Appendix 2
Global Commodity Price Prospects

Commodity prices declined in 2001, however oil prices remain high relative to non-oil prices (figure A2.1). Agricultural prices have yet to begin a sustained recovery from the declines that began just before the Asia crisis in mid-1997, due to continued large supply increases, weak demand, and currency devaluations of major commodity exporters relative to the dollar. Metals and minerals prices made a modest recovery from the lows reached in 1999, but have since returned to near those lows, due mostly to weak demand. Oil prices rose sharply from their 1998 lows due to cuts by OPEC producers, but have weakened in the past year due to weakness in the global economy and, most recently, the terrorist attacks in the United States.

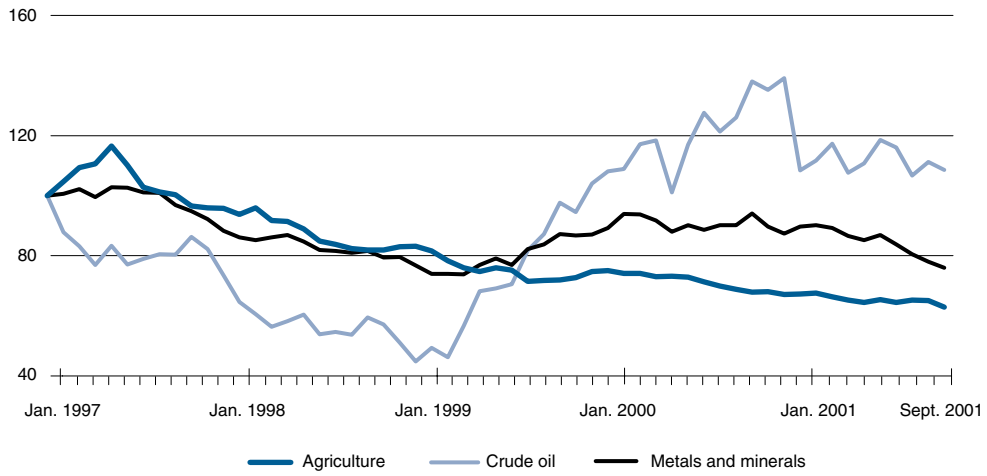
One of the main reasons for the divergence of oil and non-oil commodities is that commodity producers have responded very differently to the price declines following the Asia crisis. Cuts in crude oil production and exports by OPEC producers starting in 1999 sent oil prices higher, while metals and minerals prices got a boost from cuts in mine and smelter output. However producers of agricultural commodities were slow to adjust to low prices; this has contributed to continuing price weakness. Some agricultural commodities are still facing large year-to-year production increases despite the nearly 32 percent decline in agricultural commodity prices from 1997 to 2001. Global coffee production, for example, increased 21 percent from 1997 to 2000 despite a decline of 53 percent in nominal prices over the same period.

Currency devaluations, relative to the U.S. dollar, have also depressed prices of some commodities—especially in countries with weak currencies that are also major commodity exporters, such as Brazil, Indonesia, and Thailand. For example, Brazil's currency has devalued about 50 percent relative to the dollar since 1997, and this has led to lower dollar prices for its major agricultural exports—coffee, soybeans, and sugar. Indonesia, a major exporter of natural rubber and vegetable oils, has seen its currency devalue 70 percent relative to the dollar since 1997. Thailand, the largest rice exporter, has seen its currency devalue 30 percent relative to the dollar since 1997, which has sent rice prices lower.

The current decline in non-oil commodity prices has been more severe than the two declines of the 1980s. There are strong similarities in all three periods, however (figure A2.2). The current decline began in May 1996, and prices fell by 30 percent in 38 months, compared to a decline of 27 percent in 32 months from the February 1980 peak, and a 23 percent decline in 37 months from the June 1988 peak. In all three cases, commodity prices reached their initial lows after about three years and then rallied before returning to their previous lows. Then the patterns diverge, with prices declining for another year in one case and rising in the other.

Figure A2.1 Commodity price trends

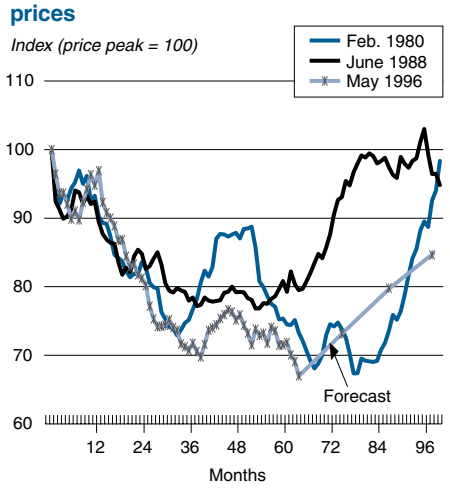
January 1997=100



Source: World Bank.

Figure A2.2 Non-energy commodity prices

Index (price peak = 100)



Source: World Bank.

The recent terrorist attacks and resulting economic slowdown is expected to delay the recovery in non-oil commodity prices until the latter half of 2002 and result in a modest 1.6 percent increase in 2002. Thereafter prices are expected to rebound rapidly as extreme low prices curtail supplies and prices rise 8.1 percent in 2003. The increases are expected to be below the recoveries of the 1980s (figure A2.2) because of large surplus production capacity relative to demand that exists in many commodities; improvements in technology that have lowered production costs; and policies in many OECD countries that have insulated producers from declines in global prices. Agricultural prices are projected to rise 1 percent in 2002 and 8.8 percent in 2003, while metals and minerals prices are projected to rise 3.2 and 7.2 percent, respectively, during 2002 and 2003. Beyond 2003, we expect nominal non-oil prices to continue to increase about 5 percent per year through 2005. Specific commodity price projections are contained in tables A2.12 and A2.13 for selected years to 2005, 2010, and 2015. Projected nominal and real commodity indices are given in table A2.14.

Oil prices are expected to fall to $21 a barrel in 2002 compared to $25 a barrel in 2001. However, the recent terrorist attacks in the

United States have added substantial risk to the outlook, and prices will likely be more volatile than previously expected. Prices are expected to settle in the $18–20 range over the balance of the decade as recent high prices stimulate new production capacity.

Over the forecast period to 2015, real non-oil commodity prices are projected to remain about constant relative to 2001 levels as nominal prices recover from current severely depressed levels. In contrast, real oil prices are expected to fall 40 percent over the same period as prices retreat from current high levels. This divergent forecast for non-oil and oil prices reflects the extreme divergence in current prices rather than a fundamental difference in the long-term outlook. The trend of real commodity prices of the last century are expected to continue, with both oil and non-oil prices declining relative to manufactures prices. During the twentieth century, non-oil commodity prices fell about 1 percent per year relative to the prices of manufactures; oil prices fell even more rapidly until the early 1970s when OPEC's market power emerged and supplies were curtailed. Since the peak of real non-oil prices in the early 1970s and the peak of oil prices in 1980, real prices of both have declined by about two-thirds.

The structural decline in agricultural commodity prices relative to manufactures appears to be the direct consequence of more rapid productivity gains (see box A2.1) Such gains have been fueled by rising yields, improved policies in developing countries, and investments in infrastructure and irrigation. Metals and minerals costs have also declined due to improvements in technology, better management, and better policies. Demand growth for commodities has slowed in response to slower population growth and declining income elasticities. These trends are expected to continue and lead to continued declines in real commodity prices over the longer term.

Agriculture

Agricultural commodity prices have been the weakest component of commodity prices, down 33 percent in 2000 compared to their 1995 highs.

Box A2.1 Total factor productivity growth

Martin and Mitra (2001),[1] in a cross-country study of nearly 50 countries for the period 1967–92, estimated total factor productivity (TFP) growth for agriculture at between 2.3 percent and 2.9 percent per year (depending on the econometric specification used) compared to 1.1 percent to 1.9 percent for manufactures. The TFP growth was found to be faster in developed countries than in developing countries, for both agriculture and manufacturing, and growth was faster in middle-income than low-income developing countries. The difference in TFP growth between agriculture and manufactures was most striking for low-income developing countries, where the range of TFP estimates was 1.4 to 2.0 for agriculture compared to 0.2 to 0.9 for manufactures (table A2.1). Thus the greater gain in total factor productivity of agriculture relative to manufactures has played a large role in accounting for the decline of agricultural prices relative to manufactures.

Total factor productivity growth in agriculture and manufacturing

(percent)

	Agriculture	Manufacturing
Overall TFP	2.3 to 2.9	1.1 to 1.9
Developed countries	3.4 to 3.5	1.9 to 3.3
Developing countries	1.8 to 2.6	0.6 to 0.9
Low income countries	1.4 to 2.0	0.2 to 0.9
Middle income countries	1.8 to 2.9	0.8 to 1.0

[1] Martin, W. and D. Mitra (2001). "Productivity Growth in Agriculture versus Manufacturing." Economic Development and Cultural Change, vol. 49, no. 2, January, pp. 403–422.

Beverages

The World Bank's monthly index of nominal beverage prices (comprised of the export value weighted average of coffee, cocoa, and tea prices) has declined 71 percent since the 1997 highs, due mostly to steep declines in coffee prices.

Prior to 1998–99, coffee production and consumption were relatively equal, with little overall increase in either since the late 1980s. Since 1998–99, production has increased about 20 percent, and arabica and robusta coffee prices have declined 66 and 63 percent, respectively, from 1997 to the first nine months of 2001. Despite these dramatic price declines, production is expected to increase for the fourth consecutive year (see table A2.1). Prices are not expected to recover until this imbalance is resolved. It is possible that coffee prices have permanently shifted lower to accommodate increased production by efficient producers.

Cocoa and tea prices have not seen the sharp declines observed in coffee because supplies have not increased as significantly. Cocoa consumption has grown at a fairly steady 3 percent per year over the past two decades, while global tea consumption has grown at a more modest 1 percent per year (see table A2.2).

Coffee

Brazil, the largest coffee producer with about 30 percent of the world's total, is expected to have a near-record crop, while Vietnam, the second largest producer, is expected to have a record crop. Other major producers such as Colombia, Côte d'Ivoire, Indonesia, and Mexico are all expected to have large crops.

Low prices have been met with several recent attempts to curtail exports by the Association of Coffee Producing Countries (ACPC). So far these attempts have been ineffective and all efforts have ended in failure. Current efforts appear to lack an effective mechanism to control coffee exports and have not yet inspired much market response. In addition, withholding stocks without reducing supplies encourages sales outside of the agreement and undermines the agreement.

The recent decline in coffee prices has been due primarily to a surge in supplies, but the equally important longer-term problem for coffee producers is weak demand. Per capita consumption in Europe and the United States, which accounts for nearly 90 percent of international demand, has been declining. In the United States, for example, per capita coffee consumption has been declining since 1970, while per capita consumption of soft drinks has more than doubled. Unless tastes change, coffee producers will probably need to adjust to slow—perhaps stagnant—demand growth.

A significant recovery of coffee prices is not expected soon unless there are major supply disruptions due to droughts or frosts, which occurred in 1994 and 1997. We project a modest recovery in robusta prices beginning in 2002 and arabica prices in 2003 (table A2.12–13 for specific price forecasts), but we also recognize the risk that prices could drift lower until supplies are sharply reduced. Over the longer-term,

Table A2.1 Coffee production

(million bags)

	1997–98	1998–99	1999–2000	2000–01	2001–02
Brazil	22.8	35.6	30.8	34.1	33.7
Vietnam	6.9	7.5	11.0	11.3	12.5
Colombia	12.2	10.9	9.5	11.5	11.4
Indonesia	7.8	7.0	6.5	7.3	6.3
Mexico	5.1	5.0	6.2	5.5	5.5
Côte d'Ivoire	3.7	2.2	5.7	4.3	4.7
World	96.4	108.4	113.7	117.0	117.7

Source: USDA; and International Coffee Organization (ICO).

Table A2.2 Beverages' global balance

							Annual growth rates (percent)		
	1970	1980	1990	1999	2000	2001	1970–80	1980–90	1990–2000
Coffee *(Thousand bags)*									
Production	64,161	86,174	88,849	113,723	117,001	117,739	2.11	1.36	1.20
Consumption	71,536	79,100	96,300	98,000	103,290	105,340	1.01	1.97	0.22
Exports	54,186	60,996	76,163	92,338	87,502	96,095	0.78	2.41	1.06
	1970	1980	1990	1998	1999	2000	1970–80	1980–90	1990–2000
Cocoa *(Thousand tons)*									
Production	1,554	1,695	2,506	2,884	3,032	2,809	0.46	4.62	1.82
Grindings	1,418	1,556	2,335	2,785	2,911	2,977	0.16	4.48	2.38
Stocks	497	675	1,791	1,231	1,321	1,125	2.38	13.89	3.95
Tea *(Thousand tons)*									
Production	1,286	1,848	2,526	2,963	2,847	2,895	4.09	2.87	1.24
Exports	752	859	1,099	1,296	1,272	1,309	2.35	2.39	1.62

Notes: The 2001 figures for coffee are preliminary forecasts. Time reference for coffee and cocoa are based on crop year shown under the year that production begins: October to September for cocoa, and April to March for coffee. For tea, time is calendar year.
Source: International Cocoa Organization; International Tea Committee; FAO; USDA; and World Bank.

real coffee prices are expected to recover, but remain well below historical highs of the 1970s or recent highs of the 1990s. By 2015, real arabica and robusta prices are projected to increase 54 and 74 percent, respectively, from 2001 levels, but they would still be only half of their 1990s peaks.

Cocoa

Following the three-decade low in February 2000, cocoa prices recovered somewhat during the first nine months of 2001 to average $1.01/kg compared to $0.91/kg in 2000. The partial price recovery was largely due to production cutbacks and export disruptions in Côte d'Ivoire (due to political instability), and Ghana. The 2000–01 cocoa crop is expected to be down 7.3 percent from the 1999–2000 record crop, and more in line with the average production levels of the early 1990s.

Demand for cocoa is expected to grow by 2.3 percent this season, just a little slower than the 1990–2000 average of 2.4 percent, but far below the 1980–90 average of 4.6 percent (table A2.2). Demand from Eastern Europe and the former Soviet Union (FSU) has grown by more than 10 percent per year, while East Asian countries have seen slower demand growth, partly due to the recent economic slowdown. Prices are projected to average a little over $1.00/kg in 2001 and about $1.10/kg in 2002. By 2015, real prices are projected to increase 21 percent from 2001 but still be 20 percent below their 1998 highs.

Tea

The three-auction average tea price fell 17 percent in the first nine months of 2001, compared to 2000, due mostly to increased production by the major exporters (India, Kenya, and Sri Lanka). In addition, currency devaluations in Sri Lanka relative to the U.S. dollar contributed to the dollar price declines. Since the high in 1997, nominal tea prices are down about 21 percent.

Tea prices have been held up by several years of poor harvests in some exporting countries, combined with strong demand in the Middle East and the Russian Federation, following high export earnings from crude oil. However, prices are expected to decline as supplies increase and demand weakens along with the expected decline in crude oil prices. We project tea prices to decline about 1 per-

cent in 2002, but there is potential for larger declines because of a possible disruption in trade to the Middle East and Central Asia following recent events.

The growth of global tea exports has slowed significantly during the 1990s compared to previous decades (table A2.2), and this has not been offset by more rapid growth in domestic demand in major producing countries, such as India. Thus, we project real prices to decline 14 percent by 2015 relative to 2001 as exporters intensify their push to increase output and demand growth remains weak.

Food

Despite considerable volatility in the components of the food price index, the overall index of nominal food prices has remained relatively constant since 1999, but is down nearly 32 percent since peaking in 1996. Prices are expected to increase about 1 percent in 2002 and then begin to recover more rapidly as the global economy rebounds from the current slowdown, and agricultural commodity prices recover from current lows. By 2015, real food prices are expected to return to long-run trends, down 13 percent relative to 2001 levels.

Fats and oils

Fats and oils prices have taken a beating, down 8.1 percent in the first nine months of 2001 compared to 2000, and down 40 percent since 1997. The declines are due generally to increased supplies and currency devaluations of major producers versus the dollar. Global fats and oils production in 2001–02 (October to September) is expected to increase about 2 percent from the 2000–01 level, which is well below the trend growth of about 3.5 percent per year, but follows large increases in recent years that have left the market oversupplied. The increase has been greatest in the two largest vegetable oils—soybean and palm—which account for 23 and 19 percent of total fats and oils, respectively.

World soybean production has grown by 5.1 percent per year over the past decade, with growth centered in the three major producers and exporters (Argentina, Brazil, and the United States), which together account for 80 percent of global production (table A2.3). Since 1990, palm oil production has more than doubled (table A2.4), with the large increases coming from Indonesia and Malaysia.

Table A2.3 Soybean production

(millions of tons)

Year	Argentina	Brazil	United States	World
1990	11.5	15.8	52.4	104.1
1995	12.4	24.2	59.2	124.9
2000	26.0	37.5	75.4	172.1
2001	25.5	38.0	79.9	177.2

Source: USDA.

Table A2.4 Palm oil production

(millions of tons)

Year	Indonesia	Malaysia	World
1990	2.41	6.10	11.03
1995	4.22	7.81	15.22
2000	6.95	10.84	21.77
2001	7.35	11.55	23.01

Source: Oil World.

Prices of most fats and oils are expected to increase in 2002 and 2003, but remain well below 1999 highs. Once the current imbalance is resolved, price prospects improve due to the strong demand growth expected in China and India. Real fats and oil prices are projected to increase 12 percent from 2001 to 2015 as prices recover from current lows.

Grains

The USDA's projection for the new season (2001–02) is for significant declines in ending-stocks of grain (table A2.5), and this should cause most grain prices to increase in 2001 and 2002 after reaching lows in 1999 or 2000. Maize prices appear to have bottomed out in 2000 and are expected to increase about 2 percent in 2001 and 7 percent in 2002. Wheat prices, which hit bottom in 1999, are projected to increase 10 percent in 2001 and 4 percent in

Table A2.5 Global grain stocks to use
(percentages)

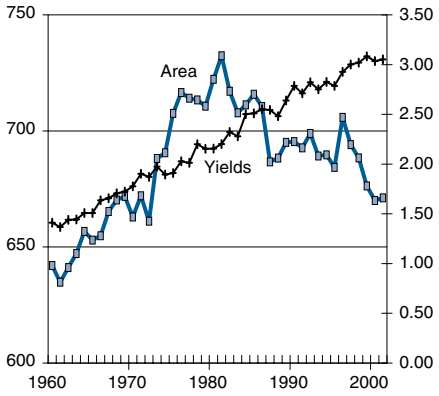
	Maize	Rice	Wheat	Total Grains
1997–98	25.5	33.3	29.3	26.9
1998–99	29.3	34.3	29.8	28.5
1999–2000	28.4	35.8	28.3	27.8
2000–01	25.9	34.2	26.8	26.1
2001–02 (estimated)	23.0	31.4	22.4	23.1
1990s low	22.6	31.4	25.2	23.2

Source: USDA. Data for 2001–02 are the USDA's August 2001 estimate.

2002. Rice prices, which are still falling, are expected to decline 16 percent in 2001, and then increase 9 percent in 2002. In real terms, maize, rice, and wheat prices are projected to increase 14, 17, and 13 percent by 2015 relative to their lows during 1999–2001.

Substantial surplus production capacity exists because yields have continued to grow along historical trends, while the area devoted to grain production has fallen (figure A2.3). Despite these reductions in land use, real prices have declined by half since 1980. The growth of global grain consumption has slowed from 2.6 percent per year during the 1970s to 1.8 percent during the 1980s, and to 1 percent during the 1990s (table A2.6).

Figure A2.3 World grain area and yields
Million hectares and tons per hectare



Note: Area is in million hectares (left side) and yields are in tons per hectare (right side).

Source: World Bank based on USDA data.

Sugar

World sugar production has exceeded consumption in 8 of the past 10 seasons, causing the ending stocks-to-use ratio to reach 0.27 in the 2000–01 marketing season—the highest since 1985. World sugar consumption has grown by 3 percent per year during the last decade (table A2.6). Sugar prices had recovered from the sharp drop following the Asia crisis, but have since declined due to large supplies (figure A2.4).

Brazil, which is the largest sugar exporter with about one-quarter of world exports in 2000–01, more than doubled production from 1990–91 to 2000–01 and increased exports from 1.5 to 11.3 million tons. Australia and Thailand increased production by 50 and 70 percent, respectively, from 1990–91 to 1997–98 when prices were attractive, but have cut production as prices have declined.

Sugar prices are expected to fall about 11 percent in 2002 in response to large supplies and weak demand, and then increase 12 percent in 2003. However, prices are expected to remain relatively weak for the next several years, with fluctuations depending on the year-to-year balance of production and consumption. Over the longer term, real prices are expected to trend lower as production continues to outpace consumption and stocks periodically build. Relative to the 1999 lows, real prices are projected to increase 49 percent by 2015.

Raw materials

The index of agricultural raw materials prices (comprised of tropical hardwoods, cotton, and natural rubber) declined sharply during the Asia crisis and then stabilized. Recently prices have again declined, and are now about 40 percent below their 1997 nominal levels (figure A2.5). Prices are expected to reach a low in 2001 and then increase modestly during the next several years. By 2005, nominal prices are projected to rise 28 percent relative

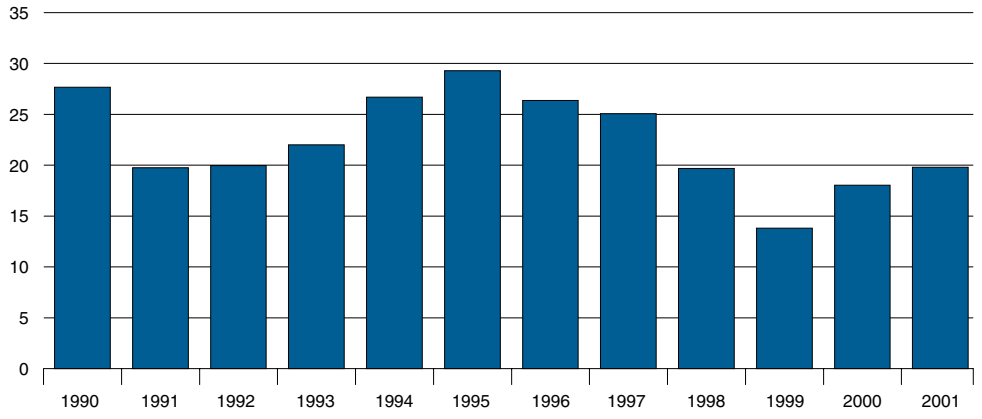
Table A2.6 Foods' global balance

							Annual growth rates (percent)		
	1970	1980	1990	1998	1999	2000	1970–80	1980–90	1990–2000
Grains *(Million tons)*									
Production	1,079	1,430	1,769	1,888	1,887	1,840	2.88	1.55	1.04
Consumption	1,114	1,450	1,717	1,857	1,890	1,876	2.58	1.78	1.02
Exports	109	215	203	225	241	227	6.35	0.13	0.94
Stocks	193	309	490	528	525	489	7.24	3.83	0.56
Soybeans *(Thousand tons)*									
Production	44,269	80,873	104,093	159,819	159,659	172,107	6.84	1.87	5.08
Consumption	47,988	84,017	103,643	159,567	159,839	171,486	6.53	2.04	4.99
Exports	12,572	24,514	24,488	38,945	47,231	52,686	5.24	0.80	2.88
Stocks	3,599	11,538	12,992	14,297	14,338	14,209	13.83	0.66	0.20
Sugar *[Thousand tons (raw equivalent)]*									
Production	70,919	84,742	109,393	143,388	133,634	136,882	2.80	1.59	3.26
Consumption	65,395	91,062	106,802	138,168	127,499	129,449	3.30	1.40	3.00
Exports	21,931	27,571	34,078	41,933	36,742	39,911	3.26	0.83	3.12
Stocks	19,614	19,494	19,309	28,178	31,639	35,225	3.96	0.77	4.52
	1970	1980	1990	1999	2000	2001	1970–80	1980–90	1990–2000
Fats and oils *(Million tons)*									
Production	39.78	58.09	80.84	113.50	117.48	119.84	3.68	3.54	3.70
Consumption	39.82	56.80	80.87	112.20	117.54	121.29	3.55	3.69	3.64
Exports	8.83	17.763	26.89	35.13	37.82	39.37	7.05	4.19	3.39
Stocks	5.18	9.25	12 .15	14.04	14.00	12.80	7.09	2.44	0.69

Note: Time reference for grains, soybeans, and sugar are based on marketing years, shown under the year in which production begins, and varies by country and commodity; for fats and oils time is crop year beginning September.
Source: USDA; and *Oil World*.

Figure A2.4 Nominal sugar price

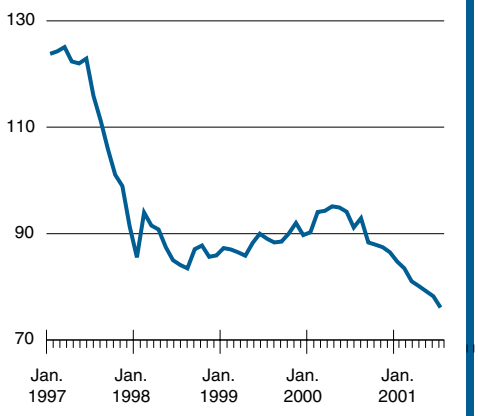
U.S. cents per kilogram



Source: World Bank.

Figure A2.5 Agricultural raw materials price index

Index, 1990 = 100



Source: World Bank.

to 2001, and real prices are projected to rise 17 percent by 2015.

Cotton

Cotton prices declined almost 14 percent in the first three quarters of 2001 compared to 2000—in response to a 6 percent increase in global production in the 2001–02 season. The surge in production (compared to recent historical growth of about 0.8 percent a year) was largely due to a 7 percent increase in global area planted in cotton, which was in response to the relative attractiveness of cotton prices compared to other annual crops. China, India, and the United States accounted for three-quarters of the total production increase.

Cotton demand has been stagnant for most of the past decade and is unlikely to quickly absorb recent production increases. Cotton's share of total fiber consumption exceeded 80 percent in 1950, but fell to 50 percent by 1980, and reached a low of 40 percent in recent years. Consumption is only expected to increase 1 percent in 2001–02; consequently stocks are expected to rise significantly. Therefore, the widely used Cotlook A Index is projected to average $1.06/kg in 2001 and then decrease to $1.02/kg in 2002. Over the longer term, real prices are expected to rise only modestly from current low levels. By 2015, real prices are projected to increase 14 percent relative to 2001.

Natural rubber

Natural rubber prices have contributed to the recent weakness in raw materials prices by declining 11 percent during the first three quarters of 2001 compared to 2000. This price weakness occurred despite a nearly 9 percent increase in global demand (partly in response to the second Firestone tire recall).

The three top producers and exporters of natural rubber—Indonesia, Malaysia, and Thailand—have, in principle, agreed to establish a buffer stock with the objective of cutting production by 4 percent annually starting in 2002 until a full price recovery is realized. While the details of the buffer stock scheme have not yet been outlined, the trilateral organization, Tripartite Rubber Corporation (TRC), is expected to act soon. The historical record of managed supply cut mechanisms is poor, but because TRC consists of the three members who together account for about two-thirds of global output, the outcome may be different.

Natural rubber prices are expected to decline 11 percent in 2001 and then begin to recover in 2002—rising 25 percent by 2005. Real prices are expected to increase 16 percent by 2015 relative to 2001.

Tropical timber

Asian meranti log prices fell 14 percent during the first three quarters of 2001 compared to 2000, due to weak demand in Japan and the strong dollar relative to the Japanese yen. African sapelli log prices fell 5 percent over the same period due to reduced supplies because of restrictions and bans on log exports from Cameroon and other African countries. The weakness of the euro against the dollar and the instability of meranti prices encouraged European buying in the African market.

As growth in the global economy slows, demand in the tropical timber industry continues to weaken, and prices are expected to follow

Table A2.7 Raw materials' global balance

							Annual growth rates (percent)		
	1970	1980	1990	1999	2000	2001	1970–80	1980–90	1990–2000
Cotton *(thousand tons)*									
Production	11,740	13,832	18,970	18,841	19,360	20,800	1.22	3.09	0.84
Consumption	12,173	14,215	18,576	19,784	19,700	19,930	1.11	3.10	0.21
Exports	3,875	4,414	5,081	6,102	5,770	5,900	0.93	2.79	0.49
Stocks	4,605	4,895	6,645	8,802	8,580	9,460	1.71	2.83	1.38
	1970	1980	1990	1998	1999	2000	1970–80	1980–90	1990–2000
Natural rubber *(thousand tons)*									
Production	3,140	3,820	5,080	6,820	6,800	6,880	1.78	3.17	3.08
Consumption	3,090	3,770	5,190	6,540	6,660	7,260	1.58	3.16	3.25
Net Exports	2,820	3,280	3,950	4,690	4,660	5,000	1.26	2.07	1.84
Stocks	1,440	1,480	1,500	2,300	2,530	2,150	0.60	0.23	3.71
	1970	1980	1990	1997	1998	1999	1970–80	1980–90	1990–1999
Tropical lumber *(thousand cubic meters)*									
Logs, production	210	262	300	311	289	299	1.47	1.71	0.45
Logs, imports	36.1	42.2	25.1	17.9	14.6	18.9	0.18	5.10	5.36
Sawnwood, production	98.5	115.8	131.8	115.0	108.3	108.2	1.17	1.74	1.99
Sawnwood, imports	7.1	13.2	16.1	21.2	19.5	21.6	4.95	2.57	3.33
Plywood, production	33.4	39.4	48.2	56.1	47.6	52.0	1.17	2.02	0.46
Plywood, imports	4.9	6.0	14.9	19.5	18.3	18.3	0.69	9.10	3.60

Note: The 2001 figures for cotton are preliminary forecasts. Time reference for cotton is based on crop year shown under the production year beginning August; for rubber and tropical timber, time refers to calendar year.
Source: International Cotton Advisory Committee; International Rubber Study Group; FAO; and World Bank.

demand. Log imports to Japan are expected to fall about 6 percent in 2001 compared to the previous year, according to industry estimates. China, which is the largest global log importer, has continued rapid import growth and this has partially offset weak Japanese imports. However, the combination of the strong dollar, slower economic growth, and the abundance of softwoods that can substitute for hardwood in some uses, should lead to lower prices in 2001. The recovery of timber prices beyond 2001 will be closely linked to the global economic recovery expected in 2003 and to a weakening of the dollar. We project timber prices to remain unchanged in 2002 and to recover in 2003. By 2005, nominal prices of meranti logs are projected to increase 43 percent relative to 2001; sapelli logs are projected to increase 13 percent; and meranti sawnwood is projected to increase 34 percent.

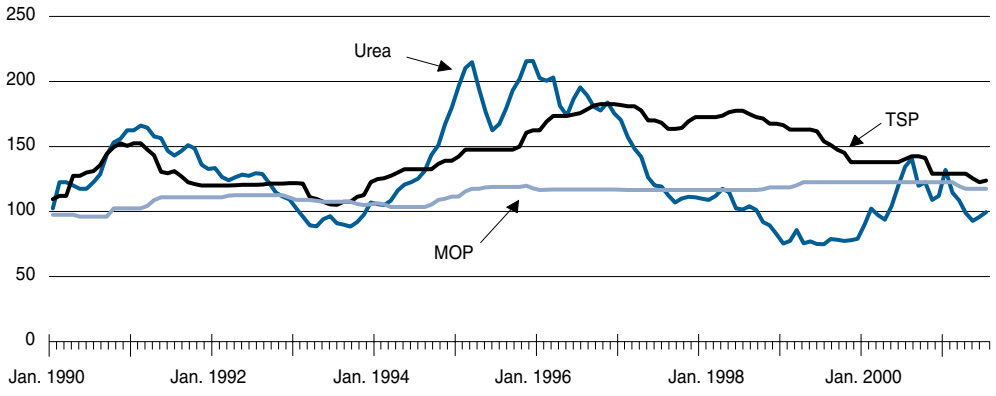
Over the longer-term, real timber prices are projected to recover from current levels, as timber prices remain one of the few commodities with trend real price increase due to supply constraints. Real meranti logs and sawnwood prices are projected to increase 37 and 27 percent, respectively, from 2001 to 2015 while sapelli log prices are projected to increase 9 percent by 2015 compared to 2001. The slower projected growth of sapelli log prices reflects the smaller price decline compared to meranti log prices during the Asia crisis.

Fertilizers

The fertilizer industry is burdened by surplus capacity and weak demand, but prices appear to be near their lows. The situation varies by fertilizer type, with nitrogen (urea) fertilizer prices recovering in 2000 after falling for four years; phosphate (TSP) fertilizer prices still declining but near expected lows; and potash (MOP) prices holding steady due to aggressive production cutbacks (figure A2.6).

Figure A2.6 Fertilizer prices

Dollars per ton



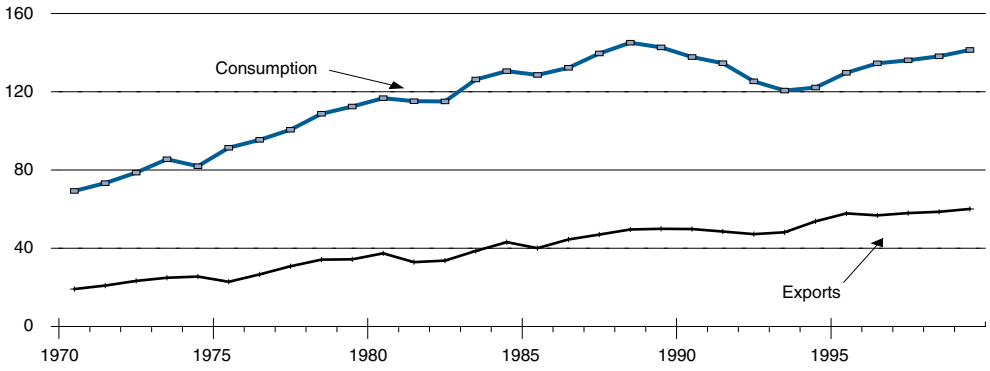
Source: World Bank.

The industry is still adjusting to the sharp declines in consumption in former Soviet and Eastern European countries following the collapse of the Soviet Union. Prices had been heavily subsidized under state control and fertilizer use was high, but subsidies were cut and consumption fell sharply after the collapse of the Soviet Union. This left many countries (such as the Russian Federation and Ukraine) with large production capacity and reduced domestic demand—which led to export growth from Eastern Europe of 4 percent per year since 1993. These exports displaced traditional exporters, and depressed prices of nitrogen and phosphate fertilizers. Global consumption fell about 17 percent from the high in 1988 to the low in 1993 and has only recently recovered to near the 1988 peak (figure A2.7).

The fertilizer industry has had to contend with several other changes in recent years, in-

Figure A2.7 World fertilizer consumption and exports

Millions of tons



Source: FAO.

Table A2.8 Fertilizer global balance
(million tons)

	1970	1980	1990	1997	1998	1999	Annual growth rates (percent) 1970–80	1980–90	1990–99
Nitrogen									
Production	33.30	62.78	82.26	87.60	88.48	90.85	6.53	3.12	1.11
Consumption	31.76	60.78	77.14	80.12	82.62	85.53	6.86	2.60	1.15
Exports	6.77	13.15	19.48	23.24	23.95	24.58	7.23	5.10	2.62
Phosphate									
Production	22.04	34.51	39.35	32.81	32.99	32.65	3.72	1.70	2.05
Consumption	21.12	31.70	35.90	33.34	33.17	33.15	3.85	1.39	.88
Exports	2.92	7.51	10.50	12.24	12.54	12.90	8.37	5.01	2.31
Potash									
Production	17.59	27.46	26.82	26.16	24.98	25.42	3.97	0.03	0.59
Consumption	16.43	24.24	24.68	22.63	22.36	22.68	3.93	0.05	0.94
Exports	9.45	16.72	19.82	22.52	22.13	22.63	4.89	0.73	1.48

Note: All data are in marketing years.
Source: FAO.

cluding weak grain prices since 1996; high natural gas prices in the United States and Europe in the past two years; reduced fertilizer use in the EU because of environmental concerns and lower commodity intervention prices; and increased domestic fertilizer production in major importing countries such as China.

The slow recovery of agricultural commodity prices and weakness in the global economy suggest that prices may remain near current levels for several years or begin a modest recovery. Over the longer term, nitrogen prices are projected to rise as production capacity is rationalized and demand increases; phosphate prices are expected to remain about constant following recent declines; and potash prices are expected to decline as surplus capacity continues.

Metals and Minerals

The index of metals and minerals prices fell 15 percent during the first nine months of 2001, with copper prices down 23 percent (see figure A2.8). Production cutbacks have helped slow the price decline, most notably in aluminum where significant capacity has been shut in the United States' Pacific Northwest—and to a lesser extent in Brazil—because of electric power problems. Mergers and acquisitions have also helped to rationalize surplus capacity within the industry. However global output continues to exceed demand and inventories have risen. Stocks of most metals have risen by more than 60 percent this year, with aluminum and copper stocks more than doubling (see figure A2.9).

The negative impact on the global economy from the terrorist attacks of September 11 will result in lower demand for most metals and minerals, higher inventories, and lower prices. Further closure of high-cost production is likely, and this may help underpin prices somewhat. However the recovery in prices will likely be delayed well into 2002, and will largely be determined by the timing and the strength of the rebound in global economic activity.

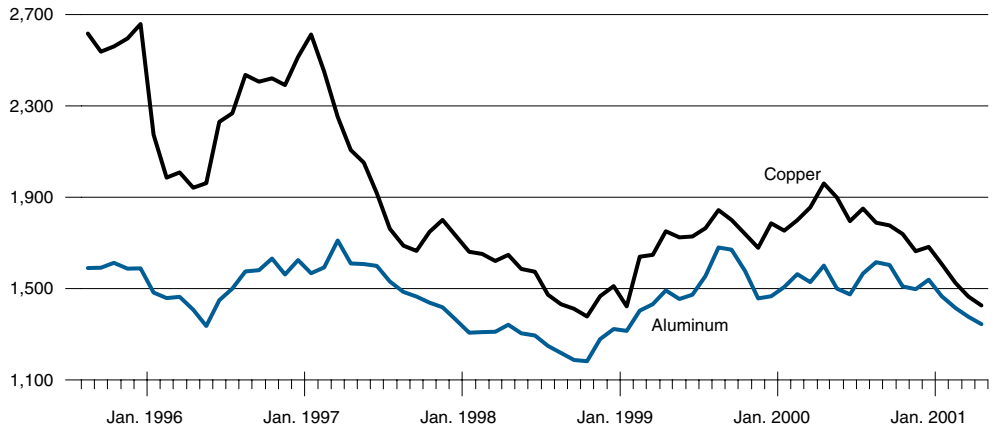
Higher prices will also bring forth new capacity and the restart of idle facilities, and prices will eventually recede. Real prices are expected to decline in the longer term, as production costs continue to fall due to new technologies and improved managerial practices (see figure A2.10).

Aluminum

Aluminum prices have fallen 14 percent this year, while London Metal Exchange (LME) inventories have risen 124 percent. Prices have been partly supported by large reductions in

Figure A2.8 Aluminum and copper prices

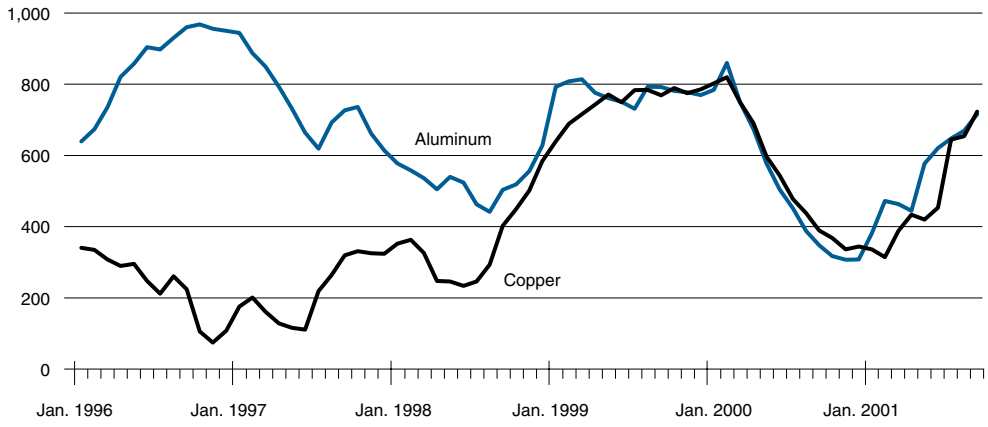
Dollars per ton



Source: London Metal Exchange.

Figure A2.9 Aluminum and copper stocks

Thousands of metric tons



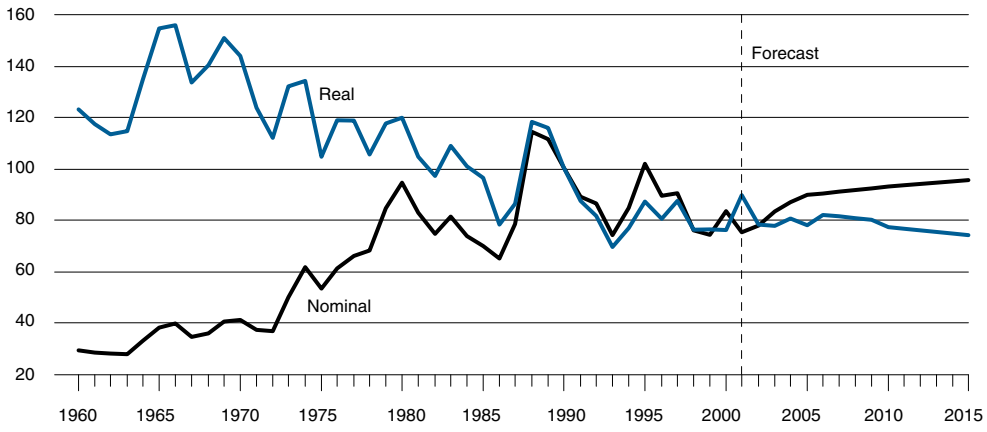
Source: London Metal Exchange.

production in the United States because of the electricity crisis on the West Coast and production curtailments in Brazil and Canada due to hydropower shortages.

About 1.6 million tons of capacity in the U.S. Pacific Northwest has been idled because of electric power shortages in the region. The Bonneville Power Authority (BPA) asked aluminum producers to stay off-line for up to two years or face high power prices when new contracts went into effect on October 1, 2001. The BPA announced that load reductions by utilities and industries helped reduce the rate increase to 46 percent (approximately $34/MWh) compared to possible rate increases of 250 percent, and spot power rates that were several times that

Figure A2.10 Metals and minerals prices

Price index (1990 = 100)



Source: Platts and World Bank.

amount. As compensation for not taking power and curtailing production, aluminum smelters will receive an average rate of $20/MWh.

Despite production cutbacks, the global market is expected to retain a small surplus this year, before moving into a deficit in 2002, but this will partly depend on any structural impact to demand following the September terrorist attacks. Prices are expected to recover during the next economic cycle, but real long-term prices are expected to decline. New low-cost capacity is coming on-stream, but profitable new investments will continue to require low-cost power supplies.

Copper

Copper prices declined 23 percent in the first nine months of 2001, due to weak demand and rising stocks.

LME inventories have more than doubled this year, and are only 13 percent below the highs in early 2000. World consumption fell 2 percent during the first six months, due to the slump in economic activity. In the United States, the construction sector has been buoyant, but weakness in the auto and technology sectors has resulted in total demand falling 9 percent. Demand has been weak elsewhere, with the notable exception of China, partly due to its infrastructure programs. Meanwhile, world production rose 4 percent in the first half of the year.

With recovery of demand in 2002, the market balance is expected to slip into deficit, since only moderate growth in production is expected. Prices could rebound sharply as the next cycle commences, which could also provide upward momentum to other metals prices. In the longer term, increases in new low-cost capacity are expected, and real prices are expected to decline.

Nickel

Nickel prices have fallen 31 percent this year because supply has significantly exceeded demand. LME inventories have risen by 73 percent, but are still quite low compared with levels in recent years (see table A2.9). Production in the first seven months increased by 2.7 percent, with Canada, Colombia, and New Caledonia recording large gains. However first-half world consumption dropped 10 percent, with demand in Japan and the United States down sharply, while China provided the one bright

Table A2.9 Metals and minerals global balance

(thousand tons)

	1970	1980	1990	1998	1999	2000	Annual growth rates (percent) 1970–80	1980–90	1990–2000
Aluminum									
Production	10,257	16,027	19,362	22,648	23,705	24,495	3.2	1.9	2.2
Consumption	9,996	14,771	19,244	21,842	23,505	24,905	3.2	1.8	2.2
LME ending stocks	n.a.	68	311	636	775	322	n.a.	0.3	0.4
Copper									
Production	7,583	9,242	10,809	14,145	14,455	14,788	1.9	1.1	3.5
Consumption	7,294	9,400	10,780	13,364	14,094	15,099	2.5	1.0	3.3
LME ending stocks	72	123	179	592	790	357	7.4	5.6	15.7
Nickel									
Production	0	717	842	999	1,073	1,140	n.a.	1.6	3.1
Consumption	0	742	858	1,042	1,028	1,107	n.a.	1.5	2.6
LME ending stocks (tons)	2,130	4,554	4,344	65,964	46,962	9,678	n.a.	0.5	8.3

n.a. = not available.
Source: World Bureau of Metal Statistics; London Metal Exchange and World Bank.

spot of growth. Stainless steel production has declined owing to the slowdown in economic activity, which lowered demand and prices for nickel (and zinc). The market is tilting into surplus, and a small surplus is expected to endure in 2002 and 2003 as production increases.

Gold

Gold was the one major metal to rise sharply immediately following the September terrorist attacks. After averaging $267/toz this year, prices surged toward $300/toz as some investors turned to gold as a safe haven. Once calm returns to world markets, gold prices should revert toward previous levels, as gold demand will be adversely affected by higher prices and the slowing global economy. Gold demand has been sluggish this year, falling 3 percent in the second quarter, in part because of the higher U.S. dollar gold price. Central Bank sales continue (see table A2.10), with the U.K. government about to complete its

Table A2.10 Gold global balance

(tons)

	Tons 1991	1994	1995	1996	1997	1998	1999	2000	(percent p.a.) 1991–2000
Jewelry	2,358	2,618	2,791	2,851	3,349	3,156	3,149	3,185	3.4
Other fabrication	518	457	503	484	560	569	595	564	0.9
Bar hoarding	252	231	306	182	325	173	240	211	2.0
Other	n.a.	n.a.	6	n.a.	n.a.	208	170		n.a.
Total demand	**3,128**	**3,305**	**3,606**	**3,518**	**4,234**	**4,106**	**4,154**	**3,971**	**4.0**
Mine production	2,159	2,279	2,274	2,361	2,479	2,538	2,568	2,576	2.0
Net official sales	111	81	173	279	626	374	464	471	17.4
Old gold scrap	482	617	625	640	628	1,097	616	607	2.6
Net hedging	66	163	535	142	504	97	506		n.a.
Other	310	173		95	297			316	0.7
Total supply	**3,128**	**3,305**	**3,606**	**3,518**	**4,234**	**4,106**	**4,154**	**3,971**	**2.4**

n.a. = not available
Source: Gold Field Minerals Service; and World Bank.

planned series of auctions of 395 tons in early 2002. Gold prices are expected to remain under $300/toz over the forecast period, generally trading in a relatively narrow range. As has been the case for some time, higher prices will stimulate new supplies, encourage producer sales, and lessen demand, while low prices will reduce investment and encourage consumption. Mine production is expected to continue to increase moderately, as new low-cost operations come on-stream. An important determinant of prices will be the decision by Central Banks whether to further stem official gold sales when the Washington Agreement expires in 2004.

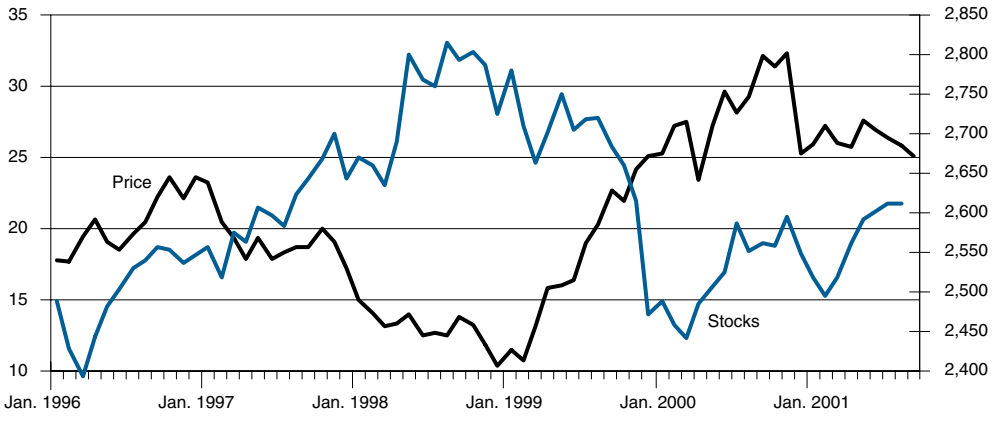
Petroleum

Since the rebound in oil prices that began in early 1999—propelled by a large cutback in OPEC production and sharp decline in inventories (see figure A2.11)—prices have held firm primarily because of OPEC production restraint. Ten OPEC countries (excluding Iraq, which remains outside the quota system while under U.N. sanctions) are taking pre-emptive production decisions to keep prices within their recently chosen band of $22–28 a barrel for its basket of crudes. Due to the seasonality of oil demand, OPEC must both raise and lower production during the year to stabilize prices (see figure A2.12). With non-OPEC supply increasing, it will be more and more difficult to counterbalance the downward pressure on prices.

The terrorist attacks on the United States on September 11, 2001, have accentuated this picture, while at the same time uncertainty is exceptionally large. Following the attacks, oil prices slumped below $23 a barrel due to expectations of weak oil demand, little immediate threat to oil supplies, and no action by OPEC to reduce production and prop up sagging prices. However should there be a significant supply disruption—either from military attacks, sanctions, or reactions from oil producers (for instance, from Iraq)—oil prices could rise sharply.

OPEC announced immediately after the attacks that it would raise production if necessary to help prevent oil prices from spiking higher. Given surplus capacity of around four million barrels a day, the organization could easily make up for a loss of, say, Iraq's exports of around two million barrels a day. At its meeting at end-September 2001, the organization de-

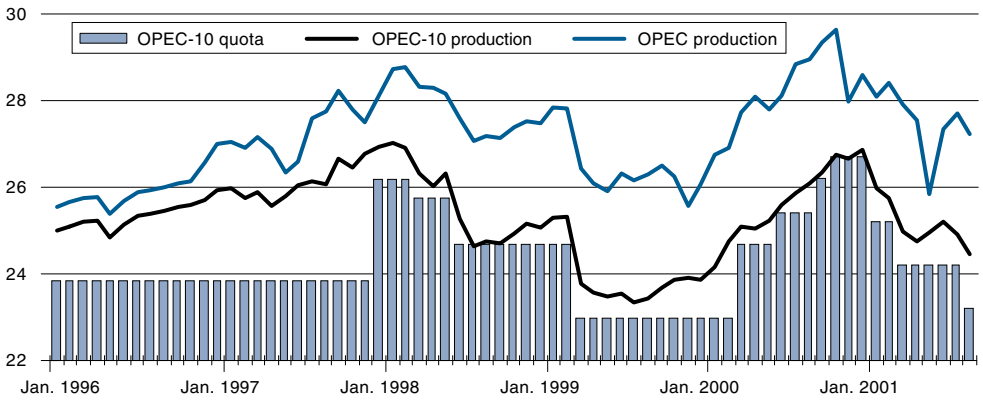
Figure A2.11 Oil price and OECD stocks



Source: World Bank and International Energy Agency.

Figure A2.12 OPEC production and quotas

Millions of barrels a day



Note: OPEC-10 excludes Iraq.
Source: International Energy Agency.

cided not to cut production, despite the fact that oil prices were starting to fall below the lower end of its range. The organization felt compelled not to raise prices at this time because of the impact on the weakening global economy, and to show support for the allied coalition.

In 2002, the requirements for OPEC oil are projected to be lower than in 2001, due to minimal growth in global oil demand and continued rise in non-OPEC supplies. Consequently, OPEC will need to lower production to keep prices within its band. OPEC is expected to strive to maintain prices within the lower end of its range. However, in the present political and economic environment, it is expected to fall short because of weak oil demand, higher inventories, and overproduction by some member countries.

Once some form of normalcy returns to the political and economic climate, and a global recovery commences, OPEC is expected to continue its policy of adjusting output to keep inventories lean and to maintain prices within its band. However, this requires OPEC to micromanage the market and to anticipate seasonal changes in demand for its crude. Given the many uncertainties affecting underlying levels of oil demand and supply, its production decisions may result in both the over- and undershooting of prices.

In the longer term, if OPEC is successful in keeping prices above $25 a barrel, the impact on demand, and particularly on competing supplies, will increasingly exert downward pressure on prices. While higher prices in 1999–2000 were achieved relatively easily with little apparent impact on demand, supply, and economic activity, long-term responses are likely to be much higher and could thwart part—and possibly much—of the growth in demand for OPEC crude.

To the degree that higher oil prices are deemed to be temporary, there will be little structural change to oil demand. But if high prices are perceived to be "permanent," it will accelerate advances in conservation and substitution away from oil. High prices have already generated policy responses, such as the new U.S. energy policy, and increasing environmental pressures will also tend to restrain oil consumption over time. High prices will also stimulate development of conventional and unconventional oil supplies, and make alternative energy supplies more competitive. There are no apparent resource constraints far into the future, and oil consumption has only risen moderately over the past 20 years (see

Table A2.11 Petroleum global balance

(million barrels per day)

	Million barrels per day						Annual growth rates (percent)		
	1970	1980	1990	2000	2001	2002	1970–80	1980–90	1990–2000
OECD	34.0	41.5	41.5	47.8	47.8	47.8	2.0	0.0	1.4
FSU	5.0	8.9	8.4	3.6	3.7	3.7	5.9	0.6	8.1
Other nonOECD	6.8	12.3	16.1	24.4	24.6	24.9	6.1	2.7	4.3
Total consumption	**45.7**	**62.6**	**66.0**	**75.9**	**76.1**	**76.4**	**3.2**	**0.5**	**1.4**
OPEC	23.5	27.2	24.5	30.8	30.3	29.3	1.5	1.0	2.3
FSU	7.1	12.1	11.5	7.9	8.5	8.8	5.4	0.5	3.6
Other nonOPEC	17.4	24.6	30.9	38.0	38.0	38.7	3.5	2.3	2.1
Total production	**48.0**	**63.9**	**66.9**	**76.7**	**76.8**	**76.8**	**2.9**	**0.5**	**1.4**
Stock change, misc.	2.3	1.3	0.9	0.8	0.7	0.4			

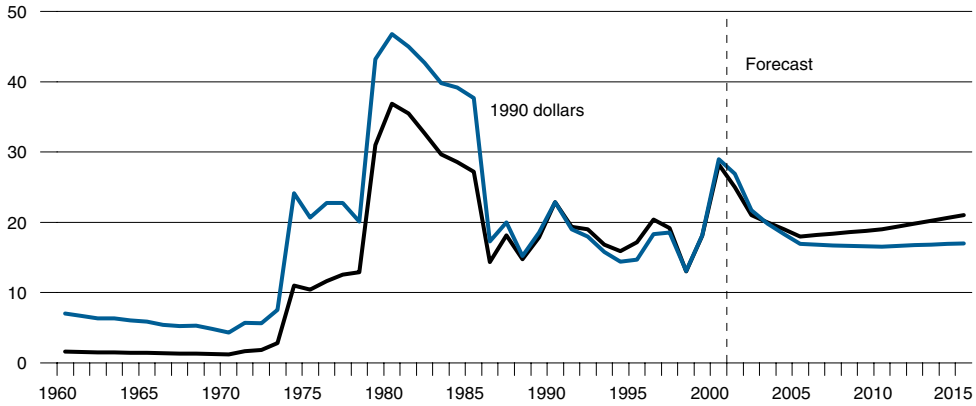
Source: British Petroleum; International Energy Agency; and World Bank.

table A2.11). In addition, new areas continue to be developed (e.g., deep water offshore and the Caspian Sea), development costs continue to fall (shifting supply curves outward), and the large profits being generated will lead to higher investment. In addition, OPEC countries are increasing capacity, and will add to the supply competition in the coming years.

Due to rising supply competition and below-trend oil demand growth, oil prices are expected to decline from $25 a barrel in 2001 to $21 a barrel in 2002, and fall below $20 a barrel by mid-decade (see figure A2.13). A risk to the forecast is if OPEC takes strong, concerted action on production levels over the next few years to keep prices at or above $25 a barrel. If successful, it will add to the growing pressures on world demand and competing supplies, and prices would still be expected to fall below $20 a barrel by mid-decade.

Figure A2.13 Crude oil prices

Dollars a barrel



Source: World Bank.

Table A2.12 Commodity prices and price projections in current dollars

Commodity	Unit	Actual				Projections					
		1970	1980	1990	2000	2001	2002	2003	2005	2010	2015
Energy											
Coal, U.S.	$/mt	n.a.	43.10	41.67	33.06	44.00	38.00	36.00	34.00	35.00	36.00
Crude oil, average	$/bbl	1.21	36.87	22.88	28.23	25.00	21.00	20.00	18.00	19.00	21.00
Natural gas, Europe	$/mmbtu	n.a.	3.40	2.55	3.86	4.00	3.30	3.10	2.75	2.75	3.00
Natural gas, U.S.	$/mmbtu	0.17	1.55	1.70	4.31	3.95	2.50	2.60	2.75	3.00	3.25
Nonenergy Commodities											
Agriculture											
Beverages											
Cocoa	cents/kg	67.5	260.4	126.7	90.6	105.0	110.0	120.0	140.0	157.0	168.0
Coffee, other milds	cents/kg	114.7	346.6	197.2	192.0	136.7	138.9	154.3	209.4	265.0	280.0
Coffee, robusta	cents/kg	91.4	324.3	118.2	91.3	61.7	63.9	70.6	88.2	132.0	142.6
Tea, auctions (3) average	cents/kg	83.5	165.9	205.8	187.6	162.0	160.0	168.0	180.0	182.0	184.0
Food											
Fats and oils											
Coconut oil	$/mt	397.2	673.8	336.5	450.3	315.0	365.0	430.0	600.0	645.0	670.0
Copra	$/mt	224.8	452.7	230.7	304.8	200.0	350.0	400.0	450.0	480.0	500.0
Groundnut oil	$/mt	378.6	858.8	963.7	713.7	675.0	725.0	775.0	820.0	850.0	875.0
Palm oil	$/mt	260.1	583.7	289.8	310.3	290.0	330.0	360.0	400.0	450.0	475.0
Soybean meal	$/mt	102.6	262.4	200.2	189.2	180.0	183.0	190.0	215.0	235.0	245.0
Soybean oil	$/mt	286.3	597.6	447.3	338.1	357.0	385.0	395.0	425.0	460.0	505.0
Soybeans	$/mt	116.9	296.2	246.8	211.8	200.0	205.0	210.0	235.0	260.0	270.0
Grains											
Maize	$/mt	58.4	125.3	109.3	88.5	90.0	96.0	108.0	122.0	125.0	130.0
Rice, Thai, 5 percent	$/mt	126.3	410.7	270.9	202.4	170.0	185.0	205.0	235.0	260.0	270.0
Sorghum	$/mt	51.8	128.9	103.9	88.0	95.0	91.8	103.3	116.6	119.5	123.5
Wheat, U.S., HRW	$/mt	54.9	172.7	135.5	114.1	125.0	130.0	138.0	150.0	155.0	160.0
Other food											
Bananas, U.S.	$/mt	166.1	377.3	540.9	424.0	610.0	523.6	523.6	529.1	568.0	590.0
Beef, U.S.	cents/kg	130.4	276.0	256.3	193.2	207.0	202.8	202.8	213.9	220.0	230.0
Oranges	$/mt	168.0	400.2	531.1	363.2	630.0	625.0	550.0	450.0	475.0	500.0
Shrimp, Mexican	cents/kg	n.a.	1,152	1,069	1,513	1,575	1,550	1,600	1,660	1,690	1,720
Sugar, world	cents/kg	8.2	63.16	27.67	18.04	18.80	16.75	18.70	22.00	24.00	26.00
Agricultural raw materials											
Timber											
Logs, Cameroon	$/cum	43.0	251.7	343.5	275.4	265.0	265.0	275.0	300.0	338.0	385.0
Logs, Malaysia	$/cum	43.1	195.5	177.2	190.0	162.0	162.0	190.0	232.0	260.0	295.0
Sawnwood, Malaysia	$/cum	175.0	396.0	533.0	594.7	485.0	485.0	570.0	650.0	720.0	820.0
Other raw materials											
Cotton	cents/kg	67.6	206.2	181.9	130.2	105.8	102.1	114.6	132.3	149.9	159.6
Rubber, RSS1, Malaysia	cents/kg	40.7	142.5	86.5	69.1	61.7	63.9	72.8	77.2	88.0	95.1
Tobacco	$/mt	1,076	2,276	3,392	2,976	3,011	3,080	3,150	3,250	3,300	3,450
Fertilizers											
DAP	$/mt	54.0	222.2	171.4	154.2	147.0	155.0	165.0	180.0	190.0	200.0
Phosphate rock	$/mt	11.00	46.71	40.50	43.75	41.75	41.00	42.00	43.00	46.00	48.00
Potassium chloride	$/mt	32.0	115.7	98.1	122.5	119.0	120.0	121.5	125.0	127.0	130.0
TSP	$/mt	43.0	180.3	131.8	137.7	125.0	126.0	127.0	138.0	145.0	165.0
Urea, E. Europe, bagged	$/mt	48.0	222.1	130.7	112.1	105.3	110.0	120.0	140.0	145.0	150.0
Metals and minerals											
Aluminum	$/mt	556	1,456	1,639	1,549	1,440	1,500	1,650	1,800	1,850	1,900
Copper	$/mt	1,416	2,182	2,661	1,813	1,575	1,625	1,800	2,000	2,100	2,200
Gold	$/toz	36.0	607.9	383.5	279.0	275.0	280.0	275.0	275.0	300.0	300.0
Iron ore, Carajas	cents/dmtu	9.84	28.09	32.50	28.79	30.03	30.50	31.00	32.00	33.00	33.00
Lead	cents/kg	30.3	90.6	81.1	45.4	47.0	50.0	55.0	60.0	64.0	64.5
Nickel	$/mt	2,846	6,519	8,864	8,638	5,900	6,100	6,200	6,400	6,500	6,600
Silver	cents/toz	177.0	2,064	482.0	499.9	450.0	475.0	500.0	520.0	550.0	550.0
Tin	cents/kg	367.3	1,677	608.5	543.6	440.0	465.0	485.0	525.0	540.0	550.0
Zinc	cents/kg	29.6	76.1	151.4	112.8	89.0	90.0	95.0	100.0	110.0	120.0

n.a. = Not available.
Note: Projections as of October 12, 2001.
Source: World Bank, Economic Policy and Prospects Group.

Table A2.13 Commodity prices and price projections in constant 1990 dollars

Commodity	Unit	Actual				Projections					
		1970	1980	1990	2000	2001	2002	2003	2005	2010	2015
Energy											
Coal, U.S.	$/mt	n.a.	54.71	41.67	33.94	47.33	39.31	35.68	31.97	30.48	29.17
Crude oil, average	$/bbl	4.31	46.80	22.88	28.98	26.89	21.73	19.82	16.92	16.54	17.02
Natural gas, Europe	$/mmbtu	n.a.	4.32	2.55	3.96	4.30	3.41	3.07	2.59	2.39	2.43
Natural gas, U.S.	$/mmbtu	0.61	1.97	1.70	4.42	4.25	2.59	2.58	2.59	2.61	2.63
Nonenergy Commodities											
Agriculture											
Beverages											
Cocoa	cents/kg	240.6	330.5	126.7	93.0	113.0	113.8	118.9	131.6	136.7	136.1
Coffee, other milds	cents/kg	408.8	440.0	197.2	197.1	147.0	143.7	153.0	196.9	230.8	226.9
Coffee, robusta	cents/kg	325.7	411.7	118.2	93.7	66.4	66.1	69.9	82.9	114.9	115.6
Tea, auctions (3) average	cents/kg	297.7	210.6	205.8	192.6	174.3	165.5	166.5	169.2	158.5	149.1
Food											
Fats and oils											
Coconut oil	$/mt	1416.0	855.3	336.5	462.3	338.9	377.6	426.2	564.1	561.7	542.9
Copra	$/mt	801.6	574.7	230.7	312.9	215.2	362.1	396.4	423.1	418.0	405.1
Groundnut oil	$/mt	1349.5	1090.1	963.7	732.6	726.1	750.1	768.1	771.0	740.2	709.0
Palm oil	$/mt	927.1	740.9	289.8	318.5	312.0	341.4	356.8	376.1	391.9	384.9
Soybean meal	$/mt	365.7	333.1	200.2	194.2	193.6	189.3	188.3	202.1	204.6	198.5
Soybean oil	$/mt	1020.8	758.6	447.3	347.1	384.0	398.3	391.5	399.6	400.6	409.2
Soybeans	$/mt	416.8	376.0	246.8	217.5	215.2	212.1	208.1	221.0	226.4	218.8
Grains											
Maize	$/mt	208.2	159.0	109.3	90.9	96.8	99.3	107.0	114.7	108.9	105.3
Rice, Thai, 5 percent	$/mt	450.3	521.4	270.9	207.8	182.9	191.4	203.2	221.0	226.4	218.8
Sorghum	$/mt	184.7	163.6	103.9	90.3	102.2	95.0	102.3	109.7	104.1	100.1
Wheat, U.S., HRW	$/mt	195.7	219.3	135.5	117.1	134.5	134.5	136.8	141.0	135.0	129.6
Other food											
Bananas, U.S.	$/mt	592.1	478.9	540.9	435.3	656.2	541.7	518.9	497.5	494.6	478.0
Beef, U.S.	cents/kg	465.0	350.3	256.3	198.4	222.7	209.8	201.0	201.1	191.6	186.4
Oranges	$/mt	599.1	508.0	531.1	372.9	677.7	646.6	545.1	423.1	413.6	405.1
Shrimp, Mexican	cents/kg	n.a.	1,462	1,069	1,553	1,694	1,604	1,586	1,561	1,472	1,394
Sugar, world	cents/kg	29.32	80.17	27.67	18.5	20.2	17.3	18.5	20.7	20.9	21.1
Agricultural raw materials											
Timber											
Logs, Cameroon	$/cum	153.3	319.5	343.5	282.8	285.1	274.2	272.6	282.1	294.3	311.9
Logs, Malaysia	$/cum	153.8	248.2	177.2	195.0	174.3	167.6	188.3	218.1	226.4	239.0
Sawnwood, Malaysia	$/cum	623.9	502.7	533.0	610.5	521.7	501.8	564.9	611.1	627.0	664.4
Other raw materials											
Cotton	cents/kg	241.1	261.7	181.9	133.7	113.8	105.6	113.6	124.4	130.5	129.3
Rubber, RSS1, Malaysia	cents/kg	145.2	180.8	86.5	71.0	66.4	66.1	72.1	72.6	76.6	77.0
Tobacco	$/mt	3,836	2,889	3,392	3,055	3,239	3,186	3,122	3,056	2,874	2,795
Fertilizers											
DAP	$/mt	192.5	282.1	171.4	158.3	158.1	160.4	163.5	169.2	165.5	162.1
Phosphate rock	$/mt	39.2	59.3	40.5	44.9	44.9	42.4	41.6	40.4	40.1	38.9
Potassium chloride	$/mt	114.1	146.9	98.1	125.8	128.0	124.2	120.4	117.5	110.6	105.3
TSP	$/mt	153.3	228.8	131.8	141.4	134.5	130.4	125.9	129.8	126.3	133.7
Urea, E. Europe, bagged	$/mt	171.1	282.0	130.7	115.1	113.3	113.8	118.9	131.6	126.3	121.5
Metals and minerals											
Aluminum	$/mt	1,982	1,848	1,639	1,590	1,549	1,552	1,635	1,692	1,611	1,539
Copper	$/mt	5,047	2,770	2,661	1,862	1,694	1,681	1,784	1,880	1,829	1,783
Gold	$/toz	128.1	771.6	383.5	286.5	295.8	284.5	272.6	258.6	261.2	243.1
Iron ore	cents/dmtu	35.1	35.7	32.5	29.6	32.3	31.6	30.7	30.1	28.7	26.7
Lead	cents/kg	108.0	115.0	81.1	46.6	50.6	51.7	54.5	56.4	55.7	52.3
Nickel	$/mt	10,147	8,275	8,864	8,867	6,347	6,311	6,145	6,017	5,660	5,348
Silver	cents/toz	631.0	2619.4	482.0	513.2	484.1	491.4	495.5	488.9	478.9	445.6
Tin	cents/kg	1309.6	2129.3	608.5	558.0	473.3	481.1	480.7	493.6	470.2	445.6
Zinc	cents/kg	105.5	96.6	151.4	115.8	95.7	93.1	94.2	94.0	95.8	97.2

n.a. = Not available.
Note: Projections as of October 12, 2001.
Source: World Bank, Economic Policy and Prospects Group.

Table A2.14 Weighted indices of commodity prices and inflation

Index	Actual				Projections[a]					
	1970	1980	1990	2000	2001	2002	2003	2005	2010	2015
Current dollars										
Petroleum	5.3	161.2	100.0	123.4	109.3	91.8	87.4	78.7	83.0	91.8
Nonenergy commodities[b]	43.8	125.5	100.0	86.9	79.1	80.4	86.9	97.4	106.8	109.5
Agriculture	45.8	138.1	100.0	87.7	80.1	80.9	88.0	100.3	112.3	114.8
Beverages	56.9	181.4	100.0	88.4	71.8	73.4	80.5	101.4	123.6	130.8
Food	46.7	139.3	100.0	84.5	86.5	87.2	91.6	100.4	107.4	100.4
Fats and oils	64.4	148.7	100.0	96.2	89.5	95.2	100.9	115.1	126.6	132.8
Grains	46.7	134.3	100.0	79.5	77.4	82.0	90.0	101.0	106.7	110.6
Other food	32.2	134.3	100.0	77.7	89.1	83.7	84.8	88.0	92.0	68.1
Raw materials	36.4	104.6	100.0	91.4	78.1	78.4	89.1	99.6	110.4	121.7
Timber	31.8	79.0	100.0	111.0	91.0	91.0	107.0	123.1	136.6	155.5
Other raw materials	39.6	122.0	100.0	78.0	69.3	69.8	76.8	83.5	92.5	98.6
Fertilizers	30.4	128.9	100.0	105.8	97.9	97.7	99.0	105.2	111.3	122.7
Metals and minerals	40.4	94.2	100.0	83.0	74.9	77.3	82.9	89.3	92.6	95.2
Constant 1990 dollars[c]										
Petroleum	18.9	204.6	100.0	126.7	117.5	95.0	86.6	74.0	72.3	74.4
Nonenergy commodities	156.3	159.3	100.0	89.2	85.1	83.1	86.1	91.5	93.0	88.7
Agriculture	163.3	175.3	100.0	90.0	86.2	83.7	87.3	94.3	97.8	93.1
Beverages	202.8	230.3	100.0	90.7	77.2	75.9	79.8	95.3	107.7	106.0
Food	166.5	176.8	100.0	86.7	93.0	90.2	90.8	94.4	93.5	81.3
Fats and oils	229.5	188.7	100.0	98.8	96.2	98.5	100.0	108.2	110.3	107.6
Grains	166.6	170.5	100.0	81.6	83.3	84.8	89.2	94.9	92.9	89.6
Other food	114.9	170.5	100.0	79.8	95.9	86.5	84.0	82.7	80.1	55.2
Raw materials	129.8	132.7	100.0	93.8	84.1	81.1	88.3	93.6	96.1	98.6
Timber	113.3	100.3	100.0	113.9	97.9	94.2	106.0	115.7	118.9	126.0
Other raw materials	141.1	154.9	100.0	80.0	74.6	72.2	76.2	78.5	80.5	79.9
Fertilizers	108.3	163.6	100.0	108.6	105.3	101.0	98.2	98.9	96.9	99.4
Metals and minerals	143.9	119.6	100.0	85.2	80.5	80.0	82.1	84.0	80.7	77.1
Inflation indices, 1990=100[d]										
MUV index[e]	28.05	78.78	100.00	97.41	92.96	96.66	100.90	106.36	114.84	123.42
Percent change per annum		10.88	2.41	–0.26	–4.56	3.98	4.38	2.67	1.55	1.45
U.S. GDP deflator	33.59	65.93	100.00	123.73	126.58	128.86	131.43	137.28	153.06	170.65
Percent change per annum		6.98	4.25	2.15	2.30	1.80	2.00	2.20	2.20	2.20

a. Commodity price projections as of October 12, 2001.
b. The World Bank primary commodity price indices are computed based on 1987–89 export values in U.S. dollars for low and middle-income economies, rebased to 1990. Weights for the subgroup indices expressed as ratios to the nonenergy index are as follows in percent: agriculture 69.1, fertilizers 2.7, metals and minerals 28.2; beverages 16.9, food 29.4, raw materials 22.8; fats and oils 10.1, grains 6.9, other food 12.4; timber 9.3, and other raw materials 13.6.
c. Computed from unrounded data and deflated by the MUV index.
d. Inflation indices for 2001–10 are projections as of October 3, 2001. MUV for 2000 is an estimate. Growth rates for years 1980, 1990, 2000, 2005, 2010, and 2015 refer to compound annual rate of change between adjacent end-point years; all others are annual growth rates from the previous year.
e. Unit value index in U.S. dollar terms of manufactures exported from the G-5 countries (France, Germany, Japan, the United Kingdom, and the United States) weighted proportionally to the countries' exports to the developing countries.
Source: World Bank, Economic Policy and Prospects Group; Historical U.S. GDP deflator; U.S. Department of Commerce.