

Price Spreads for Selected Foods

Red Meats

Beef supplies and consumption were down slightly in 1997 after increasing each year since 1993 while pork consumption has decreased each year since 1994. Pork supplies did, however, increase during the fourth quarter of 1997 and increased substantially in 1998. The retail price of beef decreased slightly while the farm price increased in 1997, resulting in a decrease in the farm-to-retail price spread for beef in 1997. The highest nominal spread for beef was in 1995. Retail pork prices increased in 1997 to a record nominal high, while the farm price decreased, resulting in a record high farm-to-retail pork spread on a nominal basis.

Choice Beef

Retail Choice weighted-average beef prices in 1997 were \$2.80 per retail pound, nearly the same as in 1996, staying well below the nominal record level price of \$2.93 in 1993 (table 9). Prices at both retail and farm levels were relatively stable throughout the year. Prices of individual cuts ranged from an average of \$1.40 per pound for ground beef for 1997 to nearly \$6.00 per pound for the most expensive steaks.

Farm value of beef increased 2 cents in 1997 from 1996 levels. The farm value share increased to 49 percent of the retail price of beef in 1997 from 48 percent in 1996. The farm value share has trended down over the years (table 9). The highest farm value on a nominal basis was in 1990, 31 cents above 1997. Farm value is computed using the USDA Agricultural Marketing Service's five-region direct market price series for live slaughter steers, 65- to 80-percent Choice. Prices per pound of slaughter steers are multiplied times 2.4 pounds, the quantity of live animal required to sell 1 pound of Choice beef at retail. We then estimate the value of byproducts, principally the hide, obtained from the slaughtered animal. We subtract this byproduct value to obtain the net farm value of the meat alone.

The farm-to-retail price spread for Choice beef has decreased the last two years to \$1.42 in 1997 from

the record high of \$1.46 per pound in 1995. The spread varied from a high of \$1.48 in January 1997 with a low of \$1.36 in March 1997 and was \$1.44 in December. The price spread for beef on a nominal basis has increased over time, but at slightly less than the rate of inflation since 1980.

The farm-to-retail price spread pays for various marketing functions, most of which tend to increase in cost over time. The estimated cost of slaughtering and boxing beef was 19.4 cents per pound in 1996 and 17.1 cents in 1997 (table 10). Transportation of beef from the packer to the retailer cost 3.8 cents per retail pound in 1996 and 3.9 cents in 1997.

Warehousing and store delivery were estimated to cost 12.9 cents per pound at retail in 1997, based on data in the *1992 Census of Wholesale Trade*, published by the U.S. Department of Commerce, which indicated that warehousing and delivery costs represented 5.8 percent of gross sales by meat wholesalers.

Cutting and merchandising of Choice beef cost \$1.08 per pound in 1997. The cost has trended up over time but decreased slightly in 1997 from 1996. This cutting and merchandising cost represents the difference between the total of other functions and the retail price. Data for 1991-97 indicate an upward trend in the cost of cutting and merchandising beef, reflecting the effects of inflation on marketing costs. In contrast, warehousing and store delivery costs have been lower in recent years than in 1991, while slaughtering and boxing costs have varied widely.

Pork

Retail pork prices averaged \$1.97 per pound during 1992-95, down from 1990-91 levels of \$2.12, but increased to record levels of \$2.21 in 1996 and \$2.32 in 1997 on a nominal basis. Even so, prices in 1997 were only 37 percent above prices in 1982-84 (table 9), smaller than the 57-percent increase in overall food prices between 1982-84 and 1997. Per capita pork consumption on a retail-weight basis decreased in 1996 and 1997 (which fits with the price increase noted above), but began to increase in the last quarter of 1997 and continued into 1998. The net farm value

also increased in 1996 and 1997. Meanwhile, the farm value share decreased from 38 percent in 1996 to 35 percent in 1997.

Farm value is computed from the average price of barrows-and-gilts at five midwestern markets. This average price is then multiplied by 1.7 pounds, the quantity of live animal needed to sell 1 pound of pork at retail. A value for lard and other byproducts is then subtracted to obtain the net farm value.

Retail price changes lag farm price changes, particularly when farm prices decrease. These lags result in spread increases when farm prices decrease, as they did in the last half of 1997. The farm-to-retail price spread for pork increased 14 cents to a record-high \$1.50 for 1997 (table 9), eclipsing the previous record set in 1996. This increase reflected the effects of an increase in retail price combined with a net decline in farm value. The farm-to-wholesale component of the total spread in 1997 (36 cents) was an increase, but not to a record high. The wholesale-to-retail spread increased in 1997 to a record high \$1.14 per retail pound equivalent on a nominal basis.

The slaughtering and processing component represents charges for slaughtering the hog, cutting the carcass into primals, and includes processing hams, bacon, and other products. We estimate this spread by deducting the farm value and intercity transportation costs from the composite wholesale price of pork. The transportation portion of the price spread for pork between the packer and retail marketing areas has stayed about the same for several years. The warehousing and store delivery spread increased slightly in 1997 (table 10).

Cutting and merchandising costs (\$1.04) made up the largest component of the farm-to-retail price spread for pork in 1997. This figure was 13 cents higher than pork's cutting and merchandising cost in 1991. The cutting and merchandising component is calculated as a residual between the total of all other functions and the retail price. The trend in this component had been fairly flat until the last 2 years.

Other Animal Products

Retail prices rose 2.7 cents per pound for whole, ready-to-cook chicken in 1997, while farm value dropped 2.0 cents (table 11). Thus, the marketing spread widened 4.7 cents in 1997, only the third increase of the 1990's. The spread was stable from 1981 to 1986, averaging 33.5 cents per pound. From 1986 to 1991, the marketing spread trended up to average 44.5 cents per pound in 1991. Since that time, the spread has risen only 2.8 cents to 47.3 cents per pound in 1997. Broiler processing costs have increased little in recent years, reflecting gains in labor productivity that have offset rising labor and other input costs.

Much of the demand for broilers is for further processed products. Broiler producers are cutting chicken into parts, and most producers are further processing chicken into fillets, nuggets, and other value-added products according to buyers' specifications. The processor generally realizes a more favorable gross margin and increased volume from this further processing. Most of these products are served through fast-food and institutional outlets, but considerable volumes of chicken parts are sold through retail stores for home consumption. These further processed products are not included in farm-to-retail price spread computations, but they represent a source of market strength that supported prices in 1997 as per capita consumption of broilers continued to rise at the relatively sharp pace of 2.7 percent per year.

Egg prices dropped 5 cents in 1997, after rising 18 cents in 1996. For 1997, retail shell-egg prices averaged \$1.06 per dozen of grade A, large (table 11). The farm value also declined, dropping 9.2 cents to 59.5 cents. Meanwhile, the price spread between the farm value and the retail price rose 4.4 cents. This rise is consistent with the general upward trend in the price spread for eggs since 1985, and primarily reflects the faster rate of decrease in the farm value, relative to the retail price drop. However, the spread is the primary determinant of retail prices during most years.

The retail price of fluid whole milk rose 2.7 cents per half-gallon in 1997. Since the early 1980's, retail milk prices have tended to rise less than broader measures of consumer prices. The 1997 average retail price for a half-gallon of whole milk was \$1.59, which was 39 percent higher than in 1987 (table 11). This compares with a 41-percent average increase in grocery store food prices.

A 12-percent farm value drop, coupled with a 12-percent expansion in the farm-to-retail price spread, shaped retail milk prices in 1997. The farm-to-retail price spread for fluid milk increased 10.7 cents to \$1.00 in 1997. The spread is 63 percent of the price of a half-gallon of fluid milk, and thus plays a more important role in determining milk prices. Therefore, the retail price of milk rose 1.7 percent in 1997, even though the farm value and price spread rose on an equal, but opposing, percentage basis. Farmers received an average of 58.5 cents for milk equivalent to a half-gallon at retail in 1997, 8.0 cents less than in 1996.

Fruits and Vegetables

The farm-to-retail price spread for fresh fruits and vegetables increased about 2.9 percent in 1997, slower than the average of all foods. The increase that did occur was primarily due to higher spreads for fresh fruits, whose farm value dropped 9.7 percent, the first decline since 1994. Meanwhile, retail prices rose 0.9 percent, thereby producing a wider spread. Vegetable spreads offset the fresh fruit results to produce the slow growth in the aggregate price spread for fresh fruits and vegetables. The farm value of fresh vegetables increased 4.8 percent. Although retail prices for fresh vegetables rose nearly 3 percent, the higher farm value squeezed the spread, resulting in a smaller percentage rise in the price spread.

Produce wholesale-to-retail margins generally exceed the average margin of the typical supermarket, and produce is the most profitable and fastest growing department of the typical store. For example, *Supermarket Business* indicates that the fresh produce margin was 44.1 percent in 1996, considerably

larger than the 30.1-percent average for all foods. The larger margin reflects larger retailing costs associated with increased perishability and the labor required to handle fresh produce. The cost of transportation and refrigeration required to move a product such as peaches is also included in the margin. Retail prices may not necessarily drop proportionately to lower farm prices stemming from a larger crop.

While gross margins alone do not reflect actual profitability, the percentage of storewide gross profit dollars that fresh produce contributed has been much greater than their contribution to store sales would suggest. Produce accounts for 8.7 percent of total sales of the typical supermarket, but yields about 20 percent of net profit dollars, according to a survey by the Produce Marketing Association.

The price spread for processed fruits and vegetables rose 4.2 percent in 1997. The principal item in this food group is frozen concentrated orange juice. The retail price of a 12-ounce can of frozen juice rose 1.6 percent in 1997 to \$1.30 (table 12). This increase mainly reflected a 3.7-percent rise in the price spread. However, the retail price increase was mitigated by a 2.1-percent farm value decline, which reflected an 11-percent increase in the Florida orange crop.

Other Crop Products

The farm-to-retail spread—consisting of wheat-milling, breadbaking, and distribution costs—accounts for nearly all of bread's retail price, which averaged 87 cents per pound in 1997, slightly lower than in 1996 (table 13). This price is the average of monthly prices reported by the U.S. Bureau of Labor Statistics. The farm value of wheat, at 4.7 cents, was 1.2 cents lower in 1997 than in 1996. The farm value represents the payment to farmers for the quantity of wheat (approximately 0.86 pound) required to produce the flour for a 1-pound loaf of bread. The payment is computed from the average farm price for all wheat. A deduction is made for the value of millfeed, a byproduct of milling the wheat. The value of the millfeed ranges from 15 to 20 percent of the value of the wheat, depending on the flour-milling extraction rate, the price of flour, and the price of millfeed.

Other farm-derived ingredients, including lard, soybean oil, high-fructose corn syrup, and soy-whey blend, contributed 0.7 cent to a total farm value of 5.4 cents. The farm value percentage of all ingredients was 6 percent of the retail price in 1997, 2 percentage points less than in 1996.

Because of the stability provided by the price-support program for sugar, retail sugar prices, together with the farm value and price spreads, changed relatively little from year to year. On balance, farm values rose slightly in 1996/97. This relatively stable pattern may not hold in the future as price supports are rescinded, pursuant to the Federal Agriculture Improvement and Reform Act of 1996.

The 1996/97 farm value of a pound of sugar was 14.2 cents, about 1.4 percent higher than that of a year earlier (table 14). The farm value is based on the season-average prices that growers received in the United States for sugarcane and sugar beets, based on raw and refined sugar prices. The farm value accounted for 34 percent of the retail price of sugar in 1996/97, lower than the previous 2 years. The farm-to-retail price spread for sugar was 28 cents in 1996/97, 1 cent higher than the previous year. This spread covers all the functions of transporting sugarcane and sugar beets to processing plants, processing sugarcane and refining raw cane sugar, processing sugar beets, and selling sugar to wholesalers, intercity transportation, and wholesaling and retailing charges.