The Anatomy of Price Change

Producer Price trends continue moderate in the third quarter

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Prices received by producers of finished goods rose at a seasonally adjusted annual rate of 2.5 percent during the third quarter of 1983, slightly below the 3.0 percent rate in the second quarter. By contrast, prices received by producers of intermediate goods doubled from a 3.3-percent seasonally adjusted annual rate in the second quarter to a 6.6-percent rate in the third. Crude material prices rose at a rate slightly less than the 6-percent rate recorded in the preceding quarter. (See table 1.) *(All percent changes in this report are annual rates unless otherwise indicated.)*

Among finished goods, the energy index slowed from 11.4 percent in the second quarter to a rate of 3.7 percent in the third. The finished consumer foods index turned up slightly, rising 1.5 percent from June to September after showing no change during the preceding 3 months. The index for finished goods other than foods and energy continued to rise modestly (2.8 percent in the third quarter, in the wake of 2.5 percent in the previous 3 months). Over the first 9 months of 1983, the Finished Goods Price Index inched up at a seasonally adjusted annual rate of just 0.2 percent, as a sharp drop in the first quarter was balanced by moderate advances in each of the subsequent quarters.

The general economy continued to improve during the third quarter, although the rate of growth was somewhat lower than the unusually high rate in the second quarter. Consumer spending remained robust for a broad range of goods, and businesses became more willing to accumulate inventories to keep up with demand. Although industrial production and capacity utilization rates continued to rise, expenditures for many kinds of capital investment goods lagged behind the overall recovery. The persistence of historically high U.S. interest rates dampened demand for residential construction and depressed foreign markets for American-made products. Inflation continued to be restrained by modest wage increases, improved productivity, the stage of the recovery, and stiff competition from imports; however, an unusually hot, dry summer devastated many portions of the agricultural sector and strongly affected the outlook for prices of foods in both the short and the long run.

Finished goods

Finished consumer goods. The Producer Price Index for finished consumer goods moved up at an annual rate of 2.7 percent after seasonal adjustment, following a 3.3-percent increase from March to June. A substantial deceleration in price increases for household energy items, coupled with falling passenger car prices, offset a small upturn in food prices.

Within the finished energy goods category (most of its components are lagged 1 month), the gasoline index increased 5.5 percent, far below the 26.9 percent of the previous 3 months. The slowdown in inflation for home heating oil was somewhat less pronounced—9.5 versus 20.3 percent. Prices for most refined petroleum products tended to stabilize over the summer, after the last round of general price increases in the spring. The relatively high inflation rate in home heating oil prices partly reflected concern about the historically low levels of inventory as the new heating season approached. The natural gas index dropped for the second consecutive quarter, largely because of a serious oversupply in the face of weak demand. The September 1983 natural gas index was only 1.2 percent higher than in September 1982, in sharp contrast to its 21.2 percent jump between September 1981 and September 1982 and its 30.2 percent surge in the 12 months ended in September 1981.

The price index for new passenger cars dropped at a seasonally adjusted annual rate of 2.9 percent, somewhat larger than the second quarter drop. All of the third quarter decline occurred in September, when the index reflected the impact of the inventory liquidation allowances which domestic auto manufacturers traditionally grant their dealers to help close out the old model year. During the summer, consumer demand for new cars was far higher than in recent years, an expression of pent-up demand and renewed optimism among consumers following two recent, severe recessions. Demand was so strong that inventories in dealers' lots plunged to unusually low levels, in sharp contrast

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Table 1. Percent changes in selected producer price indexes by stage of processing, 1982–1983

Index	12 months ending Sept. 1983	Seasonally adjusted annual rate for 3 months ending—				
		Sept. 1982	Dec. 1982	Mar. 1983	June 1983	Sept. 1983
Finished goods	1.4	4.2	5.2	-4.7	3.0	2.5
Finished consumer foods	1.3	-7.7	.8	4.1	0	1.5
Finished energy goods	-5.5	30.9	7.0	-35.5	11.4	3.7
Finished consumer goods excluding foods and energy	2.9	4.2	7.9	-2.0	3.1	2.9
Capital equipment	2.4	3.5	3.6	2.0	1.7	2.5
Intermediate materials, supplies, and components	1.7	1.4	1.3	-4.0	3.3	6.6
Intermediate foods and feeds	10.1	-13.7	-4.5	10.3	5.8	32.4
Intermediate energy goods	-2.6	7.3	6.6	-22.5	2.6	11.6
Intermediate materials excluding foods and energy	2.1	1.0	1.0	.8	2.9	4.0
Crude materials for further processing	3.9	-12.2	1.5	2.9	6.0	5.6
Crude foodstuffs and feedstuffs	6.0	-26.4	1.3	18.1	.8	5.9
Crude nonfood materials	1.6	6.8	1.7	-11.3	12.1	5.3

to the excessive stocks that had plagued the industry for some time. As a result, some car manufacturers scaled back or discontinued some of their sales incentive programs, such as direct rebates to buyers and subsidies to banks that had agreed to give below-market financing. By raising the net unit proceeds received by producers, this served to offset, for the third quarter as a whole, some of the effect of the September liquidation allowances.

Prices for many kinds of consumer foods—such as processed poultry, fresh vegetables, and cooking oils—rose substantially during the third quarter because of reduced supplies due to the drought in many growing areas. For example, the drought boosted processed chicken prices both directly through its impact on the supply of chickens and indirectly through upward pressure on feed costs. Harvests of sweet and white potatoes, lettuce, tomatoes, and many other vegetables were severely reduced by the weather. Prices for some kinds of cooking oils processed from soybeans and other oilseeds soared because of extensive damage to the domestic soybean crop.

However, the impact of the adverse weather on food prices was muted, at least temporarily, by lower red meat prices. Many cattle and hog owners rushed to liquidate their herds to avoid the rapid runup in feed costs associated with the drought. The large number of cattle and hogs coming to market, including some breeding stock, kept prices for beef and pork falling for much of the third quarter. Once this liquidation process has run its course, however, it is expected that the relatively small remaining supply of livestock will lead to higher meat prices.

Among other consumer goods, prices for tobacco products and floor coverings turned up after declining during the first half of the year, and price increases accelerated for cosmetics, luggage and small leather goods, lamps and bulbs, and prescription drugs. At the same time, however, substantial decreases were registered for costume jewelry, tires and tubes, glassware, and flatware. Price advances for most other consumer products remained moderate. The impulse towards raising prices to improve profits during a time of resurgent consumer demand was tempered or outweighed by the need to restrain price hikes to preserve or extend market shares in the face of strong foreign and domestic competition. Some firms increasingly concentrated on cutting production costs of higher-value specialty items that could be sold profitably without boosting prices.

Capital equipment. The Producer Price Index for capital equipment rose at a seasonally adjusted annual rate of 2.5 percent, somewhat more than in either the first or second quarters of 1983. Despite improved demand, declines in prices for heavy and light trucks at the end of the 1983 model year (September) helped to hold down the third quarter rise in this index. Prices for energy production machinery also moved down; however, demand for oilfield drilling and production equipment was notably higher than the low point reached this spring. Prices for most other kinds of capital equipment moved up sluggishly. Machinery producers generally were still waiting for the upsurge in other sectors of the economy to translate into improved demand for projects to modernize or expand industrial capacity.

Intermediate goods

The index for Intermediate Materials, Supplies, and Components climbed at a 6.6-percent seasonally adjusted annual rate in the third quarter, up from a 3.3-percent rate in the previous quarter. The broad-based acceleration was evident in foods, energy, and a number of other products. The dominant influences were the overall economic expansion and the unusual heat experienced in major crop-producing areas of the country.

Foods and feeds. The intermediate foods and feeds index soared 32.4 percent, the highest since the fall of 1980. This year's hot summer reduced harvests of corn, soybeans, and other crops used in the processing of feeds and vegetable oils and, at the same time, boosted demand for feeds by damaging pastures. As a result, prices for prepared animal feeds climbed 17.5 percent from June to September (before compounding), and crude vegetable oil prices soared 65.6 percent, the largest quarterly rise on record. The climb in the index for animal fats and oils was also substantial, although less than what was registered for crude vegetable oils. Because items within these two categories are often substituted for each other, their price trends usually move in tandem.

Energy. The index for intermediate energy goods (which consist of products purchased by businesses) moved up 11.6

percent, after falling rapidly at the beginning of the year, then turning up in the late spring. Residual fuel prices advanced substantially, partly as the result of increased demand from industrial users. Utilities also purchased greater amounts of residual fuel in order to accommodate peak summer demand for electricity, as air conditioning usage in the hot summer was unusually high. The price index for this fuel had fallen in eight of the nine preceding calendar quarters, inducing many industrial plants and utilities which had switched to natural gas to switch back to residual fuel oil. The index for diesel fuel also turned up somewhat after recent declines, as the economic recovery spurred rail, truck, and ship freight traffic. Prices for coke oven products likewise turned up, partly reflecting improved conditions in the steel industry. In contrast, commercial jet fuel prices continued the steady decline evident for many months. The long-term contracts prevalent in this market result in a pattern of price movements which typically lags behind other refined petroleum products.

Manufacturing materials. The index for nondurable manufacturing materials rose 9.3 percent, after declining during the first half of the year. Prices for industrial chemicals moved up 9.5 percent, the first significant increase in two years, even though costs for crude petroleum had remained virtually flat. Similarly, the index for plastic resins and materials registered an accelerated increase because of increased petrochemical costs and strengthened demand from domestic makers of plastic construction and automotive products and from foreign buyers. Prices for inedible fats and oils continued to rise sharply in line with the recent surge in oilseed prices. Higher oilseed prices were also a major cause of the substantial upturn in the index for paint materials. Generally, improved demand was responsible for accelerated prices increases for both processed yarns and paper.

The index for durable manufacturing materials slowed from an 8.9-percent increase to 1.9 percent between the second and third quarters. However, this was largely due to a downturn in the index for jewelers' materials and findings, which had soared in the preceding quarter. Burdensome supplies in world markets led to lower prices for primary copper and tin after relatively little movement in the second quarter.

Most other types of durable materials displayed larger increases compared to the previous quarter. The PPI for steel mill products recorded an 11.2-percent advance, following a year and a half of virtually flat prices. The increases were concentrated in carbon sheet and strip, which are widely used by the expanding automotive industry. Continued weak demand from some sectors, such as capital equipment manufacturers, prevented significant price advances for most other kinds of steel. Improved demand led to sizable increases for aluminum, hardwood lumber, and Portland cement.

Construction materials.. The index for construction materials and components moved up 1.7 percent, even less than in other recent quarters. Renewed uncertainty over the strength of the recovery in housing construction was reflected in mixed price signals among various products. The annual rate of new private housing starts reached a peak of nearly 1.9 million units in August after a fairly steady climb dating from the end of 1981. However, an upturn in mortgage interest rates which began in late spring threatened the housing industry once again.

Prices for gypsum products (such as wallboard) rose very sharply, as the dominant firms in this industry moved to restore sagging profit margins while supplies tightened. In addition, asphalt roofing prices experienced the first quarterly increase in a year. Improved demand was a key element in price advances for plastic construction products, millwork, and asphalt paving mixtures.

The softwood lumber industry, which had experienced major gains in prices and production earlier in the year, was quickly affected by indications of a downturn in the housing market. In fact, prices for both softwood lumber and plywood began to fall in July, while actual housing construction starts did not turn down until September. Domestic producers had kept lumber inventories down during the recession, but by July it was apparent that output was running ahead of demand. Labor problems in Canadian sawmills had little effect on the high level of imports into the U.S., which further contributed to the oversupply of lumber.

Other intermediate goods. The index for electronic components rose 10.3 percent, far more than in most recent times. After a prolonged slump, manufacturers of semiconductors began to rebuild output levels, as demand for certain devices such as random access memory chips pulled prices sharply higher. The economic recovery also contributed to price hikes for electric motors and generators, photographic supplies, and glass containers. Prices were lower, however, for internal combustion engines and fertilizers.

Crude materials

The Producer Price Index for Crude Materials for Further Processing increased at a seasonally adjusted annual rate of 5.6 percent, following a 6.0-percent advance in the preceding 3 months. A marked third quarter acceleration in price increases for foodstuffs was balanced by a slowdown in inflation for nonfood items.

Foodstuffs. The index for crude foodstuffs and feedstuffs increased 5.9 percent at a seasonally adjusted annual rate. Third quarter price movements among crude foodstuffs were dominated by the effects of the summer's unusually hot and dry weather. The price level for soybeans was 49.7 percent higher in September (before compounding) than in June, with similar increases for other oilseeds. This steep climb was due to the crop-damaging weather, tight stock holdings by farmers, and higher demand for animal feeds. Soybean yields were down one-fifth from 1982. The price level for corn rose 7.8 percent over the quarter (before compounding) as a result of the summer weather, tight farmer holdings, and a reduction in planted acreage by the Federal payment-in-kind (PIK) program. The drought was the overriding reason that corn yields fell more than one-fourth from 1982. Prices for hay, barley, oats, and rye also surged because of the heat wave.

Although affected by both the drought and by acreage reduction, corn prices were less volatile than soybean prices for several reasons. There is usually a fairly consistent ratio between the prices for corn and soybeans because they can substitute for each other in their primary use as feedstuffs. In the first half of the year, corn prices increased substantially because of acreage reduction, while soybean prices were depressed by high inventories and a low volume of exports (due to the strong dollar). Consequently, a realignment of these prices was expected. In the summer, corn price increases caused by the crop-damaging weather were moderated by high inventories from previous bumper harvests. Once prices started moving, the overdue correction for the abnormal shift in the corn-soybean price ratio also dampened corn price increases while pulling up soybean prices.

An abundant wheat crop, harvested for the most part before the onset of severely hot weather, caused prices to fall in July. The good harvest was augmented by the simultaneous release of payment-in-kind wheat stocks to farmers. Prices for wheat rose for the rest of the quarter, pulled up by other grain prices as well as by the base price for the U.S. loan program. Many farmers realized that they could net more dollars per bushel by borrowing against their wheat than by selling at the low July market price. Thus, less wheat was available for markets, and prices approached the loan program base price.

Expanded livestock production combined with higher feed costs caused livestock farmers to cut back their herds and add to their already large marketings, bringing livestock prices down. Much grazing land for cattle was parched because of the drought, and prospective feed costs were likely to rise as well. As a result, cattle farmers reduced their large 1983 inventory by raising slaughter rates and cutting back breeding stock, which increased current marketings and lowered prices. Hog prices showed a brief increase in August when hot weather prompted farmers to ship fewer hogs to market, to prevent suffocation in transport. However, September prices resumed their long downward trend begun early in the year. Live poultry stocks, which had already been reduced in the spring because of rising feed costs, experienced a slower rate of weight gain in the summer's hot weather, further reducing marketings. The resulting sharp price increases were strengthened by reports of high mortality rates.

Sensitive industrial materials. The index for crude nonfood materials other than energy rose 20.2 percent at a seasonally adjusted annual rate. Aluminum base scrap prices climbed very sharply for the third consecutive quarter on the strength of robust demand from the transportation and construction sectors. Prices for iron and steel scrap showed small increases as demand from steel mills remained steady. On the other hand, copper base scrap prices fell, reflecting the overall weakness in copper markets.

Raw cotton prices continued to rise, as they had during the first half of the year; apparel demand improved, and cotton production was curtailed by the PIK program. Cattle hide prices advanced strongly, as good demand continued. However, the increase was smaller than in the second quarter because of expanded slaughtering. Prices for crude natural rubber turned up; demand increased and production was cut back in response to the second quarter's excess supplies.

Contrary to this general upward trend, potash prices plummeted. Demand for potash is tied to fertilizer needed for corn plantings, which had been lowered by the spring acreage reduction. Large end-of-season surpluses of potash led to heavy discounting in early summer.

Crude energy materials. Third quarter prices for crude energy materials showed the smallest decreases of the year. Natural gas prices fell for the second consecutive quarter. The index for natural gas reached a peak last March after steadily climbing for several years as a result of legislation phasing out price controls. In reaction to these rising prices, industrial users adjusted their demand downwards, in part by switching to residual fuel oil. These market changes began to be felt at the producer's level during the second and third quarters. Also, the Canadian government lowered their export prices during the third quarter to preserve their share of the U.S. natural gas market. □