

Rising producer prices in 1999 dominated by energy goods

Surging energy prices push up the Producer Price Index for crude, intermediate, and finished goods

Eleni Xenofondos
and
William F. Snyders

The Producer Price Index (PPI) for crude, intermediate, and finished goods rose in 1999; surging energy prices were the driving force behind the acceleration in each stage of process. The Producer Price Index for Finished Goods rose 2.9 percent in 1999, after showing no change in 1998, and falling 1.2 percent in 1997. The rise in 1999 was the largest annual increase since 1990's 5.7-percent advance. The turnaround in overall finished goods was primarily due to soaring energy prices, which increased 18.1 percent, following an 11.7-percent decrease during the previous 12 months. The index for finished consumer foods rose 0.8 percent in 1999, after a slight 0.1-percent increase in 1998. However, finished goods other than foods and energy—a category that includes both consumer goods and capital equipment—increased 0.9 percent in 1999, after gaining 2.5 percent a year earlier. (See table 1.)

At the earlier stages of processing, the Producer Price Index for intermediate materials, supplies, and components rose 3.7 percent, following a 3.3-percent decline in 1998. This index captures price movements for goods such as jet fuel, paint materials, shipping containers, animal feeds, and semiconductors. The overall acceleration in intermediate materials was primarily due to rising prices for intermediate energy goods, which declined in 1998. Also contributing to the acceleration were rising prices for both nondurable and durable manufacturing materials, both of which fell last year. The index for materials and components for construction rose more than in the prior

year. Prices for intermediate foods and feeds decreased less than in 1998. The intermediate core index (which excludes foods and energy) increased 1.9 percent, following a 1.6-percent decline in 1998.

Similarly, prices for crude materials for further processing advanced 15.3 percent in 1999, after falling 16.7 percent in 1998. Crude goods include commodities such as wheat, slaughter cattle, crude petroleum, natural gas, scrap metals, timber, and raw cotton. Analogous to finished and intermediate goods, most of the increase in crude goods can be attributed to rising prices for energy goods, which dropped in the previous year. Prices for crude goods other than foods and energy also increased substantially from last year. The index for crude foodstuffs and feedstuffs fell less than it did in 1998.

Inflation, as measured by the Consumer Price Index (CPI), rose 2.7 percent during 1999, accelerating from the 1.6-percent increase in 1998. As with the PPI, much of the CPI's overall increase can be attributed to rising energy prices—gasoline prices paid by consumers rose 30.1 percent in 1999. However, excluding food and energy goods, consumer prices advanced only 1.9 percent, the slowest annual rate of increase in nearly 35 years.¹

Energy goods

The PPI for finished energy goods advanced 18.1 percent, following an 11.7-percent drop in 1998. Taking a look further up the pipeline for energy

Eleni Xenofondos and William F. Snyders are economists in the Office of Prices and Living Conditions, Bureau of Labor Statistics.

Table 1. Annual percent changes for major categories of the Producer Price Index by stage of processing, 1990-99

Index	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Finished goods	5.7	-0.1	1.6	0.2	1.7	2.3	2.8	-1.2	0.0	2.9
Foods	2.6	-1.5	1.6	2.4	1.1	1.9	3.4	-8	.1	.8
Energy	30.7	-9.6	-3	-4.1	3.5	1.1	11.7	-6.4	-11.7	18.1
Other	3.5	3.1	2.0	.4	1.6	2.6	.6	.0	2.5	.9
Intermediate materials, supplies, and components	4.3	-2.6	1.0	1.0	4.4	3.3	.7	-8	-3.3	3.7
Foods and feeds	-1.3	-2	-5	5.5	-4.5	10.3	2.1	-1.7	-7.3	-4.2
Energy	21.8	-11.6	.7	-4.2	2.9	1.1	11.2	-7.0	-12.1	19.6
Other	1.9	-8	1.2	1.6	5.2	3.2	-9	.3	-1.6	1.9
Crude materials for further processing.....	6.0	-11.6	3.3	.1	-5	5.5	14.7	-11.3	-16.7	15.3
Foodstuffs and feedstuffs	-4.2	-5.8	3.0	7.2	-9.4	12.9	-1.0	-4.0	-11.0	-1
Energy	19.1	-16.6	2.3	-12.3	-1	3.7	51.2	-23.1	-23.8	36.9
Other .....	.6	-7.6	5.7	10.7	17.3	-4.2	-5.5	.0	-16.0	14.0

goods, prices for intermediate energy goods advanced 19.6 percent in 1999, following a 12.1-percent drop in the 1998 calendar year. Also, the PPI for crude energy materials rose 36.9 percent in 1999, following a 23.8-percent drop in 1998. While most energy products accelerated during 1999, each stage of process was driven by accelerating prices for petroleum-based commodities.

Petroleum-based energy goods. Crude petroleum accounted for three-fourths of the acceleration in crude energy materials. In 1998, petroleum prices reached near-historic lows as world production increased 1.4 percent, petroleum demand from East Asia waned, and a warmer-than-normal 1997-98 winter season decreased energy demand in the United States.² Crude petroleum prices, however, took a new direction in 1999 due to several factors that combined to push up oil prices by 172.0 percent. First, domestic crude oil production fell from 228.1 million barrels in 1998 to 214.6 million barrels in 1999, a decline of nearly 6.0 percent. This slowdown in production can be traced to a 10.6-percent drop in Alaskan crude oil output as well as a 4.8-percent decrease from the lower 48 States.³

In March 1999, the Organization of Petroleum Exporting Countries (OPEC) and several non-OPEC countries announced an agreement to reduce output. As a result, crude oil imports from some nations to the United States dropped significantly. (See table 2.)

Other worldwide events also affected domestic oil prices in the United States. During most of the 1990s, the Far East enjoyed rapid economic expansion and the commensurate expanding demand for energy. However, in 1998, Japan's economic growth rate fell 2.9 percent, real gross domestic product (GDP) in Thailand dropped 8.1 percent, and the growth rate in South Korea fell 5.8 percent.⁴ Economic slumps in these and other Asian countries caused oil demand for industrial and other uses to decline. In 1999, these economies be-

gan to recover. Real GDP rebounded, and competition for available crude oil supplies increased.

Petroleum-based products also led to the acceleration at the intermediate stage of process. (Approximately two-thirds of the acceleration in intermediate energy goods can be attributed to petroleum-based energy products.) Jet fuel prices surged 90.9 percent from December 1998 to December 1999, after falling for 2 consecutive years. The indexes for diesel fuel, liquefied petroleum gas, and residual fuel also rose in 1999, following a decrease in the prior year.

More than half of the acceleration in prices for finished energy goods can be traced to a 74.8-percent surge in gasoline prices, which followed a 33.1-percent drop in 1998. Chart 1 illustrates the strong correlation in the price movements among crude petroleum and gasoline. Excluding gasoline, a more detailed look shows that the index for finished goods increased 1.3 percent in 1999, compared with the 2.9-percent gain in the overall index. Weather-related supply issues put upward pressure on gasoline prices as Hurricane Lenny forced the closing of refinery operations in the Caribbean. Also, refinery operations in Mississippi temporarily closed for maintenance. Among other petroleum-based energy goods, prices for home heating oil jumped 89.4 percent, following a 36.1-percent decline in 1998. The indexes for finished lubricants and liquefied petroleum gas also increased in 1999. (See table 3.)

Energy goods other than petroleum-based. Among other finished energy goods in 1999, electricity production declined as cooler weather in some parts of the country substantially reduced the need for air conditioning, keeping residential electric power prices low. (The residential electric power index was the only finished energy component that fell in 1999.) In addition, with no significant generation outages in 1999, the wholesale supply of electricity was more than sufficient.

Table 2. Imports of crude oil into the United States by country of origin, 1998-99

Country of origin	Crude oil (thousand barrels)		Percent change
	1998	1999	
Arab OPEC			
Qatar	504	332	-34.1
Kuwait	109,412	89,914	-17.8
Saudi Arabia	512,452	506,272	-1.2
Other OPEC			
Venezuela	502,552	419,893	-16.4
Nigeria	251,315	227,471	-9.5
Non-OPEC			
Congo (Kinshasa)	6,219	900	-85.5
Yemen	1,628	335	-79.4
China, People's Republic of	15,376	4,763	-69.0
Peru	14,908	9,227	-38.1
Trinidad and Tobago	19,423	14,748	-24.1
Angola	169,580	130,168	-23.2
Gabon	75,543	61,247	-18.9
Malaysia	9,375	7,708	-17.8
Congo (Brazzaville)	19,527	16,645	-14.8
Guatemala	8,311	7,632	-8.2
Mexico	482,252	457,655	-5.1

SOURCE: *Petroleum Supply Annual, 1999, Volume I* (Energy Information Administration). See text footnote 3 for Internet address.

Prices for residential natural gas increased, after falling in the previous year.

Further up the energy pipeline, prices rose for commercial electric power, industrial natural gas, and commercial natural gas, after falling in 1998. The index for industrial electric power fell less in 1999 than in the prior year. By contrast, prices for coke oven products declined 5.4 percent in 1999, after edging up 0.1 percent in the prior year.

At the crude stage of process, the index for natural gas rose 7.9 percent, following a 17.8-percent drop in 1998. By contrast, coal prices fell 9.3 percent, following a 1.2-percent decrease in the previous year. Following crude oil, natural gas and coal are the largest fuel sources used in the United States, each supplying 23.0 percent of U.S. consumption.⁵

In 1999, natural gas prices increased mainly due to summer cooling needs, anticipation of decreased injection rates, ensuing decreased winter storage levels, and decreased drilling activity. Hot weather in California and the Southwest caused a higher-than-normal demand for air conditioning. Higher energy prices and demand in 1999 also resulted from the temporary closings of hydroelectric power plants in the Northwest and West, due to the dams' harmful environmental effects on some species of fish and birds. At the same time, a maintenance shutdown of California's main north-south transmission line caused a decrease in supply.

Foods and related products

Producer prices for finished consumer foods accelerated in 1999, rising 0.8 percent, after a 0.1-percent increase in 1998. Leading the way, pork prices jumped 29.8 percent, following a 27.3-percent drop in 1998 and a 13.6-percent decline in 1997. Declining pork prices in 1998 resulted from overproduction, softer exports to Asia and Mexico, and price competition from Canadian imports. The rebound in pork prices for 1999 can be traced to a dramatic 266.9-percent jump in the index for slaughter hogs. In addition, greater demand for U.S. pork exports in 1999 pushed prices higher. (See table 4.)

Also contributing to the increase in finished consumer foods was a 10.8-percent rise in beef and veal prices, which had declined 2.7 percent in 1998. Beef prices were very strong in the second half of 1999 in spite of record beef production and large supplies of pork and poultry. Demand for higher quality beef was unusually strong as U.S. and world economies continued to strengthen, particularly in Asia. In addition, expectations for a more festive holiday season bolstered demand for higher quality beef to insure adequate supplies.

In contrast to rising meat prices, the dairy products index fell 11.1 percent in 1999, following a 10.7-percent gain in the prior year. Due to cold and dry weather throughout most of 1997 and 1998, milk production fell, and dairy prices gradually rose. During the same period, skyrocketing butter demand also pushed prices upward. However, prices for dairy products fell beginning in the first quarter of 1999 due to decreased demand and increased production levels. For the 1999 calendar year, prices declined for fluid milk products, butter, cheese, and ice cream and frozen desserts.

Among other finished consumer foods, prices rose for fresh fruits and melons, and for finfish and shellfish, after falling in the previous year. In contrast, the indexes for processed young chickens and for shortening and cooking oils declined in 1999, after increasing in 1998.

At the earlier stages of processing, prices for intermediate foods and feeds declined 4.2 percent throughout 1999, following a 7.3-percent drop in 1998. The index for prepared animal feeds fell 2.7 percent, after dropping 20.4 percent in the prior year. Crude vegetable oil prices declined due to decreasing crude input prices of corn and soybeans. The index for crude foodstuffs and feedstuffs edged down 0.1 percent in 1999, following an 11.0-percent drop during the 1998 calendar year. Slaughter cattle prices rose 19.4 percent, after falling 12.0 percent a year ago. Similarly, a large upturn for slaughter hog prices was posted in 1999. The indexes for corn and alfalfa hay fell less than in the previous year. Conversely, fluid milk prices declined 31.3 percent in 1999, after advancing 25.6 percent in 1998. The index for slaughter broilers and fryers also declined, following an increase in the prior year.

Chart 1. PPI for crude petroleum and gasoline, 1973-99

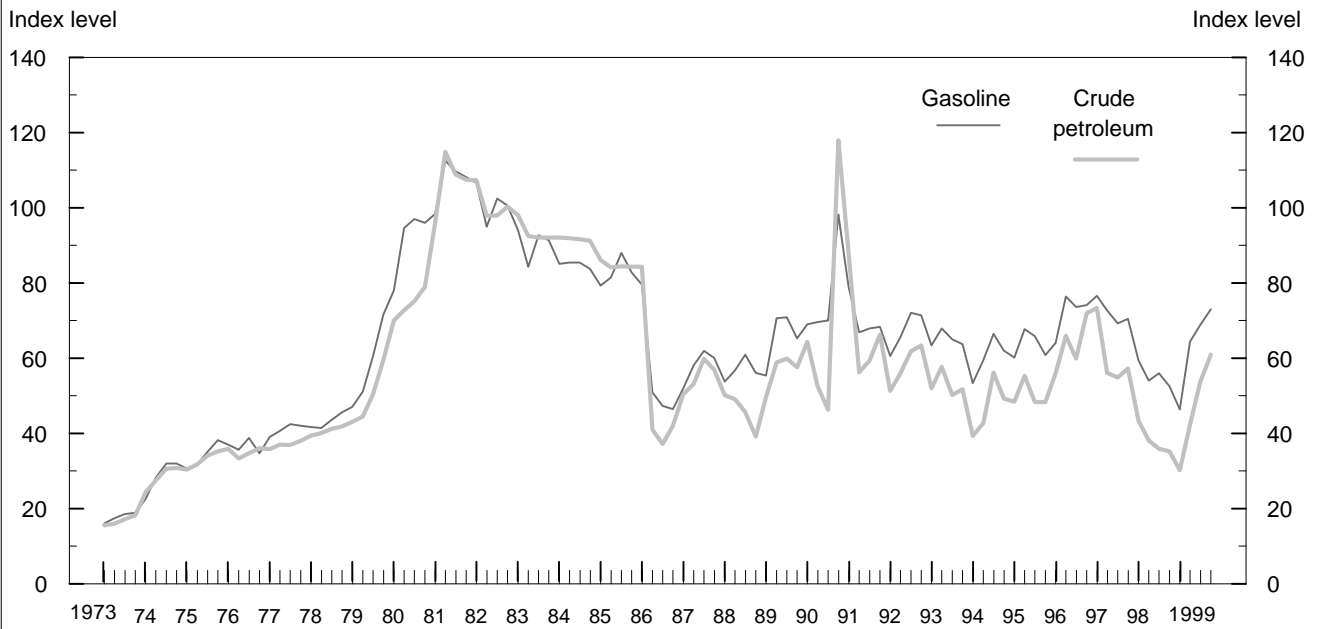


Chart 2. Key commodity impacts to finished goods less foods and energy

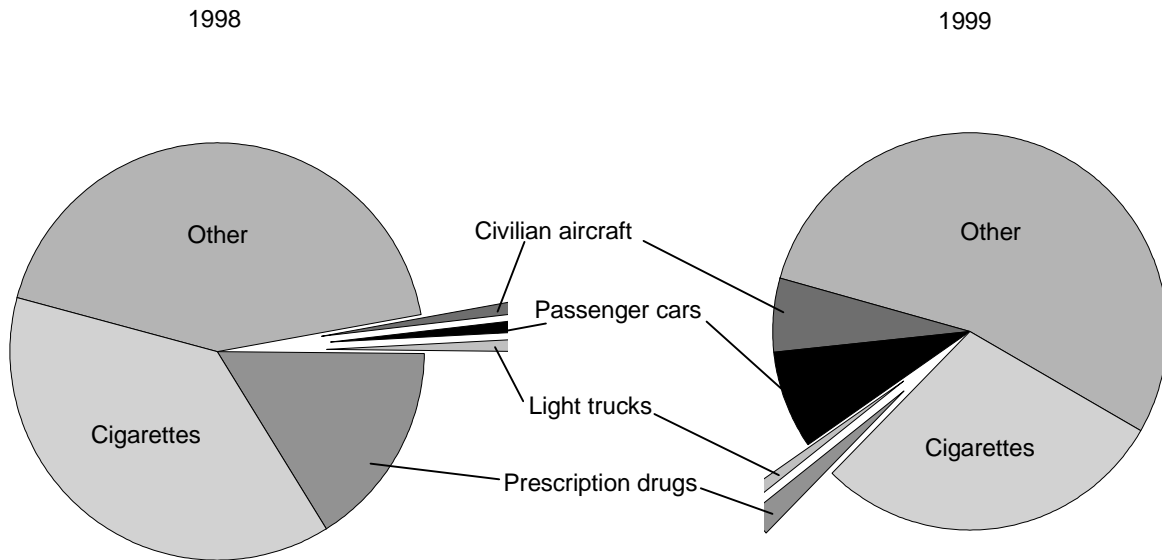


Table 3. Annual percent changes in Producer Price Indexes for selected energy items, 1994–99

Index	1994	1995	1996	1997	1998	1999
Finished energy goods	3.5	1.1	11.7	-6.4	-11.7	18.1
Gasoline	11.2	2.4	27.1	-15.0	-33.1	74.8
Home heating oil	6.9	11.9	25.0	-21.7	-36.1	89.4
Residential electric power	1.5	.9	.6	-2	-2.5	-.5
Residential natural gas	-2.6	-2.4	11.2	2.4	-2.4	.9
Intermediate energy goods	2.9	1.1	11.2	-7.0	-12.1	19.6
Natural gas to electric utilities	3.4	-1.4	6.1	9.3	-24.3	15.6
Diesel fuels	5.9	11.1	26.2	-22.5	-33.8	86.4
Jet fuels	4.3	6.1	26.1	-22.3	-35.8	90.9
Commercial electric power	2.3	.6	-.1	.0	-1.8	.6
Liquefied petroleum gas	13.0	3.9	71.4	-29.3	-32.6	87.0
Residual fuels	10.2	-4.7	32.8	-7.6	-39.8	91.1
Crude energy materials	-.1	3.7	51.2	-23.1	-23.8	36.9
Natural gas	-14.0	-.3	92.0	-27.9	-17.8	7.9
Crude petroleum	21.1	10.8	35.8	-28.3	-48.6	172.0
Coal	-2.1	-.8	-1.1	4.9	-1.2	-9.3

Finished goods other than foods and energy

The index for finished goods other than foods and energy increased 0.9 percent, after advancing 2.5 percent in 1998. Finished consumer goods less foods and energy increased 1.2 percent, following a 4.2-percent gain in 1998. (See table 5.) By contrast, the index for capital equipment rose 0.3 percent in 1999, after showing no change a year earlier. Chart 2 illustrates the key commodities contributing to the rise in finished goods less foods and energy in 1998 and 1999.

Most of the deceleration in finished consumer goods other than foods and energy was due to much lower price increases for cigarettes and prescription drugs. The cigarette index rose 9.6 percent in 1999, after jumping 49.4 percent in 1998, and prescription drug prices increased 0.8 percent, after gaining 20.9 percent a year ago.

Cigarette prices were idle for most of 1999 with the exception of a 9.5-percent increase in September 1999. Tobacco manufacturers raised the per-pack price of cigarettes by 18 cents to help pay a \$206 billion legal settlement. The settlement also crippled the tobacco industry's ability to market products by limiting advertisement locations. As a result of the price increase and better awareness of the ill effects of smoking, cigarette sales fell during most of 1999.

In spite of double-digit growth in sales for prescription drugs in 1999, price increases slowed dramatically, up only 0.8 percent, following a 20.9-percent hike in 1998. This deceleration was led by smaller price increases for minor tranquilizers, diuretics, cough and cold preparations, vitamins, and diabetes therapy drugs. The indexes for antispasmodic, cardiovascular therapy, and sedatives declined, after rising in 1998. However, price increases for systemic anti-infectives, hormones, and dermatologicals accelerated in 1999. The index

for anti-arthritics rose, after falling in the prior year.

Prices for other finished goods less foods and energy decelerated in 1999. Price increases slowed for light motor trucks, book publishing, alcoholic beverages, periodical circulation, and household furniture. The indexes for men's and boys' apparel and for sporting and athletic goods declined, after rising in 1998. Conversely, prices rose more in 1999 than in the prior year for passenger cars, mobile homes, and newspaper circulation.

Strong economic growth and a low unemployment rate helped raise sales of new cars by 6.8 percent in 1999. Passenger car prices rose 1.2 percent in 1999, versus 0.5 percent in 1998. The 1999 passenger car index had the largest increase since a 1.7-percent rise in 1995. Domestic car production increased to 5.6 million units in 1999, after 4 consecutive years of decline.⁶ Domestic car inventories were 1.3 million units at the end of 1999, the same as at the end of 1998.

Within capital equipment, prices increased 0.3 percent in 1999, after showing no change a year earlier. This slight acceleration was led by a 2.1-percent increase in civilian aircraft prices, following a 0.5-percent rise in 1998. The civilian aircraft index advanced due to cost increases for labor and materials. Price increases also accelerated for commercial furniture, transformers and power regulators, and for agricultural machinery and equipment. In contrast, price increases slowed for light motor trucks, heavy motor trucks, and industrial material handling equipment. The indexes for communication equipment and for x-ray and electromedical equipment fell more than in 1998.

The truck indexes increased at a slower rate in 1999 versus the prior year. Prices for light trucks rose 0.3 percent, after advancing 1.0 percent in the previous year. This slower rate of increase can be traced to the bigger incentive pro-

Table 4. Annual percent changes in Producer Price Indexes for selected food items, 1994–99

Index	1994	1995	1996	1997	1998	1999
Finished consumer foods	1.1	1.9	3.4	-0.8	0.1	0.8
Pork	-11.1	15.3	21.9	-13.6	-27.3	29.8
Dairy products	-2.0	5.4	2.4	4.7	10.7	-11.1
Fresh fruits and melons	-11.2	2.5	37.2	-8.2	-19.0	8.2
Fresh and dry vegetables	25.6	-36.0	-24.3	21.6	8.8	4.4
Roasted coffee	49.8	-8.2	-8.4	18.1	-9.5	-9.9
Beef and veal	-4.8	-1.4	7.4	-5.4	-2.7	10.8
Processed poultry	-3.7	8.4	2.6	-6.3	3.8	-3.7
Intermediate foods and feeds	-4.5	10.3	2.1	-1.7	-7.3	-4.2
Prepared animal feeds	-10.6	20.6	5.4	-3.1	-20.4	-2.7
Crude vegetable oils	4.1	-14.1	-9.3	13.9	-2.7	-37.5
Flour	-1.1	20.1	-9.0	-8.2	-5.6	-7.5
Confectionery materials	2.2	1.5	2.2	-15.8	-1.0	1.7
Refined sugar .....	.8	.8	4.2	-4.5	.6	-2.2
Crude foodstuffs and feedstuffs ..	-9.4	12.9	-1.0	-4.0	-11.0	-.1
Slaughter hogs	-21.3	40.6	23.2	-21.7	-76.8	266.9
Soybeans	-18.1	26.7	-3.7	1.8	-21.3	-17.5
Wheat	-5.6	29.9	-19.3	-11.3	-15.0	-13.9
Corn	-22.4	49.4	-21.0	2.2	-22.5	-12.4
Fluid milk	-5.2	8.4	1.1	2.8	25.6	-31.3
Slaughter cattle	-5.3	-5.2	-2.5	2.0	-12.0	19.4

grams aimed at boosting sales on some models. The index for heavy trucks rose 1.4 percent, following a 3.9-percent gain in 1998. Sales of medium-duty trucks increased more than 20.0 percent in 1999, and heavy-duty truck sales were 25.4 percent above 1998 levels.

The index for electronic computers fell 19.7 percent in 1999. Quality improvement in CPUs, hard drives, and other computer components contributed to the falling prices of electronic computers. Improving technology and production processes continued to result in a better product for a lower price. In addition, price competition continued in all segments of the computer hardware industry.

Intermediate industrial materials

The PPI for intermediate materials less foods and energy rose 1.9 percent, after falling 1.6 percent in 1998. This upturn was mainly due to a 4.0-percent price increase for nondurable manufacturing materials, following a 5.3-percent decline in 1998. Durable manufacturing materials also rose, after falling in the prior year. The index for materials and components for construction rose at a higher rate in 1999 than in 1998. (See table 6.)

Within nondurable manufacturing materials, the indexes for plastic resins and materials and organic chemicals advanced due to significantly higher prices for crude petroleum in 1999. Prices for plastic resins and materials advanced 15.9 percent, after falling 13.4 percent in 1998. Similarly, the indexes for primary basic organic chemicals, paperboard, paper, and woodpulp rose, after declining in the prior year. For woodpulp—a material input to paper and paperboard pro-

duction—rising prices were due to strong demand and lower inventories caused by the closure of several major woodpulp producers. Higher prices for paperboard in 1999 also resulted from supply interruptions caused by natural disasters such as Hurricane Floyd.

The inedible fats and oils index fell for the second consecutive year. This index is very sensitive to movements in grain prices and tends to be volatile; monthly price movements have ranged from a low of -20.4 percent (March 1999) to a high of +14.5 percent (October 1999). General weakness in global agricultural commodity prices is the key factor causing the year's downward movement.

The price movements of several commodities worked to dampen the overall acceleration within the nondurable manufacturing materials index in 1999. The phosphates index decreased 8.6 percent, after gaining 4.6 percent in 1998, and prices for alkalies and chlorine, gray fabrics, processed yarns and threads, and synthetic fibers fell more in 1999 than in the previous year.

The durable manufacturing materials index rose 2.4 percent during 1999, after posting a 5.5-percent decline in 1998. Prices for primary nonferrous metals (including copper and aluminum) rose 14.0 percent in 1999, following a 16.7-percent drop a year ago. Prices for these products rebounded due to strong demand from the automotive industry and the construction sector. The flat glass index fell less than in the previous year. Prices for steel mill products fell 2.4 percent, following a 6.5-percent decline in 1998. This slower rate of price decline may be attributed to falling import levels and some reduction in the large inventory of imported steel accumulated in 1998.

Table 5. Annual percent changes in Producer Price Indexes for selected finished goods other than foods and energy, 1994–99

Index	1994	1995	1996	1997	1998	1999
Finished goods other than foods and energy	1.6	2.6	0.6	0.0	2.5	0.9
Finished consumer goods less foods and energy	1.4	2.8	.8	.3	4.2	1.2
Passenger cars	2.1	1.7	–.8	–2.6	.5	1.2
Light trucks	3.3	1.5	.2	–3.6	1.0	.3
Prescription drugs	3.1	4.2	2.0	3.6	20.9	.8
Over-the-counter drugs	1.7	1.7	–1.7	.3	.0	.9
Cigarettes	–.1	3.7	3.3	10.0	49.4	9.6
Books	5.4	6.5	3.2	3.3	4.1	1.8
Periodicals	3.6	4.8	2.0	4.0	3.4	.7
Newspapers	3.3	8.8	4.2	.1	1.1	1.4
Household furniture	2.7	2.7	1.4	1.1	1.9	1.2
Capital equipment	2.0	2.2	.4	–.6	.0	.3
Heavy trucks	3.0	4.1	–4.5	.6	3.9	1.4
Truck trailers	7.7	2.2	–1.4	2.0	1.9	1.7
Civilian aircraft	2.5	6.1	3.2	.5	.5	2.1
Commercial furniture	2.5	3.4	2.0	1.2	.1	1.2
Transformers and power regulators	2.1	3.3	–1.0	.6	.1	3.0
Computers	–6.8	–12.7	–22.3	–21.6	–26.6	–19.7
Agricultural machinery	2.7	4.7	1.4	1.4	.7	1.3
Construction machinery	2.0	2.5	1.8	1.9	1.7	1.4

The index for materials and components for construction registered a 2.2-percent gain in 1999, after edging up only 0.1 percent during 1998. More than half of this acceleration was due to the index for softwood lumber's 10.1-percent rise in 1999, following a 10.1-percent decline last year. Softwood lumber prices rose steadily during the first half of 1999 (except for a slight drop in April) due to an active construction sector, then weakened after July. Prices for other commodities contributed to the acceleration in the construction materials index. Prices for plastic construction products and nonferrous wire and cable also rose, after falling in 1998, and the indexes for gypsum products and millwork rose more than in the previous year. By contrast, plywood prices fell 0.2 percent in 1999, following a 4.9-percent rise in 1998. The index for air conditioning and refrigeration equipment also fell, after increasing in the previous year. Cement prices rose less than in the prior calendar year.

Crude nonfood materials less energy

Prices for crude nonfood materials less energy rose 14.0 percent in 1999, after declining 16.0 percent in the prior calendar year. More than half of the acceleration in this index was due to price increases for iron and steel scrap and wastepaper. The index for iron and steel scrap rose 40.0 percent, following a 39.9-percent drop in the previous year. Domestic demand for iron and steel scrap in 1999 was strong, while Asian demand continued to rise. The wastepaper index jumped 110.5 percent, following a 28.9-percent fall in 1998. The rising prices

for wastepaper in 1999 may be linked to increased paper production and increased usage of recycled materials in paper products. Upturns in the indexes for aluminum base scrap, copper ores, softwood logs, and copper base scrap also contributed to the price acceleration in basic industrial materials in 1999. By contrast, the index for raw cotton decreased 20.8 percent in 1999, after registering an 8.0-percent decline in 1998. Price increases for gold ores and phosphates declined from their 1998 increases. The index for pulpwood logs fell more than in the prior year, while prices for construction sand, gravel, and crushed stone rose less.

Selected service industries

Among the available PPI service industries, the rate of price increase received by physician offices slowed from 2.6 percent in 1998 to 2.1 percent in 1999. Because health insurance and managed care companies are benchmarking more of their price changes to medicare, the annual price movements in medicare treatments and non-medicare treatments are beginning to converge. In an effort to compete for managed care dollars, there was a growing trend toward consolidating practices to increase bargaining power. These physician networks bring together partners with management skills, managed care expertise, information systems, and capital. (See table 7.)

In 1999, the index for general medical and surgical hospitals rose at a somewhat faster rate—1.8 percent versus 1.3 percent in 1998. Prices received by psychiatric hospitals rose

Table 6. Annual percent changes in Producer Price Indexes for selected intermediate and crude materials other than foods and energy, 1994–99

Index	1994	1995	1996	1997	1998	1999
Intermediate goods other than foods and energy	5.2	3.2	-0.9	0.3	-1.6	1.9
Nondurable manufacturing materials	10.4	5.9	-3.3	.3	-5.3	4.0
Inedible fats and oils	48.0	-3.9	2.1	3.8	-22.8	-16.0
Woodpulp	38.1	40.7	-33.0	4.1	-12.5	12.1
Basic organic chemicals	15.7	.4	3.6	-1.7	-6.4	6.9
Plastic resins and materials	18.8	-4.3	4.2	-2.8	-13.4	15.9
Durable manufacturing materials	9.8	1.1	-1.4	.0	-5.5	2.4
Copper	68.2	-1	-22.9	-22.8	-17.7	21.7
Aluminum	64.4	-7.3	-12.8	12.4	-17.5	16.0
Aluminum mill shapes	18.3	7.9	-7.9	6.8	-8.5	4.2
Flat glass	4.4	-5	-1.5	-1.3	-1.6	-3
Construction materials	3.9	1.9	1.8	1.2	.1	2.2
Gypsum products	30.8	1.0	6.6	7.1	7.3	23.1
Nonferrous wire and cable	13.8	1.6	-3.1	-2.2	-4.6	.3
Softwood lumber	-9.6	-10.3	19.6	-3.8	-10.1	10.1
Crude nonfood materials less energy	17.3	-4.2	-5.5	.0	-16.0	14.0
Wastepaper	179.6	-50.9	-1.3	11.6	-28.9	110.5
Nonferrous scrap	70.3	-10.3	-7.9	-6	-24.8	25.6
Raw cotton	34.9	4.2	-13.0	-11.2	-8.0	-20.8
Sand and gravel	2.3	3.6	1.9	1.8	3.5	2.9

0.9 percent in 1999, after increasing 0.5 percent in 1998, while the index for specialty hospitals (except psychiatric) advanced 2.7 percent in 1999, following a 2.3-percent rise in the prior year. One factor behind these accelerations was the influence that health maintenance organizations (HMOs) exercised over service providers. In the past, pressures by managed care companies in the healthcare industry helped keep inflation to a minimum. However, further cost containment approaches are difficult to find. As a result, providers have been forced to increase prices as costs rise, leading to higher reimbursement rates.

The robust U.S. economy grew more than 4.0 percent during 1999 and coupled with higher fuel costs, permitted the distribution service industries to set higher prices. Of the 20 distribution service industries for which PPI publishes price indexes, all but three industries showed increased prices in 1999. This compares to 1998, when all but four industries raised prices. Freight transportation arrangement, freight transportation on the Great Lakes-St. Lawrence Seaway, and crude petroleum pipelines were the three industries with declining prices in 1999. A common theme among industries with increasing prices in 1999 was higher fuel prices.

The trucking (except local) index rose 3.4 percent for the second consecutive year. Petroleum, mostly in the form of motor fuels, is consumed primarily for transportation purposes. Crude prices have changed significantly over the past year with prices rising from \$12 per barrel in mid-Feb-

ruary 1999—representing the lowest prices in nominal terms since 1986—to more than \$25 per barrel by the end of the year.⁷ These higher fuel costs—combined with strong economic conditions, higher equipment costs, and driver shortages—attributed to this industry’s higher prices.

Rail freight transportation prices steadily declined over the last several years, despite periodic marginal increases and the problems attributed to consolidations and mergers in the mid-1990s. The index for railroad line-haul operations rose 0.1 percent in 1999, after rising 0.5 percent in 1998. Similar to last year, this advance reflected increased charges for trailer-on-flatcar freight shipments and passenger transportation services. Prices for non-trailer-on-flatcar freight shipments fell 0.2 percent for the year. In 1999, intermodal (shippers and containers on flatcars) freight volume totaled more than 9 million trailers and containers—3.1 percent higher than in the prior year. Total freight volume for domestic railroads reached 1,404.6 billion ton-miles for 1999, representing a 1.8-percent increase from last year. Car-load freight volume actually decreased 0.8 percent in 1999.

The index for scheduled air transportation accelerated from 2.5 percent in 1998 to 6.7 percent in 1999. Prices for the nonscheduled air transportation industry also rose in 1999. Fuel costs account for more than 10.0 percent of total expenses in the airline industry. As a result, a 90.9-percent jump in jet fuel prices put upward pressure on air transportation prices in 1999. In addition, a strong U.S. economy helped increase demand for air travel. The airline industry enjoyed its eighth consecutive year of air traffic growth in 1999. Through-

Table 7. Percent change in Producer Price Indexes for the net output of selected service industries, 1993–99

SIC code	Industry	1993–94	1994–95	1995–96	1996–97	1997–98	1998–99
Distribution							
4011	Railroads, line-haul operating	0.4	-0.3	0.0	1.0	0.5	0.1
4212	Local trucking without storage	1.7	1.9	.0	.2	1.7	1.1
4213	Trucking, except local	3.1	.9	3.5	2.6	3.4	3.4
4214	Local trucking with storage .....	.7	10.9	.1	.6	.5	.5
4215	Courier services, except by air	3.8	3.3	3.0	3.8	4.2	3.4
4221	Farm product warehousing and storage .....	.6	2.2	-1.5	2.0	.6	5.3
4222	Refrigerated warehousing and storage .....	.6	1.7	.5	.1	.5	1.2
4225	General warehousing and storage	1.3	1.3	1.4	.7	2.9	2.6
4311	United States Postal Service .....	.0	10.4	.0	.0	.0	2.2
4412	Deep sea foreign transportation of freight	-3.9	.8	.7	-3.7	4.7	22.9
4424	Deep sea domestic transportation of freight	7.6	-6	1.9	-6	.2	1.2
4432	Freight transportation on the Great Lakes- St. Lawrence Seaway	-1.4	3.0	1.8	1.4	.8	-1
4449	Water transportation of freight, n.e.c.	15.4	9.7	-10.1	-4	-2.2	8.1
4491	Marine cargo handling	-5	-9	1.0	1.2	1.8	1.5
4492	Tugging and towing services	3.5	5.3	2.4	2.2	2.8	2.9
4513	Air courier services	1.6	1.9	4.6	-3.9	3.1	5.1
4581	Airports, flying fields, and airport services	1.1	2.2	3.8	3.0	3.0	3.9
4612	Crude petroleum pipelines	13.7	4.6	-12.4	-3.7	1.4	-1.7
4613	Refined petroleum pipelines	1.8	.1	.4	1.2	-1.1	.3
4731	Freight transportation arrangement	-	-7	2.7	-1.4	-6	-2.8
Communications							
4813	Telephone communications, except radiotelephone	-	-	-1	-4	-1.7	-3.0
4832	Radio broadcasting	6.8	5.8	10.8	3.1	.8	7.7
4841	Cable and other pay television services	-4	3.2	5.1	4.7	3.7	3.3
Real estate							
6512	Operators and lessors of nonresidential buildings	-	-	-6	2.2	1.2	5.7
6531	Real estate agents and managers	-	-	-5	1.4	2.6	1.5
Professional, scientific, and technical							
7311	Advertising agencies	-	-	1.7	2.5	1.3	2.8
8111	Legal services	-	-	-	4.1	2.5	2.9
8711	Engineering design, analysis, and consulting services	-	-	-	3.1	2.9	3.1
8712	Architectural design, analysis, and consulting services ..	-	-	-	3.0	5.3	4.9
8721	Accounting, auditing, and bookkeeping services	-	-	2.8	2.1	3.0	3.5
Health care							
8011	Offices of physicians	4.1	2.9	.7	1.2	2.6	2.1
8053	Skilled and intermediate care facilities	-	5.9	5.4	4.2	4.4	4.0
8062	General medical and surgical hospitals	3.4	3.7	1.5	.5	1.3	1.8
8063	Psychiatric hospitals	4.2	.1	5.0	-6.7	.5	.9
8069	Specialty hospitals, except psychiatric	5.2	1.8	2.9	.6	2.3	2.7
8071	Medical laboratories	-	5.2	.2	.9	.2	-8
8082	Home health care services	-	-	-	6.2	.5	4.0
Other							
4512	Air transportation, scheduled	-7	8.7	6.5	.9	2.5	6.7
4522	Air transportation, nonscheduled .....	.7	1.8	2.2	-1.6	2.6	2.0
4724	Travel agencies	-2.7	-6.9	2.6	1.5	-2.3	.3
6311	Life insurance carriers	-	-	-	-	-	-3
6331	Property and casualty insurance	-	-	-	-	-	1.1
7011	Hotels and motels	1.4	4.0	4.8	4.1	4.2	2.8
7349	Building cleaning and maintenance services, n.e.c.	-	1.6	2.0	1.4	1.1	2.6
7361	Employment agencies	-	.8	1.8	1.0	2.9	2.2
7363	Help supply services	-	3.8	1.4	1.8	2.2	1.8
7372	Prepackaged software	-	-	-	-	.9	-2.4
7513	Truck rental and leasing, without drivers	2.2	3.6	-8	.5	-9	.3
7514	Passenger car rental, without drivers	2.4	7.4	-5.0	13.7	-4.0	3.8

NOTE: Calculations are based on a 12-month change from December of indicated years. Dashes indicate that the index was not in estimation. n.e.c. = not elsewhere classified.

out the first half of 1999, revenue passenger miles increased at a 3.3-percent annual rate.

Other transportation service industries with increasing price indexes in 1999 include courier services (land and air), farm product warehousing and storage, marine cargo handling, tugging and towing services, and airports and airport services. From December 1998 to December 1999, the index for foreign freight transportation jumped 22.9 percent, following a 4.7-percent rise during the same period in 1998. Domestic freight transportation and water transportation also rose in 1999.

Among real estate industries, the index for operators and lessors of nonresidential buildings rose 5.7 percent in 1999, after registering a 1.2-percent increase in 1998. The strong economy helped keep vacancy rates low and created good opportunities for new construction. During the third quarter of 1999, the national rental vacancy rate stood at 8.2 percent.⁸ The U.S. Census Bureau's vacancy rate for all rental apartments (five or more units in structure) fell to 8.7 percent, the lowest rate since 1985.⁹ Similarly, in the professionally managed, generally "upscale" segment of the market, vacancies dropped to 3.9 percent. While 1999 was relatively lackluster for nonresidential construction as a whole, the most impressive growth came from continued gains in the office sector. As a partial result of the mini-boom in office buildings, the commercial sector posted a gain of nearly 8.0 percent—almost three times the overall nonresidential average.¹⁰

The index for real estate agents and managers increased 1.5 percent in 1999, after rising 2.6 percent in the previous year. Real estate brokerage increased 3.3 percent, and real estate appraising increased 8.1 percent in 1999. Continued plentiful employment, rising real income, 7.0-percent mortgage rate fluctuations, and higher limits on Federal Housing Administration loans, all led to increasing home sales, as well as higher fees for appraisals and commissions on sales.

The functions performed by advertising, legal, and accounting firms are required in the day-to-day operations of most companies, and professional, scientific, and technical firms in the United States maintain a worldwide client base. Domestic economic strength has further increased demand for activities such as corporate real estate, banking and commercial-type legal counsel, auditing, and tax preparation and consulting. The indexes for all of these service lines increased in 1999 for the third consecutive year. As a result of the strong economy, new construction helped raise prices for architectural design, analysis, and consulting services.

The index for radio broadcasting advanced 7.7 percent in 1999, following a 0.8-percent rise in the previous year. The dramatic rise in prices for radio broadcasting can be attributed to higher radio advertising rates in 1999. As a result of the deregulatory Telecommunications Act of 1996, the industry has experienced the benefits brought on by the large number of mergers and acquisitions. This industry consolidation al-

lowed large radio groups to control more of the market and have greater pricing power. It also allowed these groups to package their less-valuable inventory with their highly priced spots, resulting in greater prices across the board. Also, the radio industry reaped great benefits from heavy spending for advertising due to new e-commerce and other web-related companies in the last year. In addition, demand for advertisement creation and placement increased at a faster rate in 1999.

The index for cable and other pay television services rose 3.3 percent, after a 3.7-percent increase in 1998. Price increases continued to advance for subscriber services. Prior to this year, the Federal Communications Commission regulated rates for most levels of cable service. However, 1996 Telecommunications Act provisions brought an end to rate regulation. Since March of 1999, cable systems have been free from most rate regulations and now have the ability to increase rates at their own discretion. A limiting factor that cable systems considered when making pricing decisions is the direct-to-home satellite industry, which experienced considerable growth in its subscriber base. Cable advertising rates increased in 1999. This followed a trend of rising prices in the previous few years. The proliferation of cable channels also led to increased competition, forcing individual networks to keep their prices relatively stable. New advertising opportunities on the Internet also led to greater competition for advertising dollars.

The index for telephone communication (except radio telephone) fell 3.0 percent, following a 1.7-percent drop in 1998. Competition among long-distance carriers forced public-switched toll prices down 5.8 percent. The index for local service (except private lines) increased only 0.2 percent. Little has changed in price levels since passage of the 1996 Telecommunications Act. Portions of this Act were meant to increase competition and reduce prices for local telephone service; however, outcomes have not yet been realized to any substantial degree.

The index for wireless telecommunications (introduced in June 1999) advanced 3.0 percent during the 6 months ended in December. This advance was largely attributable to increases in cellular and other wireless voice grade service (up 6.0 percent) and paging services (up 9.4 percent) over the 6-month period.

The index for passenger car rental (without drivers) rose 3.8 percent in 1999, after falling 4.0 percent in 1998. Higher fuel prices and an expanding economy favoring expenditures for leisure and business travel contributed to this turnaround.

Prices received by providers of hotels and motels rose 2.8 percent, following a 4.2-percent gain in the prior year. Charges for guestroom rentals rose 3.8 percent, while prices for food and beverages rose 2.9 percent. However, other guest services such as casino games fell 5.4 percent. The strong economy has helped to keep occupancy rates

relatively high, allowing hotels and motels to increase room-rental charges.

Prepackaged software prices showed a 2.4-percent decrease in 1999, after a 0.9-percent rise in its first year of publication. Falling prices were partly due to declines in computer games and other prepackaged software.

In its first year of publication, the index for property and casualty insurance increased 1.1 percent. The 2.8-percent increase in homeowners insurance helped stimulate the increase in the property and casualty insurance index for 1999. One explanation for this increase is that many insurers addressed catastrophic losses through higher premiums, especially in

catastrophe-prone zones. According to the Property Claim Services unit of Insurance Services Office, Inc., the United States experienced 99 catastrophic events through September 1999 with insured losses of \$7.4 billion.

By contrast, the index for life insurance carriers declined 0.3 percent from December 1998 to December 1999. Declines for life insurance policies and fixed-rate deferred annuities attributed to the drop in life insurance carriers. In order to remain competitive, many insurers are also decreasing their premiums for the various life insurance policies they sell. Increased competition from consolidation in the industry also contributed to the decrease in life insurance carriers. □

Notes

¹ For details, see Todd Wilson, "Core consumer prices in 1999; low by historical standards," *Monthly Labor Review*, April 2000, pp. 3-5.

² See *International Petroleum Data* (Energy Information Administration), on the Internet at <http://www.eia.doe.gov/emeu/international/petroleu.html#ProductionA>.

³ See *Petroleum Supply Annual, 1999, Volume I* (Energy Information Administration), on the Internet at http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/petroleum_supply_annual/psa_volume1/current/pdf/volume1_all.pdf.

⁴ See *East Asia: The Energy Situation* (Energy Information Administration), on the Internet at <http://www.eia.doe.gov/emeu/cabs/eastasia.html> (visited June 15, 2000).

⁵ See *Increases in Crude Oil, Distillate Fuels and Gasoline Prices, Statement of John Cook, Petroleum Division Director, EIA, Before the*

Committee on Energy and Natural Resources, U.S. Senate, February 24, 2000, on the Internet at http://www.eia.doe.gov/pub/oil_gas/petroleum/presentations/2000/senate022400/senate022400.htm (visited June 15, 2000).

⁶ Ralph W. Morris, "Motor Vehicles, 1999," *Survey of Current Business*, February 2000.

⁷ See *Increases in Crude Oil, Distillate Fuels and Gasoline Prices*.

⁸ Daryl Delano, "Dollar value of new multifamily construction up," *Building Design & Construction*, February 2000.

⁹ See "Vacancy rates drop," *Journal of Property Management*, April 2000.

¹⁰ Daryl Delano, "Office buildings: Biggest growth area last year," *Building Design & Construction*, March 2000.