Recession, energy prices ease producer price inflation, 1991

The weak U.S. economy had a pervasive effect on price movements in 1991; energy indexes plummeted at all stages of processing, after increasing sharply in the previous 2 years

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Prices received by domestic producers turned down broadly in 1991, after registering substantial advances a year earlier. The Producer Price Index (PPI) for Finished Goods—a measure of changes in selling prices charged by domestic producers of items such as meats, gasoline, apparel, and trucks—edged down 0.1 percent from December 1990 to December 1991, following an increase of 5.7 percent in the preceding year. Similarly, the Intermediate Goods Price Index—which focuses on price movements for items such as animal feeds, diesel fuel, yarns, and motor vehicle parts—moved down 2.6 percent in 1991 after a 4.3-percent rise the year before. Even more dramatic was the turnabout in the index for Crude Materials for Further Processing—a category encompassing such basic items as grains, crude oil, raw cotton, and ores—which switched from a climb of 6.0 percent in 1990 to a slump of 11.6 percent a year later. (See table 1.)

A dramatic reversal in energy prices accounted for most of the differences between 1990 and 1991 movements for each of the three major stage-of-processing categories. However, many other kinds of goods also contributed a share.

Among finished goods, the index for energy swung from an upward surge of 30.7 percent in 1990 to a drop of 9.6 percent in 1991. Consumer food prices also turned down, declining 1.6 percent, after rising 2.6 percent in 1990. The index for finished goods other than foods and energy, sometimes referred to as the "core" or "underlying" rate of inflation, slowed from a climb of 3.5 percent in 1990 to 3.1 percent; within this category, the increase in capital equipment prices decelerated more than did the advance for consumer goods.

Among the categories for intermediate and crude goods, energy prices turned down sharply. Prices for intermediate foods and feeds inched down only slightly, following a larger drop in 1990, while the crude foodstuffs index decreased more in 1991 than in the preceding year. Prices for intermediate goods other than foods and energy fell less than 1 percent, after a rise of nearly 2 percent in 1990. Basic industrial material prices declined considerably, following a small rise in 1990.

Both the dramatic late 1990 rise and the 1991 fall in energy prices reflected the impact of events in the Middle East. The Iraqi invasion of Kuwait in August 1990 prompted widespread fears that oil supplies would be seriously disrupted by an outbreak of military hostilities in the Persian Gulf region. Crude petroleum prices consequently were bid up substantially. The flow of oil continued much as before, however, largely because Saudi Arabia boosted its own output to make up for the cutoff of supplies from Iraq and Kuwait. The rapid success of the allied air campaign in January 1991 quickly erased fears of major oil supply interruptions, resulting in a sharp drop in prices for petroleum and petroleum products.

The continued weakness of the economy, both in this country and in many other nations, had a less spectacular but more pervasive effect on price movements in 1991. The coincidence of the beginning of the economic slowdown in July

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1990 and the Iraqi invasion of Kuwait immediately thereafter encouraged the notion that the resolution of the Kuwaiti crisis would end the slowdown as well. With a resurgence of consumer confidence in the wake of the Desert Storm operation, there was a widespread perception by midyear that the slowdown was over.

But the sluggishness which dominated the remainder of 1991 failed to match the usual profile of recovery from an economic setback, as many of the more serious problems underlying the recession reemerged with relatively little improvement. Consumer spending failed to rebound vigorously, partly because of the continuing burden of consumer debt incurred in recent years and partly because of caution due to fears of potential layoffs. Rapid drops in interest rates, while assisting homeowners who refinanced their mortgages, also reduced the spending power of consumers who held significant amounts in certificates of deposit and other savings instruments and accounts.

Financial institutions were often reluctant to grant business loans because of regulatory pressure to tighten their credit standards after their financing of many real estate development projects soured. Businesses frequently postponed capital expansion projects, preferring to improve their productivity by reducing payrolls rather than by investing in new machinery. Consequently, capital utilization rates for manufacturing stayed below 80 percent all year, leaving little need for new capacity.

Residential construction activity picked up somewhat, as lower mortgage interest rates and declining home prices in some parts of the country made housing more affordable; however, office building construction remained depressed in the wake of severe overbuilding in the 1980's. In addition, defense expenditures were cut back as Desert Storm and the collapse of the former U.S.S.R. reduced international tensions, while State and local government spending was restrained by lower tax revenues and declining Federal payments.

The American dollar weakened considerably against several major foreign currencies, as lower U.S. interest rates induced more foreign investment to flow back abroad. While the weaker dollar stimulated American exports, this was offset somewhat by falling demand from other countries, suffering their own economic downturns. Imports continued to present formidable competition for many domestic goods, further limiting the ability of American firms to raise prices in hopes of restoring profit margins.

Although most closely watched indicators of future economic conditions signalled a strong recovery in 1991 which failed to materialize, one leading indicator which remained weak all year was the PPI for basic industrial materials. This index declined in most months of 1991, reflecting the sluggishness of the manufacturing sector.

Energy

Energy indexes plummeted at all stages of processing in 1991, after increasing sharply in each of the preceding 2 years. Dramatic advances had been recorded for petroleum and petroleum products in 1990 in the aftermath of the Iraqi invasion of Kuwait; the ending of the conflict with only minimal disruption in supplies caused an emphatic reversal in energy prices in 1991.

In 1991, the crude energy materials index fell 16.7 percent, after advancing 19.1 percent in

Table 1. **Annual percent changes for major categories of the Producer Price Index, by stage of processing, 1987–91**

Index	1987	1988	1989	1990	1991
Finished goods	2.2	4.0	4.9	5.7	−0.1
Foods	−.2	5.7	5.2	2.6	−1.6
Energy	11.2	−3.6	9.5	30.7	−9.6
Other	2.1	4.3	4.2	3.5	3.1
Intermediate materials, supplies, and components	5.4	5.6	2.3	4.3	−2.6
Foods and feeds	5.5	10.8	0	−1.3	−.1
Energy	9.0	−4.4	10.6	21.8	−11.6
Other	5.2	7.2	.9	1.9	−.8
Crude materials for further processing	8.9	3.1	7.1	6.0	−11.6
Foodstuffs and feedstuffs	1.8	14.2	2.8	−4.2	−5.6
Energy	10.7	−9.5	17.9	19.1	−16.7
Other	22.6	7.5	−3.6	.6	−8.0

NOTE: Data are calculated on a December-to-December basis.

Table 2. **Annual percent changes for selected energy items in the Producer Price Index, 1987–91**

Index	1987	1988	1989	1990	1991
Finished energy goods	11.2	-3.6	9.5	30.7	-9.6
Gasoline	21.4	-3.3	9.2	45.2	-25.1
Home heating oil	25.3	-12.5	33.9	28.1	-30.5
Residential power	—	—	—	—	5.1
Residential gas	—	—	—	—	.7
Intermediate energy goods	9.0	-4.4	10.6	21.8	-11.6
Liquefied petroleum gas	27.4	-22.2	25.1	76.8	-23.7
Residual fuels	26.6	-19.2	29.8	42.8	-39.0
Diesel fuel	29.7	-13.3	35.9	32.8	-30.4
Industrial power	-2.4	.8	3.3	4.1	5.4
Commercial power	-.2	.6	3.0	3.3	3.2
Crude energy materials	10.7	-9.5	17.9	19.1	-16.7
Crude petroleum	28.8	-18.1	35.0	32.6	-30.4
Natural gas (to pipelines)	-3.2	.4	3.5	6.5	-5.4
Coal	-4.1	-1.4	2.7	.7	-1.9

NOTE: Data are calculated on a December-to-December basis. Dash indicates data not available.

1990 and 17.9 percent in 1989 (table 2). Prices for intermediate energy goods (such as liquefied petroleum gas) fell 11.6 percent in 1991, following a 21.8-percent advance a year earlier, and a 10.6-percent climb the year before. The index for finished energy goods (such as home heating oil) declined 9.6 percent, after jumping 30.7 percent in 1990 and 9.5 percent in 1989.

Crude energy materials. The index for crude petroleum plunged 30.4 percent in 1991 after advancing about 33 percent in each of the preceding 2 years. Nevertheless, the December 1991 index was still 19.2 percent higher than it had been in July 1990 immediately before the Persian Gulf crisis began. During January 1991, posted prices of crude oil were in constant turmoil because of political instability in the Gulf. By happenstance, the pricing date for the PPI fell on January 15, which was also the deadline set by President Bush for Iraq to withdraw from Kuwait. (In general, prices are reported for the Tuesday of the week containing the 13th day of the month.) The war began the next day. Because the PPI pricing date virtually coincided with the peak of prices in January, the crude oil index for January was up 10.8 percent from its December level.

In February, however, prices for crude oil declined 27.0 percent, as the early success of air operations among allied troops calmed fears of major supply interruptions. Petroleum prices fell another 15.7 percent in March as Desert Storm concluded with a brief ground campaign. Oil prices then increased for several months before retreating again at the end of the year.

Domestic production of crude oil edged up slightly in 1991 over 1990 levels. Imports of crude oil started rising at the beginning of 1991, after falling for the last 3 months of 1990. These imports were 23.9 percent higher at the end of 1991 than in December 1990. By the end of 1991, production of crude oil by the Organization of Petroleum Exporting Countries (OPEC) was at its highest level since the Persian Gulf crisis began, in part because of Saudi Arabia's determination to keep world prices low to assist countries suffering economic contractions.

The index for natural gas to pipelines fell 1.5 percent after 3 years of modest increases; because this index is lagged 1 month, the comparison is from the January 1991 index (for December 1990 prices) to the January 1992 index (for December 1991 prices). Prices were down sharply through the first 9 months of the year, reflecting the combined impact of a warm winter in much of the country, lessened industrial demand due to the recession, and competition from falling oil prices. However, the index rebounded somewhat at the end of the year. Coal prices declined 1.9 percent in 1991 after rising 0.7 percent a year earlier. Overcapacity in production, combined with large stockpiles of coal left over from 1990, contributed to the downward movement.

Intermediate energy goods. Declines in the prices for liquefied petroleum gas, jet fuel, residual fuel, and diesel fuel ranged between 24 and 39 percent. The newly developed Producer Price Indexes for both commercial and industrial natural gas declined slightly in 1991. Natural gas prices charged to many large industrial users are tied, in part, to the price of fuel oil. Consequently, declines in the price of fuel oil just after the first of 1991 contributed to lower natural gas prices. However, lowered demand for natural gas, due in

part to a mild winter, and the resultant high stocks of natural gas led to the downward movement in the index for natural gas to electric utilities in the early part of 1991; this index then surged nearly 15 percent in November, resulting in a net increase of 2.4 percent for the year.

The industrial electric power index registered a 5.4-percent increase in 1991, compared with a rise of 4.1 percent in the previous year. Commercial power rates moved up 3.2 percent, nearly the same as a year earlier. Plummeting oil prices exerted virtually no downward pressure on rates for electricity, because only 5 percent of electrical output is generated from oil.

Finished energy goods. Lower prices for crude petroleum were reflected in substantial decreases in the prices for both gasoline and home heating oil. Gasoline prices fell 25.1 percent in 1991, after rising 45.2 percent in 1990 and 9.2 percent in 1989. Although gasoline stocks were relatively low during much of 1991, the sluggish economy restrained both business and consumer demand for gasoline. Prices for home heating oil dropped 30.5 percent, following a 28.1-percent advance a year earlier and a 33.9-percent climb in 1989. A mild winter led to excessive fuel inventories and consequent heavy price discounting. In their first year of calculation, the new index for residential electric power rose 5.1 percent and the index for residential natural gas moved up 0.7 percent.

Foods

Prices received by domestic producers for finished consumer foods declined 1.6 percent from December 1990 to December 1991 (table 3). This decrease followed rises of 2.6 percent in 1990 and 5.2 percent in 1989. The intermediate foods and feeds index edged down 0.1 percent after falling 1.3 percent in the preceding year. At the farm level, the Producer Price Index for crude foodstuffs and feedstuffs dropped 5.6 percent after a 4.2-percent decline in 1990.

Livestock, meats, and poultry. Much of the deceleration in prices for crude and finished foods was attributable to lower demand for and higher production of livestock and meats. The index for livestock fell 14.5 percent in 1991, the largest annual decline since 1970. Prices for cattle decreased more than 10 percent, following a moderate increase a year earlier. Hog prices dropped nearly 20 percent, much faster than in the preceding year.

The production for both beef and pork in 1991 rose from the previous year, 1 percent for beef and 4 percent for pork. The combination of low demand for red meat and an increase in production drove the beef and veal index down 12.3 percent over the year, after an increase of nearly 10 percent in the prior 12 months. Favorable returns to hog farmers for most of the year led to an increase in pork production. Following double-digit advances in both 1989 and 1990, prices for pork dropped nearly 20 percent in 1991. Overall, the index for meats fell 12.3 percent in 1991, the first calendar year decline since 1987.

In response to good consumer demand and favorable profit margins, chicken production once again expanded in 1991. This led to small over-the-year declines in the prices for both live and processed chickens. Despite higher production,

Table 3. **Annual percent changes for selected food items in the Producer Price Index, 1987–91**

Index	1987	1988	1989	1990	1991
Finished consumer foods	−0.2	5.7	5.2	2.6	−1.6
Beef and veal	3.7	12.8	5.6	9.6	−12.3
Pork	−16.4	.1	20.0	12.5	−18.2
Fresh fruits and vegetables	6.1	.8	−7.0	0	−17.3
Dairy products	−.4	4.4	14.3	−7.1	6.5
Bakery products	4.1	7.6	6.0	3.2	4.3
Intermediate foods and feeds	5.5	10.8	0	−1.3	−.1
Flour	3.7	21.3	.4	−18.5	18.4
Prepared animal feeds	13.5	12.7	−8.8	−4.0	2.7
Crude foodstuffs and feedstuffs	1.8	14.2	2.8	−4.2	−5.6
Cattle	11.3	5.3	7.8	6.5	−13.6
Hogs	−22.3	−4.9	17.6	−8.2	−19.5
Oilseeds	16.4	29.1	−22.4	8.0	−10.6
Fluid milk	−4.8	6.0	19.8	−26.2	17.1
Wheat	10.8	35.7	.8	−34.4	37.1
Corn	10.3	40.6	−11.5	−.8	2.2

NOTE: Data are calculated on a December-to-December basis.

prices for live turkeys turned up and price decreases slowed for processed turkeys in 1991; effective marketing for a variety of turkey products led to stronger demand.

Prices for eggs declined nearly 5 percent in 1991, less than half as much as in the preceding year. Although egg production was slightly higher in 1991, the rate of expansion slowed, as producers became more cautious because of lower (but still positive) net returns.

Fruits and vegetables. From December 1990 to December 1991 the index for fresh fruits decreased 18.3 percent after rising 11.0 percent in the preceding year. Substantial declines for grapes, peaches, and pears at the end of the year accounted for much of the downturn. The navel orange index, however, climbed 17.7 percent, reflecting the California freeze in December 1990.

The fall in the price index for fresh and dried vegetables accelerated to 16.3 percent after falling 9.0 percent in 1990 and 5.7 percent in 1989. This was the largest decline in 7 years. A 28.9-percent drop in white potatoes accounted for much of the decrease. An excellent crop of Irish potatoes in all four seasons kept potato prices below the previous year's levels. In addition, the index for tomatoes ended up 40 percent lower than in December 1990. The combination of an excellent Florida crop and stiff competition from imports from Mexico drove down tomato prices.

Other vegetables, however, registered price increases during the year. Heavy rains in March and an abnormally cold spring delayed harvests and required replanting of some California vegetables. In the fall, the whitefly infested the desert areas of California, damaging lettuce, cauliflower, and broccoli crops. Cooler temperatures in December mitigated the infestation, but not before it had damaged more than $200 million worth of produce. Prices for lettuce surged more than 120 percent in November, but then fell more than 50 percent in December; over the year, this index netted a decline of 10.3 percent.

Hay and oilseeds. The Producer Price Index for hay slumped 32.2 percent over the year, nearly twice as much as in 1990. Excellent range and pasture conditions, as well as a reduction in the use of hay for feeding, pushed hay prices down substantially.

The oilseeds index fell 10.6 percent over the year. Prices for peanuts retreated 31.6 percent, as an excellent 1991 crop followed the 1990 crop failure. The cottonseeds index also ended the year one-third below the level of December 1990, as record world production in 1991 depressed domestic markets. Soybean prices turned down 7.4 percent after a moderate increase in the year before, as 1991 soybean production levels were even higher than those of the previous year. The decrease in oilseed prices was reflected in the indexes for crude vegetable oils and for shortening and cooking oils, both of which turned down after rising in 1990.

Sugar and soft drinks. Prices for both raw cane sugar and refined sugar turned down in 1991 after a slight increase in the previous year. A good Louisiana cane crop after a poor one in the previous year drove prices downwards. In addition, strong world production depressed sugar prices, as low growth in usage rates in developing countries resulted in static trade.

Soft drink prices edged up 0.1 percent, much less than the advance in the previous 12 months. The index for chocolate products, however, rose substantially more than in the year before.

Milk and dairy products. The upturn in prices for milk and dairy products offset some of the deceleration in the crude and the finished foods indexes. The fluid milk index surged 17.1 percent after dropping more than 25 percent in 1990. Milk production fell below 1990 levels, as low returns for milk and higher prices for slaughtered cows induced many producers to exit the industry.

Following decreases in 1990, prices turned up for condensed and evaporated milk, cheese, and fluid milk products. Overall, the index for dairy products rose 6.5 percent in 1991 after a 7.1-percent decline in the preceding 12 months. Although butter prices fell 1.6 percent over the year, this was substantially less than in the year before.

Grains, bakery products, and animal feeds. From December 1990 to December 1991, the grains index increased 12.3 percent, following a substantial decrease in the previous 12 months. The upturn was primarily caused by a 37.1-percent rise in wheat prices after a 34.4-percent drop in 1990; this was the largest annual increase since 1973. Domestic wheat production increased about 40 percent from 1989 to 1990, driving prices sharply lower. In 1991, far fewer acres were devoted to wheat, and production retreated back to around 1989 levels. High levels of exports, attributable to lower world wheat production in 1991, also helped to raise wheat prices.

Flour prices rose 18.4 percent in 1991 after falling by about the same amount in the previous year. (Prices for flour are highly dependent on those of wheat, but fluctuations are typically reduced about 50 percent.) The bakery products index rose slightly more than in the preceding 12 months. Despite higher flour prices, production

levels were up, as consumers were urged to increase their intake of carbohydrates for health reasons.

Corn prices remained relatively stable over the year, recording a net rise of 2.2 percent after a small decline a year earlier. The 1991 corn crop turned out even larger than the bumper 1990 crop, moderating prices despite increased feed use.

Producer prices for prepared animal feeds rose 2.7 percent after falling 4.0 percent in the previous year. An increased demand for feeds was prompted by a record high production of cattle and poultry. Much of the acceleration in the intermediate foods and feeds index was attributable to this upturn in prices for prepared animal feeds.

Other finished goods

Prices received by domestic producers for finished goods other than foods and energy moved up 3.1 percent in 1991, following an advance of 3.5 percent a year earlier and a 4.2-percent rise in 1989 (table 4). While it may be tempting to assume that a recession year like 1991 would witness a slower pace than may be expected in the years ahead, a look at this index since the previous recession suggests otherwise. The following tabulation shows the "core" rate of inflation in the PPI (finished goods other than foods and energy) over the 1981–91 period:

Year	*PPI core rate*	*Year*	*PPI core rate*
1981	7.7	1987	2.1
1982	4.9	1988	4.3
1983	1.9	1989	4.2
1984	2.0	1990	3.5
1985	2.7	1991	3.1
1986	2.7		

The core rate of inflation in 1982, the last recession-dominated year before 1991, was 4.9 percent. This rate slowed dramatically to the 2-percent level in each of the first 2 years of the ensuing recovery and remained below 3 percent in each of the 3 years thereafter. The fact that the core rate receded and remained low long after the last expansion began indicates that further deceleration from the 1991 rate may be able to coexist with a broad economic expansion. Evidence for this hypothesis can be found in the fact that core inflation slowed from a 3.6-percent annual rate in the first half of 1991 to a rate of 2.6 percent in the second half.

Capital equipment prices slowed from a 3.4-percent increase in 1990 to a rise of 2.5 percent in 1991. Increases were at least 2 percentage points lower than those of the previous year for several categories—metal forming machine tools, transformers, oilfield and gasfield machinery, commercial furniture, railroad equipment, and photographic equipment. In addition, the new index for electronic computers dropped almost 20 percent in 1991. In contrast, indexes for light trucks, civilian aircraft, and ships rose more in 1991 than in either 1990 or 1989.

The increase in the index for consumer durable goods decelerated to 2.2 percent after advancing 2.7 percent in 1990. This was principally attributable to a moderation in the passenger car index. Prices for mobile homes, furniture, floor coverings, and gold jewelry also moved up less than in the preceding year. In contrast, glassware and flatware prices turned up after each had fallen about 8 percent in 1990.

The index for consumer nondurables other than foods and energy rose 4.2 percent, almost as much as the year before. Price indexes for newspaper and periodical circulation, books, children's apparel, and prescription drugs moved up less than in 1990, and the index for sanitary paper products turned down after a moderate increase in 1990. In contrast, prices for alcoholic beverages, over-the-counter drugs, and women's apparel climbed much more in 1991 than in 1990. In addition, the index for tobacco products surged at a double-digit pace for the fifth consecutive year.

Transportation equipment. The Producer Price Index for passenger cars rose 3.5 percent in 1991, well below 1990's increase of 4.3 percent. However, truck prices failed to follow suit; prices for light trucks accelerated substantially, from 0.4 percent in 1990 to 5.7 percent a year later, and prices for heavy trucks moved up 3.7 percent in 1991, about the same as in the preceding year. Indexes for civilian aircraft and ships each rose more than 6 percent in 1991, somewhat more than their 1990 advances. The railroad equipment index, which had risen around 5 percent annually for 3 consecutive years, edged up only 0.7 percent in 1991.

For domestic producers of motor vehicles, 1991 was another poor sales year, relieved only by a brief surge of demand in the afterglow of Desert Storm. Import sales were also generally weak, although they continued to command a sizable market share. Sales of passenger cars and light trucks were down about 12 percent from 1990 levels, which themselves were not strong. Car production was the lowest for any calendar year since 1982, the last recession. Plant closings and layoffs became more common as companies downsized in an effort to eliminate excessive domestic production capacity.

Table 4. **Annual percent changes for selected finished goods other than foods and energy in the Producer Price Index, 1987–91**

Index	1987	1988	1989	1990	1991
Finished goods other than foods and energy	2.1	4.3	4.2	3.5	3.1
Consumer goods	2.7	4.8	4.4	3.7	3.4
Passenger cars	-3.5	3.8	2.1	4.3	3.5
Tobacco products	12.5	13.1	13.5	12.6	13.1
Alcoholic beverages	.1	1.5	2.3	2.0	5.5
Prescription drugs	9.3	8.0	9.5	8.1	7.1
Over-the-counter drugs	4.8	6.5	4.1	4.2	5.9
Publications	3.8	5.9	4.8	4.9	3.2
Capital equipment	1.3	3.6	3.8	3.4	2.5
Light trucks	.1	6.4	2.7	.4	5.7
Heavy trucks	-2.9	5.7	1.5	3.6	3.7
Civilian aircraft	.9	3.2	5.4	5.0	6.1
Metal forming machine tools	2.1	6.1	4.9	4.7	2.9
Construction machinery	2.0	3.2	4.8	3.8	2.8
Computers	—	—	—	—	-19.5

NOTE: Data are calculated on a December-to-December basis. Dash indicates data not available.

Machinery. Prices for a broad array of machinery moved up in 1991, but substantially slower than they had a year before. Machine tools showed a particularly large deceleration; the index for metal forming machine tools, which had soared nearly 10 percent in 1990, slowed to a rise of 2.4 percent, while prices for metal cutting machine tools moved up 2.9 percent in 1991 after climbing 4.7 percent a year earlier. The 1991 increases for both machine tool categories were the smallest since 1987. The index for oilfield and gasfield machinery increased 3.1 percent over the year, about half the size of its 1990 advance, and mining machinery prices also rose more slowly. However, indexes for office machinery and for x-ray and electromedical equipment both turned up modestly after small declines in 1990.

Weak demand for machinery from firms which were reluctant to expand until a general recovery was clearly underway accounted for much of the deceleration in price advances for machinery. The absence of significant material or labor cost pressure also helped to hold down inflation in this sector. The price slowdown was especially pronounced among machine tools, partly because retrenchment by automotive firms forced a postponement of their retooling plans. Defense cutbacks also hurt machine toolmakers. Furthermore, hopes that American-made machine tools had regained a technological edge over foreign competition in markets abroad proved premature. Exports of American machine tools were unusually strong for several years before stabilizing in 1991. The reversal in fortune among energy producers in 1991 effectively braked the 1990 runup in prices of oilfield and mining machinery, while the continued sluggishness in most construction markets restrained prices for construction machinery.

Computers. The index for electronic computers, which was introduced into the PPI system in January 1991, ended its first year with a decrease of 19.5 percent. This reflected a long-established trend towards improved technical capabilities combined with lower costs. Like many other industries, the computer industry reacted to lower demand from business, consumers, and the Defense Department through intense price competition. Plans were implemented to reduce capacity so that firms could become profitable even in the face of falling demand and prices. On a favorable note, exports rebounded after the conclusion of Desert Storm, as producers supplied computer parts to the growing number of their offshore plants. Imports, especially of portable computers, also turned up in 1991.

Tobacco products, alcohol, and drugs. The Producer Price Index for tobacco products climbed 13.1 percent in 1991; this index has registered increases of about 13 percent in each of the last 5 years. At the end of 1991, the index for tobacco products was more than 267, while the index for finished goods overall was still less than 125 (both series are on the 1982=100 base.) In other words, while prices for finished goods in general were less than 25 percent above their 1982 levels, prices for tobacco products were more than double what they were in 1982.

Continuing a trend that developed in the mid-1980's, heavier export demand for cigarettes in 1991 again largely compensated for the drop in

domestic consumption. American tobacco products continued to enjoy a reputation for premium quality in many countries; the health concerns that have limited cigarette usage here are not so prominent abroad. Producers have thus been able to boost prices regularly without encountering significant buyer resistance. Exports now account for about 27 percent of domestic output, compared with less than 10 percent in 1985.

Prices received by domestic producers of alcoholic beverages climbed 5.5 percent in 1991, far more than in other recent years. This advance occurred entirely in January, when distillers and brewers raised their own prices at the same time that higher Federal excise taxes took effect. (Excise taxes do not represent revenues retained by producers and are therefore excluded from PPI calculations.) This index drifted slightly lower for the remainder of 1991.

Prices for both prescription and over-the-counter drugs continued to climb at a faster pace in 1991 than prices for most other consumer goods. However, whereas in most recent years, price increases for prescription drugs have been about double those for over-the-counter drugs, the spread was considerably smaller in 1991; prescription drug prices rose 7.1 percent over the year (less than 1990's increase of 8.1 percent), while over-the-counter drugs moved up 5.9 percent (compared with 4.2 percent a year earlier). Price increases have generally been more moderate for over-the-counter drugs because of competition from inexpensive generic counterparts to national name brands. Prescription drugs, by contrast, are shielded from competition by patents; pharmaceutical firms can therefore keep prices high enough to recover the research, development, and testing costs of both successful and unsuccessful ventures. At the end of 1991, the indexes for prescription drugs (221.2) and over-the-counter drugs (169.5) (1982=100) were both far above the level for finished goods overall.

Publications. Indexes for books and for both newspaper and periodical circulation increased considerably less in 1991 than in most other recent years. Movements for 1991 ranged between 2.6 and 4.3 percent for these categories, compared with 4.0- to 9.0-percent advances a year earlier. The recession had a strong impact on publication prices, partly because spending on these items can be cut back when consumers are uncertain about their economic prospects. At the same time, advertising revenues for newspapers and magazines were also adversely affected by the recession; one result was a drop in the number of newspapers and periodicals being published. However, export markets for American publications expanded, partly because of improved international copyright protections. Book price increases were checked by lower State and local government expenditures for textbooks.

Intermediate goods

After moving up 1.9 percent in 1990, the Producer Price Index for intermediate materials less foods and energy turned down 0.8 percent in 1991—the first decline in 6 years (table 5). Most categories of manufacturing materials decreased during the year, and price advances for construction materials were smaller than those in 1990.

Manufacturing materials. The index for nondurable manufacturing materials fell 4.8 percent, following a 3.7-percent rise in 1990. Prices for materials derived from petroleum turned down in line with crude oil prices, as oil market pressures were relieved following the end of the Persian Gulf war. Prices for petrochemicals, plastic resins and materials, paint materials, and synthetic rubber fell sharply following substantial increases in the previous year. Markets for ethylene and plastic resins and materials were additionally troubled after producers expanded production capacity. Demand for ethylene became sluggish both domestically and abroad. Synthetic rubber demand surged during the Gulf war and plummeted after the conflict ended. Prices for plastics were restrained by new environmental regulations covering plastic products; additionally, demand remained sluggish because of the continuing recession.

Prices also turned down for intermediate basic organic chemicals, other basic organics, other basic inorganics, fertilizer materials, and inedible fats and oils. However, price declines for alkalies and chlorine were milder than in the prior year, and price advances accelerated for medicinal and botanical chemicals.

Synthetic fiber prices dropped more in 1991 than in 1990, and processed yarns and threads turned down after rising in the previous year. Gray fabric prices moved up a little faster than in 1990, however, and finished fabric prices advanced about as much as in the preceding year. Leather prices turned down sharply as recessionary pressures and a general decline in world demand continued while supplies remained more than ample.

Producers of many pulp and paper products cut their selling prices considerably to retain market share in the face of weak domestic markets and production overcapacity. Foreign demand was relatively strong, however. Prices for

paper turned down as domestic demand was off from advertisers, newspapers, and magazines. Prices for coated paper dropped as producers faced competition from Canadian and European imports. Following a drop of 11.5 percent in 1990, woodpulp prices plummeted nearly 24 percent during 1991 as domestic demand fell sharply. Paperboard prices inched up in 1991, however, as a rebound in the second half of the year offset a decline in the first half.

The index for durable manufacturing materials fell 3.7 percent after edging down 0.1 percent during 1990. The index for steel mill products dropped 3.6 percent, prompted in large part by low demand from the automotive and construction industries; higher inventories which had been accumulated in response to the anticipation of labor problems in midwinter also limited demand. Prices fell faster than in the previous year for hot and cold rolled steel sheets and for semifinished steel mill products. Hot rolled steel bars continued their sizable declines. Prices for cold finished bars fell after edging up in the preceding year.

World prices for nonferrous metals plummeted in 1991. The former Soviet Union boosted exports of aluminum, copper, and zinc, despite falling prices, to obtain hard currency to help deal with dire domestic economic problems. (Nonferrous metal exports are second only to oil as a source of foreign currency for the former Soviet Union.) Prices for domestic output were also down because of weak construction activity and slowdowns in the automotive and aerospace industries. Primary aluminum prices dropped 25 percent after showing little net change in the previous year. Japanese demand for U.S. aluminum ingot was sharply higher, however, partly because the weaker American dollar lowered prices to foreign importers. Prices for aluminum mill shapes, primary copper, copper mill shapes, and primary lead decreased faster than in 1990. Copper price declines, however, were limited by continued high demand from the Far East and fewer production problems in Zaire, Peru, Chile, and Canada. The United States became a net exporter of copper for the first time in half a century. Price declines slowed for primary zinc, gold, silver, and platinum.

Table 5. **Annual percent changes for selected intermediate and crude materials other than foods and energy in the Producer Price Index, 1987–91**

Index	1987	1988	1989	1990	1991
Intermediate goods other than foods and energy	5.2	7.2	0.9	1.9	-0.8
Nondurable manufacturing materials	7.8	11.4	-.8	3.7	-4.8
Basic inorganic chemicals	1.8	8.8	5.6	1.7	-1.5
Petrochemicals	42.4	36.2	-18.5	23.0	-24.4
Plastic resins and materials	14.9	19.0	-12.0	7.1	-12.2
Sythetic fibers	2.2	6.7	7.0	-.8	-2.0
Finished fabrics	4.8	4.3	3.8	1.3	1.2
Leather	19.7	7.8	5.5	.4	-6.8
Paper	4.8	11.5	.1	1.6	-3.9
Durable manufacturing materials	11.6	10.1	-3.2	-.1	-3.7
Steel mill products	5.9	6.3	1.2	-1.5	-3.6
Aluminum mill shapes	14.2	20.6	-6.1	-.5	-5.7
Copper and brass mill shapes	52.2	22.6	-13.9	-.7	-4.6
Construction materials	4.2	5.6	2.5	1.5	.8
Fabricated structural metal products	4.6	8.1	3.2	1.1	-.5
Nonferrous wire and cable	23.9	18.3	-3.9	-1.3	-2.9
Heating equipment	-.3	6.0	5.5	4.5	.9
Softwood lumber	7.7	-.1	4.6	-5.1	12.0
Plywood	3.6	.5	11.7	-8.7	9.3
Millwork	4.6	2.9	4.6	1.8	6.3
Concrete products	.3	.8	1.5	2.8	1.7
Crude nonfood materials less energy	22.6	7.5	-3.6	.6	-8.0
Iron and steel scrap	42.7	13.5	-15.6	5.6	-13.7
Nonferrous scrap	50.9	26.9	-15.6	.7	-17.2
Nonferrous ores	17.3	13.7	-20.9	-5.2	-18.9
Raw cotton	14.7	-8.7	15.7	12.4	-23.7
Cattle hides	29.2	-11.0	26.8	-10.5	-19.4
Wastepaper	17.5	-14.7	-4.7	-11.9	-17.5

NOTE: Data are calculated on a December-to-December basis.

Construction materials. The increase in the index for materials and components for construction slowed to 0.8 percent in 1991, after rising 1.5 percent in the preceding year and 2.5 percent in 1989. Prices for fabricated structural metal products, plastic construction products, and asphalt felts and coatings turned downward after advancing in 1990. Prices for nonferrous wire and cable and for steel wire fell faster in 1991 than in the preceding year. Price advances slowed for heating equipment, air conditioning and refrigeration equipment, concrete products, wiring devices, switchgear equipment, plumbing fixtures and brass fittings, and fabricated ferrous wire products. Gypsum products continued to decline steadily, as in most recent years. In contrast, prices for lumber and wood products were much stronger in 1991 than they had been a year earlier.

The decline in mortgage interest rates in 1991 was a boon for those homeowners who were able to reduce their monthly mortgage payments substantially by refinancing. However, these lower rates boosted new residential construction only modestly by the end of the year. For 1991 as a whole, the number of new housing starts barely exceeded 1 million units—about 15 percent below the 1990 level and the smallest number of new starts for any calendar year since the immediate post-World War II period. After starting the year with an annual rate of only about 850,000 units, the rate of new housing starts had recovered to about 1.1 million units by year's end. The number of new housing starts peaked at about 1.8 million units in 1986 and has declined in each year since.

Within the residential housing sector, construction activity was weaker for apartment houses than for single-family homes. Outside of the residential sector, the market for construction of new office buildings and other commercial projects remained depressed in those sections of the country still trying to absorb the excess inventory from the boom of the 1980's. Private nonresidential construction spending was nearly 20 percent lower in December 1991 than it had been a year earlier. Public construction spending was marginally higher at the end of 1991 than at the end of 1990. Overall construction spending was down 10 percent in 1991 from 1990's level.

While price movements for most kinds of construction materials reflected the sluggishness of the economy, prices for many kinds of wood products rebounded in 1991. Softwood lumber prices fell early in the year, in part because of the uncertainty associated with events in the Persian Gulf. The surge in consumer confidence in the aftermath of Desert Storm raised lumber prices considerably in the second quarter. At the same time, further upward pressure resulted from logging restrictions in the Pacific Northwest in connection with the controversy over preserving the habitat of the endangered spotted owl. Adverse weather in some logging areas also served to raise lumber prices. Softwood lumber prices then retreated in the third quarter as eased logging restrictions and improved weather boosted supplies. The failure of the economy to follow a normal recovery path led to less optimistic prospects for the housing market and thus lowered demand for wood products; lumber is a far more essential material in residential construction than in other types of construction activity. Lumber production cutbacks then led to a price upturn in the final months of 1991.

The net result was a 12-percent jump in the softwood lumber index, following a drop of 5.1 percent the year before. Similarly, plywood prices advanced 9.3 percent in 1991, nearly offsetting the impact of its decrease in 1990. Improved export markets were an important factor behind the upturn in plywood prices. Millwork prices rose much more than in the preceding year.

Basic industrial materials

The index for crude nonfood materials less energy fell 8.0 percent in 1991, after edging up 0.6 percent in the previous year. This index registered moderate declines in most months of the year, as the economy failed to regain significant strength.

In 1991, prices turned down substantially for iron and steel scrap, raw cotton, copper base scrap, and uranium, radium, and vanadium ores following increases the year before. Prices fell faster for aluminum base scrap, copper ores, cattle hides, wastepaper, and silver ores. By contrast, the index for softwood logs turned up, following a moderate decrease in the previous year. In addition, prices for sand and gravel, pulpwood logs, and iron ores rose faster than in the preceding year, and price declines slowed for gold ores.

Metal scrap and ores. Metal prices led the downturn in the basic industrial materials index. The index for iron and steel scrap dropped 13.7 percent, following a moderate increase in 1990. Both domestic and export markets were relatively poor for this industry.

An abundance of scrap materials from Eastern Europe, combined with higher shipping rates, drove metal scrap export levels substantially below those of 1990. In addition, lower demand by the automotive industry further depressed ferrous scrap prices. The avoidance of a strike led to sharp price declines in June. The ferrous scrap index increased moderately in late summer with

the start of the new model year, but fell thereafter as a sign of a weak economy.

Aluminum base scrap prices dropped 26.9 percent over the year after decreasing much more moderately in the year before. The index for copper base scrap turned down 9.4 percent, following an increase in the prior year. Overall, prices for nonferrous metal scrap fell nearly 20 percent in 1991. Nonferrous scrap prices tend to follow closely those of primary metals due to easy substitutability; if the price differential between primary and scrap metal is not maintained, customers will opt for the lower priced item. The large inflow of primary nonferrous metals from the former Soviet Union drove prices down for primary metals, which in turn adversely affected scrap prices. Furthermore, the automotive, aerospace, and construction industries were hard hit by the recession. Domestic automobile sales were at their lowest level since 1983, cuts in defense spending substantially reduced orders for aircraft and related equipment, and building activity decreased to recessionary levels.

Prices for nonferrous metal ores dropped nearly 20 percent after a smaller decrease in 1990. The major component of this index, copper ores, slumped 17.6 percent in the wake of a 3.8-percent decrease a year earlier. Copper ore output in 1991 increased 600,000 tons over 1990 levels, with the opening of new mines and expansion of existing ones. This industry, however, encountered bottlenecks between mine production and smelting and refining during the year because copper mine production sometimes exceeded the capacity of copper smelting and refining operations. As a result, the mining industry experienced a sharp drop in prices for copper ores.

Raw cotton. During the first 6 months of 1991, the raw cotton index shot up at an annual rate of approximately 25 percent as U.S. cotton exports increased. In addition, bad weather conditions in early spring from Georgia to Texas, as well as in Arizona and California, slowed cotton planting. During the second half of 1991, however, the index for raw cotton dropped at a 53.7-percent rate. The higher market prices for cotton which prevailed during the first half of the year encouraged the planting of larger acreages; overall cotton planting thus rose 13 percent in 1991. Demand for American exports, meanwhile, slowed in the fall because of record world production levels. Thus, after climbing 12.4 percent in 1990, the index for raw cotton fell 23.7 percent—the largest drop since 1981.

Cattle hides. In 1991, the index for cattle hides declined 19.4 percent, nearly twice as much as in the preceding 12 months. The total number of cattle slaughtered was about 2 percent below 1990 levels, despite higher beef production, which resulted from an increase in average weight. In addition, overall world demand for leather substantially declined in 1991, and tanners cut back their hide inventories to lower their costs. This led to the largest decline for the cattle hides index since 1974.

Wastepaper. Prices for wastepaper continued on a downward trend that began in 1988 as the index dropped 17.5 percent in 1991—even faster than in any of the preceding 3 years. Mandatory recycling increased to the point where some jurisdictions, particularly in the Northeast, actually paid to have their low grade wastepaper hauled away. At the same time, however, existing physical plants were still unable to utilize recycled paper efficiently. In most cases, it is less expensive to manufacture products from virgin fiber than it is to make them from recycled materials, because the latter requires special processing costs. Rapid declines in pulp prices further weakened the demand for high-grade pulp substitute wastepaper.

Selected industries

Mining. The Producer Price Index for the net output of the domestic mining sector fell 12.5 percent in 1991, following increases of 14.0 percent in 1990 and 9.6 percent in 1989. In 1991, all mining categories declined, except nonmetallic mining; this index rose 1.3 percent, continuing its modest upward trend. Decreases over the year were led by the oil and gas extraction industry group, which fell about 16 percent following 2 years of advances. The metal mining industry group also declined about 16 percent in 1991. The indexes for the coal mining industry groups edged down after rising in other recent years.

Manufacturing. The Producer Price Index for the net output of the domestic manufacturing sector dipped 0.9 percent in 1991. A large decrease for the petroleum refining industry group (26.0 percent) and much smaller declines for the industry groups for primary metals, paper, and chemicals more than offset advances for most other industry groups. Leading the increases in 1991 was the industry group index for tobacco manufactures, which rose 14.3 percent. The lumber and wood products industry group index turned up 5.3 percent, after edging down a year earlier. Most other industry groups rose less than 4 percent.

Other. Among other industries, the index for the U.S. Postal Service rose 19.8 percent on the strength of hikes in February, ranging from 2.6

percent for fourth class library rate mail to 30.9 percent for second class nonprofit rate mail. Other large increases in 1991 were recorded for domestic deep sea freight transportation (6.4 percent) and electric power utilities (4.5 percent). In contrast, declines were registered for the collection of scrap and waste materials (14.3 percent) and tour operators (3.9 percent). □

Equal pay: the double meaning

Although equal pay seemed to be making a work-related demand, the rhetoric surrounding it was rooted in an understanding of social roles that assigned high wages and good jobs to the men who supported families. The slogan respected job segregation and limited wage comparisons by suggesting that segregated work could not and should not earn male pay. It supported the notion that comparing female to male pay was appropriate only for those women who were in fact performing the same jobs as men, and thus made it possible to retain one's self-respect at the lower wage typical of women's jobs. When occupational segregation broke down, even temporarily, as it did, for example, during World War I, inevitable wage tensions resulted. The Women in Industry Service noted that women who had formerly been satisfied with much lower wages protested when they discovered they earned less than men doing the same jobs. The service recorded the 'discontent and ill feeling . . . which resulted in careless work' that was characteristic of women with 'good habits of work' who were taken on at 20 cents an hour only to discover that 'young boys with no training at all' were hired in at 31 cents an hour. As long as it was sustained by occupational segregation, equal pay for equal work restricted comparisons between men and women workers by implying that those who did not work alongside men could not expect to compare themselves to them.

—Alice Kessler-Harris

A Woman's Wage: Historical Meanings and Social Consequences (Lexington, KY, The University of Kentucky Press, 1990), pp. 89-90.