Price changes in 1981: widespread slowing of inflation

Consumer and producer price increases slowed to their lowest rate since 1977; major reasons for the moderation include favorable developments affecting food and energy as well as the impact of the recession

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During 1981, inflation in both retail and primary markets slowed to the lowest pace since 1977. The Consumer Price Index for All Urban Consumers (CPI-U) moved up 8.9 percent, following increases of 13.3 and 12.4 percent in 1979 and 1980. All major categories of consumer spending, except medical care, registered smaller increases in 1981 than in the previous year. The moderation in the housing and transportation components, along with a sharp deceleration in the food and beverage index, were largely responsible for the slowdown in the overall CPI in 1981. (See table 1.)

The deceleration was especially apparent in prices for consumer goods, which rose only 6.0 percent, following an 11.1-percent advance in 1980. The slowdown was less dramatic for consumer services, from 14.2 percent in 1980 to 13.0 percent in 1981. Mortgage interest costs slowed to 20.0 percent, after a 27.8-percent surge in 1980, but the index for services less mortgage interest costs rose almost 11 percent, virtually the same as in 1980. Because services are generally more labor-intensive than commodities, service charges tend to be slower to react to shifts in the general economy. The experimental CPI-U-X1, which incorporates the rental equivalence approach to homeownership costs instead of mortgage interest rates and home purchase prices, moved up 8.5 percent, compared with a 10.8-percent increase in 1980. Thus, the 1981 deceleration was greater for the official CPI than for the CPI-U-X1.[1]

At the primary market level, the Producer Price Index (PPI) for Finished Goods moved up 7.0 percent during 1981, considerably less than the 11.8-percent jump in 1980. Like the CPI, the PPI deceleration was broad. Although the 14.3-percent climb in the finished energy goods index was much larger than the increases for other major categories of finished goods in 1981, it was only about half as large as the surge this index recorded in 1980. Consumer food prices rose only 1.5 percent in 1981, following a 7.5-percent advance during the previous year. The upward movement in the index for finished consumer goods other than foods and energy slowed from 10.4 percent in 1980, to 6.9 percent in 1981. The deceleration in the capital equipment index was less pronounced than those of other major categories of finished goods—9.2 percent, following an 11.4-percent climb in 1980. Prices for intermediate materials rose about half as much in 1981 (6.1 percent) as in the preceding year. Following a 12.8-percent climb in 1980, crude material prices dropped by 3.7 percent, the first decrease in more than a decade. The steep advance in crude energy prices was more than offset by falling prices for foodstuffs and for a range of raw industrial materials.

The widespread slowdown in inflation in 1981 reflected generally favorable developments in factors influencing food and energy prices, expectations of reduced

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inflation rates in the next few years, and the impact of a recession that spread from the automotive and construction sectors to the rest of the economy around midyear. While the gross national product increased about 2 percent for the year, most of that gain occurred in the first quarter. The particular weakness of the residential construction and automotive markets throughout 1981 was indicated by the lowest rate of private housing unit starts in 35 years and the worst level of domestic new car sales since 1961. The rate of capacity utilization in the manufacturing sector and the unemployment rate both reached levels associated with severe recessions by the end of the year. Inventory accumulations by many firms unable to cut back orders to match the drop in

Table 1. Changes in selected components of the Consumer and Producer Price Indexes, 1980–81

Grouping	Relative importance, Dec. 1980	Percent change		Contribution[1]		Compound annual rate, seasonally adjusted except as noted, for 3 months ended —			
		Dec. 1979 to Dec. 1980	Dec. 1980 to Dec. 1981	Dec. 1979 to Dec. 1980	Dec. 1980 to Dec. 1981	1981			
						March	June	Sept.	Dec.
Consumer Price Index for All Urban Consumers (CPI-U)[2]									
All items	100.0	12.4	8.9	100.0	100.0	9.6	8.1	12.8	5.4
Food and beverages	18.3	10.1	4.3	15.3	8.9	5.6	2.3	7.6	1.8
Food at home	12.0	10.6	3.0	10.4	4.0	3.8	0.3	7.8	−0.3
Food away from home	5.3	9.6	7.2	4.2	4.3	9.0	6.6	7.1	6.1
Alcoholic beverages	1.0	7.6	5.8	.6	.6	9.2	5.6	7.0	1.4
Housing	45.5	13.7	10.2	49.7	51.9	7.7	13.0	16.9	3.6
Shelter	31.6	15.1	9.9	37.6	35.0	3.9	15.1	19.8	1.8
Rent, residential[3]	5.1	9.1	8.5	3.9	4.8	7.0	7.7	10.2	9.0
Homeownership	25.8	16.5	10.1	33.2	29.1	2.9	16.9	21.5	0.3
Home purchase[3]	10.3	11.4	1.2	9.5	1.4	−8.8	8.7	12.4	−5.7
Financing, taxes and insurance[3]	12.0	23.3	17.9	20.5	24.0	11.4	25.9	33.1	3.6
Maintenance and repairs	3.5	10.6	9.2	3.1	3.7	11.8	10.7	8.9	5.6
Fuel and other utilities	6.5	13.6	14.5	7.1	10.6	26.1	8.6	14.8	9.3
Household furnishings and operation	7.3	8.1	7.6	5.0	6.3	9.2	7.8	6.9	6.8
Apparel and upkeep	4.9	6.8	3.6	2.8	2.0	4.9	2.6	6.4	0.8
Apparel commodities	4.2	6.0	2.7	2.1	1.3	3.7	1.8	5.5	−0.2
Apparel services	0.7	12.4	9.4	.7	.7	11.4	8.9	9.8	7.7
Transportation	19.0	14.7	11.0	22.0	23.3	19.2	2.3	11.6	11.6
Private transportation	17.8	14.0	10.4	19.8	20.8	19.1	1.6	10.0	12.0
Public transportation[3]	1.2	25.6	19.2	2.2	2.6	21.2	14.3	37.5	5.8
Medical care	4.7	10.0	12.5	3.9	6.6	11.9	11.8	14.4	11.7
Medical care commodities	0.8	10.0	11.3	.6	1.0	12.1	12.3	11.9	9.1
Medical care services	3.9	10.0	12.7	3.3	5.6	12.1	11.6	14.9	12.3
Entertainment	3.6	9.6	7.2	2.9	2.9	9.5	5.1	6.9	7.3
Other goods and services	4.0	10.1	9.8	3.3	4.4	8.8	11.3	10.8	8.4
All items	100.0	12.4	8.9	100.0	100.0	9.6	8.1	12.8	5.4
Food	17.3	10.2	4.3	14.6	8.2	5.3	2.2	7.7	1.7
Commodities less food and energy	33.7	9.9	5.9	27.7	22.2	3.5	8.7	9.5	2.2
Energy[3]	10.8	18.1	11.9	15.1	14.5	49.1	4.7	3.0	−2.4
Services less energy	38.1	14.1	12.9	42.6	55.1	10.6	14.8	19.1	7.6
All items	100.0	12.4	8.9	100.0	100.0	9.6	8.1	12.8	5.4
Services	41.6	14.2	13.0	47.0	60.8	10.9	14.8	19.2	7.8
Commodities	58.4	11.1	6.0	53.0	39.2	8.8	3.2	8.5	3.6
All items less food, energy, and mortgage interest costs	62.0	9.9	8.0	51.0	55.3	6.7	8.6	11.4	5.2
All items (X-1 approach)	—	10.8	8.5	—	—	10.7	5.9	10.1	7.5
Producer Price Index (PPI) by stage of processing[2]									
Finished goods	100.0	11.8	7.0	100.0	100.0	12.8	7.1	3.4	5.2
Finished energy goods	12.1	27.8	14.3	26.9	24.4	56.6	3.5	−3.6	9.7
Consumer foods	23.1	7.5	1.5	16.1	5.0	5.1	3.5	1.6	−3.7
Finished goods less food	76.9	13.3	8.7	83.9	95.0	15.3	8.1	4.0	7.7
Finished goods less food and energy	65.0	10.7	7.6	57.0	70.6	8.8	9.0	5.6	7.4
Finished consumer goods less food	56.6	14.2	8.4	62.2	68.0	16.5	7.6	3.2	7.2
Finished consumer goods less food and energy	44.6	10.4	6.9	35.5	43.6	7.4	8.8	5.4	6.4
Capital equipment	20.3	11.4	9.2	21.5	27.1	11.6	10.0	5.7	9.7
Intermediate materials, supplies, and components	100.0	12.6	6.1	100.0	100.0	11.5	7.4	3.8	2.0
Intermediate energy goods	16.2	25.4	11.1	28.5	29.2	47.0	1.9	−2.1	4.2
Intermediate food and feeds	6.5	16.1	−12.4	7.5	−9.0	−17.2	−.3	−18.3	−12.9
Intermediate materials less foods, feeds	93.6	12.4	7.4	92.5	109.0	13.8	8.0	5.2	2.8
Intermediate materials less food, energy	77.3	10.1	6.7	64.0	79.8	8.3	8.8	7.1	2.4
Crude materials	100.0	12.8	−3.7	100.0	100.0	3.4	10.8	−9.7	−16.6
Crude energy materials[3]	26.8	26.9	22.9	46.4	−166.8	110.0	4.3	1.1	2.9
Crude foodstuffs and feedstuffs	57.7	8.6	−14.0	43.1	219.8	−15.6	6.4	−18.2	−25.5
Crude nonfood materials	42.3	19.1	10.4	56.5	−119.8	34.3	16.1	1.1	−5.6
Crude nonfood materials less energy	15.5	7.5	−11.3	10.3	47.0	−44.5	47.7	1.2	−22.5

[1]Percent of overall change attributable to each specific item.

[2]See "Definitions" and "Notes" preceding tables 22–30 of Current Labor Statistics in this *Review*.

[3]Not seasonally adjusted.

NOTE: Data shown above and elsewhere in this article may differ from those previously reported because seasonal adjustment factors have been recalculated to reflect developments during 1981. In addition, PPI data through September 1981 have been revised to reflect the availability of late reports and corrections by respondents.

sales kept industrial production from falling more. Export markets, an increasingly important sector in recent years, were badly depressed for many products in 1981, partly because of economic weakness abroad.

The unusually high interest rates which prevailed during much of the year played a complex role, both directly and indirectly, in many price movements. With interest rates so high in spite of lower inflation, real (that is, inflation-adjusted) interest costs reached virtually unprecedented levels. On the one hand, interest rates aggravated inflation in that mortgage interest rates at or near record-high levels served to raise the reported inflation rate for the CPI; in addition, soaring financing costs were sometimes passed through to buyers in increased prices charged by businesses trying to protect their profits or to minimize their losses. On the other hand, high interest rates helped to restrain inflation by reducing demand for inventories, discouraging commodity speculation, depressing residential construction activity, forcing the postponement of some long-term investment projects, making personal savings more rewarding and consumer credit more expensive, and raising imports and cutting exports through their effect on improving the value of the American dollar in foreign exchange markets.

Consumer goods, except food and energy

Retail prices for consumer goods other than food and energy increased about 6 percent in 1981, after rising about 10 percent in 1980. Price increases for houses slowed as the housing industry experienced its worst year since 1946, mainly because of continued high interest rates for mortgages and construction loans. Sales of both new and existing houses fell almost 20 percent from 1980 levels, and the number of new private housing unit starts dropped to the lowest figure in 35 years. (See table 2.)

The Producer Price Index for finished consumer goods other than foods and energy rose 6.9 percent in 1981, down from a 10.4-percent increase in the preceding year. Unlike 1980, when the indexes for both durables and nondurables other than foods and energy climbed at virtually the same rate, the nondurables index moved up considerably more in 1981 (8.0 percent) than did the durables index (5.4 percent). Demand for consumer durables was hard hit by the recession, while demand for nondurables held relatively steady. The greater deceleration in the durables index partly reflected a dramatic downturn in prices for items made from precious metals: gold jewelry prices dropped 20 percent after soaring nearly 32 percent in 1980, and sterling silver flatware prices were cut 45 percent following a 19-percent advance. The 1981 increase in the nondurables index was also propped by the indexes for newspapers, periodicals, and books, all of which rose at or close to double-digit rates; because these categories were first introduced into the PPI in December 1980, they had no impact on 1980 index movements. Aside from these special cases, primary market prices for a range of consumer goods rose 3 or more percentage points less in 1981 than they did in 1980.

Retail prices for passenger cars moved up 6.8 percent, somewhat less than the 1980 advance of 7.5 percent. Prices received by producers of automobiles also increased somewhat less than in the preceding year (8.7 versus 9.4 percent). Domestic new car sales totaled only about 6.2 million units for the entire year, the lowest since 1961. A variety of rebate programs offered for 1981 model cars did stimulate sales from time to time, but generally, demand remained sluggish. When an anticipated rebound in sales concurrent with the introduction of 1982 models failed to materialize, many of the announced price increases for the new model-year cars had to be discounted almost immediately. Demand for larger cars recovered, at least relatively, in part because of recent improvements in mileage performance, combined with a gradual decline in gasoline prices after a sharp jump early in the year. Sales of imported cars fell, but much less than did sales of domestic autos. Thus, imports accounted for a record 27 percent of total new car sales in this country. Both retail and producer tire prices rose about 5 percent, far less than in other recent years, as reduced automobile production depressed demand for tires, forced many promotional sales, and lowered prices for crude natural rubber.

As an alternative to higher priced new cars, consumer demand remained strong for used cars, and that index registered an even larger increase in 1981 (20.3 percent) than in the preceding year (18.9 percent). Consumers were less reluctant to buy larger used cars as gasoline prices stabilized. In addition, dealer sales of used cars, although improved from 1980, remained at low levels because of a shortage of trade-ins for new cars.

Retail prices for apparel commodities other than footwear rose 2.4 percent, compared with a 5.8-percent increase in 1980. Synthetic fiber prices had climbed sharply in 1980 and early in 1981; consequently, the apparel industry used more natural fiber in its blends. Synthetic fiber prices slowed in the remaining months of 1981 as petroleum prices stabilized; and, after rising sharply in 1980, cotton prices declined in 1981. Price increases for footwear slowed to 4.6 percent, as producer prices for leather dropped considerably.

On the other hand, prices accelerated for prescription and nonprescription drugs. This acceleration can be attributed to a number of factors, including: (1) a significant increase in the incidence of flu-type ailments early in the year that caused a surge in demand for drugs for treatment; (2) higher costs for plastic packaging; (3) higher costs for research and certification of new drugs;

Table 2. Changes in retail prices for selected commodities less food and energy, 1980–81

CPI grouping	Relative importance, Dec. 1980	Percent change		Compound annual rate, seasonally adjusted except as noted, for 3 months ended —			
		Dec. 1979 to Dec. 1980	Dec. 1980 to Dec. 1981	1981			
				Mar.	June	Sept.	Dec.
Commodities less food and energy	100.0	9.9	5.9	3.5	8.7	9.5	2.2
Alcoholic beverages	2.9	7.6	5.8	9.2	5.6	7.0	1.4
Home purchase[1]	30.5	11.4	1.2	−8.8	8.7	12.4	−5.7
Maintenance and repair commodities[1]	2.4	10.4	4.7	8.3	6.2	1.8	2.6
Textile housefurnishings	1.5	8.2	9.3	7.2	8.4	10.3	11.7
Furniture and bedding	3.5	7.8	6.4	8.8	3.2	9.0	5.1
Appliances, including radio and TV[1]	4.1	3.6	3.9	5.2	6.0	3.9	.5
Other household equipment[1]	2.6	10.4	7.4	14.5	6.0	6.6	2.7
Housekeeping supplies[1]	4.3	12.4	7.6	10.5	8.8	5.3	6.1
Apparel commodities less footwear	10.5	5.8	2.4	3.6	1.2	6.1	−1.4
Footwear	1.9	6.7	4.6	4.4	5.2	3.9	5.0
New cars	10.6	7.5	6.8	−0.9	20.9	3.6	5.0
Used cars	8.8	18.3	20.3	8.0	8.5	44.2	22.7
Auto parts and equipment[1]	1.8	8.6	5.1	4.7	−4.0	8.0	3.6
Medical care commodities	2.3	10.0	11.3	12.1	12.3	11.9	9.1
Entertainment commodities	6.4	10.3	7.1	9.0	6.3	6.2	7.0
Tobacco products[1]	3.1	9.7	7.6	3.3	13.0	4.8	9.5
Toilet goods and personal care appliances[1]	2.1	9.9	9.1	14.1	11.6	4.6	6.2
School books and supplies	0.5	9.7	14.6	14.0	9.2	35.8	2.1

[1] Not seasonally adjusted.

and (4) a high level of advertising expenses required by intensified competition within the industry. Prices for school books and supplies rose sharply, reflecting higher costs of production of textbooks. Price increases for textile housefurnishings accelerated somewhat, augmented by sharply increased costs of synthetic fibers in early 1981.

Energy reacts to weakened demand

Prices for nearly all types of energy rose considerably less in 1981 than in either of the previous 2 years. This reflected reduced world demand associated with recessionary conditions and the continued excess supplies of crude petroleum. Energy prices surged during the first quarter of the year following the decontrol of domestic oil prices and another round of price hikes announced by the Organization of Petroleum Exporting Countries (OPEC) at the end of 1980. After this initial surge, most energy prices either remained stable or edged downward as demand weakened. (See table 3.)

Consumer energy items. Retail motor fuel prices[2] followed the same pattern as other refined petroleum products. The decontrol of prices for domestic crude oil and gasoline announced on January 28, together with the OPEC price hikes established in December 1980, caused the average retail price per gallon of gasoline to increase 15.7 cents during the first quarter. But gasoline stocks reached a record level in March and remained relatively high throughout the year as demand weakened. In response to higher prices and the threat of recession, American motorists generally curtailed summer driving; as a result, the traditional peak period of gasoline demand did not occur.[3] Consequently, retail gasoline prices declined (before seasonal adjustment) for the 9 successive months of April through December. The resulting price competition pressures squeezed retailer's profit margins. Gasoline prices increased 9.4 percent over the year, after jumping 52.2 percent in 1979 and 18.9 percent in 1980.

Fuel oil prices in the CPI increased 17.0 percent in 1981, a somewhat slower rise than the 20.2-percent advance in 1980. The deregulation of the crude petroleum industry coupled with seasonally strong demand led to huge increases in the first quarter, which were followed by 7 months of declines attributed to abundant supplies. The increased number of passenger cars using diesel fuel helped raise fuel oil prices; as gasoline demand slumped, petroleum refiners attempted to maintain profit levels by raising prices of distillate fuels.

Consumer prices for natural gas rose 14.9 percent in 1981, compared with 20.1 percent in 1979 and 14.7 percent in 1980. Purchased gas adjustments and rates showed moderate but steady increases throughout the year. Electricity prices increased 14.5 percent in 1981, a slight moderation from the previous year. Utilities dependent upon petroleum-fueled power generating plants raised fuel adjustment charges during the early part of the year, and sizable increases in coal prices were passed on to electricity consumers during the summer.

Industrial fuels. Prices of energy goods used by businesses and industries also soared during the first quarter of 1981. The fastest rate of advance was for diesel fuel; however, prices turned downward during the second quarter and continued to recede for the remainder of the year, as the weak caused reduced shipments by motor trucks. Similarly, commercial jet fuel prices surged and then began to fall; however, the downturn was somewhat later than that for diesel fuel. This is typical, because jet fuel is sold largely on a contractual basis and its price is less flexible than that of diesel fuel. Demand for jet fuel was held down by the cutback in flights attributed to the strike and subsequent firing of some air controllers. Over the year, both diesel fuel and commercial jet fuel prices rose less than in either 1979 or 1980.

After rising rapidly from November 1980 through March 1981, prices for residual fuel fell sharply for the rest of the year. These prices are especially sensitive to short-term market changes because most sales are transacted at spot prices. In late 1980, fears of shortages arising from the Iran-Iraq war led to sharp increases; when it became apparent that supplies would exceed demand, prices began to plummet during the spring of 1981.

The PPI for electric power (which includes sales to commercial and industrial users, but not sales to residential customers) rose somewhat less than during the preceding year. The slowdown was the result of decelerated increases for residual fuel and natural gas, which are used in power-generating plants. However, there were large increases during the second half, coinciding with steep hikes in coal prices. Utilities continued to switch from petroleum to coal as a generating fuel during 1981 as an economy measure and in compliance with Federal energy policy. The proportion of total electricity output produced in coal-fired facilities rose to 52 percent, compared with 44 percent in 1978; during the same period, the proportion generated using petroleum (residual fuels) dropped to 9 percent, from 16 percent.

Crude energy. On January 28, 1981, the Administration announced the immediate decontrol of prices for crude petroleum; previously, a phased decontrol program had been set for completion at the end of September 1981. Domestic oil prices quickly rose to about the world level, jumping nearly 20 percent between January and February. Thereafter, domestic crude oil prices became responsive to world market conditions, which were characterized by excess supplies. After the early surge, prices fell about 7 percent through the end of the year.

After Iran and Iraq partially resumed crude oil shipments around the end of 1980, world supplies again exceeded demand. Saudi Arabia, which had raised its production to more than 10 million barrels per day to

Table 3. Changes in consumer and producer prices for energy items, 1980–81

Grouping	Index	Relative importance, Dec. 1980	Percent change		Compound annual rate, seasonally adjusted except as noted, for 3 months ended —			
			Dec. 1979 to Dec. 1980	Dec. 1980 to Dec. 1981	1981			
					March	June	Sept.	Dec.
Finished items (sold to consumers)								
Energy items [1]	CPI	100.0	18.1	11.9	49.1	4.7	3.0	−2.4
Finished energy goods	PPI	100.0	27.8	14.3	56.6	3.5	−3.6	9.7
Motor fuels, motor oil, coolants, etc. [2]	CPI	55.7	18.9	9.4	49.6	−15.7	1.9	12.1
Gasoline	CPI	54.9	18.9	9.4	50.4	−16.1	1.8	12.3
	PPI	56.8	29.5	10.8	59.5	−8.9	−8.4	14.7
Household fuels	CPI	44.3	17.0	15.2	33.1	9.1	11.3	9.1
Fuel oil [1,3]	CPI	12.0	19.9	16.6	97.0	−6.4	−4.9	5.5
	PPI	14.1	23.9	19.5	107.7	3.8	−5.8	1.2
Gas (piped)	CPI	13.0	14.7	14.9	16.6	17.5	15.6	9.9
	PPI	18.2	29.9	26.8	28.6	47.0	18.0	16.0
Electricity	CPI	19.3	16.7	14.5	12.2	15.5	20.6	9.9
Intermediate materials (sold to businesses)								
Intermediate energy goods	PPI	100.0	25.4	11.1	47.0	1.9	−2.1	4.2
Diesel fuel [1,4]	PPI	9.0	23.7	17.4	106.8	4.9	−10.5	−2.1
Commercial jet fuel [1,4]	PPI	8.3	29.9	12.9	60.3	19.0	−10.9	−4.6
Residual fuel [4]	PPI	15.6	39.8	.8	56.1	−9.1	−12.5	−17.2
Liquefied petroleum gas [1]	PPI	4.8	22.1	1.7	11.8	1.3	−6.5	.9
Electric power [4]	PPI	29.9	17.6	13.7	11.5	11.5	19.6	12.2
Crude materials								
Crude energy materials	PPI	100.0	26.9	22.9	110.0	4.3	1.1	2.9
Natural gas [1,4]	PPI	30.6	29.9	26.8	28.6	47.0	18.0	16.0
Crude petroleum [1]	PPI	54.7	34.4	24.4	214.6	−12.2	−9.0	−4.6
Coal [1]	PPI	14.6	3.6	8.5	5.0	9.1	15.9	4.3

[1] Not seasonally adjusted.
[2] "Motor fuels" replaces "gasoline" to reflect the inclusion of direct pricing of gasohol and diesel fuel.
[3] Includes coal and bottled gas in the CPI.
[4] Prices are lagged 1 month in the PPI.

compensate for the shortfall caused by the outbreak of the war between Iraq and Iran, maintained this rate for most of 1981, thereby creating the worldwide glut of petroleum. Some individual oil-exporting countries began discounting their prices by April in order to boost sales in a sagging market. The fact that price reductions by oil exporting countries outside of OPEC (such as Mexico) induced OPEC members to alter their price and output levels indicated that OPEC was losing its ability to manipulate the world market. Those countries with the highest prices (Libya, Algeria, and Nigeria) were forced to cut their output drastically because of a lack of buyers. In October, members of OPEC finally resolved their policy differences and agreed on a uniform benchmark price of $34 per barrel; price reductions by most OPEC members were coupled with a price increase and output cutback by Saudi Arabia.

The PPI for natural gas rose more than 25 percent for the third consecutive year, although the 1981 increase was somewhat less than in 1979 or 1980. Part of the increase was the result of the scheduled phasing out of some price controls under the provisions of the Natural Gas Policy Act of 1978. However, a large part of the price hikes was due to the producers' practice of changing to more advantageous price categories by drilling old gas wells deeper or by drilling new wells in old gas fields.

Coal prices were raised substantially during the third quarter, following 3 years of relatively little movement. The increase reflected higher labor costs in the wake of a new wage settlement negotiated with the United Mine Workers. Export demand for coal, while strong, did not grow as much in 1981 as had been expected, and some coal producers were constrained by their inability to maintain profit margins as costs rose.

Food price increases—5-year low

Retail food prices, showing their smallest increase since 1976, rose 4.3 percent in 1981, following a 10.2-percent advance in 1980. At the producer level, finished consumer food prices increased 1.5 percent, after advancing 7.5 percent in 1980. (See table 4.) The PPI for crude foodstuffs and feedstuffs fell 14.0 percent in 1981, compared with an 8.6-percent increase in 1980. This moderation in price increases was largely the result of improved supplies, as the United States increased

Table 4. Changes in retail and producer prices for selected foods, 1980–81

Commodity	Index	Relative importance, Dec. 1980	Percent change		Compound annual rate, seasonally adjusted except as noted, for 3 months ended —			
			Dec. 1979 to Dec. 1980	Dec. 1980 to Dec. 1981	1981			
					Mar.	June	Sept.	Dec.
Consumer food[1]	CPI	100.0	10.2	4.3	5.3	2.2	7.7	1.7
	PPI	100.0	7.5	1.5	5.1	3.5	1.6	−3.7
Beef and veal	CPI	9.8	5.0	−1.7	−14.1	−1.6	19.2	−7.8
	PPI	12.1	−1.8	−8.0	−24.1	13.4	5.1	−21.0
Pork	CPI	4.7	11.8	2.3	−12.9	13.2	20.6	−9.5
	PPI	6.5	8.8	−3.5	−12.6	36.0	7.6	−31.7
Poultry	CPI	2.3	15.0	−5.4	−9.6	−4.9	2.9	−10.6
	PPI	3.3	6.8	−17.5	−11.9	−5.4	−26.8	−24.9
Cereal and bakery products[2]	CPI	8.7	11.6	7.4	13.3	7.4	4.2	5.1
	PPI	13.1	11.2	2.9	5.6	10.7	2.2	−6.3
Dairy products[2]	CPI	9.3	9.7	3.2	8.0	2.0	0.8	2.0
	PPI	13.6	10.2	2.0	8.9	1.0	−1.6	0.0
Fresh fruits and vegetables	CPI	5.2	13.9	4.9	35.9	−24.5	16.8	1.3
	PPI	5.2	16.3	14.2	67.4	−27.2	−0.8	38.7
Processed fruits and vegetables[2]	CPI	4.5	8.0	11.8	21.3	15.2	8.3	3.3
	PPI	6.4	6.3	14.7	36.0	11.9	10.9	3.0
Eggs	CPI	1.3	11.1	−4.2	−24.1	29.0	−7.6	−7.1
	PPI	2.0	9.6	−10.1	−32.3	61.3	−9.8	−33.8
Sugar and sweets[3]	CPI	2.9	35.7	−7.0	−3.2	−21.0	0.1	−2.3
	PPI	4.8	45.0	−26.2	−37.6	−31.4	−34.9	6.8
Roasted coffee[2]	CPI	0.8	−11.6	−11.6	−27.7	−6.8	−8.8	−0.8
	PPI	3.6	−14.7	−3.5	−1.8	−21.1	−0.6	12.5
Fats and oil products[2,4]	CPI	1.9	8.1	3.7	29.9	1.0	−1.6	−10.6
	PPI	1.6	2.6	0.4	2.7	−7.4	−4.5	12.0
Food away from home[5]	CPI	30.7	9.6	7.2	9.0	6.6	7.1	6.1

[1] Includes items not listed.
[2] Not seasonally adjusted in the CPI.
[3] "Sugar and confectionery" in the PPI. Not seasonally adjusted in the CPI or PPI.
[4] "Shortening and cooking oils" in the PPI effective January 1982, formerly "vegetable oil end products."
[5] The PPI does not reflect restaurant prices.

its crop production 14 percent and its livestock production 2 percent. Processing, transportation, and marketing charges constitute a large share of total costs, as foodstuffs move from the crude stage to the finished goods stage, and account for an even larger share at the retail level. Continued increases in costs for energy, labor, and other inputs, therefore, prevented the drop in farm prices from being fully reflected in grocery stores and restaurants.

The CPI for food rose only slightly in the first half of the year before accelerating in the third quarter to a 7.7-percent annual rate of increase. In contrast, the PPI for foods showed progressively smaller increases over the same period. During the fourth quarter, retail prices rose at a more moderate pace, and the PPI for finished consumer foods declined. The CPI for food away from home rose 7.2 percent over the year, somewhat less than the 9.6-percent increase in 1980.[4]

Meats. The CPI for beef and veal fell 1.7 percent in 1981, after a rise of 5.0 percent in 1980 and increases of more than 20 percent in each of the previous 2 years. This index declined in the first 6 months of 1981, turned up significantly by the end of the third quarter as processor prices surged, and then fell again in the fourth quarter when processor prices weakened. At the processor level, generally declining prices resulted from large-scale slaughtering of breeding stock.

Pork prices in the CPI rose 2.3 percent in 1981, after rising 11.8 percent in 1980. At the processor level, pork prices declined 3.5 percent, after rising 8.8 percent in the previous year. The moderation was attributed to sharp price declines early in 1981 when pork supplies were abundant, even though consumers substituted pork for more costly beef.

Both retail and processor prices for poultry fell in 1981, following a rapid increase in the summer of 1980 when intense heat killed millions of chickens. The decline in 1981 retail prices occurred in the first half of the year when poultry supplies were abundant; retail prices turned up slightly in the third quarter when supplies tightened again, only to fall again in the fourth quarter. Despite generally tight supplies, egg prices declined, after rising in 1980. Although production costs, particularly energy, rose rapidly, egg price increases were limited both by plentiful supplies of other high protein foods and by tight consumer budgets as a result of the recession.

Dairy products. Prices for dairy products were relatively stable in 1981, compared with earlier years, because of both large supplies and the lack of any permanent increase in the support price of milk since October 1980.[5] U.S. Department of Agriculture purchases under the price support program during 1981 totaled 12.6 billion pounds (milk equivalent fat basis), compared with 8.6 billion during 1980. The Agriculture Department now purchases over a tenth of total farm marketings. Because of such large government purchases, the price of milk is effectively determined by the support price program.

Milk production was estimated at about 3 percent more in 1981 than in 1980. The large number of young replacement heifers available to enter the milking herd allowed the number of milk cows to continue to increase. In addition, lower cow prices throughout 1981 led to a reduced slaughter rate for older, less productive cows. Relatively favorable income for dairy farming, compared with other farm enterprises and other employment opportunities, contributed to the cow population. Cows numbered 10.94 million in October, the largest count since May 1977. Milk production in 1981 also rose because of continued increases in productivity: output per cow advanced (even with relatively little change in feeding rates) because of genetic improvements through selective breeding. In addition, the labor productivity of dairy farming has increased significantly in recent years because of technological advances. Increases in retail prices for butter (3.2 percent), ice cream (6.3 percent), and milk (2.3 percent) were much less than in 1980.

Crops. Prices for grains and feeds turned downward in 1981, following 3 years of generally rising prices. This easing reflected large domestic harvests and weak export demand for corn. Soybean prices, which had displayed no clear trend in recent years, began to fall sharply in late 1980 and continued downward in most subsequent months. The 1981 peanut harvest was substantially larger than the drought-ravaged 1980 crop; after soaring in 1980, retail peanut butter prices fell each month from June 1981 to December.

Cereal and bakery products. Price increases for cereal and bakery products slowed considerably during the second half of 1981, leading to smaller increases than in 1980. The moderation was greater at the producer level, where materials form a larger fraction of costs. Although many production costs continued to rise, prices of several key ingredients fell, in particular, flour, reflecting lower wheat prices; sugar, reflecting improved world supplies; and rice, reflecting improved harvests in many foreign producing countries and large domestic supplies after a record U.S. harvest.

Fruits and vegetables. Volatility was the hallmark of fresh fruit and vegetable prices in 1981, as often happens. Adverse weather conditions are frequently the cause of small harvests and higher prices. A freeze in Florida in January struck hard at tomatoes, as well as

some other winter vegetables. This was followed by rain damage in Florida and in Mexico, the largest supplier of U.S. tomato imports. With supplies short, prices soared in the first quarter, only to fall in the second, as tomatoes planted after the frost were marketed. Potato prices rose in the first quarter, as the small stocks left after the poor harvest of 1980 were depleted. However, later in the year, the new crop came to market and prices for potatoes fell sharply. Lettuce prices showed their usual volatility in response to supply changes as growing areas shifted. The CPI for lettuce rose or fell more than 5 percent in 8 of the 12 months; the net increase for the year was 34.4 percent. The freeze in Florida also damaged orange trees, but an unusually large supply of fresh oranges from California kept consumer price increases small. In the third quarter, both orange and apple prices rose as stockpiles were diminished. Apple prices continued upward in the fourth quarter because of a smaller harvest than in the previous year.

Higher processing costs and smaller supplies for most processed fruits and vegetables led to their relatively large price increases. Among the largest increases in 1981 were the PPI for frozen orange juice concentrate (32.7 percent) and the CPI for frozen fruits and fruit juices (18.0 percent). These indexes rose sharply after the January freeze. Unlike fresh oranges which come largely from California, orange juice is more dependent on the Florida crop. Increased imports of frozen orange juice concentrate from Brazil did not make up the shortfall.

Sugar and coffee. World sugar prices dropped throughout 1981, after undergoing sharp increases in 1980. Domestic producer prices for sugar fell until September, when import fees were restored. Because of time lags, consumer sugar prices continued declining until year-end. Roasted coffee prices declined 11.6 percent for the second consecutive year, as world supplies remained abundant.

Services, excluding energy

The index for services less energy advanced 12.9 percent, compared with a 14.1-percent climb in the preceding year. Many major components within this area continued to climb at double-digit rates, although usually somewhat less than in 1980. However, the medical care services index accelerated, and in 1981 it registered one of the largest advances ever. (See table 5.)

Contracted mortgage interest costs rose 20.0 percent in 1981, following advances of 34.7 percent in 1979 and 27.6 percent in 1980. In 1979 and 1980, this index reflected sharp increases in house prices and in mortgage interest rates; in 1981, with home prices rising only 1.2 percent, the increase was primarily attributable to mortgage interest rates. The index for mortgage interest rates (up 15.0 percent in 1980 and 16.1 percent in 1979) rose 18.9 percent in 1981, reflecting the behavior of long-term interest rates. The persistent slowdown in money growth from 1977 to 1981 (8.2 percent in 1977 and 1978, 7.6 percent in 1979, 7.3 percent in 1980, and about 4.0 percent in 1981) rendered loanable funds scarce and expensive.

The residential rent index moved up 8.5 percent, a slightly slower rate than the 9.1 percent of the previous year. This slowdown mainly reflected moderating fuel costs.

The transportation services index rose 11.1 percent, a slower rate than the 14.1 percent advance in 1980. The public transportation index (which includes intracity mass transit and intercity bus, train, and airline fares) advanced 19.2 percent, considerably less than the 25.6-percent jump in 1980, but much more than the in-

Table 5. Changes in consumer services less energy prices, 1980–81

CPI grouping	Relative importance, Dec. 1980	Percent change		Compound annual rate, seasonally adjusted except as noted, for 3 months ended—			
		Dec. 1979 to Dec. 1980	Dec. 1980 to Dec. 1981	1981			
				Mar.	June	Sept.	Dec.
Services less energy	100.0	14.1	12.9	10.6	14.8	19.1	7.6
Rent, residential[1]	13.4	9.1	8.5	7.0	7.7	10.2	9.0
Household, less rent and energy[1,2]	50.1	17.2	15.5	12.1	20.4	26.0	4.7
Home financing, taxes and insurance[1]	31.4	23.3	17.9	11.4	25.9	33.1	3.6
Mortgage interest costs[1]	25.8	27.6	20.0	11.6	30.7	38.3	2.8
Home maintenance and repairs	7.2	10.7	10.5	12.7	12.2	10.9	6.5
Housekeeping services[1]	5.1	7.4	10.8	11.6	11.9	7.6	12.0
Transportation services	15.1	14.1	11.1	10.2	11.6	12.6	10.0
Auto maintenance and repairs	3.8	10.9	8.6	8.8	7.0	10.1	8.3
Other private transportation services[1]	8.2	11.8	9.1	6.8	12.7	4.8	12.5
Public transportation[1]	3.1	25.6	19.2	21.2	14.3	37.5	5.8
Medical care services	10.3	10.0	12.7	12.1	11.6	14.9	12.3
Entertainment services[1]	3.9	8.7	7.3	10.4	3.2	8.1	7.7
Personal care services[1]	2.3	8.0	7.5	8.9	7.6	9.7	4.0
Apparel services	1.7	12.4	9.4	11.4	8.9	9.8	7.7
Personal and educational services	3.1	12.3	13.2	9.9	12.8	17.7	12.5

[1] Not seasonally adjusted.

[2] Includes items not listed.

creases for auto maintenance and for other private transportation services. These increases partly reflected higher wage rates because of cost-of-living adjustment clauses in contracts. Airline fares accounted for much of the deceleration in the public transportation sector, as some airlines were able to restrain fare boosts because of moderating fuel costs and intensified competition.

The medical care services index climbed 12.7 percent, following a 10-percent rise in 1980. The index for physician services advanced 11.7 percent, slightly more than in 1980, reflecting increases for a range of services. The dental services index moved up 10.2 percent, roughly the same as in the previous year. Charges for the more difficult dental services did not increase to the same extent as the more routine services, such as fillings and teeth cleaning. Traditionally, use of dental services has fluctuated with the business cycle. However, this is no longer the case, partly because of the increased extent of third-party dental coverage; the share of total expenditures for dental services assumed by private health insurance expanded from 2 to 21 percent between 1965 and 1980. The index for other professional services rose 9.2 percent, with optometrists and ophthalmologists leading the increases.

The cost of hospital rooms, particularly semi-private rooms, continued to rise at a double-digit rate. Some of the factors affecting hospital charges included higher interest costs, increased labor costs attributable, in part, to a shortage of professional nurses, and rising demand associated with the larger proportion of elderly in the general population.

Price increases for most other types of services, including entertainment, personal care, and apparel, rose less than in the previous year. However, the personal and educational services index increased more, reflecting higher college tuition costs.

Capital equipment

The Producer Price Index for capital equipment moved up 9.2 percent, a moderate slowdown from the 11.4-percent advance registered in 1980. The slowdown was broad based; double-digit rates of inflation, extremely common among various kinds of capital goods in the previous year, were far less so in 1981. At the same time, however, few kinds of capital equipment rose less than 8 percent in either 1980 or 1981; increases of this size were common for consumer goods in 1981.

The relatively high rate of inflation in capital goods prices in both 1980 and 1981 could only be partly attributed to a passthrough of increased material costs. In fact, the index for durable manufacturing materials had already slowed from a 17.2-percent surge in 1979 to a 5.9-percent rise in 1980, before decelerating even further to a 3.3-percent increase in 1981. However, prices for steel—a major material in many kinds of capital goods—did rise faster in 1981 than in other recent years. One crucial factor might be the fact that the real (inflation-adjusted) level of capital expenditures was maintained in both 1980 and 1981, despite a sluggish economy. The Commerce Department estimates that real spending by businesses on new plants and equipment increased 0.8 percent in 1980 and 0.3 percent in 1981. However, the 1981 strength in capital spending, as with the economy as a whole, was concentrated in the first quarter; by the end of the year, real business investment was dropping at a double-digit rate.

One of the largest price increases recorded for capital goods was the 17.7-percent climb for oilfield and gasfield machinery for the second consecutive year. The longstanding boom in energy exploration, development, and production activities, which was further stimulated by the total deregulation of domestic crude oil prices in early 1981, once again proved to be largely independent of the economy. However, prices for mining machinery, which had risen 14.0 percent in 1980, slowed to an 8.1-percent increase in 1981—even though coal prices rose more in 1981 (8.5 percent) than in the preceding 2 years combined (7.1 percent). Mining activity and, hence, demand for mining machinery, were held down by excess inventories of many minerals because of the recession.

Heavy motor trucks, transformers and power regulators, and packaging machinery were among the relatively few capital goods categories to register an even larger price increase in 1981, after climbing at a double-digit rate in 1980. Strong demand often was a major contributing factor. On the other hand, some of the categories with the most marked decelerations included machine tools, fixed-wing utility aircraft, railroad equipment, plastic and rubber industry machinery, printing trades machinery, and woodworking machinery.

Intermediate materials, except foods and energy

The Producer Price Index for intermediate materials other than foods and energy rose 6.7 percent during 1981, following 2 years of double-digit increases. Most of the advances took place early in the year, as manufacturers felt the impact of the decontrol of domestic crude oil prices. The upward movement of prices generally eased during the latter part of the year in response to deteriorating economic conditions. (See table 6.)

American industry displayed greater caution in inventory management in recent years, compared to the 1974–75 recession. During 1973 and early 1974, fears of shortages induced manufacturers to purchase materials in great quantities, creating an artificial boom. But when the recession became apparent, excess stocks were quickly liquidated, thereby intensifying the drop in aggregate demand. Because adjustments in stocks of man-

ufacturers' materials and supplies during the 1980 recession were less severe than in 1974–75, there was a correspondingly smaller buildup of stocks during the subsequent upturn. Continued high interest rates discouraged firms from holding more than minimal inventories. Thus, demand for materials and supplies was rather flat in 1981, even before business turned downward again during the summer.

Nondurable manufacturing materials. The rapid climb in crude oil prices early in the year quickly resulted in steep hikes for many items in the nondurable manufacturing materials category. Prices rose rapidly during the first few months of 1981 for such industrial chemicals as benzene and butadiene, partly because feedstock prices jumped and partly because the reduction in operating levels of petroleum refineries created temporary shortages of certain chemicals. Prices for industrial chemicals tended to stabilize after May, and some prices declined in response to weakened demand. In 1981, the index for industrial chemicals climbed 9.0 percent, following 2 years of much sharper increases.

Higher prices for chemicals, in turn, led to large increases in synthetic fiber prices during the first half of the year. Fiber price increases were further aided by the producers' curtailment of output to restrain inventory buildups and by the shutdown of a number of less efficient fiber-producing factories, as demand for textile products remained relatively weak during most of the year. However, prices for gray fabrics and finished fabrics rose much less than in most recent years, largely because of weak apparel markets and declining raw cotton prices.

The surge in petrochemical prices also had a strong impact on synthetic rubber prices, which rose sharply in the early months of 1981 and were up about 15 percent for the full year, an even sharper increase than in 1980. Plastic resin prices remained relatively flat during most of 1981 in spite of increased petrochemical costs. A long-term excess capacity problem emerged over the past 2 years. New plants were built in anticipation of continued strong growth in plastic sales which did not materialize.

Woodpulp prices moved up much less in 1981 than in either 1979 or 1980, reflecting the weak state of world pulp and paper markets. The indexes for paper and paperboard registered smaller increases compared with the previous year, as wastepaper prices continued to fall. Strikes in Canadian paper mills led to fears of shortages and, thus, higher prices during the summer; prices eased later in the year because of the economic slowdown.

For the third consecutive year, prices for inedible fats and oils moved down. This reflected slow demand and

Table 6. Changes in producer prices for selected materials other than foods and energy, 1980–81

PPI grouping	Relative importance, Dec. 1980	Percent change		Compound annual rate, seasonally adjusted except as noted, for 3 months ended—			
		Dec. 1979 to Dec. 1980	Dec. 1980 to Dec. 1981	1981			
				Mar.	June	Sept.	Dec.
Intermediate materials, except foods and energy	100.0	10.1	6.7	8.3	8.8	7.1	2.4
Materials for nondurable manufacturing	21.3	12.3	7.8	13.1	9.3	7.9	1.7
Materials for durable manufacturing	20.1	5.9	3.3	−.9	10.6	8.0	−4.2
Components for manufacturing[1]	20.9	13.5	8.7	13.5	5.0	10.5	6.0
Materials and components for construction	19.9	9.0	5.1	5.3	10.6	1.0	3.9
Synthetic fibers	.9	12.9	15.3	24.2	21.6	7.6	9.8
Finished fabrics	2.2	9.3	4.7	11.1	6.3	5.2	−.9
Leather	.4	2.3	−6.2	−29.6	4.9	−3.3	8.1
Industrial chemicals[1,2]	5.6	14.5	9.0	26.0	18.3	2.3	−7.5
Plastic resins and materials	1.7	4.4	8.4	6.6	7.1	14.7	5.6
Synthetic rubber	.4	13.8	15.0	36.6	15.0	8.2	7.6
Softwood lumber	2.2	−1.3	−9.6	−14.6	22.3	−33.9	−11.1
Paperboard	.9	11.2	8.2	22.8	2.0	6.2	2.9
Finished steel mill products	7.9	8.0	11.6	17.7	6.9	16.8	4.9
Foundry and forge shop products	2.5	8.3	6.1	3.7	8.7	10.0	1.9
Nonferrous mill shapes	2.2	3.0	3.2	−2.1	9.9	6.2	−4.3
Fabricated structural metal products	4.2	8.4	8.4	12.0	8.0	7.8	6.1
Electronic components and accessories	2.0	14.0	5.9	10.0	2.4	8.1	3.8
Concrete products	2.3	9.6	5.7	3.6	9.9	2.9	6.7
Motor vehicle parts	5.0	27.2	11.6	14.9	8.7	20.1	2.9
Crude nonfood materials, except energy	100.0	7.5	−11.3	−44.5	47.7	1.2	−22.5
Raw cotton[1]	11.2	35.5	−38.4	−30.5	−15.5	−63.3	−33.2
Cattle hides	3.1	−14.2	−7.2	−42.2	−14.3	19.1	−14.6
Crude natural rubber	2.5	5.6	−33.3	−41.5	−34.6	−36.1	−28.8
Wastepaper	2.5	−13.4	−25.1	−18.2	7.5	−4.1	−62.7
Iron and steel scrap	20.9	7.6	−24.1	−44.1	16.2	4.9	−60.2
Copper base scrap	8.3	−4.7	−14.7	−40.8	68.5	−8.5	−42.3
Aluminum base scrap	5.9	−10.7	−26.6	−32.0	−48.6	6.7	−22.1

[1] Not seasonally adjusted.

[2] Some prices are lagged 1 month.

large levels of livestock slaughter. Leather prices were also down for basically the same reasons and also because of an influx of imported leather.

Durable manufacturing materials. The durable manufacturing materials index recorded a comparatively small rate of increase for the second consecutive year. Part of this moderation was due to the downward trend in precious metals prices. In addition, weak demand for many durable consumer goods led to reduced demand for materials, thereby inhibiting price rises.

The index for nonferrous mill shapes (which includes such items as sheets, tubes, rods, and extrusions) was up only about 3 percent for the second consecutive year, following a big jump in 1979. The moderation was due to weak industrial demand and the prevalence of flat or declining prices for primary nonferrous metals. Copper and lead prices moved down 12.2 and 24.4 percent during 1981, reflecting poor demand in the housing construction and automotive industries. The price of tin tumbled about 16 percent during the first half of the year, as demand in industrialized countries fell short of the steady rise in world output over recent years. However, massive purchases of tin during the second half by an unidentified group raised tin prices by the end of 1981 to a level even higher than that of a year earlier. Zinc prices rose as producers curtailed output levels and supplies dwindled. The aluminum industry suffered a sharp decline in demand from the construction and durable goods sectors as well as the export sector. This was reflected in the 18-percent drop in the index for secondary aluminum, and in sharp cutbacks in production by primary aluminum producers.

Prices for precious metals declined steadily throughout 1981, after experiencing extreme turbulence in the previous year. Speculative and precautionary demand for such metals eroded when investors regained confidence in the American dollar as inflation eased somewhat and high interest rates boosted the dollar's exchange value. Commodity speculators were also discouraged by soaring interest costs which boosted the cost of borrowing, making financial investments more attractive. Over the year, gold prices fell almost 30 percent and silver prices were nearly halved.

The finished steel mill products index advanced 11.6 percent during 1981, more than in any other year since 1974. Most of the increases took place during the first 7 months of the year, and represented an attempt by producing firms to regain historical profit margins in the wake of widespread losses in 1980. Demand for steel, as indicated by domestic shipments, improved in early 1981. The area of greatest demand continued to be steel tubes and pipes used by the petroleum industry; prices for these products were sharply higher over the year. Because of the increased exchange value of the U.S. dollar, the relative price of foreign-made steel fell during the first half of 1981. As a result, import levels surged, even though the "trigger price" was adjusted upward considerably by the U.S. Commerce Department at the beginning of the fourth quarter of 1980 and the second quarter of 1981.[6] Prices remained fairly stable after July, as demand for steel began to wane when the economy turned downward after midyear.

Among other durable manufacturing materials, flat glass prices rose 7.6 percent in 1981, as higher energy costs offset the impact of weak demand from the automotive and construction sectors. Jewelers' materials and findings fell about 25 percent in response to lower precious metals prices.

Components for manufacturing. The PPI for manufacturing components was up 8.7 percent, following 2 years of double-digit increases. Weak demand was a major influence in moderating rates of price increase for a number of components, such as foundry and forge shop products, plastic parts and components, refrigerant compressors, and electronic components other than tubes and relays. A large part of the increase which did occur for the manufacturing components index was due to higher prices for motor vehicle parts, attributed to increases in steel prices. Sharp increases also occurred for ball and roller bearings; demand for these items typically strengthens during recessions, as businesses postpone new equipment purchases and install replacement parts in old equipment instead. Likewise, advances at or near double-digit rates were registered for electric motors, internal combustion engines, tractor parts, and metal cutting machine tool parts.

Construction materials. The index for construction materials and components moved up 5.1 percent in 1981, the smallest increase since 1972. Although the pace of residential construction had staged a brief recovery after mid-1980, it turned down sharply in early 1981 after mortgage interest rates surged to record levels. As a result, demand for nearly all types of construction materials was exceptionally poor during 1981, and financial losses induced many material manufacturers to cut output. Reduced output and tight inventory controls made possible sporadic price increases during the year, such as occurred for plywood and softwood lumber during the spring. However, both these indexes showed large declines for the year. Prices for millwork moved down steadily during the first two quarters, but these losses were recouped after midyear, and that index showed virtually no change for the year. The relative strength in the millwork market was attributable to its wider usage in home renovation, often undertaken as an alternative to new home purchase during economic stringency.

Most other types of materials used in construction ei-

ther declined or rose slightly over the year. There were large increases during the first half for several products either composed of petroleum derivatives or which require large amounts of energy in the production process. These included concrete products, structural clay products, refractories, asphalt roofing, and asphalt paving mixtures. The index for fabricated structural metal products rose just as much as in the previous year, partly because of higher steel prices. In addition, demand was not as weak as for other construction materials because these products are mainly used for large-scale commercial construction, which was not as badly affected as was the single-family residential construction market. Prices for copper wire and cable moved down over the year, a result of weak demand and lower primary copper prices.

Crude nonfood materials, except energy

Producer prices for crude nonfood materials excluding energy, which tend to be highly responsive to shifts in general economic conditions, fell during most of 1981. The weakness in sensitive raw industrial prices was pervasive. Prices for ferrous scrap, raw cotton, and crude natural rubber tumbled after rising in 1980. Prices for nonferrous scrap and wastepaper declined more than in the previous year, and cattle hide prices fell for the second consecutive year. Although prices for potash and for sand and gravel continued to move up in 1981, neither rise was as large as in the preceding year.

After climbing at an unusually fast pace in the last half of 1980, iron and steel scrap prices began to drop dramatically in early 1981 and continued to decline during most of the year. The downturn was attributable, in part, to much weaker export markets in both Europe and the Far East, coupled with sluggish domestic demand associated with a hard-hit steel industry. In addition, high interest rates induced scrap buyers to purchase only what was required for immediate needs.

After surging in 1980 when a severe drought cut production drastically, raw cotton prices retreated throughout 1981. Output recovered to a new record which was 40 percent larger than the crop of the previous year. Textile mills tended to minimize their cotton purchases in the hope of buying at lower prices later. Export demand dropped more than domestic consumption.

Crude natural rubber prices, which had turned down in late 1980, continued to fall through most of 1981. The principal influence was the weakness in the automotive and tire industries, which typically account for almost three-quarters of domestic consumption of crude natural rubber.

Nonferrous scrap prices fell during most of the year, partly because of weak demand from the construction and transportation equipment industries. High interest rates and lower prices for primary copper and aluminum also served to depress nonferrous scrap prices.

Wastepaper prices, which had decreased through most of 1980, dropped even more rapidly during 1981. Expanded exports of wastepaper were unable to compensate for the decrease in domestic consumption by paper and board mills. A drop in consumer demand for recycled products, such as gypsum wallboard facing and panelboard (both are made from recycled wastepaper) further contributed to falling prices for wastepaper.

Cattle hide prices also continued their downward trend through the year. Abundant supplies associated with a high cattle slaughter rate, together with low demand from domestic and foreign tanners, generally kept cattle hide prices down.

Potash prices continued to rise, although not as much as in the preceding year, reacting to weakened domestic demand for potash as a fertilizer material. Increased energy costs helped to raise sand and gravel prices. □

FOOTNOTES

[1] The rental equivalence approach to measuring homeownership costs will be incorporated into the official CPI beginning in January 1983. See Robert Gillingham and Walter Lane, "Changing the treatment of shelter costs for homeowners in the Consumer Price Index," *Statistical Reporter*, December 1981, pp. 62–69, and "CPI Changes," *Monthly Labor Review*, November 1981, p. 2.

[2] The CPI for "motor fuel" reflects the newly-added direct pricing of gasohol and diesel fuel, in addition to gasoline.

[3] Because of the atypical seasonal pattern of gasoline demand during 1981, seasonally adjusted data (which are based on historical patterns) may be misleading; that is, the absence of price increases in the summer resulted in declines in seasonally adjusted indexes, whereas the corresponding absence of the usual decreases during the later months caused seasonally adjusted data to indicate an "artificial" upturn.

[4] For more detailed discussion of selected food prices during 1980 and 1981, particularly for meats, grains, and sugar, see William Thomas and others, "Large meat, grain supplies cut recent food price increases," *Monthly Labor Review*, January 1982, pp. 10–15.

[5] A law enacted in December 1981 extends the $13.10 milk support price, in effect since October 1980, through October 1982. For the next 3 years, the minimum prices are set at $13.25, $14.00, and $14.60 per hundredweight of raw milk.

[6] The trigger price mechanism is a system designed to monitor prices of imported steel so as to minimize "dumping," that is, selling at below-cost prices. The setting of the trigger price and the implementation of the system was begun in 1978 under the auspices of the U.S. Treasury Department, but has since been shifted to the U.S. Commerce Department.