F.2 Primary energy consumption



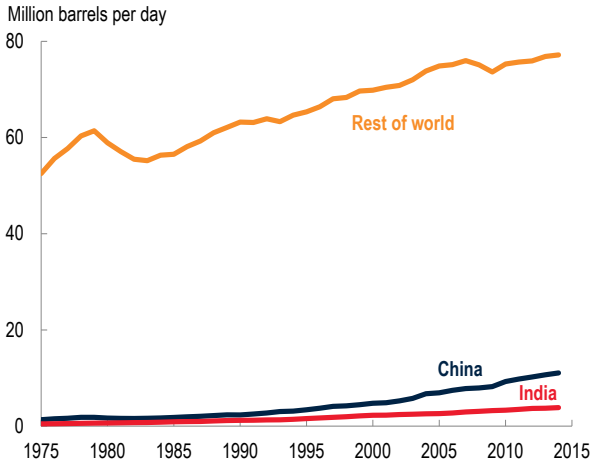
Source: BP Statistical Review of World Energy.
Note: Last observation is 2014. Primary energy consists of crude oil, natural gas, coal, nuclear, hydroelectric, and renewables.

FIGURE F.3 Coal consumption



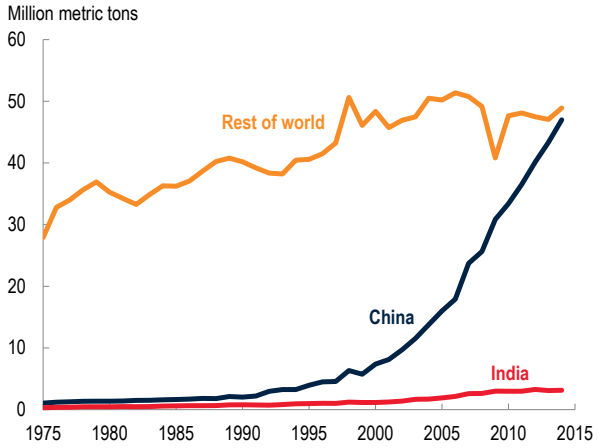
Source: BP Statistical Review of World Energy.
Note: Last observation is 2014.

FIGURE F.4 Crude oil consumption



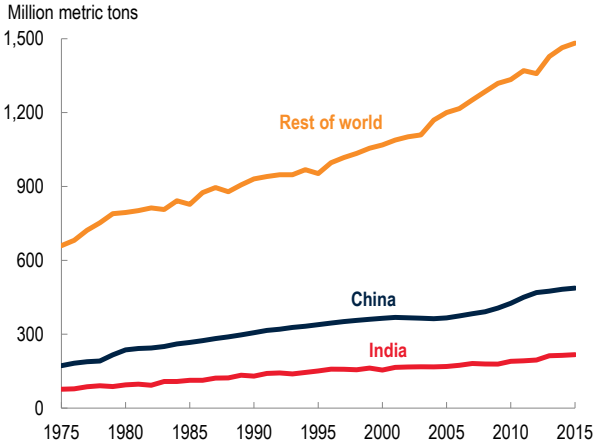
Source: BP Statistical Review of World Energy.
Note: Last observation is 2014.

FIGURE F.5 Metal consumption



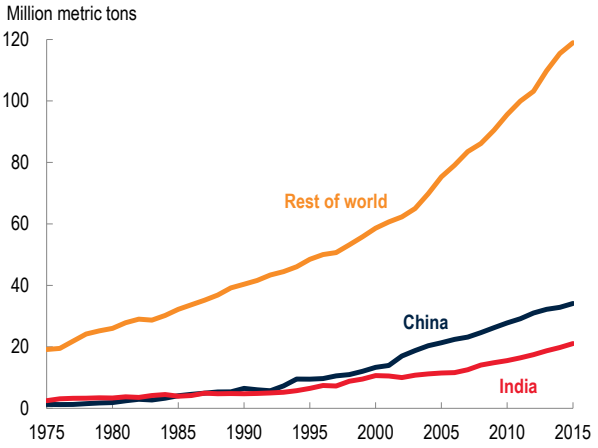
Source: World Bureau of Metal Statistics.
Note: Last observation is 2014. The six metals are: aluminum, copper, lead, nickel, tin, and zinc.

FIGURE F.6 Grain consumption



Source: U.S. Department of Agriculture.
Note: Last observation is for the 2015-16 crop year (denoted as 2015). The three grains are: wheat, maize, and rice.

FIGURE F.7 Edible oil consumption



Source: U.S. Department of Agriculture.
Note: Last observation is 2015. The edible oils are: coconut, cottonseed, palm, palmkernel, peanut, rapeseed, and sunflower seed.

Agriculture. In contrast to coal and metals, China's and India's consumption of most agricultural commodities—especially for grain such as maize, rice, and wheat—grew broadly in line with global consumption over the past two decades, leaving their share of world consumption virtually unchanged at about 22 percent and 10 percent, respectively (Figure F.6).[3] In an exception among agricultural commodities, China's share of global edible oils consumption rose almost one-and-a-half fold (to one-fifth in 2014) while India's remained around one-tenth (Figure F.7).

What explains diverging contributions of the two countries global commodity consumption?

The diverging impact of China's and India's expansion during the 2000s on individual commodity markets reflects different income elasticities and, for metals specifically, different growth engines in China and India.

Income elasticities. Consumption of industrial commodities, including metals and coal, tends to respond to economic activity whereas consumption of food commodities (especially grains) is mainly associated with population growth. While China's and India's share of the global population has remained broadly stable at 37 percent, their share of global economic activity has tripled from 5 percent in 2000 to 16 percent in 2014. As a result, their demand for highly-income elastic commodities, such as primary energy and metals, has grown more rapidly than their demand for less income-elastic commodities, such as grains.

- **Metals.** The income elasticity of metals consumption exceeds unity (see, for example, Labys, Achouch, and Terraza 1999, Issler, Rodrigues, Burjack 2013, and Baffes and Savescu 2014).
- **Energy.** The income elasticity of energy has been estimated to be around unity (Webster, Paltsev, and Reilly 2008).
- **Grains.** The income elasticity of most agricultural commodity consumption is typically less than unity. Thus, the response of *real* food commodity prices to income could be negative depending on the changes in inflation (Box 1).
- **Edible oils.** Among agricultural commodities, edible oils are an exception. Their consumption is typically more strongly correlated with income than consumption of other agricultural commodities since growing incomes are associated with increased food consumption in restaurants and in

processed form—both with higher edible oil content compared to home-cooked meals.[4]

Growth models. Consumption of primary energy and, especially, metals is strongly correlated with industrial production. The industry-led nature of China's growth between 2000-14, compared with India's, partly accounts for China's stronger surge in metals consumption. Industry (infrastructure, manufacturing, and construction) accounted for almost half of China's growth but only about one quarter of India's growth during 2000-14. As a result, China's share of global industrial production increased five-fold during the past two decades and is now eight times higher than that of India (Figures F.8 and F.9).

How will growth in China and India impact global commodity consumption?

The outlook for the role of China and India in global commodity consumption is shaped by two factors: potential for catchup with advanced country per capita consumption and the outlook for growth and population in both countries.

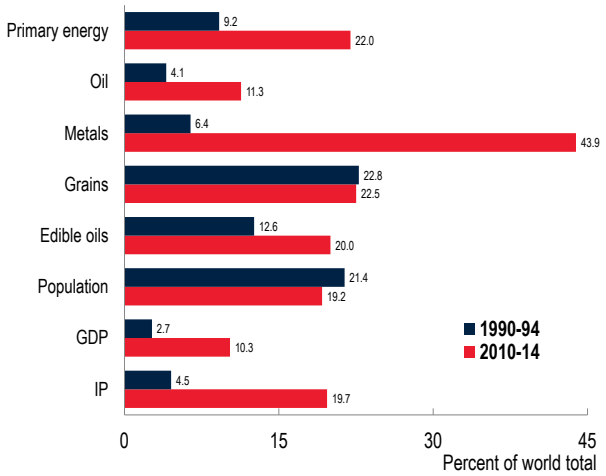
Per capita consumption. China still stands well below OECD levels of per capita consumption of primary energy; somewhat below for grains and edible oils; and in line with the OECD average for metals (Figures F.10-F.12).[5] India's per capita consumption of primary energy, metals, grains, and edible oils is considerably below both OECD and world averages. Should China's per capita commodity consumption move towards OECD levels, global primary energy demand could rise significantly. A corresponding shift in India would also boost demand for energy and metals.

Growth and population outlook. China's growth is expected to slow gradually below 7 percent by 2017, and beyond, with a shift away from industry-led growth towards more services-based growth (Figure F.13). In contrast, India's growth is expected to be sustained above 7 percent until 2017. Despite the slowdown in China, growth in both countries is expected to remain well above advanced country growth, which is likely to remain on the order of 2-3 percent. At the same time, China's population growth is expected to decline further over next decade to about 0.3 percent per annum, according to the UN's population statistics. India's population is expected to grow faster than China's at roughly 1 percent over the next decade.

On balance, these factors may herald some shifts in global consumption:

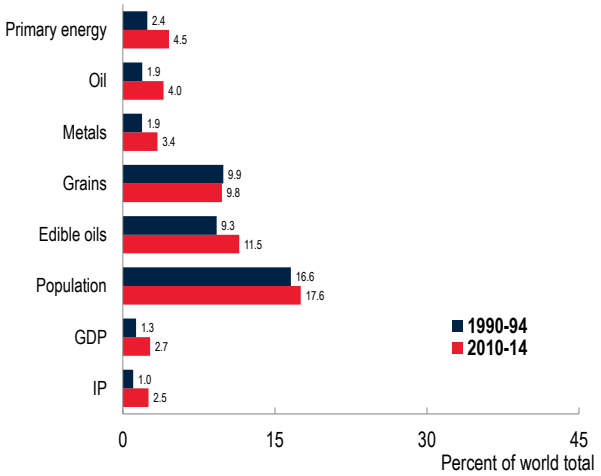
- **Easing metals consumption.** As China moves towards more services-led growth, and absent a significant shift in India's growth engines, metals consumption may slow.
- **Rising energy consumption.** Growth in India may encourage a catch-up from low per capita energy consumption. China, while on par with the world average, may also increase its per capita consumption as income grows.
- **Modest growth in agricultural commodity consumption.** Consumption of agricultural

FIGURE F.8 China's consumption of key commodities



Source: World Bank, BP Statistical Review of World Energy, World Bureau of Metals Statistics, U.S. Department of Agriculture.
Note: IP denotes Industrial production.

FIGURE F.9 India's consumption of key commodities



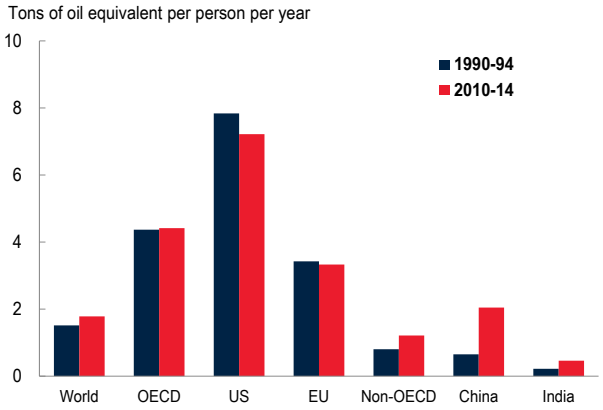
Source: World Bank, BP Statistical Review of World Energy, World Bureau of Metals Statistics, U.S. Department of Agriculture.
Note: IP denotes Industrial production.

commodities by China and India is close to the world average. Continued robust population growth in India could offset some of the slowdown in population in China and support agricultural commodity consumption.

Endnotes

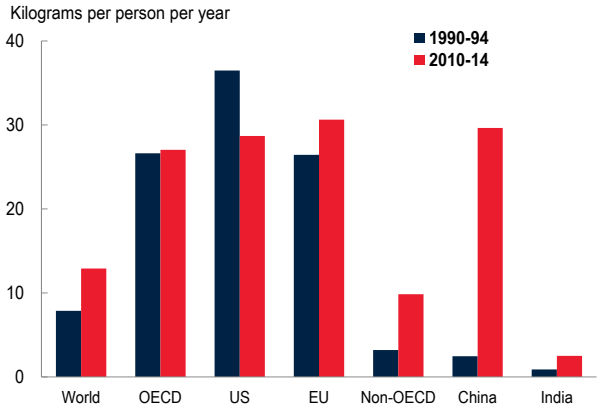
1. Schumpeter identified three long cycles in modern capitalism that also corresponds to commodity super cycles (Erten and Ocampo 2012). First, during 1786–1842, a reflection of the industrial revolution. Second, 1842–1897, characterized by the technological advancements in various industries, including railways, steamships, textiles, and clothing, the "railroadization" cycle. Third, starting in 1897, associated with the opportunities involving steel, electricity, organic chemicals, the internal combustion engine, automobiles, "electrification" cycle. Cuddington and Jerrett (2008) identified three super cycles in metals prices: 1890–1911 (driven by urbanization and industrialization in the United States), 1930–51 (European reconstruction), and 1962–77 (Japanese expansion).
2. In fact, Deaton and Drèze (2008), noted that despite growing incomes, caloric intake in India has declined since the early 1990s.
3. Grain consumption includes both human and animal feed, thus accounting for growth in animal products, including milk and dairy.
4. Increased consumption with rising incomes may, however, not be reflected in rising prices. This reflects the high substitutability of edible oil crops with other food crops because of the use of similar inputs, including land, similarly-skilled labor and machinery.
5. The high per capita averages for grains in the U.S. and edible oils in the OECD for 2010-14 partly reflect production of biofuels (primarily maize-based ethanol in the United States and edible oil-based biodiesel in the EU).

FIGURE F.10 Primary energy consumption



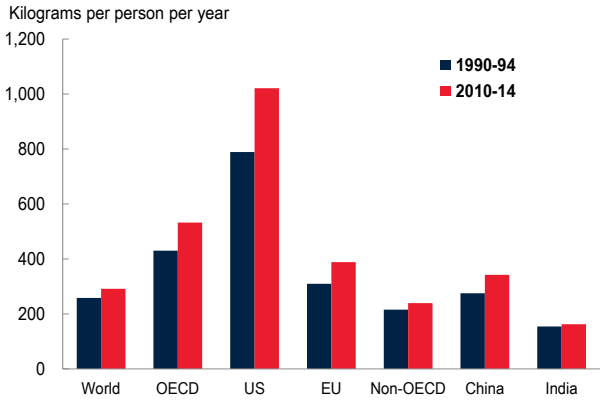
Source: BP Statistiical Review of World Energy, UN, OECD, Eurostat.
Note: Primary energy consists of crude oil, natural gas, coal, nuclear, hydroelectric, and renewables expressed in tons of oil equivalent.

FIGURE F.11 Metals consumption



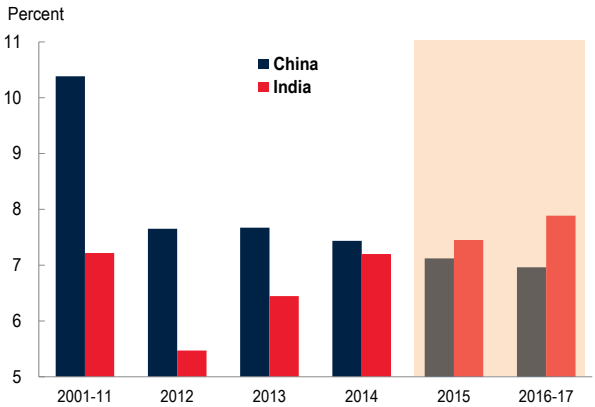
Source: World Bureau of Metal Statistics, UN.
Note: Aggregate of aluminum, copper, lead, nickel, tin, and zinc.

FIGURE F.12 Grain consumption



Source: U.S. Department of Agriculture, UN.
Note: Aggregate of wheat, maize, and rice. Refers to human, animal feed, and industrial use. The surge in US consumption reflects biofuels.

FIGURE F.13 Growth in China and India



Source: World Bank.
Note: The growth rates for 2015 and 2016-17 are forecasts reported in *Global Economic Prospects* (World Bank 2015).

BOX 1 Why does income negatively affect agricultural commodity prices?

Although income growth in emerging economies has been cited as a key driver of the past decade's food price increases, the views on the strength of such relationship are not uniform (see Figure F.14 for agriculture and manufacturing price indices). As early as the mid-19th century, the German statistician Ernst Engel observed that poor families spend a greater proportion of their assets on food compared to wealthier counterparts, thus leading to Engel's Law of less-than-unitary income elasticity of food commodities. Almost a century later, Kindleberger (1943, p. 349) argued that "[t]he terms of trade move against agricultural and raw material countries as the world's standard of living increases … and as Engel's Law of consumption operates."

Kindleberger's thesis was empirically verified by Prebisch (1950) and Kindleberger (1958) himself; it was also emphasized by Singer (1950). By some accounts, the declining terms of trade associated with food commodities—to be coined later the Prebisch-Singer hypothesis—formed the intellectual foundation on which the post-WWII industrialization policies were based, that is, taxation of primary commodity sectors in favor of manufacturing products, especially in developing countries.

Modeling Food price trends

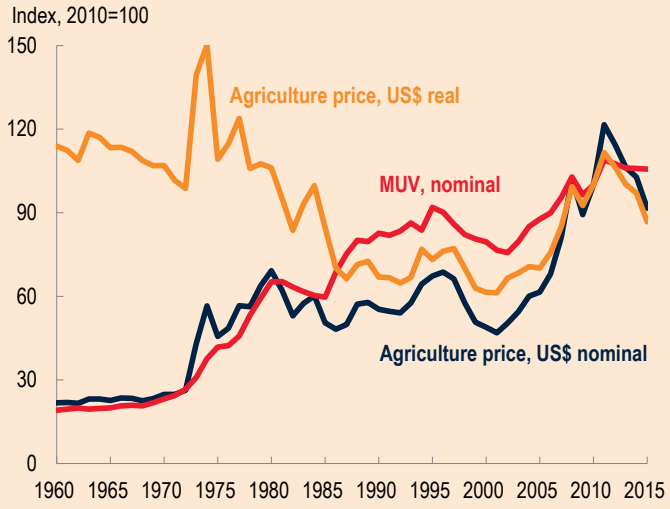
The testable implications of the relationship between Terms of Trade and income can be examined within a 2-sector, closed-economy framework as a move from equilibrium E_1 to E_2, in response to an exogenous positive shock on income (Figure F.15). Let Q_i^F, Q_i^M and P_i^F, P_i^M denote consumption and prices of the primary and manufacturing commodities in period i, and Y_i denote income, $i = 1, 2$. Income level in the first period, Y_1, is consistent with consumption bundle $[Q_1^F, Q_1^M]$ and a price ratio of (P_1^F, P_1^M). As income increases to Y_2 in period 2, it leads to a consumption bundle of $[Q_2^F, Q_2^M]$ and a price ratio of (P_2^F, P_2^M). Now assume neutral technical change and non-homothetic preferences such that the increase in the consumption of the manufacturing commodity is larger than its primary commodity counterpart, $(Q_2^M - Q_1^M) > (Q_2^F - Q_1^F)$. These assumptions imply that $(P_2^F/P_2^M) < (P_1^F/P_1^M)$, hence the inverse ToT-income relationship consistent with Kindleberger's thesis and, by extension, Engel's Law. Conversely, under homothetic preferences and biased technical change against primary commodities, a positive ToT-income relationship will emerge (this outcome is not shown in Figure F.15).

To identify the impact of income on the ToT of agricultural commodities, this section summarizes estimates from a reduced-form econometric model which conditions the ToT-income relationship on various sectoral and macroeconomic fundamentals.

The model takes the following form:

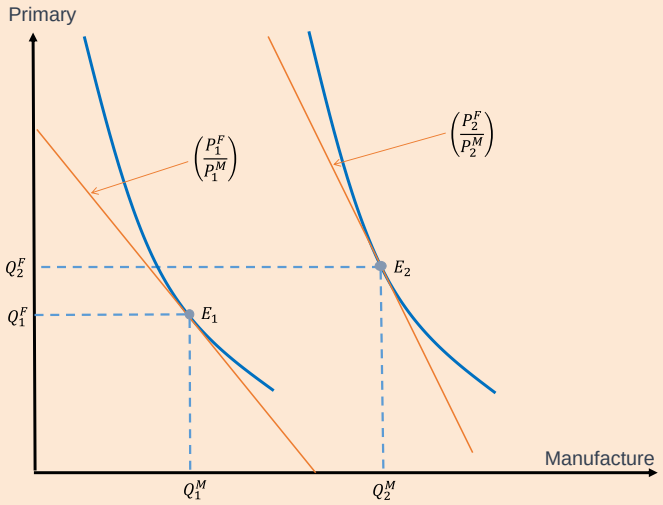
$$\log(P_t^i) = \beta_0^i + \beta_1^i \log(Y_t) + \beta_2^i R_t + \beta_3^i \log(X_t) +$$
$$+ \beta_4^i \log(S_{t-1}^i) + \beta_5^i \log(P_t^E) + \varepsilon_t^i.$$

FIGURE F.14 Nominal agricultural and manufacturing price indices (2010 = 100)



Source: World Bank.
Note: Real agricultural price is the ratio of nominal agricultural prices divided by the MUV, referred to as ToT in the analysis.

FIGURE F.15 A 2-sector model for agricultural and manufacturing prices



Source: World Bank.
Note: The 2-sector model assumes unbiased technical change and non-homothetic preferences.

P_t^i is the real price of commodity i (i = maize, soybeans, wheat, rice, palm oil, and cotton). Y_t denotes real income (proxied by GDP), R_t denotes the real interest rate, X_t is the US$ exchange rate, S_t^i denotes the stock-to-use ratio of commodity i, and P_t^E is the real price of crude oil. For each commodity i equation, the β_js are parameters to be estimated and ε_t^i is the error term. Because the variables (except interest rate) are expressed in logarithmic levels, the estimated parameters can be interpreted as elasticities.

Results

The model is applied to five food commodities (maize, soybeans, wheat, rice, and palm oil) and cotton. All commodity prices have been deflated by the Manufacturing Unit Value index. For the real interest rate, the 3-month U.S. Treasury Bill, adjusted by the U.S. Consumer Price Index, was used. The exchange rate was represented by the U.S. dollar Real Effective Exchange Rate against a broad basket of currencies. Income is proxied by the real GDP of middle-income countries measured in PPP terms. Results of the model, which was estimated both in OLS and in a panel (random effects) framework, are reported in Table F.2.

In all six equations the parameter estimate of income was negative and highly significant, with values ranging within a remarkably tight band (between –0.44 for soybeans and –0.71 for rice, palm oil, and cotton). The panel estimate was –0.48, indicating that a 10 percent increase in the income of low- and middle-income countries reduces the real price of agricultural commodities by about 5 percent. This result, is consistent with Engel's Law. Baffes and Etienne (2014), who used a similar methodology but an Autoregressive Distributed Lag model, found that the negative ToT-income relationship is robust to various income measures. Based on a literature review of more than 40 papers, they concluded that the declining ToT hypothesis is supported in about half of the papers.

In addition to the income-ToT relationship, the model provides interesting results on the effect of other macroeconomic and sectoral variables. Results of the exchange rate effect on food prices are consistent with expectations in terms of sign, but only rice is highly significant. Yet, the panel parameter estimate is significantly different from zero (–0.46, t-statistic = –1.81). These results are consistent with the literature (Lamm 1980, Gardner 1981, and Baffes and Dennis 2015).

TABLE F.2 Parameter estimates

	Maize	Soybeans	Wheat	Rice	Palm oil	Cotton	Panel
Constant	7.91***	5.85**	5.41**	14.20***	7.83***	8.08***	7.50***
	(4.02)	(2.47)	(2.45)	(6.07)	(2.70)	(3.21)	(4.89)
Income	-0.60***	-0.44***	-0.49***	-0.71***	-0.71***	-0.71***	-0.48***
	(5.28)	(3.10)	(3.73)	(4.98)	(4.17)	(4.50)	(4.59)
Real interest rate	-0.02	-0.06***	-0.06***	-0.04**	-0.06***	-0.05***	-0.01
	(0.98)	(3.53)	(3.76)	(2.00)	(2.86)	(2.80)	(1.25)
Real exchange rate	-0.41	-0.21	0.05	-1.44***	-0.13	-0.16	-0.46**
	(1.16)	(0.50)	(0.13)	(3.41)	(0.26)	(0.36)	(1.81)
Stock-to-Use ratio (lag)	-0.48***	-0.21***	-0.46***	-0.49***	-0.42***	-0.40***	-0.37***
	(6.90)	(3.72)	(4.62)	(5.10)	(3.80)	(3.80)	(8.05)
Real oil price	0.15***	0.13**	0.11*	0.15**	0.30***	0.10	0.15***
	(2.99)	(2.06)	(1.93)	(2.54)	(3.58)	(1.45)	(3.22)
R-square	0.67	0.50	0.50	0.70	0.53	0.60	0.59
No of observations	55	50	55	55	50	55	310

Source: Baffes and Haniotis (2015).
Notes: All variables (except interest rate) are expressed in logarithmic terms. The dependent variable is the logarithm of the nominal price divided by the price of manufacture goods. Because of data unavailability, the regressions for soybeans and palm oil begin in 1965 (the rest span in 1960-2014). The last row, Panel, reports estimates from a random effects model. The *R-square* for the Panel refers to the overall *R-square* (the within and between *R-squares* are 0.51 and 0.69, respectively). Absolute *t-statistics* in parentheses, * = 10 percent, ** = 5 percent, *** = 1 percent.

The real interest rate has a negative impact on all prices (except maize), but it is small in magnitude. The panel parameter estimate, -0.01, however, is not statistically different from zero. Interestingly, the weak relationship between interest rates and commodity prices is not uncommon in the empirical literature (Gilbert 1989; Frankel and Rose 2010; and Frankel 2014). Other studies (Anzuini et al. 2010; Akram 2009) found a moderate effect.[2]

Among sectoral fundamentals, the stock-to-use ratio estimates are, as expected, negative and highly significant, with a panel estimate of -0.37. These estimates are remarkably similar to findings reported elsewhere (Baffes and Dennis 2015; Bobenrieth, Wright, and Zeng 2012; and FAO 2008).

The estimate of oil price was significantly different from zero in all six equations with the panel estimate at 0.15, implying that a 10 percent increase in oil prices is associated with a 1.5 percent increase in agricultural prices. The strong relationship between energy and non-energy commodity prices has been established long before the post-2004 price boom (Gilbert 1989; Hanson et al. 1993; Borensztein and Reinhart 1994; Chaudhuri 2001; Baffes 2007, Moss et al. 2010).[3]

Last, an important aspect from the model is the actual impact of lower stocks and higher oil prices to agricultural commodity prices. The elasticities for the oil price and stocks-to-use ratio are 0.15 and -0.37, both significant at the 1% level (t-values equal to 3.22 and 8.05, respectively). During the commodity boom, real oil prices increased by 146 percent while the stock-to-use ratio (average of wheat, maize and rice) declined by 26 percent. Thus, while the decline of stock-to-use ratio contributed 10 percentage points [10% = -0.37*(-26%)] to the increase in real food prices, the contribution of the oil price increase was more than twice as much, 22 percentage points [22% = 0.15*(146%)]. Therefore, despite the fact that the stock-to-use ratio elasticity was more than twice that of the oil price elasticity, its effect was less than half.

Conclusion

Based on a reduced-form price determination model and annual data since 1960, this box established the negative relationship between income and real agricultural prices. The results also showed that the price of energy and the stocks-to-use ratio, a proxy of supply conditions, matter as well. Among macroeconomic variables, while exchange rates appear to have an effect on commodity prices, a similar effect could not be established for interest rates, despite the extensive discussion in the literature that the low interest rate environment and quantitative easing of the past few years have been an instrumental force behind the commodity price boom. Interestingly, the weak interest rate-commodity price relationship is prevalent in the literature. It is conjectured here that, while the lower cost of capital may induce a rightward shift on the demand schedule, it may also induce a rightward shift to the supply schedule due to the lower cost of input financing, thus rendering the relationship between interest rates and commodity prices ambiguous.

Endnotes

1. The theoretical underpinnings of this model are outlined in Holtham (1988) and Deaton and Laroque (1992). Among various empirical applications of such a model, Gilbert (1989) looked at the effect of developing countries' debt on commodity prices; Pindyck and Rotemberg (1990) examined comovement among various commodity prices; Reinhart (1991) and Borensztein and Reinhart (1994) analyzed the factors behind the weakness of commodity prices during the late 1980s and early 1990s; Frankel and Rose (2010) analyzed the effects of various macroeconomic variables on agricultural and mineral commodities; Baffes and Dennis (2015) and Baffes and Etienne (2014) examined the relative importance of key drivers on food price trends during the past five decades.
2. Baffes and Savescu (2014) found a positive relationship between nominal interest rates and metals prices and argued that, while the lower cost of capital may induce a rightward shift on the demand schedule, it may also induce a rightward shift to the supply schedule due to the lower cost of input financing, thus rendering the interest rate-price relationship ambiguous.
3. Yet not all studies concur with a strong oil/non-oil price relationship. Saghaian (2010) established a strong correlation among oil and food prices but not a causal link. Gilbert (2010) found a correlation between oil and food prices, but noted that it could be a result of common causation, not a causal link. Zhang et al. (2010) found no short-run (and very limited long-run) relationship between fuel and agricultural commodity prices. Reboredo (2012) concluded that grain prices are not driven by oil prices. The mixed evidence on the energy/non-energy price link could reflect the frequency of the data used in the analysis or the presence of biofuels (Baffes 2013). Zilberman et al. (2013) noted that higher frequency ("noisier") data are associated with weaker correlations. On the other hand, an exogenous shock pushing crude oil prices down under a mandated ethanol/gasoline mixture would increase fuel consumption, push ethanol and maize prices down, thus leading to a negative relationship between food and oil prices (De Gorter and Just 2008).

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Commodity Market Developments and Outlook

Energy
Metals
Precious metals
Fertilizers
Agriculture

Energy

Energy prices, as measured by the World Bank Energy Index, rose 12 percent in the second quarter, reflecting a 17 percent jump in oil prices on stronger demand and expected supply tightening. The increase more than offset continued declines in natural gas and coal prices, down 13 and 4 percent, respectively, owing to weak demand and excess supply.

Crude oil

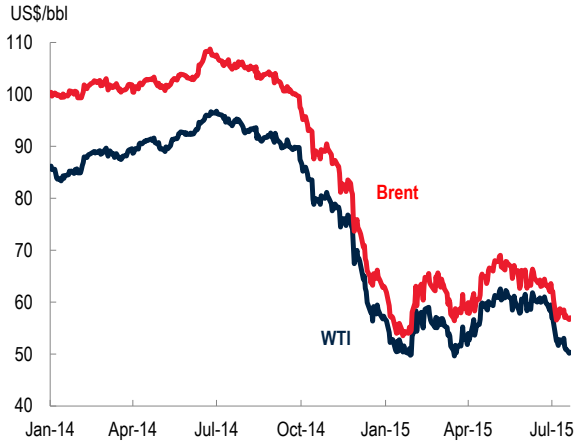
Crude oil prices averaged $60.5/bbl in the second quarter, up 17 percent from the first quarter (Figure 3). Prices started climbing from their lows in January on an expected market tightening, driven by stronger demand and an anticipated slowdown in non-OPEC oil production—particularly in the U.S., where capital expenditures and drilling activity fell sharply following the drop in oil prices in the second half of last year. However, prices eased in late June and into July as high stocks and a massive global crude surplus persisted. U.S. crude production has remained resilient to date and OPEC output continues to rise. An agreement in July between the United Nations Security Council Members plus Germany with Iran over its nuclear program further weighed on prices.

The differential between West Texas Intermediate (WTI) and Brent spot oil prices widened from near parity at the start of the year to more than $10/bbl in early April. The difference is due to the build-up of crude oil stocks, particularly at Cushing, Oklahoma, a delivery point for WTI futures contracts. However, the gap narrowed into July as crude stocks declined on strong refiner demand, lower imports from Canada, and as shale oil production began to recede. Futures prices show a discount for WTI versus Brent of about $6/bbl over the next several years.

World oil demand growth accelerated this year due to stronger economic activity in the U.S., notably for construction activity, and the effects of lower oil prices (Figure 4). Global oil consumption jumped by 1.9 mb/d or 2 percent year-on-year in the first quarter, with half of the gains in the OECD Europe and Americas. The 1.0 mb/d increase (2.2 percent) in non-OECD consumption was mainly in Asia. Estimates for the second quarter show global demand increasing by 1.4 mb/d (1.5 percent), with gains in most regions—especially in Asia. In the U.S., demand grew by more than 4 percent in the first six months, with strong gains in gasoline and gasoil/diesel. Demand for gasoil/diesel has also been strong in Europe, resulting in strong refinery demand for crude and declining crude stocks in the second quarter.

World oil demand growth is expected to slow in the second half of the year as the effects of lower prices diminish, with annual global growth projected at 1.4 mb/d or 1.5 percent year-on-year. Non-OECD demand is expected to climb by 1.0 mb/d (2. percent), with growth slightly weaker than in recent years; all three main OECD regions are projected to record annual increases together for the first time since 2005. Global oil demand in 2016 is projected to slow to 1.2 mb/d (1.3 percent), with all gains coming in the non-OECD and OECD Americas.

FIGURE 3 Crude oil prices, daily



Source: World Bank.
Note: Last observation is July 21, 2015.

FIGURE 4 World oil demand growth

Source: : World Bank, International Energy Agency.
Note: Last observation is 2015Q2.

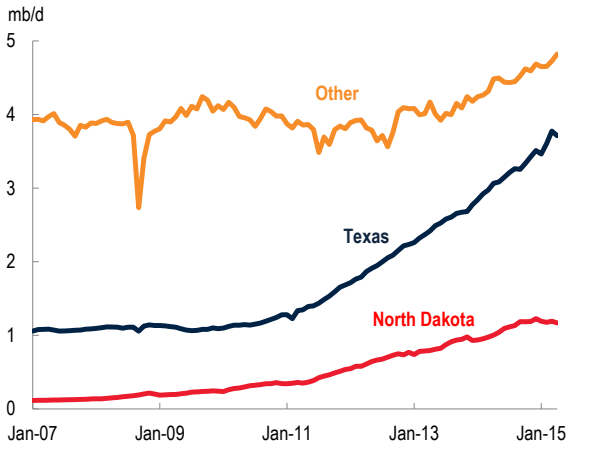
Global oil supply continued to outpace demand by a large margin, recording year-on-year growth in the first and second quarters of 3.1 mb/d and 3.3 mb/d, respectively. Increases occurred in both non-OPEC and OPEC countries. In the first quarter, non-OPEC accounted for much of the growth (2.4 mb/d), with most of the gains concentrated in three countries—Brazil, Canada, and the U.S. In the second quarter, non-OPEC growth slowed to 1.6 mb/d, reflecting weaker growth in the U.S. and minimal growth in Canada due to oils sands upgrader maintenance and wildfires in Alberta that reduced output of mainly heavy crude. Production continued rising in other major producing countries, including Russia where, despite the effects of sanctions, ruble devaluation and improved upstream taxation boosted activity. Currency devaluation in other producing countries also helped support production and exports.

In the United States, which added over 4 mb/d to global crude oil supplies since 2010, production growth is slowing on a month-to-month basis. The latest monthly data for April showed crude oil production rising marginally from the previous month to 9.7 mb/d—still the highest level in 44 years. The increase was the result of growth in the offshore Gulf of Mexico, as onshore production declined, notably in the shale producing states of Texas and North Dakota (Figure 5). The U.S. Energy Information Administration projects that domestic crude oil production will peak in the second quarter and decline over the next several quarters mainly due to the sharp drop in investment and drilling. Upstream investment has fallen an estimated 20-25 percent, and the number of drilling rigs has declined 60 percent from its October 2014 high (Figure 6). However, the decline in U.S. rig activity has slowed and actually increased in early July, possibly suggesting that the industry can operate relatively effectively with oil prices above $60/bbl.

While these developments portend to lower crude oil production, there are other factors that are helping to sustain output. A number of producers hedged production at higher prices helping to support profitability. Producers are also utilizing the most efficient rigs on their most productive tracts (high-grading) to maximize returns. There is a significant backlog of wells that have been drilled but not completed. These wells can be brought online at roughly 2/3 the cost a newly-drilled well. Well productivity has improved substantially. In the Eagle Ford (Texas) and Bakken (North Dakota) regions, new well productivity has risen from less the 300 barrels per well in early 2012 to 642 and 717 barrels, respectively. In this relatively "new industry", experience, innovation, and technology are advancing at every stage of production. Innovations include new generation rigs, pad drilling (drilling multi wells on a single land track), and re-fracking of wells. Drilling costs have fallen significantly, and technology offers further cost reduction over time from automation, computing, and robotics.

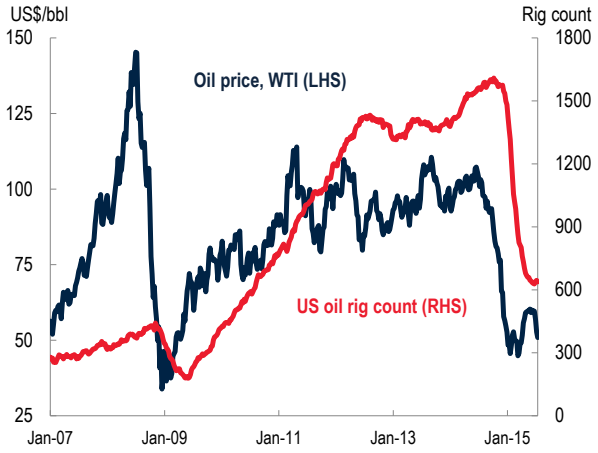
OPEC crude oil production continues to climb despite problems in Libya, sanctions in Iran, conflicts in Iraq, disputes in the Neutral Zone (shared jointly by Saudi Arabia and Kuwait), and pipeline sabotage in Nigeria (Figure 7). The group's production rose to

FIGURE 5 U.S. crude oil production



Source: U.S. Energy Information Administration, International Energy Agency.
Note: Last observation is June 2015.

FIGURE 6 U.S. oil rig count and oil prices, weekly



Source: Baker Hughes.
Note: Last observation is July 17, 2015.

31.5 mb/d in June, which is 1.5 mb/d above its overall target of 30 mb/d, and 1.5 mb/d higher than a year ago. Saudi Arabia and Iraq together added 1.6 mb/d. At its June meeting, OPEC agreed to maintain its 30 mb/d ceiling—although there continue to be no individual quotas. The group continues its policy to defend and increase market share and allow the market to determine prices. An implicit goal is to discourage investment in high-cost non-OPEC production, notably shale oil in the U.S., oil sands in Canada, and deep-water offshore.

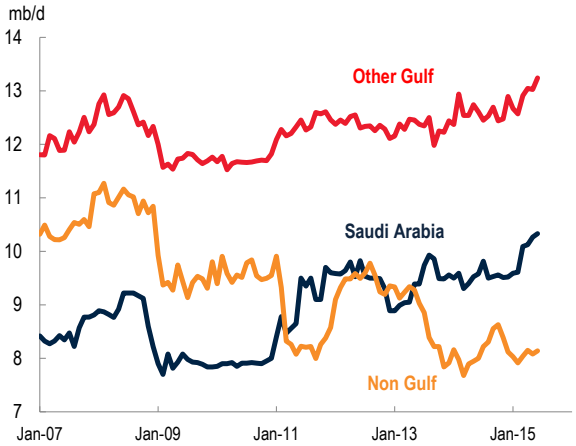
Saudi Arabia's production increased to a record 10.3 mb/d in June, in part to supply domestic power plants during peak summer demand and to feed the country's increasing refining capacity. Iraq's production rose to a record 4.1 mb/d in June, with heavy/sulfur crude from the southern fields accounting for much of the recent gains. A new export system separates light and heavy grades. Previously, heavy crude exports were restricted to enhance the quality of Basrah Light, but the separation of the two grades has allowed total exports from the south to increase to 3.0 mb/d. Exports from the north remain steady at 0.6 mb/d as a result of a deal late last year between the Iraq central government and Kurdistan regional government (KRG) to jointly market agreed volumes of northern oil in exchange for a portion of national revenues to the KRG.

Iran's oil production remained at 2.8 mb/d, with China and India emerging as the country's top importers. Iran is expected to target these countries when sanctions are lifted. An agreement with the U.N. Security Council plus Germany in July could see exports rise by some 0.5 mb/d in 2016, but depends on when the deal is finally implemented. First, members must ratify the agreement and the International Atomic Energy Agency must verify that Iran has complied with a large number of nuclear-related measures. The country could immediately offer roughly 40 million barrels from floating storage once sanctions end. Iran may eventually produce greater volumes of crude, but the country requires technology, expertise, and finance to restore and rehabilitate idled wells and expand infrastructure.

The large global supply overhang has caused OECD crude oil inventories to soar (Figure 8). Much of the increase is in North America due to surging U.S. production and effective ban on crude exports, but European crude stocks are also higher. Brisk refinery runs and strong demand are keeping product stocks in check, but waning seasonal summer demand is expected to see higher product stocks this fall.

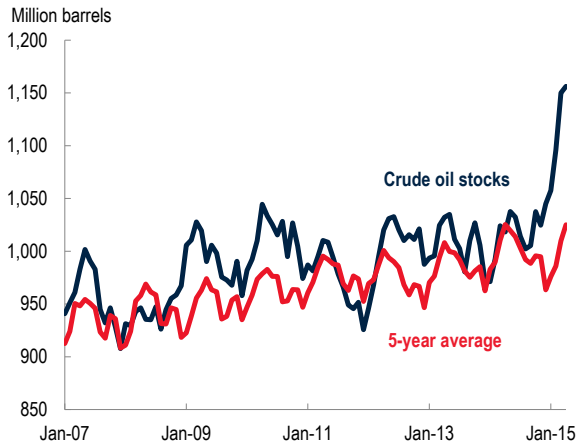
Crude oil prices are projected to drop 40 percent this year, averaging $57.4/bbl. Most of the decline has already occurred, implying flat oil prices for the rest of the year even as the large supply surplus begins to contract. Prices are expected to rise $4/bbl in 2016, as supply growth slows. Downside risks to the forecast include more resilient production from non-OPEC producers via cost and efficiency improvements, and higher OPEC production—mainly from Iraq, Iran, and Saudi Arabia—as they increase market share. Upside risks include stronger growth in demand, accelerated closure of high-cost production, OPEC supply restraint, and unexpected outages—as geopolitical risks continue to hover over the market.

FIGURE 7 OPEC crude oil production



Source: International Energy Agency.
Note: Last observation is June 2015.

FIGURE 8 OECD crude oil stocks



Source: International Energy Agency.
Note: Last observation is June 2015.

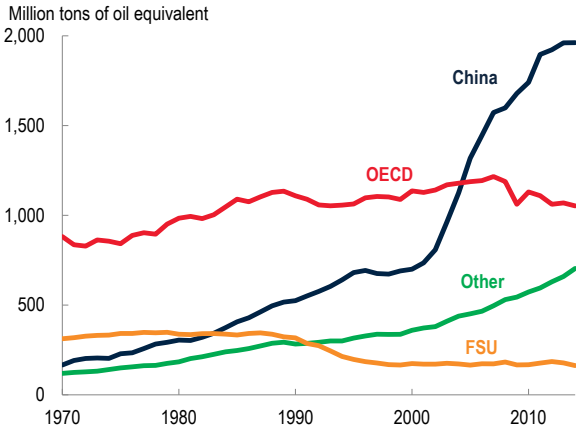
Coal

Thermal coal prices fell 4 percent in the second quarter on weak demand and surplus supply. Imports from China—which consumes half the world's coal—fell significantly in the first five months of the year on weak electricity demand, increased substitution of other fuels in power generation, environmental policies to curb coal-fired power generation, and restrictions on low-quality imports. Global supplies continue to increase from new low-cost capacity, declining costs of existing operations, and depreciating producer currencies.

China's rapid coal demand growth slowed significantly in recent years, and was essentially flat in 2014 (Figure 9). OECD coal demand continues to decline due to pressures to close older, less-efficient power plants. The only demand strength is in other emerging economies, notably India. Production and imports in India are expected to increase in the medium term, while China's imports are expected to slow. China plans to reduce pollution in heavily-populated coastal areas by shifting coal generation to northwest coal mining areas, and to transmit electricity east, thereby reducing the competitiveness of seaborne imports.

Coal prices are expected to decline 17 percent in 2015, and record modest growth going forward. Weighing against the market are closure of coal-fired power plants in China and other developing economies, competition from other fuel sources (e.g., lower priced natural gas), and policies to promote renewables. But these pressures will be partly offset by rising demand in India and other emerging economies. Supplies are expected to be ample as a result of cost reductions and investment in new low-cost capacity.

FIGURE 9 Coal consumption



Source: BP Statistical Review of World Energy.
Note: Last observation is 2014.

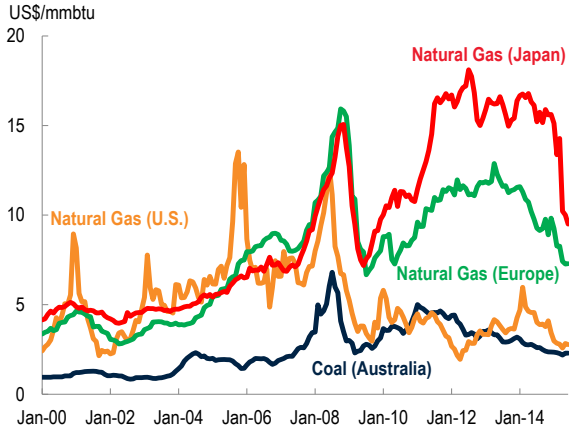
Natural gas

Natural gas prices plunged 13 percent in the second quarter, with declines in all three main regions amid weak demand, surplus supply, and effect of lower prices (Figure 10). The largest decline was in liquefied natural gas (LNG) delivered to Japan, which plunged 31 percent, partly due to the lagged effect of lower oil prices. Long term LNG import contracts are indexed to oil prices, but with a lag. New LNG capacity is set to come online this year. Much will come from Australia, but the U.S. is expected to send its first shipment by the end of this year. European gas prices dropped 15 percent owing to the same general conditions as Asia. About 60 percent of Europe's imported gas is priced on a spot- or hub-basis.

U.S. gas prices fell 5 percent because of weak demand and continued surplus supply. Production growth slowed due to maintenance of equipment and unplanned outages, but shale gas production continues to climb in the northeast Marcellus and Utica regions, providing much of the country's overall growth. However, lack of pipeline infrastructure has kept regional prices near $1/mmbtu. A wave of new pipeline capacity to move this gas to markets is expected over the next few years.

Natural gas prices are expected to decline sharply this year in all three main markets: U.S. (down 36 percent to $2.8/mmbtu); Europe (down 24 percent to $7.6/mmbtu), and Japan (down 35 percent to $10.5/mmbtu). Much of the decline has already occurred, in part due to lower oil prices. Prices are expected to remain weak in all regions due to surplus supply, relatively weak demand, and continuing low oil prices.

FIGURE 10 Coal and natural gas prices, monthly



Source: World Bank.
Note: Last observation is June 2014.

Metals

Metals prices declined only slightly in the second quarter (Figure 11). They rallied in April and early May amid falling stocks, rising seasonal demand, and some supply tightness. However, prices fell sharply during the remainder of the quarter—particularly for base metals. The downturn reflected concerns about demand (notably from China), ongoing supply increases, renewed dollar strength, and still-high stocks of a number of metals. Prices for all metals dropped in July, as concerns about the selloff in Chinese equities weighed on participants. The World Bank Metals Price Index for June was 43 percent below its February 2011 high as all metal markets tipped into surplus.

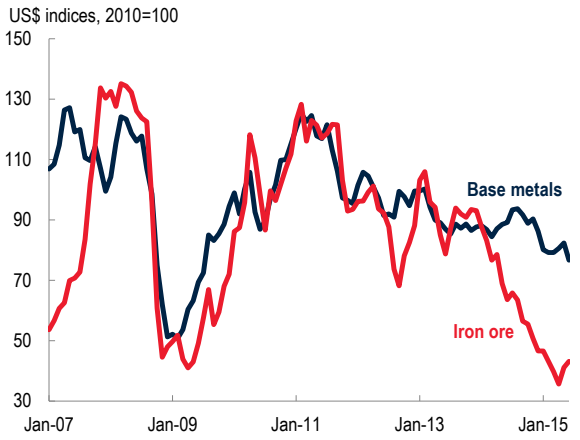
China's metal demand slowed in the first half of the year due to weakness in construction, infrastructure spending, manufacturing, and industrial sectors. Import demand, which was noticeably weak in the first quarter, improved somewhat in the second quarter, but the summer period is typically a slow period for metal business activity and contributed to weak prices recently. China's share of global metal consumption rose above 50 percent this year, mainly due to higher usage of aluminum, as demand for other base metals declined year-on-year. Outside of China, aggregate metal consumption declined slightly following relatively strong growth in 2014 (Figures 12 and 13).

On the supply side, production continues to climb following large investments and high prices in earlier years. Additional supply increases are expected in the near-to-medium term, which are expected to keep most markets in surplus. For some metals, prices have slid to where high-cost production is being closed. However, depreciation of producer currencies and falling production costs (e.g., energy) are helping sustain output.

Iron ore prices fell 7 percent—down a sixth straight quarter—on structural oversupply. However, prices jumped 20 percent in May and June due to tight supply in China, reflecting lower imports, declining stocks, and higher steel production. Shipments from Australia were disrupted by wet weather, and Brazil's exports also slowed, while China's steel output rose alongside a drop in inventories at ports and mills. However, the tightness was temporary and prices receded in mid-June as export flows resumed and stocks began to rebuild. Despite a seasonal uptick, steel output is down y-o-y in China (and globally) and little growth is anticipated due to the economic slowdown; China produces half of the world's steel. Significant new low-cost iron ore capacity continues to come online in Australia and Brazil, forcing closure of high-cost production in China and elsewhere. With additional new low-cost capacity expected in the next two years, further displacement will likely be required to balance the market.

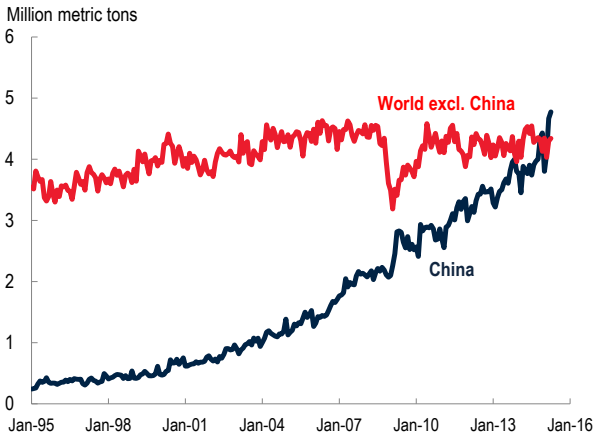
Tin prices plunged 15 percent, despite a continued sharp fall in LME inventories. Weak demand, particularly in the key electronics sector, increased supply from Myanmar, and destocking in China pushed prices lower. Nickel prices fell 9 percent as LME inventories continued to climb to record levels (Figure 14). Weak demand from the stainless steel sector (which consumes about 70 percent of the world's refined nickel), higher-than-expected production of nickel pig iron in China, and destocking of refined nickel contributed to the price decline. Indonesia's ore export ban in January

FIGURE 11 Metal price indices, monthly



Source: World Bank.
Note: Last observation is June 2015.

FIGURE 12 World refined metal consumption



Source: World Bureau of Metal Statistics.
Note: Total of aluminum, copper, lead, nickel, tin, and zinc.

2014—instituted to encourage domestic processing—looks set to tighten the market by 2016. China has been drawing on its sizeable inventories that were built prior to the Indonesian ban, and has increased lower grade ore imports from the Philippines. Once China's inventories are drawn the market is expected to tighten, as the Philippines cannot fully replace the losses from Indonesia.

Aluminum prices fell 2 percent, despite falling LME inventories, on slowing demand and higher exports from China. The market outside China remains in deficit because of smelter closures, but China's smelting capacity continues to expand, resulting in a global surplus. Aluminum demand remains relatively robust due to its diversified use in multiple sectors. A switch to light-weight aluminum bodies in trucks and autos is seen as a key demand driver going forward.

Lead prices rose 7 percent due to falling stocks and tightening supply, especially for recycled material from batteries. Lead supply—often a by-product of zinc mine production—will also be affected by zinc mine closures. Much will depend on China, where mine supply output has risen strongly in the past, but fell in 2014 due to environmental and profitability issues. The majority of lead supply will continue to come from battery recycling.

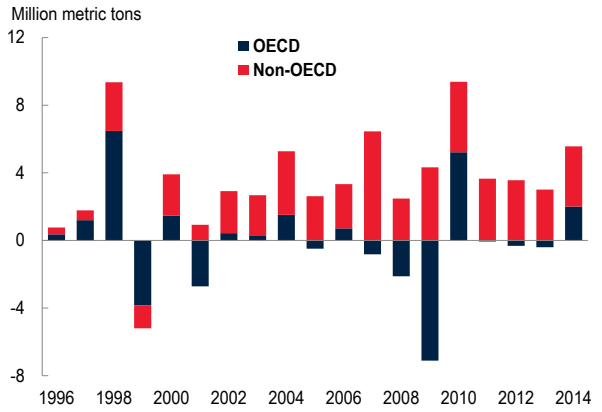
Zinc prices rose 5 percent on falling stocks and expectations of tighter markets going forward. The zinc market is facing further closure of large mines, with the massive Century mine in Australia ceasing operations in the third quarter. The closures are expected to move the market into significant deficit in 2016. Key uncertainties center on China's potential growth for zinc mining/smelting and the pace of stainless steel production, as more than half of zinc output is used to galvanize steel.

Copper prices rose 4 percent on higher seasonal demand, falling inventories, and some disruption to supply (e.g., flooding in Chile). However, prices fell from May highs owing to ongoing increases in new mine capacity, concerns about a slowdown in China, and exchange stocks that remain relatively high. New mine supply is coming on-line in the next few years, mainly from a number of mid-size mines in the Americas, and is expected to keep the market in surplus.

Metals prices are projected to decline by 17 percent in 2015 due to increases in new production capacity and slowing demand growth in China. The largest decline is for iron ore, expected to fall by 46 percent due to significant increases in new capacity from Australia and Brazil, followed by tin prices falling 30 percent. Most other prices are expected to decline as markets remain in surplus amid high stocks. Markets are expected to tighten in the medium term due to reduced supply-side investment, stronger global demand, and some specific factors, including Indonesia's ore export ban and closure of large zinc mines due to exhaustion.

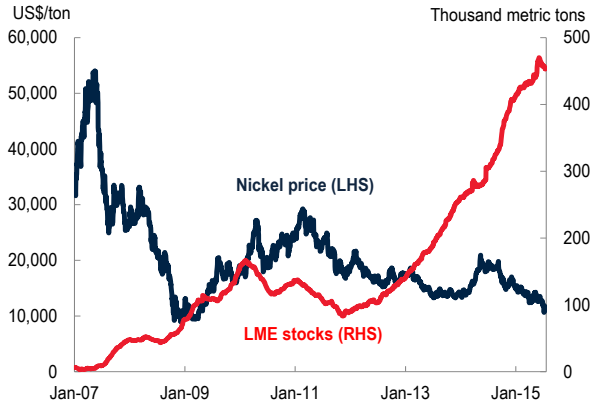
Downside risks to the forecast include slower demand in China and tightening environmental constraints to reduce pollution. On the supply side, lower costs and further producer currency depreciation could sustain surplus output and delay supply rebalancing. Upside risks are centered on stronger demand growth and supply side factors such as project delays and disruptions, falling ore grades, environmental constraints, and closure of high-cost capacity.

FIGURE 13 World metal consumption growth



Source: World Bureau of Metal Statistics.
Note: Consumption reflects the sum of aluminum, zinc, lead, nickel, and copper.

FIGURE 14 Nickel price and LME stocks, daily



Source: Bloomberg.
Note: Last observation is June 2015.

Precious metals

Precious metals prices fell more than 2 percent in the first quarter (Figure 15). Gold and silver declined near this rate on lower investment demand, and platinum dropped 6 percent on oversupply. Appreciation of the U.S. dollar and expectations of a U.S. interest rate hike dampened investor sentiment.

After a strong start to the year, precious metals prices fell initially on news of quantitative easing by the European Central Bank, followed by looser monetary measures in China and elsewhere. However, dollar strength and an anticipated U.S. interest rate increase—thought likely in September—became key drivers. Rising interest rates typically have negative implications for gold prices, as investors seek yield-bearing assets.

Physical demand for gold improved following a very weak first quarter, with strong demand in India, especially for festival-related gold jewelry. Demand in China remained subdued, with investors responding to surging equity prices at the expense of gold and other assets.

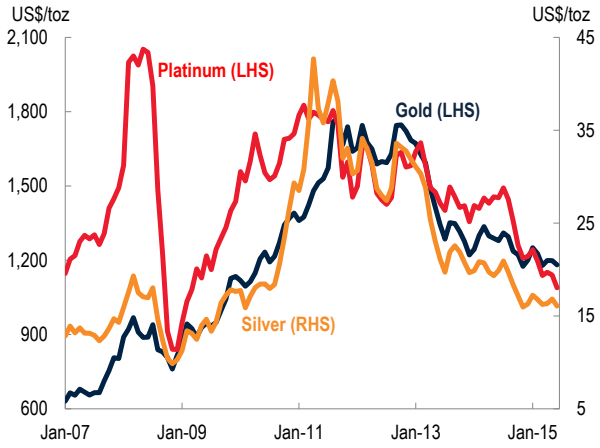
Gold mine supply continues to grow strongly, aided by falling costs and depreciating producer currencies, with most of the growth in Asia, Latin America, and Africa (Figure 16). Lower gold prices, however, will impinge on producer profitability and reduce capital expenditures, and may limit growth going forward. The industry also must contend with aging mines and deteriorating ore grades.

Silver prices trended similar to gold, with the gold/silver ratio around 73 the past nine months—up from an average 45 in 2011. While this has boosted investment demand relative to gold, investor sentiment overall remains weak. Industrial demand continues to grow strongly for some applications, notably as a catalyst to produce ethylene oxide, but intensity in the electronics and photography sectors is declining following earlier periods of high prices. Mine supply continues to expand, with gains mainly in the Americas and Asia.

Platinum prices fell more steeply than its peers, owing to weak investment demand, large stocks, growing mine supply, and reduced imports into China due to destocking. Demand from the auto sector remains buoyant due to increased auto production, and South African mining supply continues to recover from extended strikes last year. An expected global deficit this year is expected to be amply covered from inventory.

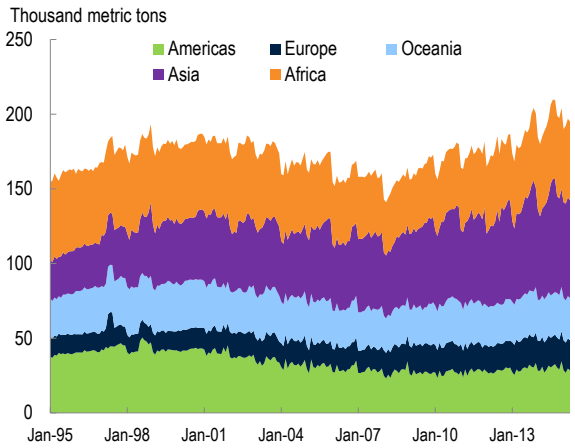
Precious metals prices are projected to decline 9 percent in 2015, mainly due to reduced investment demand, led by a 25 percent drop in platinum prices owing to expected surplus supply. Silver prices are expected to fall 22 percent, as the metal is generally thought to be more vulnerable than gold to shifting investment sentiment. Gold prices are projected to fall 12 percent, largely driven by expectations of a rising dollar and tightening in U.S. monetary policy. Investment demand will continue to be a key driver to precious metal prices going forward. Downside risks include stronger-than-expected monetary tightening and dollar strength, while significantly weaker U.S. growth (and the ramifications for the dollar and monetary policy) generate upside risk.

FIGURE 15 Precious metal prices, monthly



Source: World Bank.
Note: Last observation is June 2015.

FIGURE 16 World gold mine production



Source: World Bureau of Metal Statistics.
Note: Last observation is January 2015.

Fertilizers

Fertilizer prices fell 4 percent in the first quarter, down a second consecutive quarter, due to weak demand, destocking, and lower supply costs (Figure 17). Urea prices led the drop, declining 6 percent, while phosphate prices fell 3-5 percent. Potassium prices rose slightly. Buyers generally limited purchases, partly due to lower crop values and currency depreciation, and destocked in anticipation of lower prices.

The large decline in urea prices was due to oversupply amid weak demand. Increases in new capacity in a number of countries—Algeria, Arab Republic of Egypt, Indonesia, and Saudi Arabia—and lower energy prices for high cost producers in Europe (spot/hub based gas), Ukraine (oil-indexed gas), and China (coal) contributed to downward pressure on prices. Meanwhile, demand has been weak, particularly in Brazil where farmers are expected to significantly reduce fertilizer applications due to low crop prices and various cost-related concerns.

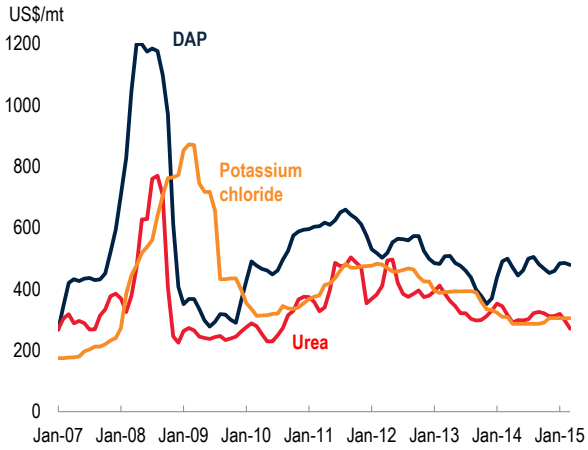
Phosphate (DAP and TSP) prices fell by 5 and 3 percent, respectively, due to weak demand, especially in Brazil. Weak crop prices, currency depreciation, and tight credit availability in the country has resulted in much weaker demand year-to-date. The weakness is particularly noticeable during the prime fertilizer import season. Third quarter demand is generally weaker as the U.S. and EU application season comes to an end and as Indian demand slows. On the supply side, rubble devaluation pushed Russia to the bottom of the cost curve and exports have increased.

Potash (potassium chloride) prices continued to edge higher during the quarter, but the market remains vulnerable, particularly due to subdued purchases from Brazil owing to high stocks and currency/credit issues. Brazil's potash imports are down more than 20 percent year-to-date. Demand was also relatively weak in the U.S., Europe, and Asia, and global consumption is expected to fall this year. Meanwhile, supplies continue to increase and producers face strong resistance to modest prices increases amid contracting demand.

Fertilizer prices are projected to decline by 5 percent in 2015, because of weak demand, rising supply, and destocking. Nutrient application continues to increase (Figure 18), but farmers are likely to thrift on fertilizer use—despite record harvests—to reduce costs and offset effects of lower crop prices and currency depreciation. Prices are expected to increase slightly over the medium term due to expected moderate growth in demand, higher energy costs, and the ongoing need for primary and processed supply. For potash, significant new capacity is expected to come online the next few years, and lower prices may be needed to balance the market.

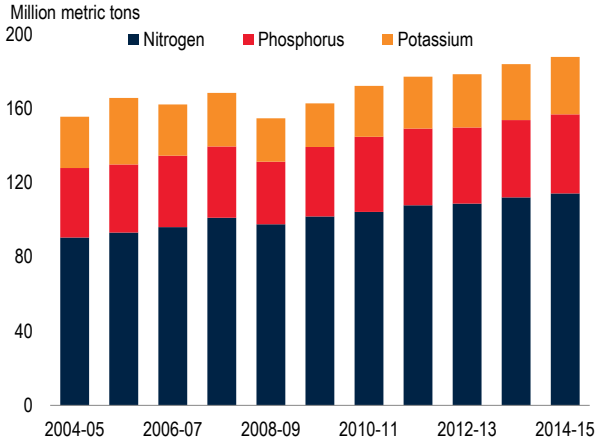
Risks are skewed to the downside owing to lower crop prices following two years of record or near-record harvests, which may result in farmers reducing fertilizer application rates. Subsidy reform in large consuming countries could also curtail demand and also adjust current imbalances in fertilizer use, notably in India which favors urea application over phosphates and potash. Lower energy costs would also tend to expand potential supply and keep markets in surplus. On the upside, higher agriculture prices would encourage greater fertilizer use and tend to tighten markets.

FIGURE 17 Fertilizer prices



Source: World Bank.
Note: Last observation is June 2015.

FIGURE 18 Global nutrient consumption



Source: Agrium Fact Book, International Fertilizer Association.
Note: Consumption does not include industrial use.

Agriculture

Agricultural prices continued their broad-based declines in the second quarter of 2015, with the overall index down 3 percent for the quarter and 15 percent lower than a year prior (Figure 19). The three key food sub-indices—grains, edible oils & meals, and other food items—declined about 5 percent in the quarter. Beverage prices remained virtually unchanged in the second quarter, while agricultural raw materials were up almost 2 percent for the quarter.

Food

Grain prices declined 6 percent in the second quarter, almost 20 percent lower than a year ago. The largest decline was in wheat, down almost 10 percent in the quarter, followed by rice (down 8 percent) and maize (down 3 percent).

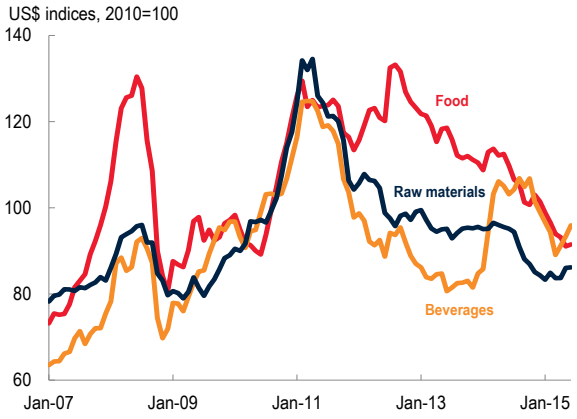
Global production of *wheat* is expected to decline marginally in 2015-16 from its record 2014-15 level; output reductions in the EU, India, and Russia will be offset by increases in China and the United States. Trade is expected to increase for the year following rising import demand by Brazil, Indonesia, and the Philippines. The market for *maize* is expected to be stable, with global production projected to reach 987 million tons this season, very close to the May 2015 assessment. Some weather-related production declines in the United States, Brazil, and Ukraine will be offset by an increase in China's output. Lastly, global *rice* production is set to increase in 2015-16 by 4 million tons (from last season's 476 million tons) in response to better crops in Asian rice producing countries, including China, India, and Indonesia.

Global supplies of all three grains (beginning stocks plus production) are expected to reach 2.69 million tons in 2015-16, down marginally from last season's record of 2.71 million tons, according to the U.S. Department of Agriculture's July 2015 assessment. The assessment is the third for the 2015-16 crop season. However, because global consumption is expected to increase by almost 1 percent, the stock-to-use ratios of rice and maize will decline marginally, while that of wheat will increase (Figure 20).

The World Bank's *edible oils and meals* price index declined 4 percent in the quarter, led by a large decline in soybean meal and soybeans (down 8 and 3 percent, respectively). Most edible oils fell during the quarter: palm kernel and its close substitute, coconut oil, fell 10 and 3 percent, respectively, while palm oil fell 3 percent and soybean oil was little changed.

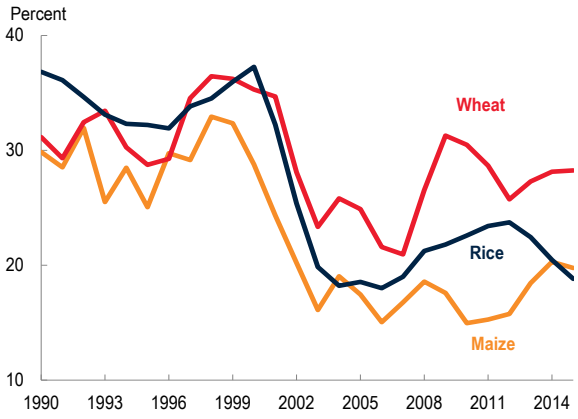
The oilseed outlook is stable as well, with global supplies (beginning stocks plus production) of the 10 major oilseeds expected to reach 628 million tons in 2015-16, up from 610 million tons the previous season. Yet, all of the increase in supplies will come from a large reduction in stocks, mostly from soybeans. The outlook is positive for the 17 most consumed edible oils: global production for 2015-16 will reach 207 million tons, up from last season's 202 million tons. Most of the increase is expected in soybean oil, due to high crop yields in Argentina and Brazil, and palm oil, due to increased output in Indonesia.

FIGURE 19 Agriculture price indices, monthly



Source: World Bank.
Note: Last observation is June 2015.

FIGURE 20 Stocks-to-use ratios



Source: U.S. Department of Agriculture (July 2015 update).
Note: Last observation is 2015-16.

In view of well-supplied markets for most grains, oilseeds, and edible oils, the World Bank's food commodity price index is expected to average 12 percent lower in 2015 compared to 2014, on top of a 7 percent decline in 2014. Edible oils and meals will decline the most (down 18 percent), followed by grains (down 9 percent), and other food items (down 7 percent).

A number of assumptions, along with associated risks, underpin the food commodity price projections. Although still in the early stages, global grain supplies in 2015-16 will be marginally lower, down 1 percent from last season (Figure 21). Global edible oil and meals supplies are each expected to rise about 3 percent from last season.

A weather-related risk is El Niño. Currently, all international climate models suggest that El Niño (which is expected to soon reach peak strength) will persist until at least the end of 2015. El Niño conditions are expected to strengthen through the growing season of the northern hemisphere. Currently, weather conditions are drier than normal in several southeast Asian countries, including Indonesia, Philippines, Thailand, and Vietnam, a pattern consistent with previous El Niño. Later in the season, dry weather conditions may spread to Northern China, given the historical patterns of El Niño. The monsoon was delayed in India, most likely due to El Niño, but it is still too early to assess if it will have an impact on agricultural production.

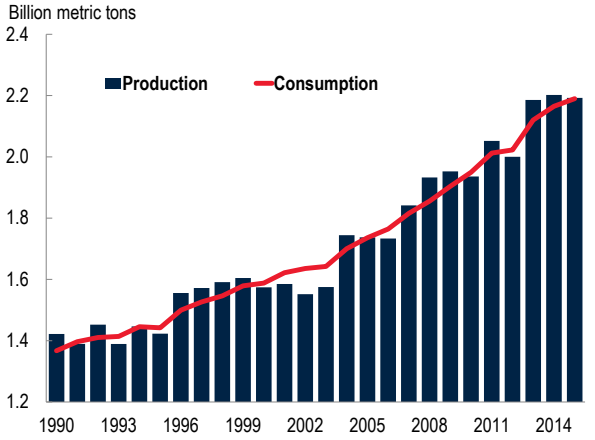
Oil prices are expected to average $57/bbl in 2015 down 40 percent from 2016, while fertilizer prices are projected to fall almost 5 percent in 2015 (on top of last year's 12 percent decline). Given the high energy requirements of agriculture—estimated to be four to five time more energy intensive than manufacturing—low oil and fertilizer prices will ease the cost pressures that most food commodities experienced during the post-2005 price boom.

The outlook for agricultural prices also assumes that biofuels will continue to play a key (albeit less prominent) role in the behavior of agricultural commodity markets. Currently, biofuels account close 1.5 mb/d in energy-equivalent terms, up from 0.4 mb/d a decade ago (Figure 22). Although biofuels will grow over the projection period, the growth will be much slower than earlier assessments. In fact, some analysts point to a slight reduction in global biodiesel production during 2015. Indeed, policy makers are increasingly realizing that the environmental and energy independence benefits of bio-fuels may not outweigh their costs.

On trade policies, exports restrictions are unlikely to be imposed, given that most markets are well-supplied. Even if some restrictions are imposed, their impact on prices is likely to be muted.

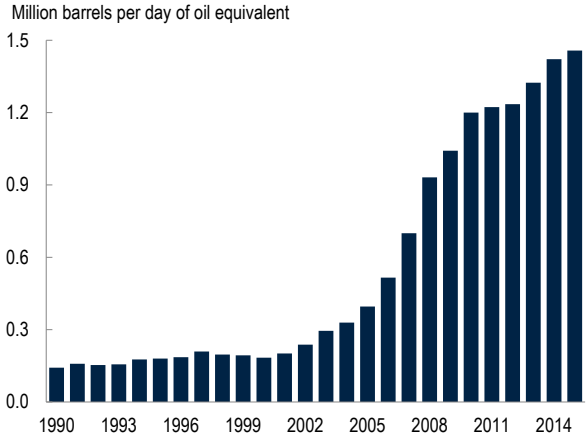
Lastly, investment fund activity, which was on the rise for almost 15 years, has stabilized at about $320 billion, according to Barclayhedge, which tracks developments in the hedge fund industry. The continuing weakness in prices across the entire commodity spectrum is likely to perpetuate the outflow of funds invested in commodities.

FIGURE 21 Global grain production and consumption



Source: U.S. Department of Agriculture (July 2015 update).
Note: Last observation is 2015-16.

FIGURE 22 Global biofuel production



Source: BP Statistical Review of World Energy and World Bank.
Note: The last observation is 2015 and is a projection.

Beverages

The World Bank's Beverage Price Index changed little in the second quarter, but individual prices followed diverse paths: tea and cocoa prices rose 14 and 5 percent, respectively, while coffee prices fell (down 9 percent for arabica and 6 percent for robusta).

Arabica prices are 25 percent lower than last year's second quarter—a period when the market experienced a large production shortfall due to poor weather in Brazil. Robusta price have fallen as well, down 6 for the quarter and 12 percent from a year ago (Figure 23). The coffee market is projected to return to a surplus in 2015-16 with Brazil (the world's top arabica supplier) bouncing back to 55 million bags, and Vietnam (the world's top robusta supplier) maintaining its output above 26 million bags. As a result, arabica and robusta prices in 2015 are expected to be 16 and 10 percent lower, respectively, compared to a year ago, with further (marginal) weakening in 2016.

Cocoa prices gained more than 5 percent in the second quarter, mostly due to a production shortfall in Ghana (from 1.02 to 0.75 million tons) and, to a lesser extent, production declines in Côte d'Ivoire. Together, these two countries account for 60 percent of global cocoa supplies. Cocoa prices are expected to decline marginally in 2015. Finally, following several months of relative stability, *tea* prices gained momentum and rose 14 percent in the quarter. A damaged crop in East Africa was the primary reason. Following a marginal decline in 2015, tea prices are expected to recover in 2016 and beyond.

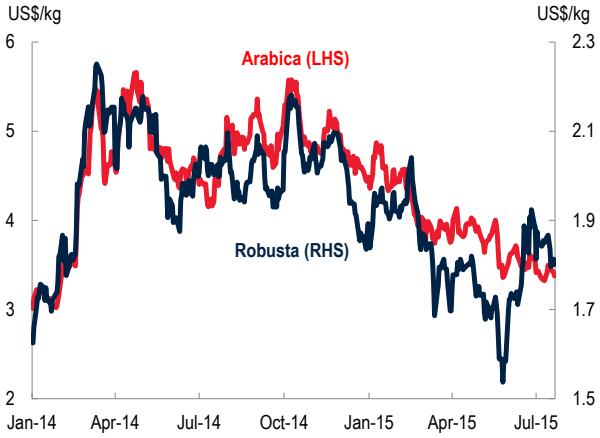
Agricultural raw materials

The World Bank's Raw Material Price Index changed little in the second quarter (up 1 percent), but it is 35 percent lower than its early 2011 peak. This is remarkably similar to the decline of the other two industrial commodity indices—energy and metals. The weakness of industrial commodity prices partly reflects the fragile recovery of the global economy.

Cotton prices gained 5 percent in the second quarter as the market moved into deficit for the first time in six years. In the previous five consecutive seasons, cotton production exceeded consumption, with the surplus going mostly to stock-building by China, which currently holds 55 percent of world stocks (Figure 24). Global cotton stocks currently account for almost one full year of consumption, a highly atypical situation. Although cotton prices are expected to average 13 percent lower in 2015, a moderate price recovery is expected for 2016 and 2017, based on the assumption that a draw-down in stocks will not take place.

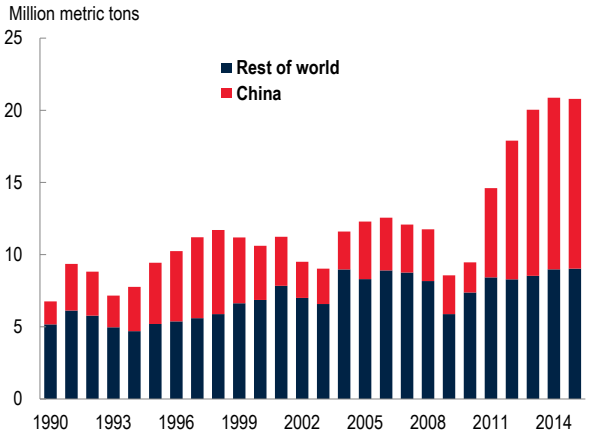
Natural rubber prices gained 3 percent in the quarter, but are still 15 percent lower than a year ago. Rubber prices had been on the decline in the past two years due to weak import demand by China. The modest price recovery reflects reduced tapping by major East Asian producers, especially Thailand and Indonesia, whose exports fell 8 and 14 percent, respectively, during the first quarter. Thailand has also engaged in stock-piling, thus reducing supply availability. Rubber prices, projected to average $1.80/kg in 2015, are expected to gradually recover in 2016 and beyond.

FIGURE 23 Coffee prices, daily



Source: World Bank.
Note: Last observation is July 21, 2015.

FIGURE 24 Cotton stocks



Source: International Cotton Advisory Committee.
Note: Last observation is 2015-16.

Appendix A

Historical commodity prices
Price forecasts

TABLE A.1 Commodities prices

Commodity	Unit		2013	2014	Q1 2014	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Apr 2015	May 2015	Jun 2015
Energy												
Coal, Australia	$/mt	*	84.6	70.1	77.1	72.7	67.9	62.9	61.2	57.8	60.4	58.7
Coal, Colombia	$/mt		71.9	65.9	68.4	64.8	66.8	63.7	57.3	55.3	54.3	53.3
Coal, South Africa	$/mt		80.2	72.3	78.4	75.0	70.2	65.8	62.1	59.3	61.9	61.2
Crude oil, average	$/bbl		104.1	96.2	103.7	106.3	100.4	74.6	51.6	57.5	62.5	61.3
Crude oil, Brent	$/bbl	*	108.9	98.9	107.9	109.8	102.1	76.0	53.9	59.4	64.6	62.3
Crude oil, Dubai	$/bbl	*	105.4	96.7	104.4	106.1	101.5	74.6	52.2	58.8	63.7	61.8
Crude oil, WTI	$/bbl	*	97.9	93.1	98.7	103.1	97.5	73.2	48.6	54.4	59.3	59.8
Natural gas, Index	2010=100		112.1	111.7	127.8	115.5	102.0	101.6	85.4	73.5	75.8	74.7
Natural gas, Europe	$/mmbtu	*	11.79	10.05	11.26	10.23	9.22	9.50	8.60	7.42	7.27	7.29
Natural gas, US	$/mmbtu	*	3.73	4.37	5.18	4.59	3.94	3.77	2.87	2.58	2.84	2.77
Natural gas, Japan	$/mmbtu	*	15.96	16.04	16.66	16.41	15.37	15.70	14.26	10.22	10.00	9.50
Non-Energy												
Agriculture												
Beverages												
Cocoa	$/kg	**	2.44	3.06	2.95	3.08	3.23	2.99	2.92	2.87	3.10	3.24
Coffee, arabica	$/kg	**	3.08	4.42	3.82	4.67	4.56	4.64	3.89	3.62	3.49	3.52
Coffee, robusta	$/kg	**	2.08	2.22	2.12	2.26	2.22	2.26	2.12	2.03	1.93	1.99
Tea, average	$/kg		2.86	2.72	2.65	2.80	2.80	2.64	2.43	2.64	2.81	2.86
Tea, Colombo	$/kg	**	3.45	3.54	3.72	3.60	3.45	3.38	3.16	3.06	2.96	2.96
Tea, Kolkata	$/kg	**	2.73	2.58	1.94	2.81	2.93	2.65	1.82	2.29	2.65	2.64
Tea, Mombasa	$/kg	**	2.40	2.05	2.29	1.98	2.01	1.90	2.31	2.56	2.83	2.97
Food												
Oils and Meals												
Coconut oil	$/mt	**	941	1,280	1,343	1,387	1,204	1,185	1,147	1,080	1,133	1,110
Copra	$/mt		627	854	896	923	805	792	760	714	748	740
Fishmeal	$/mt		1,747	1,709	1,583	1,693	1,767	1,792	1,712	1,539	1,525	1,490
Groundnuts	$/mt		1,378	1,296	1,329	1,224	1,276	1,356	1,333	1,300	1,290	1,280
Groundnut oil	$/mt	**	1,773	1,313	1,311	1,228	1,345	1,368	1,371	1,348	1,345	1,345
Palm oil	$/mt	**	857	821	911	887	772	715	683	662	659	670
Palmkernel oil	$/mt		897	1,121	1,278	1,262	988	958	1,046	985	966	885
Soybean meal	$/mt	**	545	528	582	566	493	471	431	395	389	408
Soybean oil	$/mt	**	1,057	909	977	967	865	828	774	749	781	796
Soybeans	$/mt	**	538	492	552	518	457	440	411	395	389	408
Grains												
Barley	$/mt	**	202	138	130	138	130	153	189	205	194	203
Maize	$/mt	**	259	193	210	214	174	174	174	172	166	167
Rice, Thailand 5%	$/mt	**	506	423	444	393	433	421	417	399	381	376
Rice, Thailand 25%	$/mt		473	382	375	351	400	402	397	384	368	365
Rice, Thailand A1	$/mt		474	425	427	398	449	428	416	400	387	376
Rice, Vietnam 5%	$/mt		392	407	391	389	435	414	363	354	351	349
Sorghum	$/mt		243	207	224	219	184	201	237	220	213	213
Wheat, US HRW	$/mt	**	312	285	297	322	262	258	239	223	215	210
Wheat, US SRW	$/mt		277	245	264	264	214	239	223	210	201	205
Other Food												
Bananas, EU	$/kg		1.02	1.04	1.05	1.14	0.99	0.99	0.92	0.91	0.94	0.90
Bananas, US	$/kg	**	0.92	0.93	0.95	0.92	0.94	0.90	0.98	1.03	0.94	0.92
Meat, beef	$/kg	**	4.07	4.95	4.23	4.30	5.58	5.68	4.76	4.73	4.38	4.29
Meat, chicken	$/kg	**	2.29	2.43	2.31	2.40	2.49	2.51	2.51	2.53	2.56	2.56
Meat, sheep	$/kg		5.17	6.39	6.32	6.70	6.49	6.05	5.60	5.38	5.49	5.29
Oranges	$/kg	**	0.97	0.78	0.78	0.84	0.77	0.74	0.70	0.61	0.61	0.63
Shrimp	$/kg		13.84	17.25	17.09	17.75	18.08	16.08	15.84	15.65	15.54	15.76
Sugar, EU	$/kg	**	0.43	0.43	0.45	0.45	0.43	0.41	0.37	0.35	0.36	0.37
Sugar, US	$/kg	**	0.45	0.53	0.47	0.55	0.56	0.55	0.54	0.54	0.54	0.54
Sugar, World	$/kg	**	0.39	0.37	0.37	0.40	0.38	0.35	0.32	0.29	0.29	0.27

TABLE A.1 Commodities prices

Commodity	Unit		2013	2014	Q1 2014	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Apr 2015	May 2015	Jun 2015
Raw Materials												
Timber												
Logs, Africa	$/cum		464	465	480	480	464	437	395	378	391	392
Logs, S.E. Asia	$/cum	**	305	282	290	292	286	260	249	249	249	249
Plywood	¢/sheets		560	517	532	535	525	478	458	457	452	441
Sawnwood, Africa	$/cum		749	789	793	806	800	758	726	716	741	745
Sawnwood, S.E. Asi	$/cum	**	853	898	902	917	910	863	826	814	842	848
Woodpulp	$/mt		823	877	870	888	875	875	875	875	875	875
Other Raw Materials												
Cotton	$/kg	**	1.99	1.83	2.07	2.04	1.70	1.52	1.52	1.58	1.61	1.60
Rubber, RSS3	$/kg	**	2.79	1.96	2.25	2.12	1.84	1.62	1.73	1.70	1.84	1.83
Rubber, TSR20	$/kg		2.52	1.71	1.98	1.73	1.63	1.51	1.42	1.41	1.55	1.59
Fertilizers												
DAP	$/mt	**	445	472	476	459	495	460	483	464	470	473
Phosphate rock	$/mt	**	148	110	104	110	112	115	115	115	115	115
Potassium chloride	$/mt	**	379	297	314	287	287	301	305	307	307	307
TSP	$/mt	**	382	388	366	369	413	405	400	380	380	380
Urea, E. Europe	$/mt	**	340	316	337	296	316	315	296	259	280	292
Metals and Minerals												
Aluminum	$/mt	**	1,847	1,867	1,709	1,800	1,990	1,970	1,802	1,819	1,804	1,688
Copper	$/mt	**	7,332	6,863	7,030	6,795	6,996	6,632	5,833	6,042	6,295	5,833
Iron ore	$/dmt	**	135.4	96.9	120.4	102.6	90.3	74.3	63.0	52.0	60.0	63.0
Lead	$/mt	**	2,140	2,095	2,101	2,097	2,182	2,001	1,810	2,005	1,992	1,830
Nickel	$/mt	**	15,032	16,893	14,661	18,468	18,584	15,860	14,393	12,831	13,511	12,825
Tin	$/mt	**	22,283	21,899	22,636	23,146	21,915	19,898	18,370	15,901	15,804	15,065
Zinc	$/mt	**	1,910	2,161	2,026	2,071	2,311	2,235	2,080	2,213	2,282	2,082
Precious Metals												
Gold	$/toz	***	1,411	1,266	1,293	1,289	1,281	1,199	1,219	1,199	1,199	1,182
Platinum	$/toz	***	1,487	1,384	1,427	1,446	1,433	1,228	1,193	1,151	1,140	1,089
Silver	$/toz	***	23.85	19.07	20.48	19.66	19.68	16.47	16.75	16.34	16.83	16.08
Commodity Price Indices (2010=100)												
Energy			127.4	118.3	128.3	129.6	121.6	93.7	67.3	72.2	77.9	76.4
Non-energy			101.7	97.0	99.1	99.3	96.8	92.7	86.7	84.8	85.4	84.5
Agriculture			106.3	102.7	105.5	106.6	101.2	97.7	92.9	90.5	90.1	90.7
Beverages			83.3	101.8	94.5	104.8	105.3	102.4	93.4	91.2	93.4	95.9
Food			115.6	107.4	111.8	111.5	104.5	101.7	96.5	93.2	91.0	91.5
Oils and Meals			115.9	109.0	120.1	116.1	102.3	97.5	91.3	86.6	86.3	89.2
Grains			128.2	103.9	110.1	110.9	97.7	96.9	95.4	92.5	88.9	88.3
Other Food			103.9	108.4	102.4	105.9	113.4	111.7	104.3	102.4	99.2	97.4
Raw Materials			95.4	91.9	95.6	95.6	91.1	85.5	84.0	83.7	86.1	86.2
Timber			102.6	104.9	105.8	107.4	106.3	99.9	95.7	94.6	97.2	97.7
Other Raw Materials			87.6	77.8	84.3	82.6	74.5	69.7	71.1	71.8	73.9	73.6
Fertilizers			113.7	100.5	102.5	95.8	101.5	102.1	99.3	93.0	96.1	97.8
Metals and Minerals			90.8	84.8	85.7	84.9	87.1	81.4	72.7	72.1	74.6	70.4
Base Metals		****	90.3	89.0	86.5	88.3	92.9	88.5	79.5	80.6	82.4	76.7
Precious Metals			115.1	101.1	104.3	103.3	102.8	94.2	95.6	93.9	94.3	92.4

Sources: See Appendix C.
Notes: * Included in the energy index; ** Included in the non-energy index; *** Included in the precious metals index: **** Metals and Minerals exluding iron ore.

TABLE A.2 Commodities price forecasts, nominal U.S. dollars

				Forecasts						
Commodity	Unit	2013	2014	2015	2016	2017	2018	2019	2020	2025
Energy										
Coal, Australia	$/mt	84.6	70.1	58.0	59.5	61.1	62.6	64.3	66.0	75.0
Crude oil, avg, spot	$/bbl	104.1	96.2	57.5	61.2	63.7	66.3	69.1	71.9	88.3
Natural gas, Europe	$/mmbtu	11.79	10.05	7.60	7.73	7.86	8.00	8.13	8.27	9.00
Natural gas, US	$/mmbtu	3.73	4.37	2.80	3.02	3.26	3.52	3.80	4.10	6.00
Natural gas, Japan	$/mmbtu	15.96	16.04	10.50	10.64	10.78	10.93	11.08	11.22	12.00
Non-Energy										
Agriculture										
Beverages										
Cocoa	$/kg	2.44	3.06	3.00	2.91	2.82	2.73	2.65	2.57	2.20
Coffee, Arabica	$/kg	3.08	4.42	3.70	3.68	3.66	3.64	3.62	3.60	3.50
Coffee, robusta	$/kg	2.08	2.22	2.00	1.98	1.96	1.94	1.92	1.90	1.80
Tea, avgerage	$/kg	2.86	2.72	2.65	2.69	2.73	2.78	2.82	2.87	3.10
Food										
Oils and Meals										
Coconut oil	$/mt	941	1,280	1,125	1,112	1,099	1,086	1,073	1,061	1,000
Groundnut oil	$/mt	1,773	1,313	1,370	1,400	1,430	1,462	1,494	1,526	1,700
Palm oil	$/mt	857	821	670	682	694	707	719	732	800
Soybean meal	$/mt	545	528	410	417	423	430	437	444	480
Soybean oil	$/mt	1,057	909	780	800	820	840	862	883	1,000
Soybeans	$/mt	538	492	410	420	430	440	451	462	520
Grains										
Barley	$/mt	202	138	190	191	192	193	194	195	200
Maize	$/mt	259	193	175	179	183	187	192	196	220
Rice, Thailand, 5%	$/mt	506	423	400	401	402	403	404	405	410
Wheat, US, HRW	$/mt	312	285	235	238	242	245	248	252	270
Other Food										
Bananas, EU	$/kg	0.92	0.93	0.97	0.96	0.96	0.95	0.95	0.94	0.92
Meat, beef	$/kg	4.07	4.95	4.50	4.47	4.44	4.41	4.38	4.35	4.20
Meat, chicken	$/kg	2.29	2.43	2.50	2.47	2.44	2.41	2.38	2.35	2.20
Oranges	$/kg	0.97	0.78	0.65	0.68	0.70	0.73	0.76	0.79	0.95
Shrimp	$/kg	13.84	17.25	16.00	15.67	15.35	15.03	14.72	14.42	13.00
Sugar, World	$/kg	0.39	0.37	0.30	0.31	0.31	0.32	0.33	0.34	0.38
Raw Materials										
Timber										
Logs, Africa	$/cum	464	465	390	400	410	420	431	442	500
Logs, S.E. Asia	$/cum	305	282	255	262	270	278	286	294	340
Sawnwood, S.E. Asia	$/cum	853	898	820	836	853	870	888	906	1,000
Other Raw Materials										
Cotton A	$/kg	1.99	1.83	1.60	1.65	1.71	1.76	1.82	1.88	2.20
Rubber, RSS3	$/kg	2.79	1.96	1.80	1.87	1.94	2.01	2.09	2.16	2.60
Tobacco	$/mt	4,589	4,991	4,900	4,858	4,817	4,776	4,736	4,696	4,500
Fertilizers										
DAP	$/mt	445	472	470	467	464	461	458	455	440
Phosphate rock	$/mt	148	110	110	108	106	104	102	99	90
Potassium chloride	$/mt	379	297	300	301	302	303	304	305	310
TSP	$/mt	382	388	390	386	382	378	373	369	350
Urea, E. Europe	$/mt	340	316	280	280	280	280	280	280	280
Metals and Minerals										
Aluminum	$/mt	1,847	1,867	1,765	1,804	1,845	1,886	1,928	1,971	2,200
Copper	$/mt	7,332	6,863	5,850	5,956	6,064	6,174	6,285	6,399	7,000
Iron ore	$/dmt	135.4	96.9	55.0	56.7	58.5	60.4	62.3	64.2	75.0
Lead	$/mt	2,140	2,095	1,875	2,100	2,131	2,163	2,196	2,228	2,400
Nickel	$/mt	15,032	16,893	13,000	13,572	14,170	14,793	15,445	16,125	20,000
Tin	$/mt	22,283	21,899	16,100	16,685	17,290	17,918	18,569	19,243	23,000
Zinc	$/mt	1,910	2,161	2,125	2,400	2,432	2,464	2,496	2,529	2,700
Precious Metals										
Gold	$/toz	1,411	1,266	1,175	1,156	1,138	1,120	1,102	1,084	1,000
Silver	$/toz	23.85	19.07	15.75	15.87	15.99	16.12	16.24	16.36	17.00
Platinum	$/toz	1,487	1,384	1,100	1,135	1,170	1,207	1,245	1,285	1,500

Next update: October 2015.

TABLE A.3 Commodity price forecasts, constant (2010) U.S. dollars

				Forecasts						
Commodity	Unit	2013	2014	2015	2016	2017	2018	2019	2020	2025
Energy										
Coal, Australia	$/mt	79.7	66.2	54.9	55.3	55.8	56.4	56.9	57.5	60.2
Crude oil, avg, spot	$/bbl	98.1	90.9	54.4	56.8	58.2	59.7	61.2	62.7	70.8
Natural gas, Europe	$/mmbtu	11.11	9.49	7.19	7.18	7.18	7.19	7.20	7.21	7.22
Natural gas, US	$/mmbtu	3.52	4.13	2.65	2.81	2.98	3.17	3.36	3.57	4.81
Natural gas, Japan	$/mmbtu	15.04	15.15	9.94	9.89	9.86	9.83	9.81	9.78	9.62
Non-Energy										
Agriculture										
Beverages										
Cocoa	$/kg	2.30	2.89	2.84	2.70	2.58	2.46	2.35	2.24	1.76
Coffee, Arabica	$/kg	2.90	4.18	3.50	3.42	3.34	3.27	3.20	3.14	2.81
Coffee, robusta	$/kg	1.96	2.09	1.89	1.84	1.79	1.74	1.70	1.65	1.44
Tea, avgerage	$/kg	2.70	2.57	2.51	2.50	2.50	2.50	2.50	2.50	2.49
Food										
Oils and Meals										
Coconut oil	$/mt	887	1,209	1,065	1,033	1,004	977	950	924	802
Groundnut oil	$/mt	1,672	1,240	1,297	1,301	1,307	1,315	1,322	1,330	1,363
Palm oil	$/mt	808	776	634	634	634	636	637	638	642
Soybean meal	$/mt	514	499	388	387	387	387	387	387	385
Soybean oil	$/mt	996	859	738	743	749	756	763	770	802
Soybeans	$/mt	508	464	388	390	393	396	399	402	417
Grains										
Barley	$/mt	191	130	180	177	175	174	172	170	160
Maize	$/mt	245	182	166	166	167	169	170	171	176
Rice, Thailand, 5%	$/mt	477	399	379	373	367	362	358	353	329
Wheat, US, HRW	$/mt	294	269	222	221	221	220	220	220	217
Other Food										
Bananas, EU	$/kg	0.87	0.88	0.92	0.90	0.88	0.86	0.84	0.82	0.74
Meat, beef	$/kg	3.84	4.67	4.26	4.15	4.06	3.96	3.88	3.79	3.37
Meat, chicken	$/kg	2.16	2.29	2.37	2.29	2.23	2.16	2.10	2.04	1.76
Oranges	$/kg	0.91	0.74	0.62	0.63	0.64	0.66	0.67	0.68	0.76
Shrimp	$/kg	13.05	16.29	15.14	14.56	14.03	13.52	13.04	12.57	10.43
Sugar, World	$/kg	0.37	0.35	0.28	0.29	0.29	0.29	0.29	0.29	0.30
Raw Materials										
Timber										
Logs, Africa	$/cum	437	439	369	371	375	378	381	385	401
Logs, S.E. Asia	$/cum	288	266	241	244	247	250	253	257	273
Sawnwood, S.E. Asia	$/cum	804	848	776	777	780	783	786	789	802
Other Raw Materials										
Cotton A	$/kg	1.88	1.73	1.51	1.53	1.56	1.58	1.61	1.63	1.76
Rubber, RSS3	$/kg	2.63	1.85	1.70	1.73	1.77	1.81	1.85	1.89	2.09
Tobacco	$/mt	4,327	4,714	4,638	4,514	4,403	4,296	4,193	4,092	3,609
Fertilizers										
DAP	$/mt	419	446	445	434	424	414	405	396	353
Phosphate rock	$/mt	140	104	104	100	97	93	90	87	72
Potassium chloride	$/mt	357	281	284	280	276	273	269	266	249
TSP	$/mt	360	367	369	358	349	340	331	322	281
Urea, E. Europe	$/mt	321	299	265	260	256	252	248	244	225
Metals and Minerals										
Aluminum	$/mt	1,741	1,764	1,671	1,676	1,686	1,696	1,707	1,717	1,764
Copper	$/mt	6,913	6,482	5,537	5,533	5,542	5,553	5,565	5,577	5,614
Iron ore	$/dmt	127.6	91.6	52.1	52.7	53.5	54.3	55.1	56.0	60.2
Lead	$/mt	2,018	1,979	1,775	1,951	1,948	1,946	1,944	1,942	1,925
Nickel	$/mt	14,173	15,955	12,305	12,609	12,950	13,307	13,674	14,052	16,041
Tin	$/mt	21,010	20,683	15,239	15,501	15,802	16,117	16,440	16,769	18,447
Zinc	$/mt	1,801	2,041	2,011	2,230	2,222	2,216	2,210	2,204	2,165
Precious Metals										
Gold	$/toz	1,331	1,195	1,112	1,074	1,040	1,007	975	945	802
Silver	$/toz	22.49	18.01	14.91	14.74	14.62	14.50	14.38	14.26	13.63
Platinum	$/toz	1,402	1,307	1,041	1,054	1,070	1,086	1,103	1,119	1,203

Sources and Notes: See Appendix C.

Next update: October 2015.

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

Commodity	Unit	2013	2014	Forecasts 2015	2016	2017	2018	2019	2020	2025
Nominal US dollars (2010=100)										
Energy		127.4	118.3	72.5	76.9	80.1	83.4	86.9	90.5	111.4
Non-energy commodities		101.7	97.0	85.2	86.5	87.6	88.8	90.1	91.4	98.2
Agriculture		106.3	102.7	91.7	92.6	93.7	94.7	95.8	96.9	103.0
Beverages		83.3	101.8	93.4	92.3	91.2	90.1	89.1	88.2	83.9
Food		115.6	107.4	94.2	95.3	96.5	97.7	99.0	100.2	106.8
Oils and meals		115.9	109.0	89.3	91.0	92.7	94.4	96.2	98.0	107.7
Grains		128.2	103.9	94.1	95.5	96.9	98.3	99.7	101.1	108.8
Other food		103.9	108.4	100.7	100.9	101.2	101.6	101.9	102.3	103.8
Raw materials		95.4	91.9	84.6	86.3	88.0	89.7	91.5	93.4	103.5
Timber		102.6	104.9	95.6	97.7	99.8	102.0	104.3	106.6	118.8
Other Raw Materials		87.6	77.8	72.7	73.8	75.0	76.3	77.6	79.0	86.7
Fertilizers		113.7	100.5	95.5	95.0	94.6	94.1	93.7	93.2	91.1
Metals and minerals *		90.8	84.8	70.7	72.9	74.5	76.2	77.9	79.7	89.3
Base Metals **		90.3	89.0	78.3	80.8	82.5	84.3	86.1	88.0	98.1
Precious Metals		115.1	101.1	91.7	90.7	89.7	88.7	87.8	86.8	82.5
Constant 2010 US dollars (2010=100), deflated by the MUV Index										
Energy		120.1	111.7	68.7	71.5	73.2	75.0	76.9	78.8	89.3
Non-energy commodities		95.9	91.6	80.6	80.3	80.1	79.9	79.8	79.6	78.8
Agriculture		100.2	97.0	86.8	86.1	85.6	85.2	84.8	84.5	82.6
Beverages		78.5	96.1	88.4	85.7	83.3	81.1	78.9	76.8	67.3
Food		109.0	101.4	89.2	88.6	88.2	87.9	87.6	87.4	85.7
Oils and meals		109.3	103.0	84.5	84.5	84.7	84.9	85.2	85.4	86.4
Grains		120.9	98.1	89.1	88.7	88.5	88.4	88.3	88.1	87.3
Other food		98.0	102.3	95.3	93.8	92.5	91.4	90.3	89.2	83.2
Raw materials		90.0	86.8	80.1	80.2	80.4	80.7	81.0	81.4	83.0
Timber		96.7	99.0	90.5	90.7	91.2	91.8	92.3	92.9	95.3
Other Raw Materials		82.6	73.5	68.8	68.6	68.6	68.6	68.7	68.8	69.6
Fertilizers		107.2	94.9	90.4	88.3	86.4	84.6	82.9	81.2	73.1
Metals and minerals *		85.6	80.1	66.9	67.7	68.1	68.5	69.0	69.5	71.6
Base Metals **		85.2	84.1	74.1	75.0	75.4	75.8	76.3	76.7	78.6
Precious Metals		108.5	95.5	86.8	84.2	82.0	79.8	77.7	75.7	66.2
Inflation indices, 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

Sources: 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: October 2015.

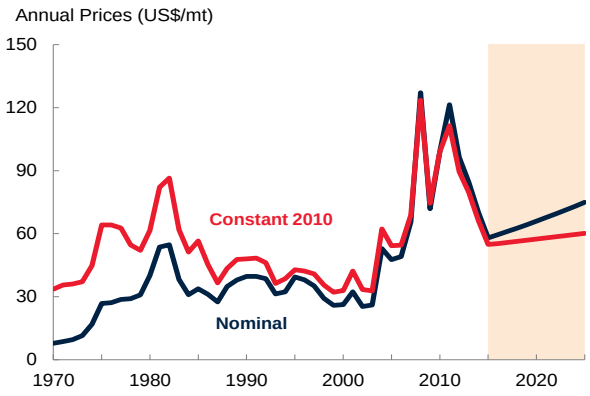
Appendix B

Commodity Balances

Coal
Crude oil
Natural gas
Coffee
Soybeans
Maize
Rice
Wheat
Sugar
Cotton
Aluminum
Copper
Lead
Nickel
Tin
Zinc

Coal

Source: World Bank.
Note: Last observation is June 2015.



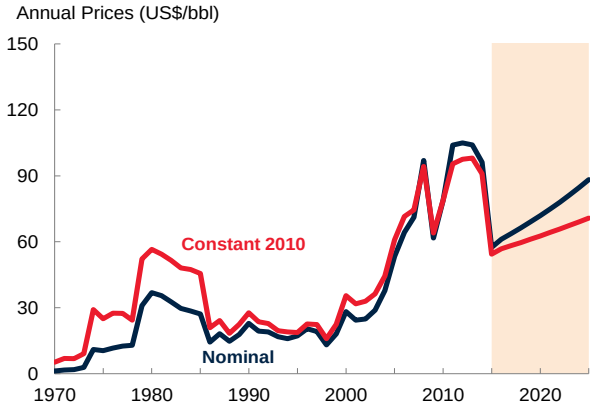
Source: World Bank.
Note: 2015-25 are forecasts.

	1981	1990	2000	2005	2010	2011	2012	2013	2014
Production (million metric tons oil equivalent)									
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*
World	**1,855**	**2,265**	**2,310**	**3,018**	**3,604**	**3,869**	**3,913**	**3,961**	**3,933**
Consumption (million metric tons oil equivalent)									
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*
World	**1,834**	**2,233**	**2,369**	**3,122**	**3,611**	**3,777**	**3,799**	**3,867**	**3,882**

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

Crude oil

Source: World Bank.
Note: Last observation is June 2015.



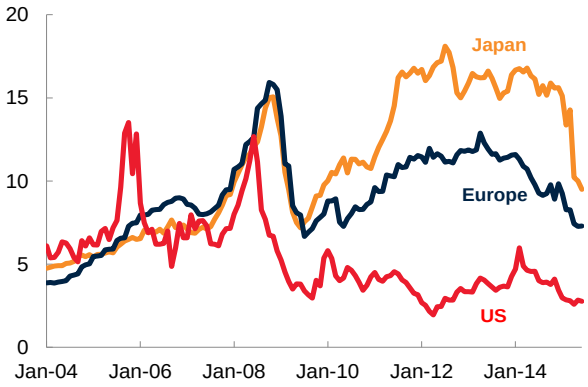
Source: World Bank.
Note: 2015-25 are forecasts.

	1970	1980	1990	2000	2010	2011	2012	2013	2014
Production (thousand barrels per day)									
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*
World	**48,056**	**62,959**	**65,385**	**74,925**	**83,190**	**83,980**	**86,150**	**86,579**	**88,673**
Consumption (thousand barrels per day)									
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*
World	**45,348**	**61,233**	**66,737**	**76,868**	**87,867**	**88,974**	**89,846**	**91,243**	**92,086**

Source: BP Statistical Review of World Energy.
Note: n/a implies data not available. Production includes crude oil and natural gas liquids but excludes liquid fuels from other sources such as bio-

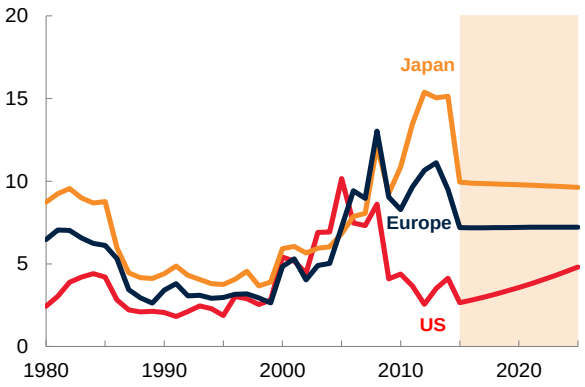
Natural gas

Monthly Prices (US$/mmbtu)



Source: World Bank.
Note: Last observation is June 2015.

Annual Constant Prices (US$/mmbtu)



Source: World Bank.
Note: 2015-25 are forecasts.

	1970	1980	1990	2000	2010	2011	2012	2013	2014
Production (billion cubic metres)									
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*
World	**992**	**1,435**	**1,983**	**2,416**	**3,203**	**3,316**	**3,380**	**3,409**	**3,461**
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*
World	**980**	**1,436**	**1,958**	**2,418**	**3,194**	**3,265**	**3,346**	**3,381**	**3,393**

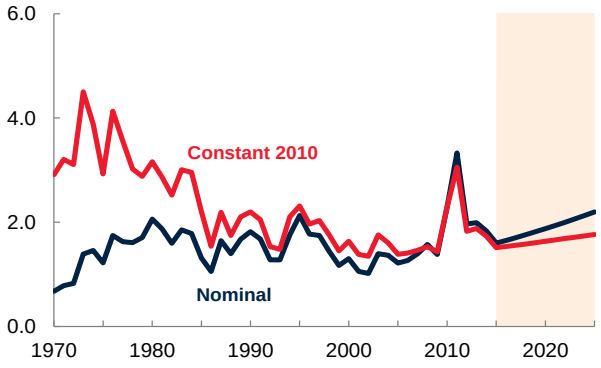
Source: BP Statistical Review of World Energy.
Note: n/a implies data not available.

Coffee

Monthly Prices (US$/kg)

Source: World Bank.
Note: Last observation is June 2015.

Annual Prices (US$/kg)



Source: World Bank.
Note: 2015-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
Production (thousand metric tons)									
India	909	1,322	1,989	2,380	5,865	6,095	6,371	6,262	6,381
China	1,995	2,707	4,508	4,505	6,400	7,300	6,700	6,003	5,403
United States	2,219	2,422	3,376	3,742	3,942	3,770	2,802	3,077	3,046
Pakistan	543	714	1,638	1,816	1,948	2,204	2,076	2,069	2,050
Brazil	594	623	717	939	1,960	1,310	1,644	1,652	1,479
Uzbekistan	n/a	1,671	1,593	975	910	1,000	920	1,005	921
Turkey	400	500	655	880	594	858	843	722	812
Australia	19	99	433	804	898	1,002	933	937	560
Burkina Faso	8	23	77	116	141	260	247	254	272
Turkmenistan	n/a	n/a	437	187	380	335	329	327	263
Mexico	312	353	175	72	157	231	193	206	255
Greece	110	115	213	421	180	248	280	308	247
Others	*n/a*	*n/a*	*3,141*	*2,688*	*2,034*	*2,265*	*2,363*	*2,341*	*2,215*
World	**11,740**	**13,831**	**18,951**	**19,524**	**25,408**	**26,878**	**25,699**	**25,163**	**23,904**
Stocks (thousand metric tons)									
China	412	476	1,589	3,755	2,087	9,607	11,511	11,890	11,756
India	376	491	539	922	1,850	1,681	1,922	1,946	2,198
Brazil	321	391	231	755	1,400	852	852	852	1,043
United States	915	581	510	1,306	566	848	539	539	973
Turkey	24	112	150	283	412	785	821	809	695
Pakistan	55	131	313	608	316	452	422	414	684
Others	*2,502*	*2,969*	*3,428*	*2,984*	*2,832*	*3,669*	*3,974*	*4,419*	*3,439*
World	**4,605**	**5,151**	**6,761**	**10,614**	**9,463**	**17,895**	**20,041**	**20,869**	**20,788**
Exports (thousand metric tons)									
United States	848	1,290	1,697	1,467	3,130	2,902	2,330	2,256	2,331
India	34	140	255	24	1,085	1,685	1,393	1,157	1,184
Brazil	220	21	167	68	435	938	767	814	726
Uzbekistan	n/a	n/a	n/a	750	600	653	680	585	595
Australia	4	53	329	849	545	1,345	1,033	776	424
Burkina Faso	9	22	73	112	136	215	253	243	264
Others	*n/a*	*n/a*	*n/a*	*2,535*	*1,786*	*2,341*	*2,264*	*2,342*	*2,153*
World	**3,875**	**4,414**	**5,069**	**5,805**	**7,717**	**10,078**	**8,719**	**8,173**	**7,677**
Imports (thousand metric tons)									
China	108	773	480	52	2,609	4,426	3,089	2,179	1,632
Bangladesh	0	45	80	248	843	593	857	899	967
Vietnam	33	40	31	84	350	548	656	676	927
Indonesia	36	106	324	570	471	683	661	656	797
Turkey	1	0	46	381	760	804	635	849	699
Pakistan	1	1	0	101	314	430	463	541	463
Thailand	46	86	354	342	383	329	369	398	372
Korea, Rep.	121	332	447	304	230	286	311	285	276
Others	*3,741*	*3,172*	*3,458*	*3,682*	*1,797*	*1,729*	*1,680*	*1,690*	*1,544*
World	**4,086**	**4,555**	**5,220**	**5,764**	**7,756**	**9,827**	**8,719**	**8,173**	**7,677**

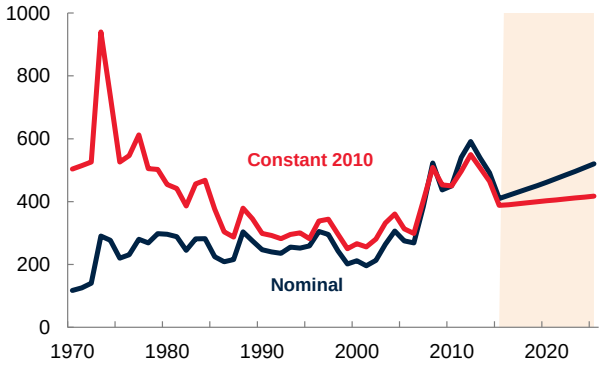
Source: U.S. Department of Agriculture.
Note: n/a implies data not available.

Soybeans

Monthly Prices (US$/mt)

Source: World Bank.
Note: Last observation is June 2015.

Annual Prices (US$/mt)



Source: World Bank.
Note: 2015-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
Production (million metric tons)									
United States	30.7	48.9	52.4	75.1	90.7	82.8	91.4	108.0	105.7
Brazil	0.0	15.2	15.8	39.5	75.3	82.0	86.7	94.5	97.0
Argentina	0.0	3.5	11.5	27.8	49.0	49.3	53.5	60.0	57.0
India	0.0	0.4	2.6	5.3	10.1	12.2	9.5	9.8	11.5
China	8.7	7.9	11.0	15.4	15.1	13.1	12.2	12.4	11.5
Paraguay	0.1	0.6	1.3	3.5	7.1	8.2	8.2	8.4	8.8
Canada	0.3	0.7	1.3	2.7	4.4	5.1	5.4	6.1	6.2
Ukraine	n/a	n/a	0.1	0.1	1.7	2.4	2.8	3.9	4.4
Uruguay	0.0	0.0	0.0	0.0	1.9	3.7	3.4	3.5	3.5
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*	*6.8*	*7.5*	*7.8*	*9.4*	*10.2*
World	**42.1**	**80.9**	**104.3**	**175.8**	**264.3**	**268.8**	**283.2**	**318.6**	**318.9**
Crushings (million metric tons)									
China	1.5	1.5	3.9	18.9	55.0	65.0	68.9	74.2	77.3
United States	20.7	27.8	32.3	44.6	44.9	46.0	47.2	49.8	50.1
Argentina	0.0	0.9	7.0	17.3	37.6	33.6	36.2	38.8	41.5
Brazil	0.0	13.8	14.2	22.7	36.3	35.2	36.9	39.3	39.5
European Union	7.3	14.1	13.0	16.8	12.4	13.2	13.4	13.8	14.1
India	0.0	0.4	2.4	4.5	9.3	9.9	8.3	7.4	9.1
Mexico	0.3	1.5	1.9	4.5	3.6	3.7	4.0	4.3	4.4
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	2.2	2.4	3.3	3.9	4.0
Bolivia	0.0	0.0	0.3	0.9	1.8	2.2	2.3	2.3	2.4
Others	*12.7*	*23.8*	*24.1*	*15.0*	*16.5*	*16.2*	*17.6*	*20.2*	*21.7*
World	**42.5**	**83.9**	**99.8**	**146.4**	**221.2**	**230.2**	**241.3**	**257.5**	**268.1**
Exports (million metric tons)									
Brazil	0.0	1.8	2.5	15.5	30.0	41.9	46.8	46.8	50.8
United States	11.8	19.7	15.2	27.1	41.0	35.8	44.8	49.7	48.3
Argentina	0.0	2.7	4.5	7.3	9.2	7.7	7.8	8.0	8.7
Paraguay	0.0	0.6	1.0	2.5	5.2	5.5	4.8	4.6	4.6
Canada	0.0	0.1	0.2	0.7	2.9	3.5	3.5	3.8	3.8
Others	*0.5*	*0.4*	*2.1*	*0.7*	*3.4*	*6.1*	*5.1*	*6.6*	*7.2*
World	**12.3**	**25.3**	**25.4**	**53.8**	**91.7**	**100.5**	**112.9**	**119.5**	**123.3**
Imports (million metric tons)									
China	0.0	0.5	0.0	13.2	52.3	59.9	70.4	74.0	77.5
European Union	7.4	13.6	13.2	17.7	12.5	12.5	13.0	13.0	13.1
Mexico	0.1	1.4	1.4	4.4	3.5	3.4	3.8	4.0	4.1
Japan	3.2	4.2	4.4	4.8	2.9	2.8	2.9	2.9	2.9
Taiwan, China	0.0	1.1	2.2	2.3	2.5	2.3	2.3	2.4	2.4
Indonesia	0.0	0.4	0.5	1.1	1.9	1.8	2.2	2.2	2.3
Turkey	0.0	0.0	0.0	0.4	1.4	1.2	1.6	2.0	2.1
Others	*8.8*	*18.7*	*17.1*	*9.2*	*11.8*	*11.9*	*15.0*	*15.6*	*16.5*
World	**19.5**	**39.8**	**38.8**	**53.1**	**88.8**	**95.9**	**111.3**	**115.9**	**120.8**

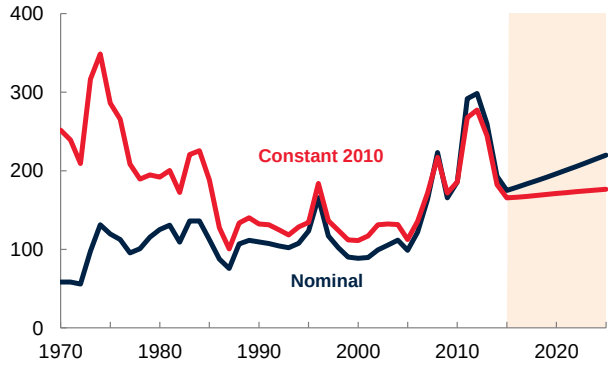
Source: U.S. Department of Agriculture.
Notes: n/a implies data not available. The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971.

Maize

Monthly Prices (US$/mt)

Source: World Bank.
Note: Last observation is June 2015.

Annual Prices (US$/mt)



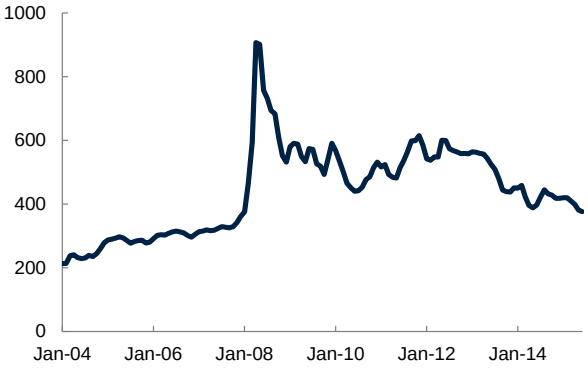
Source: World Bank.
Note: 2015-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
Production (million metric tons)									
United States	105.5	168.6	201.5	251.9	315.6	273.2	351.3	361.1	343.7
China	33.0	62.6	96.8	106.0	177.2	205.6	218.5	215.7	229.0
Brazil	14.1	22.6	24.3	41.5	57.4	81.5	80.0	82.0	77.0
European Union	29.8	42.5	36.6	51.9	58.3	58.9	64.7	75.0	65.8
Ukraine	n/a	n/a	4.7	3.8	11.9	20.9	30.9	28.5	26.0
Argentina	9.9	12.9	7.7	15.4	25.2	27.0	26.0	25.0	25.0
Mexico	8.9	10.4	14.1	17.9	21.1	21.6	22.9	24.0	23.5
India	7.5	7.0	9.0	12.0	21.7	22.3	24.3	22.5	23.5
South Africa	8.6	14.9	8.6	8.0	10.9	12.4	15.0	11.3	13.5
Russian Federation	n/a	n/a	2.5	1.5	3.1	8.2	11.6	11.3	13.0
Canada	n/a	n/a	7.1	7.0	12.0	13.1	14.2	11.5	12.3
Indonesia	2.8	4.0	5.0	5.9	6.8	8.5	9.1	9.4	9.6
Philippines	2.0	3.1	5.1	4.5	7.3	7.3	7.5	7.7	8.3
Others	*73.1*	*96.9*	*95.6*	*64.4*	*107.0*	*108.9*	*114.8*	*116.8*	*117.0*
World	**295.3**	**445.5**	**518.6**	**591.8**	**835.5**	**869.3**	**990.7**	**1,001.7**	**987.1**
Stocks (million metric tons)									
China	8.9	42.8	82.8	102.4	49.4	67.6	77.3	80.0	91.9
United States	16.8	35.4	38.6	48.2	28.6	20.9	31.3	45.2	40.6
Brazil	2.0	1.3	0.8	2.7	10.3	14.2	19.0	18.8	14.6
European Union	2.3	4.8	3.7	3.2	5.2	5.1	6.8	8.8	6.1
Iran, Islamic Rep.	n/a	0.1	0.0	0.9	2.8	3.2	4.5	5.8	4.7
Others	*8.4*	*22.9*	*19.1*	*17.8*	*31.3*	*26.2*	*35.9*	*35.4*	*32.1*
World	**38.4**	**107.4**	**145.1**	**175.3**	**127.7**	**137.2**	**174.7**	**194.0**	**190.0**
Exports (million metric tons)									
United States	12.9	60.7	43.9	49.3	46.5	18.5	48.7	47.0	47.6
Brazil	0.9	0.0	0.0	6.3	8.4	24.9	21.0	26.0	23.0
Ukraine	n/a	n/a	0.4	0.4	5.0	12.7	20.0	18.0	16.0
Argentina	6.4	9.1	4.0	9.7	16.3	18.7	17.1	15.5	15.5
Russian Federation	n/a	n/a	n/a	n/a	0.0	1.9	4.2	2.8	3.5
Serbia	n/a	n/a	n/a	n/a	2.0	0.6	1.7	2.9	2.8
European Union	5.4	1.3	0.2	0.5	1.1	2.2	2.4	3.5	2.5
Others	*11.9*	*10.5*	*9.8*	*10.6*	*11.9*	*15.5*	*15.9*	*9.4*	*11.6*
World	**37.6**	**81.6**	**58.1**	**76.7**	**91.3**	**95.1**	**131.0**	**125.1**	**122.6**
Imports (million metric tons)									
Japan	5.2	14.0	16.3	16.3	15.6	14.4	15.1	15.0	15.0
European Union	18.9	26.6	5.7	3.7	7.4	11.4	15.9	8.5	14.0
Mexico	0.1	3.8	1.9	6.0	8.3	5.7	11.0	10.0	10.3
Korea, Rep.	0.3	2.4	5.6	8.7	8.1	8.2	10.4	9.6	10.0
Egypt, Arab Rep.	0.1	1.0	1.9	5.3	5.8	5.1	8.7	7.5	8.0
Saudi Arabia	0.0	0.3	0.8	1.4	1.9	2.1	2.7	3.5	4.5
Colombia	0.0	0.1	0.0	1.9	3.5	3.3	4.3	4.4	4.5
Others	*22.6*	*52.7*	*31.9*	*31.6*	*41.9*	*49.8*	*55.7*	*58.0*	*54.5*
World	**47.3**	**100.9**	**64.3**	**74.9**	**92.6**	**99.8**	**123.8**	**116.5**	**120.8**

Source: U.S. Department of Agriculture.
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.

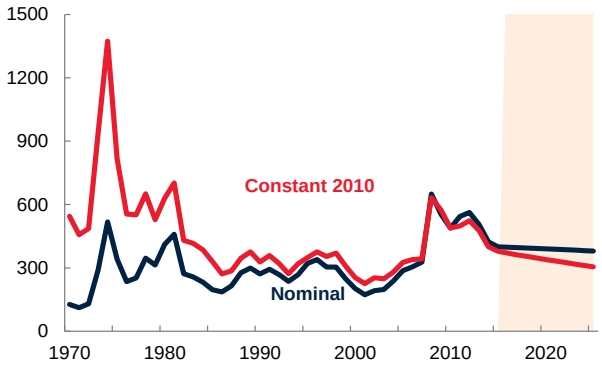
Rice

Monthly Prices (US$/mt)



Source: World Bank.
Note: Last observation is June 2015.

Annual Prices (US$/mt)



Source: World Bank.
Note: 2015-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
Production (million metric tons)									
China	77.0	97.9	132.5	131.5	137.0	143.0	142.5	144.5	146.0
India	42.2	53.6	74.3	85.0	96.0	105.2	106.5	102.5	104.0
Indonesia	13.1	22.3	29.0	33.0	35.5	36.6	36.3	36.3	36.7
Bangladesh	11.1	13.9	17.9	25.1	31.7	33.8	34.4	34.5	35.0
Vietnam	6.4	7.7	12.4	20.5	26.4	27.5	28.2	28.1	28.2
Thailand	9.0	11.5	11.3	17.1	20.3	20.2	20.5	18.8	19.0
Myanmar	5.1	6.7	7.9	10.8	11.1	11.7	12.0	12.6	12.8
Philippines	3.4	5.0	6.4	8.1	10.5	11.4	11.9	11.9	12.4
Brazil	3.7	5.9	6.8	6.9	9.3	8.0	8.3	8.5	8.0
Japan	11.5	8.9	9.6	8.6	7.8	7.9	7.9	7.8	7.9
Pakistan	2.2	3.1	3.3	4.8	5.0	5.8	6.7	6.9	6.9
United States	2.8	4.8	5.1	5.9	7.6	6.3	6.1	7.1	6.6
Cambodia	2.5	1.1	1.6	2.5	4.2	4.7	4.7	4.7	4.9
Others	*22.9*	*27.6*	*33.3*	*39.4*	*48.3*	*50.4*	*52.2*	*52.2*	*52.0*
World	**213.0**	**269.9**	**351.4**	**399.3**	**450.6**	**472.7**	**478.2**	**476.3**	**480.3**
Stocks (million metric tons)									
China	11.0	28.0	94.0	93.0	42.6	46.8	46.8	46.9	46.2
India	6.0	6.5	14.5	25.1	23.5	25.4	22.7	15.6	11.6
Thailand	1.2	2.0	0.9	2.2	5.6	12.8	11.7	9.1	6.2
Indonesia	0.6	3.0	2.1	4.6	7.1	6.5	5.5	4.5	3.6
Japan	6.1	4.0	1.0	2.6	2.9	2.9	3.1	3.3	3.4
Philippines	0.6	1.5	1.8	2.8	2.5	1.5	1.7	2.1	2.5
Others	*3.4*	*7.6*	*12.4*	*16.4*	*16.0*	*14.8*	*15.9*	*17.6*	*17.0*
World	**28.8**	**52.6**	**126.7**	**146.7**	**100.1**	**110.7**	**107.4**	**98.9**	**90.5**
Exports (million metric tons)									
Thailand	1.6	3.0	4.0	7.5	10.6	6.7	11.0	10.0	10.2
India	0.0	0.9	0.7	1.7	2.8	10.9	10.1	10.2	8.5
Vietnam	0.0	0.0	1.0	3.5	7.0	6.7	6.3	6.7	6.9
Pakistan	0.2	1.2	1.3	2.4	3.4	3.6	3.2	4.0	4.0
United States	1.5	3.1	2.3	2.6	3.5	3.4	3.0	3.3	3.5
Others	*5.2*	*4.2*	*2.8*	*6.2*	*7.7*	*8.1*	*8.1*	*8.9*	*9.1*
World	**8.5**	**12.4**	**12.1**	**24.0**	**35.1**	**39.3**	**41.7**	**43.0**	**42.2**
Imports (million metric tons)									
China	0.0	0.2	0.1	0.3	0.5	3.1	4.0	4.4	4.7
Nigeria	0.0	0.4	0.2	1.3	2.4	2.8	2.8	4.0	3.0
Iran, Islamic Rep.	0.1	0.6	0.6	0.8	2.0	2.1	1.6	1.5	1.6
Saudi Arabia	0.2	0.4	0.5	1.0	1.1	1.3	1.4	1.5	1.6
European Union	0.9	0.5	0.7	1.2	1.4	1.4	1.5	1.6	1.6
Philippines	0.0	0.0	0.4	1.4	1.3	1.4	1.2	1.7	1.3
Iraq	0.1	0.4	0.3	1.0	1.2	1.4	1.0	1.3	1.3
South Africa	0.1	0.1	0.3	0.5	0.7	0.9	1.1	1.0	1.2
Others	*7.3*	*9.2*	*8.2*	*14.7*	*22.4*	*22.2*	*23.7*	*23.9*	*23.3*
World	**8.6**	**11.8**	**11.3**	**22.1**	**33.0**	**36.7**	**38.4**	**40.8**	**39.5**

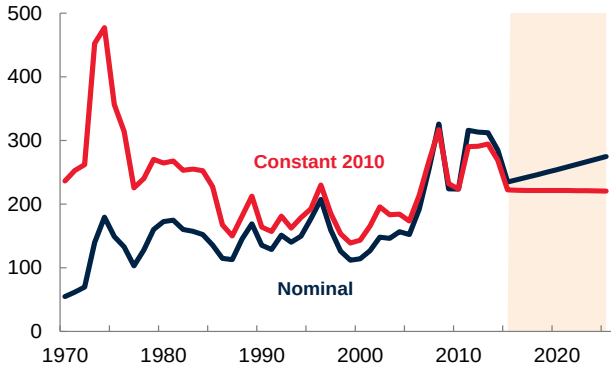
Source: U.S. Department of Agriculture.
Note: The trade year is January-December of the later year of the split. For example, 1970/71 refers to calendar year 1971.

Wheat

Monthly Prices (US$/mt)

Source: World Bank.
Note: Last observation is June 2015.

Annual Prices (US$/mt)



Source: World Bank.
Note: 2015-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
Production (million metric tons)									
European Union	62.5	93.3	125.0	132.7	136.7	133.9	144.4	156.4	147.9
China	29.2	55.2	98.2	99.6	115.2	121.0	121.9	126.2	130.0
India	20.1	31.8	49.9	76.4	80.8	94.9	93.5	95.9	90.0
United States	36.8	64.8	74.3	60.6	58.9	61.3	58.1	55.1	58.5
Russian Federation	n/a	n/a	49.6	34.5	41.5	37.7	52.1	59.1	57.0
Canada	9.0	19.3	32.1	26.5	23.3	27.2	37.5	29.3	27.5
Australia	7.9	10.9	15.1	22.1	27.4	22.9	25.3	23.7	26.0
Pakistan	7.3	10.9	14.4	21.1	23.9	23.3	24.0	25.5	25.0
Ukraine	n/a	n/a	30.4	10.2	16.8	15.8	22.3	24.8	24.0
Turkey	8.0	13.0	16.0	18.0	17.0	16.0	18.8	15.3	18.5
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	13.5
Argentina	4.9	7.8	11.0	16.3	17.2	9.3	10.5	12.5	11.5
Egypt, Arab Rep.	1.5	1.8	4.3	6.4	7.2	8.5	8.3	8.3	8.4
Others	*178.0*	*214.5*	*169.4*	*41.7*	*60.9*	*63.3*	*70.0*	*68.0*	*70.3*
World	**369.1**	**529.2**	**713.8**	**583.3**	**649.9**	**658.7**	**715.1**	**725.9**	**722.0**
Stocks (million metric tons)									
China	7.2	31.7	49.9	91.9	59.1	54.0	65.3	74.3	88.8
United States	22.4	26.9	23.6	23.8	23.5	19.5	16.1	20.5	22.9
European Union	8.6	13.0	22.5	17.9	11.9	10.8	10.1	14.7	14.1
India	5.0	4.0	5.8	21.5	15.4	24.2	17.8	17.2	11.9
Iran	0.7	1.2	3.2	2.9	2.9	5.1	7.2	7.8	7.3
Russian Federation	n/a	n/a	16.4	1.5	13.7	5.0	5.2	6.9	6.3
Others	*45.2*	*48.9*	*72.3*	*47.1*	*72.6*	*58.6*	*71.9*	*70.6*	*68.5*
World	**89.1**	**125.6**	**193.8**	**206.6**	**199.1**	**177.1**	**193.5**	**212.1**	**219.8**
Exports (million metric tons)									
European Union	6.7	17.5	23.8	15.7	23.1	22.7	32.0	34.7	31.0
United States	20.2	41.2	29.1	28.9	35.1	27.5	32.0	23.3	25.9
Russian Federation	n/a	n/a	1.2	0.7	4.0	11.3	18.6	22.2	22.0
Canada	n/a	n/a	21.7	17.3	16.6	19.0	23.3	23.7	19.5
Australia	9.1	9.6	11.8	15.9	18.6	18.6	18.6	17.0	18.5
Ukraine	n/a	n/a	2.0	0.1	4.3	7.2	9.8	11.5	12.5
Others	*15.3*	*23.1*	*38.0*	*22.6*	*31.0*	*31.0*	*31.7*	*31.6*	*28.7*
World	**51.3**	**91.4**	**127.7**	**101.3**	**132.7**	**137.3**	**165.9**	**163.9**	**158.1**
Imports (million metric tons)									
Egypt, Arab Rep.	2.8	5.4	5.7	6.1	10.6	8.3	10.2	11.4	11.5
Indonesia	0.5	1.2	2.0	4.1	6.6	7.1	7.4	7.7	8.1
Algeria	0.6	2.3	4.4	5.6	6.5	6.5	7.5	7.1	7.7
European Union	19.6	10.4	3.7	3.5	4.6	5.3	4.0	6.0	6.5
Brazil	1.7	3.9	4.4	7.2	6.7	7.4	7.1	6.3	6.5
Japan	4.8	5.8	5.6	5.9	5.9	6.6	6.1	5.8	5.8
Others	*45.3*	*70.8*	*76.9*	*67.1*	*91.1*	*104.2*	*116.0*	*115.9*	*109.2*
World	**75.4**	**99.9**	**102.7**	**99.4**	**132.0**	**145.4**	**158.2**	**160.2**	**155.3**

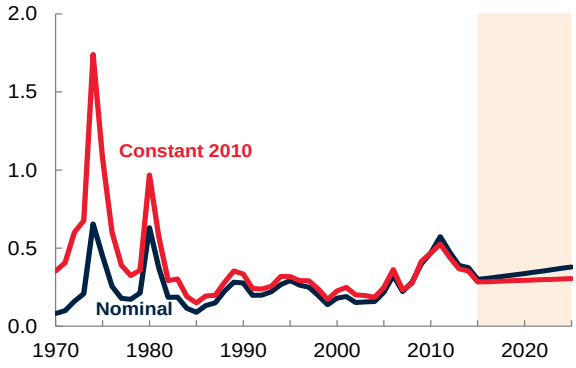
Source: U.S. Department of Agriculture (July 2015 update).
Note: n/a implies data not available. The trade year is January-December of the later year of the split. For example, 1970/71 r efers to calendar year 1971.

Sugar

Monthly Prices (US$/kg)

Source: World Bank.
Note: Last observation is June 2015.

Annual Prices (US$/kg)



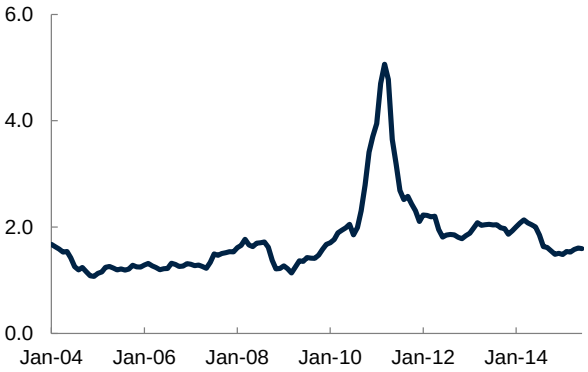
Source: World Bank.
Note: 2015-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
Production (million metric tons)									
Brazil	5.1	8.5	7.9	17.1	38.4	38.6	37.8	35.9	36.0
India	4.5	6.5	13.7	20.5	26.6	27.3	26.6	29.5	29.1
European Union	15.4	19.0	23.2	22.1	15.9	16.7	16.0	16.8	15.5
Thailand	0.5	1.7	4.0	5.1	9.7	10.0	11.3	11.0	11.4
China	2.1	3.2	6.8	6.8	11.2	14.0	14.3	11.0	10.8
United States	5.6	5.6	6.3	8.0	7.1	8.1	7.7	7.7	7.7
Mexico	2.5	2.5	3.9	5.2	5.5	7.4	6.4	6.4	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	4.8
Russian Federation	n/a	n/a	2.6	1.6	3.0	5.0	4.4	4.4	4.5
Guatemala	0.2	0.5	1.0	1.6	2.0	2.8	2.9	2.9	3.0
Philippines	2.1	2.4	1.7	1.8	2.5	2.4	2.5	2.5	2.5
Others	*45.1*	*53.3*	*60.9*	*56.3*	*32.7*	*36.0*	*35.7*	*36.5*	*36.4*
World	**85.7**	**107.6**	**137.6**	**152.9**	**162.2**	**177.6**	**175.6**	**174.3**	**173.4**
Stocks (million metric tons)									
India	1.8	1.1	3.6	12.0	6.3	9.4	8.2	10.2	10.0
Thailand	0.0	0.2	0.2	0.6	3.0	3.6	5.3	5.7	6.2
China	0.3	0.7	1.4	1.0	1.6	6.8	8.8	7.2	5.8
United States	2.9	1.4	1.4	2.0	1.3	2.0	1.6	1.5	1.4
European Union	6.3	3.5	3.7	5.7	2.0	3.8	3.1	2.6	1.0
Pakistan	0.0	0.1	0.3	0.4	1.5	0.9	1.3	1.2	1.0
Others	*15.1*	*14.2*	*15.6*	*23.9*	*13.9*	*16.2*	*15.7*	*15.9*	*15.2*
World	**26.5**	**21.2**	**26.1**	**45.6**	**29.5**	**42.6**	**44.0**	**44.3**	**40.5**
Exports (million metric tons)									
Brazil	1.2	2.3	1.3	7.7	25.8	27.7	26.2	24.6	24.4
Thailand	0.2	1.0	2.7	3.4	6.6	6.7	7.2	8.0	8.3
Australia	1.8	2.6	2.8	3.1	2.8	3.1	3.2	3.6	3.7
Guatemala	0.1	0.2	0.7	1.2	1.5	1.9	2.1	2.2	2.4
India	0.3	0.1	0.2	1.4	3.9	1.0	2.8	1.5	2.2
Mexico	0.6	0.0	0.3	0.2	1.6	2.1	2.7	1.6	1.9
Others	*17.1*	*22.2*	*25.9*	*21.5*	*11.6*	*12.7*	*13.3*	*12.7*	*13.0*
World	**21.3**	**28.4**	**33.9**	**38.3**	**53.8**	**55.1**	**57.5**	**54.2**	**55.8**
Imports (million metric tons)									
China	0.4	1.1	1.1	1.1	2.1	3.8	4.3	4.8	5.5
United States	4.8	4.4	2.6	1.4	3.4	2.9	3.4	3.1	3.5
Indonesia	0.1	0.6	0.2	1.6	3.1	3.6	3.6	3.1	3.2
European Union	5.4	3.8	4.1	3.3	3.8	3.8	3.3	3.0	3.2
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	2.1	2.0	2.1	2.1
Bangladesh	0.0	0.0	0.0	0.8	1.5	1.5	2.1	2.1	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*	*28.9*	*28.6*	*29.1*	*28.9*
World	**22.7**	**32.0**	**36.2**	**43.6**	**49.1**	**51.0**	**51.3**	**51.6**	**52.9**

Source: U.S. Department of Agriculture.
Note: 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.

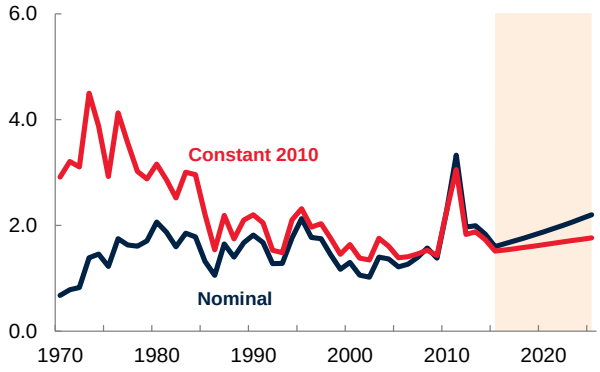
Cotton

Monthly Prices (US$/kg)



Source: World Bank.
Note: Last observation is June 2015.

Annual Prices (US$/kg)



Source: World Bank.
Note: 2015-25 are forecasts.

	1970/71	1980/81	1990/91	2000/01	2010/11	2012/13	2013/14	2014/15	2015/16
Production (thousand metric tons)									
India	909	1,322	1,989	2,380	5,865	6,095	6,371	6,262	6,381
China	1,995	2,707	4,508	4,505	6,400	7,300	6,700	6,003	5,403
United States	2,219	2,422	3,376	3,742	3,942	3,770	2,802	3,077	3,046
Pakistan	543	714	1,638	1,816	1,948	2,204	2,076	2,069	2,050
Brazil	594	623	717	939	1,960	1,310	1,644	1,652	1,479
Uzbekistan	n/a	1,671	1,593	975	910	1,000	920	1,005	921
Turkey	400	500	655	880	594	858	843	722	812
Australia	19	99	433	804	898	1,002	933	937	560
Burkina Faso	8	23	77	116	141	260	247	254	272
Turkmenistan	n/a	n/a	437	187	380	335	329	327	263
Mexico	312	353	175	72	157	231	193	206	255
Greece	110	115	213	421	180	248	280	308	247
Others	*4,629*	*3,282*	*3,141*	*2,688*	*2,034*	*2,265*	*2,363*	*2,341*	*2,215*
World	**11,740**	**13,831**	**18,951**	**19,524**	**25,408**	**26,878**	**25,699**	**25,163**	**23,904**
Stocks (thousand metric tons)									
China	412	476	1,589	3,755	2,087	9,607	11,511	11,890	11,756
India	376	491	539	922	1,850	1,681	1,922	1,946	2,198
Brazil	321	391	231	755	1,400	852	852	852	1,043
United States	915	581	510	1,306	566	848	539	539	973
Turkey	24	112	150	283	412	785	821	809	695
Pakistan	55	131	313	608	316	452	422	414	684
Others	*2,502*	*2,969*	*3,428*	*2,984*	*2,832*	*3,669*	*3,974*	*4,419*	*3,439*
World	**4,605**	**5,151**	**6,761**	**10,614**	**9,463**	**17,895**	**20,041**	**20,869**	**20,788**
Exports (thousand metric tons)									
United States	848	1,290	1,697	1,467	3,130	2,902	2,330	2,256	2,331
India	34	140	255	24	1,085	1,685	1,393	1,157	1,184
Brazil	220	21	167	68	435	938	767	814	726
Uzbekistan	n/a	n/a	n/a	750	600	653	680	585	595
Australia	4	53	329	849	545	1,345	1,033	776	424
Burkina Faso	9	22	73	112	136	215	253	243	264
Others	*2,760*	*2,886*	*2,547*	*2,535*	*1,786*	*2,341*	*2,264*	*2,342*	*2,153*
World	**3,875**	**4,414**	**5,069**	**5,805**	**7,717**	**10,078**	**8,719**	**8,173**	**7,677**
Imports (thousand metric tons)									
China	108	773	480	52	2,609	4,426	3,089	2,179	1,632
Bangladesh	0	45	80	248	843	593	857	899	967
Vietnam	33	40	31	84	350	548	656	676	927
Indonesia	36	106	324	570	471	683	661	656	797
Turkey	1	0	46	381	760	804	635	849	699
Pakistan	1	1	0	101	314	430	463	541	463
Thailand	46	86	354	342	383	329	369	398	372
Korea, Rep.	121	332	447	304	230	286	311	285	276
Others	*3,741*	*3,172*	*3,458*	*3,682*	*1,797*	*1,729*	*1,680*	*1,690*	*1,544*
World	**4,086**	**4,555**	**5,220**	**5,764**	**7,756**	**9,827**	**8,719**	**8,173**	**7,677**

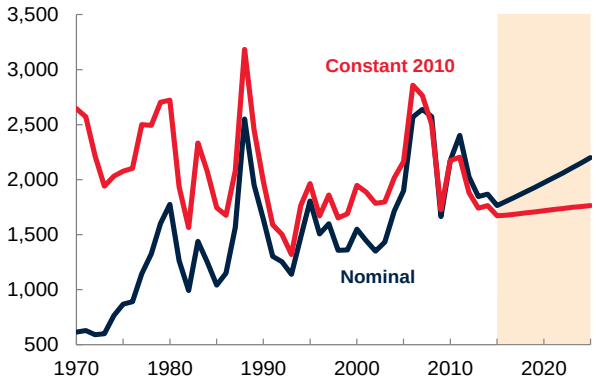
Source: International Cotton Advisory Committee.
Note: n/a implies data not available.

Aluminum

Monthly Prices (US$/mt)

Source: World Bank.
Note: Last observation is June 2015.

Annual Prices (US$/mt)



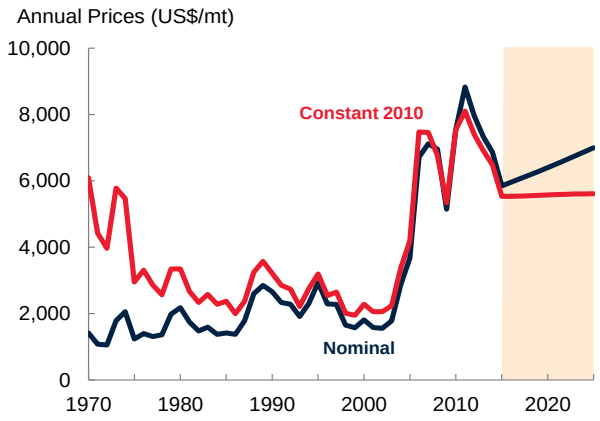
Source: World Bank.
Note: 2015-25 are forecasts.

	1980	1990	2000	2005	2010	2011	2012	2013	2014
Bauxite Production (thousand metric tons)									
Australia	27,179	40,697	53,801	59,959	68,535	69,977	76,282	81,119	80,300
China	1,700	3,655	7,900	17,408	36,837	37,174	44,052	50,400	65,000
Brazil	4,152	9,876	14,379	22,365	32,028	33,625	34,988	33,849	31,693
India	1,785	5,277	7,562	12,385	12,662	13,000	15,320	20,421	20,688
Guinea	13,911	16,150	17,992	19,237	16,427	17,695	19,974	18,763	17,602
Jamaica	12,064	10,937	11,127	14,118	8,540	10,189	9,339	9,435	9,677
Russian Federation	n/a	n/a	5,000	6,409	5,475	5,888	5,166	5,322	5,589
Kazakhstan	n/a	n/a	3,729	4,815	5,310	5,495	5,170	5,193	4,515
Surinam	4,903	3,267	3,610	4,757	3,097	3,236	2,873	2,706	2,708
Indonesia	1,249	1,249	1,151	1,442	27,410	40,644	31,443	55,655	2,556
Venezuela, RB	0	786	4,361	5,815	3,126	2,455	2,500	2,302	2,200
Greece	3,286	2,496	1,991	2,495	1,902	2,324	1,815	1,844	2,100
Dominican Republic	511	85	0	0	0	0	11	770	1,662
Others	*n/a*	*n/a*	*6,287*	*5,601*	*5,800*	*6,628*	*7,655*	*7,846*	*9,206*
World	**93,326**	**114,835**	**138,889**	**176,807**	**227,150**	**248,330**	**256,590**	**295,624**	**255,495**
Refined Production (thousand metric tons)									
China	358	854	2,647	7,759	16,244	18,135	20,251	22,046	24,382
Russian Federation	n/a	n/a	3,258	3,647	3,947	3,992	4,024	3,724	3,488
Canada	1,075	1,567	2,373	2,894	2,963	2,988	2,781	2,967	2,858
United Arab Emirates	35	174	536	722	1,400	1,750	1,861	1,848	2,341
Australia	304	1,233	1,761	1,903	1,928	1,945	1,864	1,778	1,773
India	185	433	647	942	1,610	1,660	1,714	1,596	1,767
United States	4,654	4,048	3,668	2,480	1,727	1,983	2,070	1,948	1,710
Norway	662	867	1,026	1,376	1,090	1,201	1,111	1,155	1,154
Brazil	261	931	1,271	1,498	1,536	1,440	1,436	1,304	978
Bahrain	126	212	509	708	851	881	890	913	931
Iceland	75	88	226	272	826	781	803	736	749
South Africa	87	157	683	851	806	808	665	822	745
Saudi Arabia	0	0	0	0	0	0	0	187	652
Others	*n/a*	*n/a*	*5,699*	*6,788*	*6,816*	*7,465*	*7,000*	*6,686*	*6,518*
World	**16,036**	**19,362**	**24,304**	**31,841**	**41,745**	**45,030**	**46,470**	**47,710**	**50,047**
Refined Consumption (thousand metric tons)									
China	550	861	3,352	7,072	15,854	17,702	20,224	21,955	24,069
United States	4,454	4,330	6,161	6,114	4,242	4,060	4,875	4,632	5,250
Germany	1,272	1,379	1,632	1,758	1,912	2,103	2,086	2,083	2,262
Japan	1,639	2,414	2,223	2,276	2,025	1,946	1,982	1,772	2,034
India	234	433	601	958	1,475	1,569	1,690	1,559	1,523
Korea, Rep.	68	369	823	1,201	1,255	1,233	1,278	1,241	1,282
Brazil	296	341	514	759	985	1,077	1,021	988	1,027
Turkey	45	152	211	390	703	870	925	867	915
United Arab Emirates	0	0	34	85	650	750	835	835	835
Others	*6,754*	*8,947*	*9,456*	*11,022*	*11,576*	*11,880*	*11,263*	*10,748*	*11,071*
World	**15,312**	**19,227**	**25,007**	**31,636**	**40,677**	**43,190**	**46,179**	**46,680**	**50,267**

Source: World Bureau of Metal Statistics.
Note: n/a implies data not available.

Copper

Source: World Bank.
Note: Last observation is June 2015.



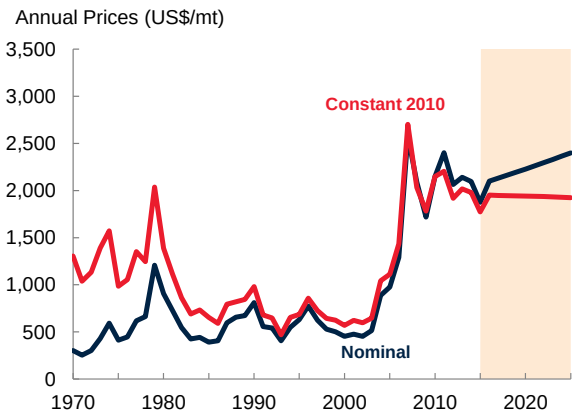
Source: World Bank.
Note: 2015-25 are forecasts.

	1980	1990	2000	2005	2010	2011	2012	2013	2014
Mine Production (thousand metric tons)									
Chile	1,068	1,588	4,602	5,321	5,419	5,263	5,434	5,776	5,750
China	177	296	549	639	1,180	1,295	1,577	1,707	1,632
United States	1,181	1,587	1,440	1,157	1,129	1,138	1,196	1,279	1,383
Peru	367	318	553	1,010	1,247	1,235	1,299	1,376	1,380
Congo, DR	460	356	33	98	378	480	608	817	1,003
Australia	244	327	832	930	870	960	914	999	970
Zambia	596	496	249	441	732	784	782	839	759
Russian Federation	n/a	n/a	580	805	703	714	720	720	720
Canada	716	794	634	595	522	569	580	632	696
Mexico	175	291	365	391	270	444	500	480	514
Kazakhstan	n/a	n/a	433	436	404	433	491	538	501
Poland	343	370	454	523	425	427	427	429	421
Indonesia	59	169	1,006	1,064	871	543	398	494	366
Others	*n/a*	*n/a*	*1,476*	*1,619*	*1,985*	*2,006*	*2,095*	*2,252*	*2,409*
World	**7,864**	**8,997**	**13,207**	**15,029**	**16,135**	**16,291**	**17,021**	**18,338**	**18,502**
Refined Production (thousand metric tons)									
China	314	562	1,312	2,566	4,540	5,163	5,879	6,839	8,008
Chile	811	1,192	2,669	2,824	3,244	3,092	2,902	2,755	2,729
Japan	1,014	1,008	1,437	1,395	1,549	1,328	1,516	1,468	1,554
United States	1,686	2,017	1,802	1,257	1,093	1,031	1,001	1,040	1,095
Russian Federation	n/a	n/a	824	968	900	910	887	874	874
India	23	39	265	518	647	662	689	619	764
Congo, DR	144	173	29	3	254	349	453	643	742
Zambia	607	479	226	465	767	740	700	629	739
Germany	425	533	709	639	704	709	686	680	683
Korea, Rep.	79	187	471	527	556	593	590	604	604
Poland	357	346	486	560	547	571	566	565	577
Australia	182	274	484	471	424	477	461	480	509
Spain	154	171	316	308	347	354	408	351	428
Others	*n/a*	*n/a*	*3,731*	*4,135*	*3,637*	*3,834*	*3,617*	*3,737*	*3,704*
World	**9,390**	**10,809**	**14,761**	**16,635**	**19,211**	**19,814**	**20,356**	**21,284**	**23,011**
Refined Consumption (thousand metric tons)									
China	286	512	1,869	3,621	7,385	7,881	8,896	9,830	11,352
United States	1,868	2,150	2,979	2,264	1,760	1,755	1,758	1,826	1,841
Germany	870	1,028	1,309	1,115	1,312	1,247	1,114	1,136	1,173
Japan	1,158	1,577	1,351	1,229	1,060	1,003	985	996	1,085
Korea, Rep.	85	324	862	868	856	784	721	722	759
Italy	388	475	674	680	619	608	570	552	622
Russian Federation	n/a	n/a	183	667	457	586	490	484	568
Taiwan, China	85	265	628	638	532	457	432	437	465
Turkey	33	103	248	319	369	421	429	453	453
Others	*n/a*	*n/a*	*4,992*	*5,246*	*4,989*	*4,834*	*4,738*	*4,566*	*4,456*
World	**9,385**	**10,780**	**15,096**	**16,649**	**19,340**	**19,576**	**20,133**	**21,002**	**22,774**

Source: World Bureau of Metal Statistics.
Note: n/a implies data not available.

Lead

Source: World Bank.
Note: Last observation is June 2015.



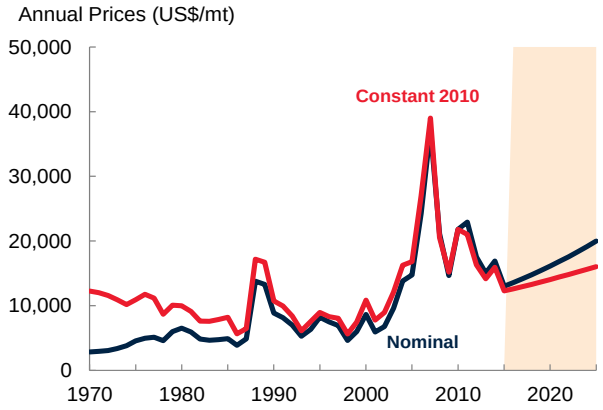
Source: World Bank.
Note: 2015-25 are forecasts.

	1980	1990	2000	2005	2010	2011	2012	2013	2014
Mine Production (thousand metric tons)									
China	160	364	660	1,142	1,981	2,406	2,613	3,048	2,853
Australia	398	570	678	767	712	621	622	711	728
United States	562	493	447	437	356	334	336	343	385
Peru	189	188	271	319	262	230	249	266	278
Mexico	146	174	138	134	192	224	238	253	249
Russian Federation	n/a	n/a	13	36	97	123	147	143	194
India	15	26	38	60	91	94	115	106	105
Bolivia	16	20	10	11	73	100	81	82	82
Sweden	72	84	107	61	68	62	64	60	71
Turkey	8	18	16	19	39	40	54	78	65
Korea, Dem. People's Rep.	125	70	26	20	27	29	38	59	53
Iran, Islamic Rep.	12	9	17	22	32	29	36	40	46
Poland	48	45	51	51	48	41	73	74	45
Others	*n/a*	*n/a*	*610*	*372*	*396*	*410*	*429*	*393*	*396*
World	**3,595**	**3,150**	**3,080**	**3,453**	**4,374**	**4,741**	**5,096**	**5,655**	**5,550**
Refined Production (thousand metric tons)									
China	175	297	1,100	2,359	4,157	4,604	4,591	4,475	4,221
United States	1,151	1,291	1,431	1,293	1,255	1,248	1,221	1,308	1,128
Korea, Rep.	15	80	222	254	321	423	460	470	633
India	26	39	57	56	366	380	461	462	473
Germany	392	394	387	342	405	429	426	400	380
United Kingdom	325	329	328	304	301	275	312	329	330
Canada	231	184	284	230	273	282	278	288	281
Japan	305	327	312	275	267	253	259	252	240
Mexico	149	238	332	272	257	247	244	236	233
Australia	234	229	223	267	210	232	207	233	232
Italy	134	171	237	211	150	150	138	180	180
Spain	121	124	120	110	163	170	160	160	162
Brazil	85	76	86	121	115	138	165	152	152
Others	*2,083*	*1,683*	*1,582*	*1,572*	*1,485*	*1,547*	*1,503*	*1,615*	*1,608*
World	**5,424**	**5,460**	**6,701**	**7,665**	**9,726**	**10,377**	**10,426**	**10,561**	**10,253**
Refined Consumption (thousand metric tons)									
China	210	244	660	1,974	4,171	4,618	4,618	4,467	4,199
United States	1,094	1,275	1,660	1,490	1,430	1,410	1,360	1,750	1,650
Korea, Rep.	54	80	309	376	382	427	429	498	564
India	33	147	56	139	420	420	524	428	517
Germany	433	448	390	330	343	374	381	392	337
United Kingdom	296	302	301	288	211	211	229	274	271
Japan	393	416	343	291	224	236	273	255	254
Spain	111	115	219	279	262	263	244	257	245
Italy	275	258	283	262	245	233	195	235	229
Others	*2,451*	*2,063*	*2,270*	*2,348*	*2,012*	*2,051*	*2,059*	*2,089*	*1,985*
World	**5,348**	**5,348**	**6,491**	**7,777**	**9,700**	**10,243**	**10,312**	**10,646**	**10,252**

Source: World Bureau of Metal Statistics.
Note: n/a implies data not available. Refined production and consumption include significant recyled material.

Nickel

Source: World Bank.
Note: Last observation is June 2015.



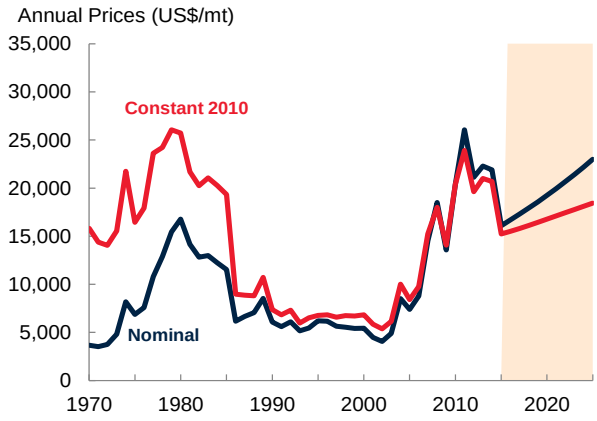
Source: World Bank.
Note: 2015-25 are forecasts.

	1980	1990	2000	2005	2010	2011	2012	2013	2014
Mine Production (thousand metric tons)									
Philippines	38	16	17	27	184	319	318	316	411
Australia	74	67	170	186	170	215	244	256	246
Russian Federation	n/a	n/a	266	289	274	270	269	242	238
Canada	189	196	191	200	160	219	212	223	235
New Caledonia	87	85	129	112	130	131	132	150	178
Indonesia	41	69	117	156	216	227	622	811	144
China	11	33	51	59	80	90	93	98	98
Brazil	3	13	32	38	54	75	90	74	86
Cuba	38	41	71	74	65	69	65	62	61
South Africa	26	30	37	42	40	43	46	51	55
Colombia	0	0	28	53	49	38	52	49	41
Madagascar	0	0	0	0	0	0	6	25	37
Guatemala	7	0	0	0	0	0	2	9	34
Others	*n/a*	*n/a*	*82*	*120*	*108*	*128*	*123*	*134*	*127*
World	**749**	**888**	**1,191**	**1,356**	**1,531**	**1,823**	**2,272**	**2,503**	**1,991**
Refined Production (thousand metric tons)									
China	11	28	52	97	314	470	591	711	644
Russian Federation	*n/a*	*n/a*	242	264	263	266	256	246	246
Japan	109	103	161	164	166	157	170	178	178
Australia	35	43	112	122	102	110	129	142	138
Canada	145	127	134	140	105	142	140	137	115
Norway	37	58	59	85	92	92	92	91	91
Brazil	3	13	23	30	28	43	59	56	73
New Caledonia	33	32	44	47	40	41	45	48	62
Finland	13	17	54	41	49	49	46	44	43
Colombia	0	18	28	53	49	38	52	49	41
United Kingdom	19	27	38	38	32	37	34	40	38
Madagascar	0	0	0	0	0	0	6	25	37
South Africa	18	28	37	42	34	36	33	32	35
Others	*n/a*	*n/a*	*127*	*166*	*163*	*184*	*192*	*184*	*180*
World	**743**	**858**	**1,110**	**1,288**	**1,437**	**1,665**	**1,843**	**1,985**	**1,920**
Refined Consumption (thousand metric tons)									
China	18	28	58	197	489	703	805	909	761
Japan	122	159	192	180	177	174	159	159	161
United States	142	127	153	128	119	134	126	123	152
Korea, Rep.	0	24	91	118	101	100	108	107	100
Taiwan, China	0	18	106	84	73	53	57	53	66
Germany	78	93	102	116	100	88	89	66	62
Italy	27	27	53	85	62	66	65	59	60
Spain	9	21	32	48	29	29	32	32	33
South Africa	n/a	n/a	35	47	41	34	32	35	31
Others	*n/a*	*n/a*	*329*	*315*	*235*	*281*	*257*	*255*	*268*
World	**717**	**842**	**1,150**	**1,317**	**1,427**	**1,661**	**1,729**	**1,798**	**1,695**

Source: World Bureau of Metal Statistics.
Note: n/a implies data not available.

Tin

Source: World Bank.
Note: Last observation is June 2015.



Source: World Bank.
Note: 2015-25 are forecasts.

	1980	1990	2000	2005	2010	2011	2012	2013	2014
Mine Production (thousand metric tons)									
China	16	42	88	113	130	127	116	149	177
Indonesia	33	39	52	120	84	78	90	84	70
Peru	1	5	36	43	34	29	26	24	23
Bolivia	23	17	13	19	20	20	20	19	20
Myanmar	1	1	2	1	1	2	2	9	17
Brazil	7	39	14	12	10	11	14	14	14
Australia	12	7	9	3	19	15	6	6	7
Vietnam	0	1	2	5	5	5	5	5	5
Rwanda	2	1	0	3	3	5	3	4	4
Congo, DR	3	2	0	8	7	3	2	5	4
Malaysia	61	29	6	3	3	3	4	4	4
Nigeria	3	0	2	1	1	2	2	3	2
Lao People's DR	1	0	0	1	0	0	1	1	1
Others	*72*	*42*	*10*	*3*	*1*	*1*	*1*	*1*	*1*
World	**231**	**225**	**234**	**333**	**318**	**303**	**292**	**327**	**349**
Refined Production (thousand metric tons)									
China	15	36	110	112	149	155	148	159	187
Indonesia	31	38	46	78	64	73	80	63	68
Malaysia	71	49	26	39	39	40	38	33	37
Peru	0	0	17	38	36	30	25	24	26
Thailand	35	16	17	29	24	24	23	23	16
Bolivia	18	13	9	16	15	15	14	15	15
Brazil	9	38	14	9	9	9	12	12	12
Belgium	3	6	9	8	10	10	11	10	10
Vietnam	0	2	2	2	3	4	5	6	6
India	0	0	4	4	4	4	4	4	4
Poland	0	0	0	0	1	1	1	2	2
Japan	1	1	1	1	1	1	1	2	2
Russian Federation	n/a	n/a	5	4	1	1	1	1	1
Others	*n/a*	*n/a*	*2*	*1*	*2*	*2*	*2*	*1*	*1*
World	**245**	**248**	**262**	**341**	**357**	**369**	**365**	**353**	**386**
Refined Consumption (thousand metric tons)									
China	13	26	49	109	154	176	176	168	193
United States	47	37	51	42	32	32	31	29	29
Japan	31	35	25	33	36	27	28	28	27
Germany	19	22	21	19	17	20	18	18	19
Korea, Rep.	2	8	15	18	17	14	16	15	14
India	2	2	6	8	11	10	10	10	12
Netherlands	5	7	4	4	5	5	5	7	7
Spain	5	4	4	7	6	6	3	5	6
Vietnam	0	0	1	1	2	2	2	4	5
Others	*100*	*98*	*101*	*97*	*88*	*85*	*70*	*70*	*67*
World	**223**	**238**	**277**	**339**	**369**	**377**	**358**	**354**	**379**

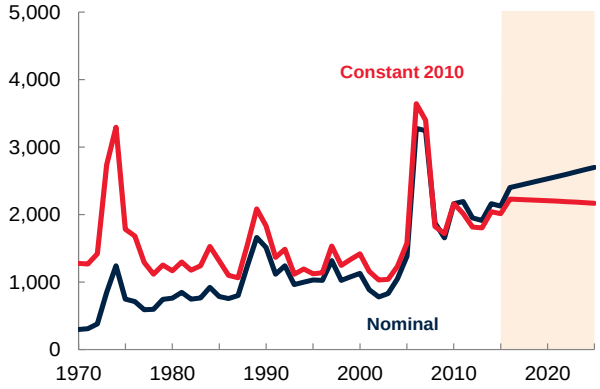
Source: World Bureau of Metal Statistics.
Note: n/a implies data not available.

Zinc

Monthly Prices (US$/mt)

Source: World Bank.
Note: Last observation is June 2015.

Annual Prices (US$/mt)



Source: World Bank.
Note: 2015-25 are forecasts.

	1980	1990	2000	2005	2010	2011	2012	2013	2014
Mine Production (thousand metric tons)									
China	150	763	1,780	2,061	3,842	4,050	4,859	5,391	5,445
Australia	495	940	1,420	1,367	1,480	1,516	1,542	1,523	1,560
Peru	488	584	910	1,202	1,470	1,256	1,281	1,351	1,319
United States	349	571	829	748	748	769	738	788	831
India	32	70	208	447	740	733	725	817	729
Mexico	243	307	401	476	570	632	660	643	676
Bolivia	50	108	149	160	411	427	390	407	493
Canada	1,059	1,203	1,002	667	649	612	612	426	353
Kazakhstan	n/a	n/a	322	364	405	377	371	361	347
Ireland	229	167	263	429	354	344	338	327	283
Sweden	167	160	177	216	199	194	188	177	222
Russian Federation	n/a	n/a	132	186	269	282	259	209	217
Turkey	23	35	26	19	196	158	206	200	211
Others	*n/a*	*n/a*	*1,204*	*1,228*	*1,176*	*1,185*	*1,211*	*1,202*	*1,344*
World	**6,172**	**7,176**	**8,823**	**9,569**	**12,510**	**12,535**	**13,380**	**13,822**	**14,029**
Refined Production (thousand metric tons)									
China	155	552	1,957	2,725	5,209	5,212	4,881	5,302	5,827
Korea, Rep.	76	248	473	650	750	828	877	895	915
India	44	79	176	266	701	788	691	773	698
Canada	592	592	780	724	690	662	649	652	648
Japan	735	688	654	638	574	545	571	587	583
Spain	152	253	386	501	517	527	528	529	529
Australia	301	309	489	457	498	507	498	498	482
Peru	64	118	200	166	223	314	319	346	336
Mexico	145	199	337	334	322	322	324	323	326
Kazakhstan	n/a	n/a	263	357	319	320	320	320	325
Finland	147	175	223	282	307	307	315	312	302
Netherlands	170	208	217	225	264	261	257	275	290
Russian Federation	n/a	n/a	241	206	260	246	247	262	265
Others	*n/a*	*n/a*	*2,757*	*2,587*	*2,285*	*2,305*	*2,086*	*2,021*	*1,998*
World	**6,159**	**6,698**	**9,153**	**10,119**	**12,919**	**13,145**	**12,563**	**13,095**	**13,525**
Refined Consumption (thousand metric tons)									
China	200	369	1,402	3,040	5,350	5,460	5,396	5,995	6,420
United States	810	992	1,315	1,080	907	939	892	939	962
Korea, Rep.	68	230	419	448	540	544	553	578	644
India	95	135	224	389	538	556	561	640	636
Japan	752	814	674	602	516	501	479	498	503
Germany	474	530	532	514	494	515	474	479	474
Belgium	155	178	394	256	321	256	239	222	388
Russian Federation	n/a	n/a	138	166	203	202	222	265	242
Italy	236	270	377	373	339	338	247	245	240
Others	*n/a*	*n/a*	*3,414*	*3,527*	*3,313*	*3,267*	*3,096*	*3,138*	*3,169*
World	**6,131**	**6,568**	**8,889**	**10,396**	**12,521**	**12,579**	**12,159**	**13,000**	**13,678**

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, Dubai and West Texas Intermediate, equally weighed.
Crude oil, U.K. Brent 38 API.
Crude oil, Dubai Fateh 32 API.
Crude oil, West Texas Intermediate (WTI) 40° API.
Natural Gas Index (Laspeyres), weights based on 5-year consumption volumes for Europe, US and Japan (LNG), updated every 5 years.
Natural Gas (Europe), average import border price with a component of spot price, including UK.
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, arithmetic average of quotations at Kolkata, Colombo and Mombasa/Nairobi.
Tea (Colombo), Sri Lankan origin, all tea, arithmetic average of weekly quotes.
Tea (Kolkata), leaf, include excise duty, arithmetic average of weekly quotes.
Tea (Mombasa/Nairobi), African origin, all tea, arithmetic average of weekly quotes.

Oils and meals

Coconut oil (Philippines/Indonesia), 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 US Gulf port for prompt or 30 days shipment.

Other food

Bananas (Central & South America), major brands, free on truck (f.o.t.) Southern Europe, including duties.
Bananas (Central & 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 (UK), 99.5% fine, London afternoon fixing, average of daily rates.
Platinum (UK), 99.9% refined, London afternoon fixing.
Silver (UK), 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 US 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 indices 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 classification.

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 of World Energy, World Metal Statistics, World Bureau of Metal Statistics, and World Bank staff estimates. The weights can be found in the table of 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. Commodities such as metals use calendar year.

Abbreviations

$ = U.S. dollar
bbl = barrel
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 (1,000 kilograms)
mb/d = million barrels per day
mmbtu = million British thermal units
mt = metric ton (1,000 kilograms)
toz = troy oz

Acronyms

DAP	diammonium phosphate
ECB	European Central Bank
EIA	Energy Information Administration
FSU	Former Soviet Union
GDP	gross domestic product
IEA	International Energy Agency
IP	Industrial Production
LME	London Metal Exchange
LNG	liquefied natural gas
KRG	Kurdistan regional Government
NPI	nickel pig iron
OECD	Organization of Economic Cooperation and Development
OLS	Ordinary Least Squares
OPEC	Organization of Petroleum Exporting Countries
PPP	Purchasing Power Parity
S/U	stocks-to-use ratio
TSP	triple superphosphate
USDA	United States Department of Agriculture
WTI	West Texas Intermediate

Data sources

Baker Hughes
Bloomberg
BP Statistical Review of World Energy
Cotton Outlook
Datastream
Fertilizer Week
INFOFISH
INTERFEL Fel Actualités Hebdo
International Cocoa Organization (ICCO)
International Coffee Organization (ICO)
International Energy Agency (IEA)
International Fertilizer 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
MLA Meat & Livestock Weekly
Platts International Coal Report
Singapore Commodity Exchange
Sopisco News
Sri Lanka Tea Board
U.S. Department of Agriculture
U.. Energy Information Administration (EIA)
U.S. NOAA Fisheries Service
World Bureau of Metal Statistics
World Gas Intelligence

Weights for commodity price indices

Commodity group	Share of energy and non-energy indices	Share of sub-group indices
Energy	**100.0**	
Coal	4.7	
Crude Oil	84.6	
Natural Gas	10.8	
Non-energy	**100.0**	
Agriculture	**64.9**	
Beverages	**8.4**	**100.0**
Coffee	3.8	45.7
Cocoa	3.1	36.9
Tea	1.5	17.4
Food	**40.0**	
Grains	**11.3**	**100.0**
Rice	3.4	30.2
Wheat	2.8	25.3
Maize (includes sorghum)	4.6	40.8
Barley	0.5	3.7
Oils and Meals	**16.3**	**100.0**
Soybeans	4.0	24.6
Soybean Oil	2.1	13.0
Soybean Meal	4.3	26.3
Palm Oil	4.9	30.2
Coconut Oil	0.5	3.1
Groundnut Oil (includes groundnuts)	0.5	2.8
Other Food	**12.4**	**100.0**
Sugar	3.9	31.5
Bananas	1.9	15.7
Meat, beef	2.7	22.0
Meat, chicken	2.4	19.2
Oranges (includes orange junice)	1.4	11.6
Agricultural Raw Materials	**16.5**	
Timber	**8.6**	**100.0**
Hardwood	8.6	100.0
Logs	1.9	22.1
Sawnwood	6.7	77.9
Other Raw Matrials	**7.9**	**100.0**
Cotton	1.9	24.7
Natural Rubber	3.7	46.7
Tobacco	2.3	28.7
Metals and Minerals	**31.6**	**100.0**
Aluminum	8.4	26.7
Copper	12.1	38.4
Iron Ore	6.0	18.9
Lead	0.6	1.8
Nickel	2.5	8.1
Tin	0.7	2.1
Zinc	1.3	4.1
Fertilizers	**3.6**	**100.0**
Natural Phosphate Rock	0.6	16.9
Phosphate	0.8	21.7
Potassium	0.7	20.1
Nitogenous	1.5	41.3
Precious Metals	**100.0**	
Gold	77.8	
Silver	18.9	
Platinum	3.3	

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

Most commodity prices declined in the second quarter of 2015 due to ample supplies and weak demand, especially in industrial commodities. One main exception was the price of crude oil which rebounded early in the quarter on stronger demand but has since weakened owing to a still large global surplus. These trends are expected to persist for the rest of the year, with a modest recovery in 2016. This issue's *Special Focus* section looks at China's and India's commodity consumption patterns. It concludes that demand from China and, to a lesser extent India, significantly raised global demand for metals and energy—especially coal—and less so for food commodities. This pattern reflected the countries' different growth models and the way in which consumption responds to income growth.

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

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