Producer inflation accelerates in 2007 due to rising prices for energy and foods

Prices for energy goods surged in 2007, after falling in 2006, while food prices increased more than they had a year earlier; in contrast, the stage-of-processing indexes for goods excluding foods and energy advanced in 2007 at rates similar to those of 2006

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he Producer Price Index (PPI) for Finished Goods climbed 6.2 percent in 2007, after inching up 1.1 percent in 2006. Finished goods are commodities that are ready for sale to final-demand users, either as durable or nondurable goods for consumers or as capital equipment for business firms. The index for intermediate materials, supplies, and components, reflecting the prices of goods produced at an earlier stage of processing, increased 7.1 percent in 2007, after rising 2.8 percent in 2006. Intermediate goods consist of material and component inputs to manufacturing and construction, as well as supplies for all types of businesses. The index for crude materials for further processing-unprocessed goods and raw materials—jumped 19.8 percent in 2007, after falling 4.7 percent in 2006. The larger advances in 2007 for the finished goods and intermediate goods indexes, as well as the upturn in prices for crude goods, are attributable primarily to a reversal in prices for energy goods, which moved up in 2007, after declining in 2006, and secondarily to prices for foods, which increased at faster rates in 2007 than they had a year earlier. (See table 1.)

Prices for energy goods jumped in 2007, after moving down in 2006. Among crude materials, prices for crude petroleum, which were nearly unchanged in 2006, surged 51.7 percent in 2007, while prices for wellhead natural gas edged down after dropping 26.2 percent in the preceding year. Further along the production path, prices for refined petroleum products and utility electric power moved up more in 2007 than they had a year earlier, while the index for utility natural gas fell less than it had in 2006. Within finished goods, the index for finished energy goods advanced 17.8 percent in 2007, following a 2.0-percent decline a year earlier. Similarly, prices for intermediate energy goods climbed 19.8 percent, after decreasing 3.3 percent in 2006, and the index for crude energy materials rose 16.2 percent in 2007, compared with a 15.7-percent drop a year earlier. (See table 2.)

In addition to energy products, also contributing to the faster rates of increase for finished and intermediate goods, as well as the reversal in the crude goods index, price gains for farm products and for processed foods and feeds accelerated in 2007. These increases were generally broad based; however, steep upturns in prices for raw fluid milk, as well as processed dairy products, led the acceleration. The indexes for finished consumer foods, intermediate foods and feeds, and crude foodstuffs and feedstuffs each rose more in 2007 than they had in 2006. For finished consumer foods, the 7.6-percent increase in 2007 was the largest since a 7.7-percent advance in 2003. At the earlier stages of processing, the 17.2-percent jump in prices for intermediate foods and

Index	2002	2003	2004	2005	2006	2007
Finished goods	1.2	4.0	4.2	5.4	1.1	6.2
Finished consumer foods	6	7.7	3.1	1.7	1.7	7.6
Finished energy goods	12.3	11.4	13.4	23.9	-2.0	17.8
Finished goods less foods and energy Finished consumer goods, excluding	5	1.0	2.3	1.4	2.0	2.0
foods and energy	5	1.1	2.2	1.6	1.8	2.4
Capital equipment	6	.8	2.4	1.2	2.3	1.4
Intermediate materials, supplies, and						
components	3.2	3.9	9.2	8.6	2.8	7.1
Intermediate foods and feeds	4.2	12.9	-2.3	2.4	4.7	17.2
Intermediate energy goods Intermediate materials less foods and	12.0	10.9	15.8	26.2	-3.3	19.8
energy	1.5	2.1	8.3	4.8	4.5	3.3
Materials for nondurable manufacturing	4.2	4.9	13.7	8.9	1.2	12.8
Materials for durable manufacturing	3.1	4.0	18.3	5.9	12.5	1.7
Materials and components for construction.	.8	3.0	10.1	6.1	4.3	2.0
Crude materials for further processing	24.7	19.5	17.4	21.1	-4.7	19.8
Foodstuffs and feedstuffs	4.5	24.1	-2.6	1.6	2.8	24.9
Crude energy materials	61.5	14.4	35.9	42.2	-15.7	16.2
Crude nonfood materials less energy	12.6	21.6	20.5	5.2	17.0	15.6
Special groupings						
Finished goods less energy	5	2.7	2.5	1.5	1.9	3.5
Intermediate materials less energy	1.6	2.6	7.8	4.6	4.5	4.0
Crude materials less energy	7.1	23.3	5.2	3.0	8.3	21.4

feeds was the fastest annual rate of increase since 1974, when prices climbed 31.1 percent. For crude foodstuffs and feed-stuffs, the 24.9-percent surge in 2007 was the largest since a 31.7-percent rise in 1973.

In contrast, the index for finished goods other than foods and energy increased at the same rate in 2007 as in the previous year, 2.0 percent. The index for consumer nondurable goods excluding foods and energy advanced more in 2007 than in the prior year, while prices for consumer durable goods and capital equipment rose less than in 2006. At the earlier stages of processing, prices for intermediate goods other than foods and energy moved up less than they had in 2006, and the index for crude nonfood materials less energy increased slightly less in 2007 than it had in the preceding year.¹

Energy goods

The indexes for energy goods at all three stages of processing turned up in 2007, after falling a year earlier. The finished energy goods index increased 17.8 percent, following a 2.0-percent decline in 2006. Among finished energy goods, prices for gasoline, home heating oil, diesel fuel, and residential electric power jumped in 2007, after

advancing at slower rates in the preceding year. The index for liquefied petroleum gas surged following a decline in 2006. Prices for residential natural gas edged down in 2007, after steep declines a year earlier. Similar to finished energy goods, the 2007 upturn in the index for intermediate energy goods was led by accelerating price increases for refined petroleum products such as gasoline, diesel fuel, jet fuel, and home heating oil. The indexes for commercial and industrial electric power also rose more in 2007 than they did in 2006. The indexes for liquefied petroleum gas and residual fuel surged in 2007, after falling in the prior year. Utility natural gas prices declined at much smaller rates than they did in 2006. At the earliest stage of processing, the index for crude energy materials moved up 16.2 percent in 2007, following a 15.7-percent decrease a year earlier. Crude petroleum prices increased more than 50 percent in 2007, after inching up in the preceding year, while natural gas prices moved down 4.9 percent, after dropping sharply in 2006.

Petroleum products. In 2007, the crude petroleum index climbed 51.7 percent, compared with a 0.1-percent rise a year earlier. In 2007, large price increases occurred over the course of the entire year: February, 7.4 percent; April,

Table 2.

Annual percentage changes in Producer Price Indexes for selected energy goods, 2003–07

Index	2003	2004	2005	2006	2007
Finished energy goods	11.4	13.4	23.9	-2.0	17.8
Residential natural gas	19.9	15.9	28.3	-11.6	9
Gasoline	14.9	27.4	41.5	1.8	36.1
Home heating oil	13.9	42.0	41.8	5.2	30.9
Liquefied petroleum gas	21.0	28.5	44.3	-15.1	59.1
Residential electric power	4.9	2.3	6.8	2.3	4.5
Intermediate energy goods	10.9	15.8	26.2	-3.3	19.8
Industrial natural gas	20.3	20.1	31.5	-13.2	-2.8
Commercial natural gas	19.9	17.5	30.3	-13.6	9
Natural gas to electric utilities	17.4	20.4	25.0	-16.1	-3.8
Diesel fuel	13.0	37.9	46.7	2.3	33.9
Jet fuel	10.2	45.5	41.3	6.6	41.3
Residual fuel	39.1	1.0	80.4	-23.5	38.2
Industrial electric power	2.4	2.3	10.4	4.0	7.3
Commercial electric power	2.7	3.1	6.6	3.4	3.8
Crude energy goods	14.4	35.9	42.2	-15.7	16.2
Natural gas	17.2	44.3	43.7	-26.2	-4.9
Crude petroleum	14.3	30.5	49.6	.1	51.7
Coal	2.1	10.0	9.7	5.5	3.2

7.4 percent; June, 4.4 percent; July, 13.0 percent; September, 8.4 percent; October, 4.1 percent; and November, 13.1 percent.² On the supply front, U.S. field production of crude petroleum was nearly flat compared with 2006 levels, roughly 1.862 billion barrels, while imports declined 1.0 percent overall, to 3.656 billion barrels. Internationally, the Organization of Petroleum Exporting Countries (OPEC) cut its official output target by 1.2 million barrels per day on November 1, 2006, and by another 500,000 barrels per day on March 15, 2007—a 6.2-percent drop in its production target—to 25.8 million barrels per day. The actual production curtailment was estimated to be 1.3 million barrels per day—a 4.7-percent decline.³ OPEC production edged up over the remainder of 2007, but by year-end, production had decreased roughly 1.5 percent in 2007, compared with a year earlier.⁴ Geopolitical uncertainty in the Persian Gulf, as well as in Venezuela, Algeria, and Nigeria, also contributed to crude oil price increases in 2007. As of December 2007, about 19.6 percent of crude oil imports came from the Persian Gulf, while 11.9, 5.1, and 11.0 percent came from Venezuela, Nigeria, and Algeria, respectively.⁵ Back in the United States, allocations of crude oil to the Strategic Petroleum Reserve (SPR) increased 1.2 percent in 2007 to 697 million barrels; however, ending stocks excluding the SPR fell 3.2 percent to 3.887 billion barrels.6

The substantial acceleration in crude petroleum prices during 2007 passed through to refined petroleum products: prices for gasoline, home heating oil, diesel fuel, and jet fuel rose at much faster rates in 2007 than they did in 2006. As was the case with crude petroleum, these advances were spread across the entire calendar year; however, particularly large gains were observed in early spring and in November. For example, in March 2007 prices for gasoline, home heating oil, diesel fuel, and jet fuel jumped 17.4, 8.5, 13.8, and 11.7 percent, respectively. In November, these indexes increased 15.7, 17.4, 18.9, and 17.0 percent.⁷

Over two periods in 2007, the rate of operable capacity utilization at U.S. refineries fell noticeably. From early January through early March, capacity utilization fell from 91.0 percent to 85.7 percent, and from mid-August to early November, it fell from 92.1 percent to 86.7 percent.⁸ During these slowdowns, finished gasoline production fell 7.0 percent and 4.0 percent, respectively. Similarly, jet fuel production dropped 7.6 percent and 0.2 percent, and distillate fuel production⁹ declined 8.8 percent and 2.0 percent. Imports of crude petroleum, not allocated to the SPR, declined 2.7 percent in 2007, and imports of refined petroleum products declined 0.5 percent over the same period.¹⁰

Natural gas products. Prices for wellhead natural gas fell 4.9 percent in 2007, compared with a 26.2-percent drop in 2006. Similarly, the indexes for utility natural gas—residential, commercial, industrial, and natural gas to electric utilities—also declined at significantly slower

rates in 2007 than they did a year earlier. Although wellhead natural gas prices tend to be more volatile than those for utility natural gas, prices received by these two sectors generally display similar directional movements over the long term.

In terms of supply, marketed production of wellhead natural gas in the United States increased nearly 4.0 percent in 2007, from roughly 19.38 million of million cubic feet (MMcf) for the 12-month period ended December 2006 to 20.15 million MMcf for the comparable period in 2007. This rise was relatively consistent over the course of the year. Imports of natural gas (wellhead and liquefied) also grew during 2007. In calendar year 2006 U.S. imports were about 4.19 million MMcf; in 2007, total imports were roughly 4.60 million MMcf, which is nearly a 10-percent jump. At the same time, an increase of nearly 12 percent in U.S. exports—from 724 thousand MMcf to 809 thousand MMcf—partially offset the rise in domestic supply.¹¹

From a storage standpoint, the volume of working natural gas in underground storage decreased in 2007, after a large net injection gain in 2006 was not replicated in 2007.12 Total working gas in underground storage increased 16.5 percent in 2006, to 3.07 million MMcf, but the measure fell 6.2 percent in 2007, to 2.88 million MMcf.¹³ This lower figure for December 2007, however, still was 7.9 percent higher than the 5-year historical average of 2.67 million MMcf. The downturn in underground storage for 2007 can be traced to increased consumption. Total U.S. natural gas consumption rose 6.6 percent in 2007, rising to 21.27 million MMcf from 19.94 million MMcf in 2006. Residential consumption grew 8.1 percent, commercial consumption expanded 6.1 percent, industrial consumption inched up 2.1 percent, and consumption by electric utilities for power generation jumped 10.5 percent.¹⁴

Liquefied petroleum gas. The PPI for liquefied petroleum gas surged 59.1 percent in 2007, after falling 15.1 percent in 2006. The category for liquefied petroleum gases includes products such as propane, ethane, butane, and isobutane. Liquefied petroleum gases can be derived from either natural gas or crude petroleum, and the steep acceleration in crude oil prices, along with the much slower rate of decrease in prices for wellhead natural gas, contributed to this reversal. In addition, year-end stocks for liquefied petroleum gases, which were 113.1 million barrels in 2006, dropped to roughly 95.2 million barrels in 2007, a 15.8-percent decline.¹⁵

Coal and electric power. The PPI for coal advanced 3.2 percent in 2007. Coal prices in 2007 were influenced by a

combination of increasing coal stocks and rising demand. During 2007, stocks (coal inventory stored for future use) grew 1.3 percent, to 189 million short tons, but total coal consumption edged up 1.5 percent, to 1.229 billion short tons.¹⁶ The PPI for electric power moved up 4.9 percent in 2007, after rising 3.2 percent a year earlier, as prices for residential, commercial, and industrial electric power each rose more than they had in 2006.¹⁷ Coal,¹⁸ which generates a little less than 50 percent of electric power domestically, has increased in price roughly 50 percent in the last 7 years.¹⁹ About 20 percent of electric power is generated from natural gas,²⁰ and in 2007, prices for both wellhead natural gas and utility natural gas sold to electric utilities declined at much slower rates than they did in the preceding year.

Foods and related products

The PPI for finished consumer foods advanced 7.6 percent in 2007, following gains of 1.7 percent in both 2006 and 2005. Accounting for this acceleration, prices for dairy products, fresh and dry vegetables, and beef and veal turned up in 2007, while the indexes for eggs for fresh use and processed young chickens rose more than they did in 2006. On the other hand, price increases slowed from 2006 to 2007 for fresh fruits and melons and for processed fruits and vegetables. The pork index fell more than it had in the prior year. (See table 3.)

At the earlier stages of processing, prices for intermediate foods and feeds jumped 17.2 percent in 2007, subsequent to a 4.7-percent increase in the previous year. The indexes for prepared animal feeds, flour, and for shortening and cooking oils rose more rapidly than they did in 2006, and prices for fluid milk products; natural, processed, and imitation cheese; and for beef and veal turned up in 2007. By contrast, the indexes for refined sugar and byproducts and for pork fell at faster rates than in 2006.

The PPI for crude foodstuffs and feedstuffs climbed 24.9 percent in 2007, compared with a 2.8-percent gain in 2006. This acceleration can be traced primarily to surging prices for raw fluid milk, which jumped 52.4 percent in 2007, after falling 4.7 percent in 2006. The index for slaughter cattle turned up in 2007, while prices for soybeans and wheat rose at faster rates than they had in 2006. In contrast, rising prices for corn and for fresh fruits and melons slowed in 2007, and the index for slaughter hogs fell more than in the previous year.

Raw fluid milk and processed dairy products. Raw fluid milk prices reached record levels in 2007, rising 52.4 per-

Table 3.

Annual percentage changes in Producer Price Indexes for selected foods and related products, 2003–07

Index	2003	2004	2005	2006	2007	
Finished consumer foods	7.7	3.1	1.7	1.7	7.6	
Dairy products	6.8	9.1	-2.6	5	23.7	
Fresh and dry vegetables	37.9	-13.9	34.3	-11.9	20.0	
Beef and veal	27.1	-3.8	3.2	-8.3	2.6	
Eggs for fresh use	40.5	-29.4	5.0	22.2	56.4	
Processed young chickens	19.9	9	-3.1	2.6	7.0	
Fresh fruits and melons	30.5	18.0	-12.2	29.5	6.5	
Processed fruits and vegetables	.4	3.1	3.4	8.3	3.3	
Pork	6.8	22.1	-8.2	6	-2.7	
Intermediate foods and feeds	12.9	-2.3	2.4	4.7	17.2	
Prepared animal feeds	14.7	-11.1	5.6	11.8	20.1	
Fluid milk products	9.3	5.0	1.0	-1.4	25.9	
Flour	5.0	4.9	2.6	11.9	55.6	
Natural, processed, and imitation cheese	8.6	14.0	-7.7	-3.1	32.1	
Shortening and cooking oils	16.1	.2	-3.3	11.0	25.4	
Refined sugar and byproducts	.8	8	18.5	5	-9.4	
Crude foodstuffs and feedstuffs	24.1	-2.6	1.6	2.8	24.9	
Fluid milk	16.1	19.1	-9.8	-4.7	52.4	
Slaughter cattle	35.4	-10.9	9.5	-9.8	8.2	
Soybeans	40.7	-29.7	7.0	7.9	76.8	
Wheat	4.0	-5.0	-1.0	22.3	109.0	
Corn	6.8	-22.9	.7	79.2	21.5	
Slaughter hogs	20.7	48.7	-14.7	-4.4	-12.4	

cent, after falling 4.7 percent in 2006. This resulted from a combination of higher demand and lower supplies, as well as from higher production costs for milk. In 2007, expanding economies in China, India, and other developing nations caused an increased demand for milk proteins, while a drought in Australia reduced world milk supplies. Furthermore, the weakened dollar resulted in increased export demand for domestically produced milk and milkrelated products throughout the year. Milk production costs were higher for farmers, as the price for dairy cattle feeds such as alfalfa hay, corn, and soybeans all rose significantly in 2007.

The increase in raw fluid milk costs were consequently passed on to manufacturers of processed fluid milk products and of natural, processed, and imitation cheese. The index for processed fluid milk products moved up 25.9 percent in 2007, after edging down 1.4 percent in the previous year. Prices for natural, processed, and imitation cheese advanced 32.1 percent in 2007, subsequent to a 3.1-percent decline in 2006.

Vegetables and fruits. The index for fresh and dry vegetables advanced 20.0 percent in 2007, following an 11.9percent decline a year earlier. Prices rose over the first four months of 2007 but then plummeted in May to nearly their lowest level of the year as supplies became plentiful for eastern and western based crops. By October, however, vegetable prices had rebounded 29.0 percent due to a reduction in planted acreage for the fall broccoli and cauliflower crop in California, as well as to increased demand for lettuce.

The index for fresh fruits and melons increased 6.5 percent, after jumping 29.5 percent in 2006. Fruit prices in 2007 were affected by a combination of seasonal factors and weather conditions. The start of 2007 experienced low prices for citrus fruits due to seasonally high supplies. However, this trend was almost immediately reversed when California and Arizona were hit by an extended deep freeze that began January 11 and destroyed crops throughout these states. When the freeze hit, the state of California estimated that about \$960 million in citrus was still on the trees and that 75 percent of it may have been lost.²¹ These losses were even more devastating to supply levels and prices due to the fact that the forecasted 2006– 07 citrus crop for oranges, lemons, and specialty fruits such as tangerines and tangelos was smaller than in years past.²² California's 2006–07 orange crop was forecasted at 1.7 million tons, 20 percent lower than the prior season and potentially the smallest crop since 1998–99.23

Rising prices for processed fruits and vegetables slowed

from 8.3 percent in 2006 to 3.3 percent in 2007. Price increases were spread over the entire year, as per capita net domestic use (a proxy for consumption) of processing vegetables (excluding potatoes, sweet potatoes, and mushrooms) increased 3 percent to about 119 pounds in 2007.²⁴

Grains, soybeans, and prepared animal feeds. Prices for overall grains have risen steadily in 2006 and 2007, increasing 59.2 and 40.8 percent, respectively. Higher prices in 2007 were primarily the result of a 109.0-percent surge in wheat prices and a 21.5-percent gain in corn prices. Wheat prices jumped as a result of inclement weather. Also, U.S. wheat ending stocks projections for 2007–08 were lowered 32 million bushels reflecting higher expected domestic use and exports.²⁵ At 280 million bushels, the projected 2007-08 ending stocks were the lowest in 60 years.²⁶ The value of the declining dollar against other major currencies also has made U.S. agricultural products attractive in foreign markets. According to U.S. Export Sales, accumulated exports of U.S. wheat were up 67.2 percent in 2007, compared with a year earlier.²⁷ Corn prices also were higher in 2007 due to high demand for ethanol, animal feed, and exports. Corn is the major source of ethanol in the United States and has become increasingly popular as it has transformed from a simple grain used primarily to feed livestock into the desired commodity used to produce alternative fuels.

The soybean index surged 76.8 percent in 2007, after rising 7.9 percent a year earlier. Prices rose in 2007 as farmers displaced soybean acreage for that of corn which was seen as more financially rewarding.²⁸ Farmers generally rotate their acres between corn and soybeans. However, once corn was established as a high-profit crop due to the boom in ethanol demand, farmers changed their planting behavior and planted more corn at the expense of soybean acreage, decreasing soybean production and further increasing the price of soybean meal. Soybean prices were also pushed higher due to increased demand, as soybean oil has become a major input to bio-diesel production. Furthermore, world trade for soybeans has increased 37 percent since 2001 and imports by China, the world's leading soybean importer, have accounted for all of the increase including an offset of a small decline in the rest of the world.²⁹ China's soybean imports have increased by 24 million tons in the last 6 years, reflecting a sharp growth in protein meal consumption.³⁰ China now accounts for almost one-half of global soybean imports.³¹

The prepared animal feeds index advanced 20.1 percent in 2007, after an 11.8-percent gain in 2006. Higher input prices—for corn, soybeans, and wheat—were passed through to prices for prepared animal feeds throughout the year. Animal feed prices also were affected by poor weather in 2007 that limited the use of pasture for livestock grazing, which in turn increased feed demand.

Slaughter cattle and beef and veal. The index for slaughter cattle turned up 8.2 percent in 2007, following a 9.8percent decline a year earlier. The cattle industry in 2007 was mainly affected by two factors: high feed costs and increased slaughter rates, which led to an end of herd expansions. In late 2006, corn prices skyrocketed as the demand for ethanol increased substantially. Consequently, prices of substitute feed crops such as soybeans, hay, and barley also rose. Increased feed costs led to higher slaughter rates, as the margins per head of cattle drastically shrunk to the point that cattlemen were losing money on each animal and were better off sending them to slaughter than continuing to feed them. Slaughter cattle prices remained strong through much of 2007, despite increased slaughter rates, as higher feed costs were partially passed through when fed cattle reached market. According to Joel L. Greene, livestock analyst for the U.S. Department of Agriculture (USDA), "The U.S. cattle herd expansion that began in 2004 came to a halt during 2007." He cites the annual *Cattle* report, which "estimated that the number of cattle and calves on January 1, 2008 was 96.7 million head, down 0.3 percent from a year earlier." Moreover, the beef cow herd was down to nearly 32.6 million head, a drop of about 1 percent from the previous year, and "the smallest beef cow herd since 1991."32 The 2007 calf crop was 37.2 million head, slightly smaller than the 2006 calf crop, signaling that the total number of cattle is set to decrease over the next several years.³³

Following a story similar to that of slaughter cattle, prices for beef and veal rose 2.6 percent in 2007, after moving down 8.3 percent in 2006. Beef production increased as a result of higher slaughter rates. In 2007, the slaughter rate was 34,274 thousand head, up 1.7 percent from 2006.³⁴ As a result, commercial beef production increased to an estimated 26,345 million pounds, up 0.8 percent from the 2006 total of 26,153 million pounds.³⁵ Despite the increase of beef supply, prices rose in 2007 due to renewed foreign demand. U.S. beef and veal exports increased 24.5 percent from 2006 and are up 105 percent from 2005.³⁶

Poultry products. The index for processed young chickens rose 7.0 percent in 2007, after increasing 2.6 percent in the preceding year. Prices for eggs for fresh use surged 56.4 percent following a 22.2-percent rise in 2006. Poul-

try product price increases in 2007 were primarily due to higher feed costs, which resulted from higher corn and soybean prices. Another factor was increased fuel costs associated with transporting poultry products to markets, costs that ultimately were passed on to buyers.

Slaughter hogs and processed pork. The indexes for slaughter hogs and processed pork were major decliners in 2007, falling 12.4 and 2.7 percent, respectively. Hog producers had been expanding their breeding herds over the last few years due to favorable breeding conditions, so unlike the livestock and poultry sectors, an increase in slaughter rates negatively affected prices for slaughter hogs and processed pork.³⁷ Additionally, a flood of Canadian swine entered American slaughterhouses during the year resulting in a supply glut that pushed prices lower.³⁸

Flour. The index for flour increased 55.6 percent in 2007, after an 11.9-percent gain in 2006. Flour prices rose throughout most of 2007, and they accelerated during the final quarter of the year as demand increased in preparation for the fall baking season. The advance in flour prices was ultimately the result of higher acquisition and storage costs of wheat. Flour mills not adjacent to large wheat growing areas needed to store millions of dollars worth of their purchased wheat. To finance the storage, millers

needed to borrow money and run a line of credit. Hence, production costs for millers were compounded by a combination of interest paid on borrowed money in conjunction with the higher prices paid for wheat.

Cooking oils. Prices for shortening and cooking oils climbed 25.4 percent in 2007, after rising 11.0 percent in the previous year. Oilseeds, which are inputs to oils and shortenings, shot up dramatically during the year. These products include soybeans, cottonseeds, peanuts, and sunflowers. To take advantage of historically high corn prices, farmers diverted precious acreage usually reserved for oilseeds to corn, which significantly depleted supplies of oilseeds. The supply situation was worsened by a prolonged drought in the Southeast that negatively affected peanut production.

Finished goods other than foods and energy

The PPI for finished goods other than foods and energy, commonly known as the finished core index, advanced 2.0 percent in 2007, the same rate as in 2006. (See table 4.) In 2007, rising prices for pharmaceutical products, cigarettes, civilian aircraft, pet food, cosmetics and other toilet preparations, commercial furniture, heavy motor trucks, communication and related equipment, and book publishing

Index	2003	2004	2005	2006	2007
inished goods other than foods and energy	1.0	2.3	1.4	2.0	2.0
		1.1			9.2
Cigarettes	8 3.2	2.0	4.8	.8 4.4	9.2
Jewelry, platinum and karat gold	3.2 .4	7.3	3.5	4.4	6.0
Pet food	.4 4.7	4.4	6.0	3.6	5.1
Pharmaceutical preparations Civilian aircraft	4.7 6.1	7.1	3.9	5.3	3.3
Heavy motor trucks	-1.9	3.4	5.3	4.7	2.9
Book publishing	4.0	4.6	3.7	4.7	2.9
Aircraft and aircraft equipment	3.6	4.0	3.3	4.0	2.9
Sporting and athletic goods	-2.2	1.3	.5	2.1	2.9
Commercial furniture	.7	3.8	3.4	2.1	2.3
Household furniture	./	3.5	3.7	2.1	1.2
Cosmetics and other toilet preparations	.3 .7	.7	1.7	1.7	1.4
Communication and related equipment	., –.9	-2.1	7	2	1.2
Tools, dies, jigs, fixtures, and industrial molds	9	.1	2.5	1.0	2
Home electronic equipment	-1.5	-4.8	-4.7	-2.5	-4.7
Light motor trucks	2.3	1.0	-5.9	1.5	7
Passenger cars	2.0	1.7	-3.4	3	-1.5
X-ray and electromedical equipment	7	-3.4	-1.6	4	-2.8
Electronic computers	-17.1	-12.3	-23.2	-22.8	-23.1

Annual percentage changes in Producer Price Indexes for selected finished goods other than foods and Table /

outweighed falling prices for electronic computers, light motor trucks, passenger cars, home electronic equipment, and x-ray and electromedical equipment.

Pharmaceutical preparations. Prices for pharmaceutical preparations advanced 5.1 percent in 2007, after rising 3.6 percent a year earlier. Pharmaceutical companies hiked prices on patent protected drugs to regain margin as their non-protected portfolios experienced lower demand due to an increased presence of generic substitutes. Pharmaceutical companies also raised prices in order to generate positive revenue comparisons in 2007 relative to those in 2006, when revenues were driven by the positive effect of the increased volume from the implementation of Medicare Part D, the retirees' prescription drug plan. Also impacting this index in 2007 were the costs associated with a number of high profile drug recalls and withdrawals along with the negative effects of a limited number of novel drug approvals.

Cigarettes. The cigarettes index advanced 9.2 percent in 2007, following a 0.8-percent gain in the preceding year. The impetus for this price movement was higher mandated Master Settlement Arrangement (MSA) payments—the money tobacco companies must pay to help Federal and state governments pay for their tobacco related health care costs and in smoking prevention efforts. The U.S. Centers for Disease Control and Prevention estimates the total annual health care expenditures caused by cigarette smoking at \$75 billion.³⁹

Civilian aircraft. After rising 5.3 percent in 2006, prices for civilian aircraft advanced 3.3 percent in 2007. This index has risen at an average annual rate of 4.1 percent over the last 10 years. Civilian aircraft sales grew 16 percent in 2007, as the expanding worldwide economy led to solid demand for commercial transport and business jets.⁴⁰ Shipments of general aviation aircraft totaled 4,272 units in 2007, the most in 25 years, as shipments of business jets topped 1,000 units for the first time in history.⁴¹

Pet food. Prices for pet food moved up 6.0 percent in 2007, following a 3.3-percent gain a year earlier. Pet food consists mainly of grain, oilseed, and of grain and meat byproducts—inputs that all rose in price over the year. This industry was severely affected in 2007 when pet food with melamine-contaminated wheat gluten from China caused the illness and death of many dogs and cats in the United States. In response to this scandal, new regulations were passed requiring standards for ingredients,

processing, and labeling for pet food,⁴² which has led to increased demand for higher priced domestic grain and meat byproducts.

Intermediate materials less foods and energy

The PPI for intermediate materials less foods and energy rose 3.3 percent in 2007, compared with a 4.5-percent increase in 2006. Leading the deceleration in the intermediate core index, the rate of advance for the materials for durable manufacturing index slowed to 1.7 percent in 2007, following an increase of 12.5 percent a year earlier. Contributing to a lesser extent, the index for materials and components for construction moved up 2.0 percent, after rising 4.3 percent in the prior year. By contrast, prices for materials for nondurable manufacturing advanced 12.8 percent compared with a 1.2-percent gain in 2006. (See table 5.) Over the last 4 years, prices for intermediate goods other than foods and energy have advanced 22.5 percent—more than 80 percent of the index's 27.3 percent gain over the 10-year period going back to 1997.

Materials for durable manufacturing. The PPI for materials for durable manufacturing rose 1.7 percent in 2007, after climbing 12.5 percent in 2006. Leading this price deceleration, the primary nonferrous metals index moved up 3.9 percent in 2007, following a 32.7-percent surge in the prior year. Prices for cold rolled steel sheet and strip, copper and brass mill shapes, and aluminum mill shapes, all of which increased dramatically in 2006, turned down in 2007, as a slowing U.S. economy and ample supplies negatively affected pricing.

Pricing for primary nonferrous metals is mainly determined by two components of this index—copper cathode and primary aluminum—both of which exhibited divergent price activity in 2007. The index for copper cathode rose 15.7 percent, subsequent to a 39.3-percent gain in 2006; this index has more than tripled since 2002. Copper demand had benefited from the housing boom-a typical 2,100-square-foot house uses 439 pounds of copper.⁴³ In 2007, depleted commodity exchange copper inventories and lower copper production due to labor unrest in Canada, Chile, Mexico, and Peru led to supply concerns and higher prices.⁴⁴ Demand from China, currently the world's largest copper consumer, grew 13 percent in 2007 to 3.99 million tons.⁴⁵ Price increases for copper cathode were moderated by lower demand for construction purposes due to the domestic housing market downturn and the increased use of less expensive plastic substitutes. The index for primary aluminum declined 12.9 percent Table 5.

Annual percentage changes in Producer Price Indexes for selected intermediate materials other than foods and energy, 2003–07

Index	2003	2004	2005	2006	2007
ntermediate goods other than foods and	2.1				
energy	2.1	8.3	4.8	4.5	3.3
Materials for durable manufacturing	4.0	18.3	5.9	12.5	1.7
Primary nonferrous metals	13.5	24.9	29.9	32.7	3.9
Copper cathode	29.5	46.8	50.0	39.3	15.7
Primary aluminum, except extrusion billet	10.4	20.1	18.0	18.1	-12.9
Steel mill products	1.7	48.8	-3.8	11.6	.9
Cold rolled steel sheet and strip	2	35.5	-1.2	41.2	-9.1
Aluminum mill shapes	5	9.9	5.0	12.7	-1.7
Copper and brass mill shapes	11.6	29.6	31.0	44.4	-3.0
Construction materials and components	3.0	10.1	6.1	4.3	2.0
Nonferrous wire and cable	5.7	13.5	21.1	21.8	2.3
Plywood	31.3	-3.4	-2.9	-8.3	7.3
Fabricated structural metal products	.6	17.6	2.9	4.7	2.3
Concrete products	1.5	7.6	10.1	8.1	3.8
Paving mixtures and blocks	3.7	4.3	14.3	27.6	1.6
Asphalt felts and coatings	6.3	4.1	15.3	5.0	1.4
Treated wood	9.4	3.3	3.8	-6.6	1.1
Softwood lumber	8.3	9.9	4	-15.2	-4.0
Building paper and board	38.6	-1.0	1.0	-13.6	-13.6
Gypsum products	2.8	20.0	18.8	5.5	-22.1
Materials for nondurable manufacturing	4.9	13.7	8.9	1.2	12.8
Industrial chemicals	8.1	24.6	13.6	4.0	16.3
Basic organic chemicals	9.3	30.3	12.6	.4	17.3
Basic inorganic chemicals	2.9	7.3	17.7	16.4	10.4
Fats and oils, inedible	29.4	-15.6	11.9	12.4	48.9
Fertilizer materials	20.9	15.2	15.6	-8.3	43.4
Plastic resins and materials	6.4	28.6	10.8	-7.8	9.7
Paperboard	-4.1	12.3	-3.0	13.6	6.0

in 2007, following an 18.1-percent advance a year earlier. Aluminum is a plentiful resource produced through an energy intensive process. With a 50-percent advance in aluminum prices between 2003 and 2006, restarts of domestic aluminum smelters drove a 14-percent increase in production in 2007 (about 300 million tons), which combined with a decrease in consumption, led to lower prices.⁴⁶

Materials and components for construction. Prices for materials and components for construction moved up 2.0 percent in 2007, compared with a 4.3-percent gain in 2006. The indexes for paving mixtures and blocks, nonferrous wire and cable, concrete products, fabricated structural metal products, and steel mill products rose less than they had a year earlier, in response to a weaker construction environment. The U.S. Department of Commerce reported that the annual value of residential construction put in place declined 18 percent in 2007 to \$532.6 billion, the lowest amount

since 2003. Residential construction accounts for roughly one half of total construction in the United States.⁴⁷

Despite a slowdown in construction, prices for plywood advanced 7.3 percent in 2007, after decreasing 8.3 percent a year earlier. Plywood pricing is volatile and can be affected by factors outside of residential construction such as mill operations, dollar valuation, and regional weather patterns. The weak dollar supported domestic plywood prices in 2007 by limiting the price competitiveness of imported products; rainy weather in the southern half of the United States also led to reduced plywood supplies.

Materials for nondurable manufacturing. The index for materials for nondurable manufacturing jumped 12.8 percent in 2007, following a 1.2-percent gain in the previous year. Prices for basic organic chemicals surged 17.3 percent, after edging up 0.4 percent in 2006. The index for fertilizer materials climbed in 2007, as soaring food prices drove demand for fertilizer as a means of improving crop

yield. Prices for plastic resins and materials turned up in 2007, while the index for inedible fats and oils advanced more than it had a year earlier. By contrast, the paperboard index moved up 6.0 percent following a 13.6-percent gain in the preceding year. Prices for basic inorganic chemicals, paper, and synthetic rubber also advanced at slower rates than in 2006.

Similar to their aggregate, components of the basic organic chemicals index increased over the course of the year, as prices for primary, intermediate, and miscellaneous basic organic chemicals rose 27.8 percent, 8.8 percent, and 5.4 percent, respectively. This broad-based advance was driven by the rising price of crude oil. Basic organic chemicals are separated from crude at petrochemical refineries through a variety of extraction processes termed cracking; thus, higher prices for oil have adversely affected chemical production costs-resulting in increased prices for basic organics.

Crude nonfood materials less energy

The PPI for crude nonfood materials less energy surged 15.6 percent in 2007, following a 17.0-percent climb in 2006. (See table 6.) Prices for basic industrial materials have increased at an average rate of 16.0 percent over the last 5 years. On average, this index rose at a 5.1-percent annual rate over the previous 25 years. Despite a slowing domestic economy, basic materials prices moved up steadily in 2007 as investors sought relative safety from inflation fears and the weaker dollar sparked higher export demand for commodities.

Iron and steel scrap. Prices for iron and steel scrap jumped

29.4 percent in 2007, following a 2.9-percent rise in 2006, primarily due to increased foreign demand. The International Iron and Steel Institute reported that although U.S. steel production declined 4.9 percent in 2007, world steel production still grew 7.5 percent.⁴⁸ Buyers in the Middle East-Turkey and Dubai-have stepped up purchases of U.S. iron and steel scrap, as their previous supplier, Russia, has limited exports to service internal demand.⁴⁹ The weak dollar also has supported the domestic scrap market by increasing the price of imports.

Gold ores. Prices for gold ores soared 24.9 percent in 2007 building on a 21.3-percent gain a year earlier. Gold demand has turned inelastic-higher prices had little effect on demand, as investors viewed gold as a safe haven against a declining dollar, inflation, and geopolitical risk. Additionally, gold production has declined, because no new major deposits have been found in the last 5 years.⁵⁰

Wastepaper. The wastepaper index jumped 53.4 percent in 2007 led by a 62.5-percent surge in wastepaper exports prices. Wastepaper export volume rose by 9 percent to 15.6 million metric tons (mmt), with China accounting for 52 percent of the total volume.⁵¹ China's surging economy grew 11.4 percent in 2007, the fifth consecutive year of greater than 10 percent growth.⁵² Paperboard is a necessary component in economic growth, because it is used to package manufactured products; China is dependent on paper imports, because it does not have sufficient amounts of natural forestland.

Construction sand, gravel, and crushed stone. The construction sand, gravel, and crushed stone index advanced

Index	2003	2004	2005	2006	2007
Crude nonfood materials less energy	21.6	20.5	5.2	17.0	15.6
Wastepaper	8.7	17.3	-9.1	19.1	53.4
Iron and steel scrap	64.9	50.8	-10.8	2.9	29.4
Gold ore	24.2	8.8	17.9	21.3	24.9
Construction sand, gravel, and crushed stone	2.4	4.3	7.7	9.3	8.4
Copper base scrap	30.7	34.5	51.9	50.0	3.1
Iron ore	1.6	6.7	15.5	7.5	1.3
Copper ores	37.4	65.1	39.3	53.1	-1.7
Softwood logs, bolts, and timber	1	5.3	2.3	-7.4	-5.3
Aluminum base scrap	11.5	12.9	12.8	23.7	-5.8

Table 6

8.4 percent in 2007 as lower supplies and increased transport charges drove prices higher despite a slowdown in U.S. construction demand. In 2007, U.S. construction spending declined 2.6 percent—the largest decrease since 2002—leading to a 16-percent decline in production for both crushed stone and for construction sand and gravel.⁵³ Nevertheless, prices still rose for this commodity due to higher transport charges, an important component in aggregate pricing, as well as the impact of a ruling in a Florida court case that limited Florida aggregate production and sent builders scrambling for alternative supplies.⁵⁴

Services

Trade industries. The index for total trade industries rose 3.9 percent in 2007. Trade indexes measure changes in margins received by wholesalers and retailers. Higher margins received by gasoline stations; merchant wholesalers of durable goods; grocery stores; merchant wholesal-

ers of nondurable goods; automobile dealers; department stores; automotive parts, accessories, and tire stores; and health and personal care stores outweighed lower margins received by electronics and appliance stores. (See table 7.)

The margin index for gasoline stations jumped 26.9 percent in 2007, after increasing 8.7 percent in 2006. Gasoline margins typically represent only pennies per gallon that consumers purchase at the pumps. Large changes in the index are usually indicative of retailers either trying to maintain market share (by decreasing margins) as supplier prices rise or recouping lost revenue (by increasing margins) as supplier prices fall. Long-term price change is the result of increases in the cost of doing business for retailers. Gasoline retailers were hit particularly hard in 2007 as supplier fuel prices increased to sustained levels not previously seen. For example, as the result of consumers increasingly using credit cards to pay for higher priced gasoline, retailers faced much higher costs of doing business for credit card fees.⁵⁵ Short-term fluctuations

Index	2003	2004	2005	2006	2007
Total trade industries	_	_	_	_	3.9
Wholesale trade	-	-	-	-	3.0
Durable goods	_	-	1.7	5.8	4.0
Nondurable goods	-	-	4.6	7.6	1.6
Retail trade	-	-	-	-	4.5
Gasoline stations	7.2	24.8	-19.2	8.7	26.9
Grocery stores	-	7.4	6.3	4	4.5
Automobile dealers	-	2.3	4.0	4.4	4.1
Department stores	-	4.7	-1.0	1	4.2
Automotive parts and accessories, tire stores	1.6	10.4	3	4.7	9.5
Health and personal care stores	-	7.2	4.4	6.8	3.6
Electronics and appliance stores	-	-6.4	1.8	-1.7	-4.7
Fransportation and warehousing	_	_	_	_	6.6
Couriers	_	9.1	8.2	3.0	12.3
Scheduled passenger air transportation	1.9	-1.5	7.7	-1.1	9.0
Inland water freight transportation	2	7.6	20.0	14.0	4.2
Line-haul railroads	2.3	7.4	13.1	1.9	9.2
U.S. Postal Service	0	0	0	6.3	6.6
Truck transportation	-	5.5	5.4	2.1	3.8
Freight transportation arrangement	.3	.9	.8	-1.8	1.9
Coastal and Great Lakes freight transportation	_	2.6	11.4	7.2	10.6
Deep sea freight transportation	8.7	3.1	.3	.2	2
lotal traditional services	_	_	_	_	1.8
General medical and surgical hospitals	4.9	4.6	4.2	3.9	3.8
Offices of physicians (except mental health)	2.2	1.5	1.9	1.1	4.0
Direct health and medical insurance	8.7	4.0	4.8	3.7	3.3
Portfolio management	11.8	9.9	10.1	5.8	9.8
Offices of lawyers	2.8	4.3	6.1	4.9	5.6
Hotels and motels (except casino)	_	2.9	7.4	4.1	6.3
Nursing care facilities	4.3	3.9	3.6	2.9	5.6
Commercial banking	_	1.3	11.5	1.3	-5.5

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throughout the year are usually the result of supply and demand circumstances. In 2007, gasoline margins were volatile early in the year before starting their upward climb in the spring, when demand increased as the driving season commenced. Between March and June, gasoline station margins increased nearly 31 percent, reflecting an increase in gasoline demand of about three percent,⁵⁶ while inventories fell 0.4 percent from their first quarter levels.⁵⁷ Throughout the second half of the year, margins were volatile, although they trended downward, reflecting a 2.0-percent decrease in demand,⁵⁸ in combination with a 1.5-percent increase in inventory levels.⁵⁹

Margins received by grocery stores turned up 4.5 percent in 2007, following a 0.4-percent decline in 2006. A major factor influencing grocers' margins are energy prices, because grocers use significant amounts of energy for both refrigeration of perishable inventory and climate control in their stores. During 2007, commercial electric power prices rose 3.8 percent,⁶⁰ closely reflecting the increase in grocery store margins.

The index for total wholesale trade industries rose 3.0 percent in 2007, as margins received by merchant wholesalers of durable goods advanced 4.0 percent, and margins received by merchant wholesalers of nondurable goods rose 1.6 percent in 2007.

The index for durable goods wholesalers followed its historical pattern with a large January increase that reflected wholesalers' traditional attempts to push price increases through at the start of the year to retailers, in combination with the removal of holiday promotions. In December, margins jumped 2.6 percent due to strong demand for industrial machinery and equipment and lower supplies of computers and related products.⁶¹

The margin index for wholesalers of nondurable goods declined in early spring as clothing wholesalers attempted to clear out relatively high inventories prior to receiving shipments for the summer season,⁶² and alcohol wholesalers received lower margins as increased demand for lowermargin malt beverages outweighed demand for other types of higher-margin alcoholic products.⁶³ Margins dropped another 2 percent in June due to decreased demand for chemical products coupled with higher inventories for farm products, grocery items, and apparel.⁶⁴ August saw a spike of 3.6 percent due to increased margins for motor oil, pharmaceuticals, and food products, particularly poultry and cheese. Margins remained volatile until late in the year, when they fell 2.6 percent in December. The drop was mainly a result of lower margins received for chemicals, prescription pharmaceuticals, plastics, and motor oils due to the high prices of petroleum-derived products that

wholesalers were unable to pass on to retailers.65

The index for automobile dealers rose 4.1 percent in 2007, following a 4.4-percent increase in 2006. This index measures changes in margins collected by automobile dealers for vehicle sales and also through their service and parts operations. In 2007, the index for automobile dealers advanced 1.2 percent in January as a result of dealers receiving a large boost in revenue for their roles as intermediaries for financing and insurance services provided during 2006. The index fell 1.4 percent between June and October reflecting lower margin on vehicle sales due to automobile dealers discounting efforts to increase sales of current model-year vehicles prior to the introduction of the 2008 models. The index jumped 2.6 percent in December, as automobile dealers raised prices for service labor and parts in anticipation of upcoming cost of living increases for employees and for increases in parts costs, which typically take effect at the start of the year.

Transportation and warehousing industries. The index for transportation and warehousing industries advanced 6.6 percent in 2007. The index for total transportation and warehousing industries measures changes in prices received by companies identified as providing transportation services, as well as delivery and warehousing services. Higher prices received by the industries for couriers, air transportation, inland water freight transportation, line-haul railroads, the U.S. Postal Service, truck transportation, freight transportation arrangement, coastal and Great Lakes freight transportation, and for warehousing and storage more than offset lower prices received by the industry for deep sea freight transportation.

The increase in the index for couriers accelerated to 12.3 percent in 2007, after advancing 3.0 percent in 2006. Prices spiked 8.1 percent in January 2007 as courier companies folded their 2006 fuel surcharges into their 2007 base rates, while reducing, although not eliminating, fuel surcharges going forward. For most of the remainder of the year, couriers modified their fuel surcharges based on changes in diesel fuel prices, typically with a two-month lag. Prices increased late in the year, reflecting increased demand for delivery of holiday purchases.

The index for the scheduled passenger air transportation industry turned up 9.0 percent in 2007, after falling 1.1 percent in 2006. Prices increased in the first quarter of the year due to a combination of strong demand and higher fuel costs, as North American passenger air traffic increased 6.1 percent while capacity rose only 5.2 percent over previous year levels,⁶⁶ and jet fuel prices ended the quarter 6.7 percent higher than their previous year's levels.⁶⁷ Prices for air transportation spiked again in the summer, reflecting a further reduction in capacity as airlines shifted to smaller planes, while demand continued to increase with the summer travel season.⁶⁸ Prices remained volatile for the rest of the year, as lower air travel demand was offset by higher fuel prices.

The increase in the index for inland water freight transportation slowed to 4.2 percent in 2007, after jumping 14.0 percent in 2006. The first quarter of 2007 saw lower prices received as poor winter weather closed a number of inland waterways. Once shipping was able to consistently resume following the spring thaw, stagnant market conditions for steel and agriculture resulted in lower demand. Prices spiked in the summer and early autumn due to increased demand for farm and related products. Inland water freight prices reversed course again in November and December as the worsening economy resulted in lower demand for many domestically produced products.⁶⁹

Traditional service industries. The index for total traditional service industries increased 1.8 percent in 2007. Traditional service industries include industries related to the dissemination of information, selected providers of health care services, as well as other assorted service industries. In 2007, increasing prices received by the industries for general medical and surgical hospitals, offices of physicians (excluding mental health), direct health and medical insurance carriers, portfolio management, offices of lawyers, non-casino hotels and motels, and nursing care facilities outweighed lower prices received by the commercial banking industry.

The index for general medical and surgical hospitals increased 3.8 percent in 2007, nearly matching its 3.9 percent rise in 2006. This index consistently reflects two major increases each year which account for a majority of the annual movement. Most of the movement in this index in 2007 occurred in January and October, which coincides with the start of the new calendar year and the start of the Federal government fiscal year, respectively. In January, an increase of 0.8 percent reflected annual increases in hospital charges and renegotiations with insurance companies for reimbursements. In October, an advance of 2.1 percent was the result of changes in Medicare and Medicaid reimbursement rates which take effect at the start of the government's fiscal year. The effect of these rate increases was offset somewhat by a new set of rules penalizing hospitals that declined to participate in Hospital Compare reporting by reducing their Medicare and Medicaid reimbursements by 2 percent.⁷⁰

The index for offices of physicians (excluding mental

health) advanced 4.0 percent in 2007, after rising 1.1 percent in 2006. Similar to the general medical and surgical hospital index, there are principally two months which account for a majority of the price change for the offices of physicians index. In January, prices received by physicians' offices jumped 3.3 percent, reflecting changes in reimbursement rates for Medicare patients. In 2007, in an effort to encourage physician consultations and preventative care, Medicare changed its reimbursement formulary to be based on the amount of time the physicians spend with individual patients.⁷¹ Additionally, offices often change their fee schedules in January for self-paying patients, and many offices increased their fees to offset higher liability insurance rates and increased operating expenses incurred throughout 2006. In September 2007, prices increased 0.6 percent reflecting the renegotiation of reimbursement rates with private insurance companies.

Prices received by the direct health and medical insurance industry increased 3.3 percent in 2007, after climbing 3.7 percent in 2006. With 2007 increases of 3.8 percent and 4.0 percent for general medical and surgical hospitals and for physicians' offices, respectively, the 3.3 percent increase for the direct health and medical insurance industry in 2007 reflects insurance companies attempts to keep pace with the cost of medical inflation. Insurance rate increases were slightly lower than those for the medical services areas reflecting attempts by employers to contain their insurance cost increases by negotiating for larger co-payments in lieu of substantially higher insurance rates.

The index for portfolio management increased 9.8 percent in 2007, following a 5.8-percent rise in 2006. Prices received by firms in the portfolio management industry are partially determined by the appreciation of portfolios of equities and debt securities. Most firms are typically priced on a one quarter lag, with prices reported to the PPI in the month following the end of each quarter. In 2007, large increases of 4.4 percent, 1.3 percent, and 2.0 percent were reported in January, April, and July, respectively, coinciding with the reports for the fourth quarter of 2006 and the first and second quarters of 2007. These increases were partially caused by advances in the equity markets, as illustrated by the Dow Jones Wilshire 5000 index, which rose 16.2 percent from the beginning of the fourth quarter of 2006 through the end of the second quarter of 2007. Changes in the portfolio management index are typically less volatile than those of the equity indexes due to the inclusion of debt securities and cash in the portfolios. Following the autumn credit meltdown, the equity markets turned lower, which was reflected by a 1.1-percent decline

for those firms that reported data for December.

The index for commercial banking turned down 5.5 percent in 2007, after advancing 1.3 percent in 2006. This downturn was driven by a 21.5-percent decline in revenue received for loan services in 2007. Noteworthy decreases were observed for the following types of loan services: home equity loans were down 24.6 percent; commercial, industrial, and agriculture loans, except real estate dropped 23.8 percent; and residential real estate loans were down 12.8 percent. By contrast, the deposit services index increased 11.5 percent for the year. Prices in the PPI banking indus-

tries reflect the difference between the revenue generated and the sum of its implicit and explicit costs for a specific type of banking activity such as commercial loans or auto loans. To measure these costs, interest is allocated between loans and deposits by means of a *reference rate*. Because most of these loans have interest rates that are fixed at the time the loan originates, most of the price movement in the index is the result of the change in the reference rate. The reference rate is based on the monetary policy of the Federal Reserve. The Federal Reserve's easing of monetary policy in 2007 had a dramatic effect on the reference rate. \Box

Notes

¹The stage-of-processing indexes for finished, intermediate, and crude goods other than foods and energy are commonly referred to as the indexes for *finished core, intermediate core*, and *crude core*. Also, the index for crude goods other than foods and energy often is referred to as the index for crude nonfood materials less energy and *basic industrial materials*.

² To locate PPI data on the BLS Web site, visit **data.bls.gov/cgibin/srgate** and enter the series identifiers in question; for example, the series identifier for the crude petroleum index is WPU056.

³ Oil Daily, Mar. 16, 2007, p. 1.

⁴ OPEC Annual Report, 2007 (Organization of Petroleum Exporting Countries), pp. 6-9; on the Internet at http://www.opec.org/library/ Annual%20Reports/pdf/AR2007.pdf (visited May 22, 2008).

⁵ "U.S. Total Crude Oil and Products Imports by Country of Origin" (Energy Information Administration, Petroleum Navigator), on the Internet at http://tonto.eia.doe.gov/dnav/pet/pet_move_impcus_ a2_nus_ep00_im0_mbbl_m.htm (visited March 28, 2008).

⁶"U.S. Crude Oil Supply & Disposition" (Energy Information Administration, Petroleum Navigator), on the Internet at **http://tonto. eia.doe.gov/dnav/pet/pet_sum_crdsnd_adc_mbbl_m.htm** (visited March 28, 2008). The Energy Information Administration Web site is located at **http://www.eia.doe.gov**.

⁷The series identifiers for gasoline, home heating oil, diesel fuel, and jet fuel are WPU0571, WPU057302, WPU057303, and WPU057203.

⁸ "U.S. Total Weekly Inputs, Utilization, & Production" (Energy Information Administration, Petroleum Navigator), on the Internet at http://tonto.eia.doe.gov/dnav/pet/pet_pnp_wiup_dcu_nus_w.htm (visited March 28, 2008).

⁹ For collection purposes, the Energy Information Administration (EIA) collects data for distillate fuel oil as a group. EIA defines *distillate fuel oil* as a general classification for one of the petroleum fractions produced in conventional distillation operations. It includes diesel fuels and fuel oils. Products known as No. 1, No. 2, and No. 4 diesel fuel are used in on-highway diesel engines, such as those in trucks and automobiles, as well as off-highway engines, such as those in railroad locomotives and agricultural machinery. Products known as No. 1, No. 2, and No. 4, fuel oils are used primarily for space heating and electric power generation. For more information, visit the Energy Information Administration Web site at http://www.eia.doe.gov/glossary/index.

html (visited Apr. 28, 2008).

¹⁰ "U.S. Weekly Imports & Exports" (Energy Information Administration, Petroleum Navigator), on the Internet at http://tonto.eia. doe.gov/dnav/pet/pet_move_wkly_dc_NUS-Z00_mbblpd_w.htm (visited March 28, 2008).

¹¹ "U.S. Natural Gas Summary" (Energy Information Administration, Natural Gas Navigator), on the Internet at http://tonto.eia. doe.gov/dnav/ng/ng_sum_lsum_dcu_nus_m.htm (visited Apr. 11, 2008).

¹² Working gas in underground storage is defined by the Energy Information Administration as the volume of gas in a reservoir that is in addition to the cushion or base gas required for the reservoir to function. Base (cushion) gas is the volume of gas needed as a permanent inventory to maintain adequate reservoir pressures and deliverability rates. For more information, visit the Energy Information Administration Web site at **http://www.eia.doe.gov**.

¹³ "U.S. Natural Gas Summary" (Energy Information Administration, Natural Gas Navigator), on the Internet at http://tonto.eia. doe.gov/dnav/ng/ng_sum_lsum_dcu_nus_m.htm (visited Apr. 11, 2008).

¹⁴ Ibid.

¹⁵ "U.S. Total Stocks, 2002–2007" (Energy Information Administration, Petroleum Navigator), on the Internet at http://tonto.eia.doe. gov/dnav/pet/pet_stoc_typ_d_nus_SAE_mbbl_a.htm (visited Apr. 11, 2008).

¹⁶ "U.S. Coal Stocks, 2001–2007" (Energy Information Administration), table 29; on the Internet at http://www.eia.doe.gov/cneaf/ coal/quarterly/html/t29p01p1.html (visited Apr. 15, 2008).

¹⁷ The series identifier for electric power is WPU054.

¹⁸ The series identifier for coal is WPU051.

¹⁹ "Net Generation by Energy Source by Type of Producer" (Energy Information Administration, October 27, 2007), on the Internet at **http://www.eia.doe.gov/cneaf/electricity/epa/epat1p1.html** (visited Apr. 15, 2008).

²⁰ Ibid.

²¹ Patricia Miller, "The Big Chill" (USDA Rural Development), on the Internet at http://www.rurdev.usda.gov/rbs/pub/mar07/big. htm (visited May 21, 2008). ²² Susan Pollack and Agnes Perez, "Fruit and Tree Nuts Outlook, 2006/07 U.S. Citrus Crop Forecast Smaller Than A Season Ago" (USDA Economic Research Service, Report FTS-325), on the Internet at http://www.ers.usda.gov/publications/fts/2006/11Nov/FTS325. pdf (visited May 21, 2008).

²³ Ibid.

²⁴ Gary Lucier and Rachael Dettmann, "Vegetables and Melons Outlook, Domestic Use of Vegetables and Melons Rose in 2007" (USDA Economic Research Service, Report VGS-326), on the Internet at http://www.ers.usda.gov/Publications/VGS/ (visited May 21, 2008).

²⁵ Gary Vocke and Edward Allen, "Wheat Outlook, 2007/08 Ending Stocks Down, Price Up" (USDA Economic Research Service, Report WHS-07k), on the Internet at http://usda.mannlib.cornell. edu/usda/ers/WHS//2000s/2007/WHS-12-13-2007.pdf (visited May 21, 2008).

²⁶ Ibid.

²⁷ U.S. Export Sales, Export Sales Weekly Historical Data, on the Internet at http://www.fas.usda.gov/export-sales/h107.htm (visited May 21, 2008).

²⁸ Jeff Cox, "Corn: The inflation crop" (CNNMoney.com, March 28, 2007), on the Internet at http://money.cnn.com/2007/03/27/news/economy/corn_prices/index.htm (visited May 21, 2008).

²⁹ Gerald A. Bange, "The Situation and Outlook for World Corn, Soybean, and Cotton Markets," Presentation to National Grain and Oils Information Center, Beijing, China, July 2, 2007; on the Internet at http://www.usda.gov/oce/speeches/2007/GeraldBange-ChinaNGOIC2007.doc (visited May 21, 2008).

³⁰ Ibid.

³¹ Ibid.

³² Joel L. Greene, "Outlook for Livestock and Poultry." Paper presented at the U.S. Department of Agriculture's 2008 Agricultural Outlook Forum, Feb. 22, 2008; on the Internet at http://www.usda. gov/oce/forum/2008Speeches/Commodity/Livestock.pdf (visited May 21, 2008).

³³ Ibid.

³⁴ "U.S. red meat and poultry forecasts" (World Agricultural Supply and Demand Estimates and Supporting Materials, U.S. Department of Agriculture), on the Internet at http://www.ers.usda. gov/Publications/LDP/2007/12Dec/ldpm162tables.pdf (visited May 21, 2008)

³⁵ Ibid.

³⁶ Ibid.

³⁷ "Too Much Pork; Too High Costs," *Weekly Outlook* (Purdue University and University of Illinois at Urbana-Champaign, October 1, 2007), on the Internet at http://www.farmdoc.uiuc.edu/marketing/weekly/pdf/100107.pdf (visited May 21, 2008).

³⁸ "Canada Livestock and Products Annual 2007," on the Internet at http://www.thepigsite.com/articles/7/markets-and-economics/2056/canada-livestock-and-products-annual-2007 (visited May 21, 2008).

³⁹ Fact Sheet: Economic Facts about U.S. Tobacco Use and Tobacco Production, (Centers for Disease Control and Prevention), on the Internet at http://www.cdc.gov/tobacco/data_statistics/Factsheets/economic_ facts.htm (visited May 21, 2008).

⁴⁰ 2007 Year-End Review and 2008 Forecast: An Analysis (Aerospace Industries Association, December 6, 2007), on the Internet at http://

www.aia-aerospace.org/stats/yr_ender/yr_ender.cfm (visited July 2, 2008).

⁴¹ "2007 Another Record Year For General Aviation Manufacturers" (General Aviation Manufacturers Association), Feb. 12, 2008; on the Internet at http://www.gama.aero/mediaCenter/pr.php?id=161 (visited July 2, 2008).

⁴² "Food and Drug Administration Amendments Act of 2007," Public Law 110-85, on the Internet at http://frwebgate.access.gpo. gov/cgi-bin/getdoc.cgi?dbname=110_cong_public_laws&docid=f: publ085.110 (visited July 2, 2008).

⁴³ Copper Facts, Copper in the Home (Copper Development Association), on the Internet at http://www.copper.org/education/c-facts/chome.html (visited May 21, 2008).

⁴⁴ Mineral Commodity Summaries (U.S. Geological Survey, January 2008), pp. 54–55.

⁴⁵ China's Copper and Aluminum Consumption Grows Strongly in 2007 (China Mining Association), Feb. 29, 2008; on the Internet at http:// www.chinamining.org/News/2008-02-29/1204270429d11500.html (visited March 5, 2008).

⁴⁶ Mineral Commodity Summaries (U.S. Geological Survey, January 2008), pp. 22–23.

⁴⁷ New Residential Construction in December 2007 (joint news release from the U.S. Census Bureau and the U.S. Department of Housing and Urban Development) Jan. 17, 2008.

⁴⁸ "World crude steel output increases by 7.5 percent in 2007" (International Iron and Steel Institute, Jan. 23, 2008); on the Internet at http://www.worldsteel.org/?action=newsdetail&id=228&latest=0&jaar=2008 (visited Jan. 24, 2008).

⁴⁹ "Problems of Russian scrap export" (Rusmet.com), Feb. 18, 2008; on the Internet at http://rusmet.com/news.php?id=13026 (visited Feb. 18, 2008).

⁵⁰ "India, China to drive demand for gold," *The Economic Times*, Nov. 22, 2007; on the Internet at http://economictimes.indiatimes.com/articleshow/msid-2561290,prtpage-1.cms (visited Jan. 23, 2008).

⁵¹ The Friday Report (Institute of Scrap Recycling Industries, Inc., Dec. 13, 2007), p. 4; on the Internet at http://www.isri.org/AM/ Template.cfm?Section=Home§ion=1_December7&template=/ CM/ContentDisplay.cfm&ContentFileID=6230 (visited Jan. 23, 2008).

⁵² China 2007 economic report: National Bureau of Statistics official report 24 January 2008 (Chinability.com), on the Internet at http://www. chinability.com/2007%20economic%20report.htm (visited Jan. 24, 2008).

⁵³ Crushed Stone and sand and gravel in the fourth quarter 2007, (U.S. Geological Survey, March 2008).

⁵⁴ Cynthia Barnett, "Rock and a Hard Place" (Florida Trend.com), September 1, 2007; on the Internet at http://www.floridatrend.com/ print_article.asp?aID=47392 (visited July 21, 2008).

⁵⁵ Margaret Webb Pressler, "Card Companies are Filling Up at the Station," *The Washington Post*, Sept. 25, 2005, p. F1, on the Internet at http:// www.washingtonpost.com/wp-dyn/content/article/2005/09/24/ AR2005092400255.html (visited May 23, 2008).

⁵⁶ "U.S. Weekly Finished Motor Gasoline Product Supplied" (Energy Information Administration), on the Internet at http://tonto.eia. doe.gov/dnav/pet/hist/wgfupus24.htm (visited Jan. 16, 2008).

⁵⁷ "U.S. Weekly Total Gasoline Ending Stocks" (Energy Information Administration), on the Internet at http://tonto.eia.doe.gov/ dnav/pet/hist/wgtstus1w.htm (visited Jan. 16, 2008).

⁵⁸ "U.S. Weekly Finished Motor Gasoline Product Supplied" (Energy Information Administration), on the Internet at http://tonto.eia. doe.gov/dnav/pet/hist/wgfupus24.htm (visited Jan. 16, 2008).

⁵⁹ "U.S. Weekly Total Gasoline Ending Stocks" (Energy Information Administration), on the Internet at http://tonto.eia.doe.gov/ dnav/pet/hist/wgtstus1w.htm (visited Jan. 16, 2008).

⁶⁰ The series identifier for the PPI for commercial electric power is WPU0542.

⁶¹ U.S. Census Bureau, table 2, "Revised (Adjusted) Estimates of Monthly Sales, Inventories, and Inventory/Sales ratio of Merchant Wholesalers, except Manufacturers' Sales Branches and Offices: 2007," on the Internet at http://www2.census.gov/wholesale/ pdf/mwts/historic/new_benchmarks/2008_mwts_revised_sa_ salesinv_nomsbo.pdf (visited Apr. 1, 2008).

⁶² "March 2007 Manufacturing ISM Report on Business" (Institute for Supply Management), on the Internet at http://www.ism.ws/about/MediaRoom/NewsReleaseDetail. cfm?ItemNumber=16263 (visited Apr. 1, 2008).

⁶³ As measured by removals of inventory. Alcohol and Tobacco Tax Trade Bureau, Monthly Statistics; on the Internet at **http://www.ttb.** gov/alcohol/index.htm (visited Apr. 2, 2008). ⁶⁴ U.S. Census Bureau, table 2, "Revised (Adjusted) Estimates."

⁶⁵ "NACS 2007 Gas Price Kit," (Association for Convenience & Petroleum Retailing); for more information, visit NACS Online at http://www. nacsonline.com/NACS/Pages/default.aspx (visited July 2, 2008).

⁶⁶ "Passenger Demand on the Rise, Cargo Sluggish" (International Air Transport Association), on the Internet at http://www.iata.org/ pressroom/facts_figures/traffic_results/2007-04-30-01 (visited Feb. 12, 2008).

⁶⁷ The series identifier for the PPI for jet fuels is WPU057203.

⁶⁸ Kelly Yamanouchi, "Summer Air Travel May Get Bumpy," *Denver Post*, Apr. 25, 2007, on the Internet at http://www.denverpost. com/business/ci_5742663 (visited Apr. 2, 2008).

⁶⁹ "Economy Barely Budges in Fourth Quarter of 2007," *News and Observer*, on the Internet at **http://www.newsobserver.com/business/story/973431.html** (visited Apr. 28, 2008).

⁷⁰ CMS Announces Payment Reforms for Inpatient Hospital Services in 2008 (Centers for Medicare and Medicaid Services Press Release), on the Internet at http://www.cms.hhs.gov/apps/media/press/release. asp?Counter=2335 (visited May 23, 2008).

⁷¹ CMS Announces Proposed Changes to Physician Fee Schedule Methodology (Centers for Medicare and Medicaid Services Press Release), on the Internet at http://www.cms.hhs.gov/apps/media/press/release. asp?Counter=1887 (visited Apr. 11, 2008).