

## Producer Price Indexes -- February 2006

The Producer Price Index for Finished Goods declined 1.4 percent in February, seasonally adjusted, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. This decrease followed a 0.3percent gain in January and a 0.6-percent increase in December. At the earlier stages of processing, the intermediate goods index turned down 0.3 percent, after rising 1.2 percent in the previous month, and prices for crude goods dropped 9.2 percent, following a 0.5 -percent decrease in January. (See table A.)

Table A. Monthly and annual percent changes in selected stage-of-processing price indexes, seasonally adjusted

| Month | Finished goods |  |  |  |  | Intermediate goods | Crude goods |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | Foods | Energy | Except foods and energy | Change in finished goods from 12 months ago (unadj.) |  |  |
| 2005 |  |  |  |  |  |  |  |
| Feb. | 0.5 | 0.6 | 1.9 | 0.1 | 4.7 | 0.6 | -0.7 |
| Mar. | . 8 | . 6 | 3.0 | . 1 | 5.0 | . 9 | 4.7 |
| Apr. | . 5 | -. 1 | 2.1 | . 3 | 4.8 | . 7 | 2.7 |
| May | -. 2 | -. 2 | -1.6 | . 2 | 3.6 | -. 3 | -3.1 |
| June | . 1 | -. 7 | 1.5 | -. 1 | 3.7 | . 2 | -1.7 |
| July | . 8 | -. 7 | 3.9 | . 3 | 4.7 | 1.0 | 5.1 |
| Aug. | . 5 | -. 2 | 3.0 | 0 | 5.3 | . 5 | 3.5 |
| Sept. | 1.4 | 1.2 | 5.4 | . 2 | 6.9 | 2.3 | 10.5 |
| Oct. | . 8 | r. 1 | r 4.3 | -. 3 | 5.9 | r 3.0 | r 5.7 |
| Nov. | -. 4 | r . 4 | r -2.6 | r. 2 | 4.4 | r -1.4 | r -1.7 |
| Dec. | . 6 | . 8 | 2.0 | . 1 | 5.4 | . 1 | -2.3 |
| 2006 |  |  |  |  |  |  |  |
| Jan. | . 3 | . 2 | 0 | . 4 | 5.7 | 1.2 | -. 5 |
| Feb. | -1.4 | -2.7 | -4.7 | . 3 | 3.7 | -. 3 | -9.2 |

$\mathrm{r}=$ revised. Some of the figures shown above and elsewhere in this release may differ from those previously reported because data for October 2005 have been revised to reflect the availability of late reports and corrections by respondents.

Among finished goods in February, the index for energy goods fell 4.7 percent, following no change a month earlier. Prices for consumer foods turned down 2.7 percent, after a 0.2 -percent gain in January. Excluding prices for foods and energy, the finished goods index moved up 0.3 percent in February, compared with a 0.4 -percent advance in the previous month.

Before seasonal adjustment, the Producer Price Index for Finished Goods decreased 1.4 percent in February to $157.8(1982=100)$. From February 2005 to February 2006, prices for finished goods rose 3.7 percent. Over the same period, the index for finished energy goods advanced 17.0 percent, prices for finished goods other than foods and energy increased 1.7 percent, and the finished consumer foods index fell 1.3 percent. For the 12 months ended February 2006, prices for intermediate goods moved up 8.2 percent, and the crude goods index rose 12.9 percent.

## Finished goods

The finished energy goods index, which was unchanged in January, decreased 4.7 percent in February. Gasoline prices decreased 11.0 percent, following a 3.5 -percent drop in January. The indexes for liquefied petroleum gas and diesel fuel also fell more in February than they had a month earlier. Prices for residential natural gas turned down, after rising in the previous month, and the index for residential electric power was unchanged, after increasing in the prior month. By contrast, the index for lubricating greases advanced 4.1 percent, compared with a 1.3-percent increase in January. (See table 2.)

Table B. Monthly and annual percent changes in selected price indexes for intermediate goods and crude goods, seasonally adjusted

| Month | Intermediate goods |  |  |  | Crude goods |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Foods | Energy | Except foods and energy | Change in intermediate goods from 12 months ago (unadj.) | Foods | Energy <br> (unadj.) | Except foods and energy | Change in crude goods from <br> 12 months ago (unadj.) |
| 2005 |  |  |  |  |  |  |  |  |
| Feb. | -0.4 | 1.2 | 0.5 | 8.4 | -2.8 | 1.5 | -2.1 | 8.3 |
| Mar. | 1.0 | 3.4 | . 4 | 8.7 | 4.7 | 7.0 | -. 5 | 11.4 |
| Apr. | -. 1 | 3.2 | . 1 | 8.1 | -2.2 | 6.5 | 2.2 | 12.4 |
| May | . 7 | -. 9 | -. 3 | 6.3 | -1.2 | -4.5 | -2.9 | 5.4 |
| June | -. 1 | 1.7 | -. 1 | 6.2 | -2.4 | -. 5 | -3.6 | 2.5 |
| July | -. 2 | 4.4 | . 1 | 6.8 | -. 6 | 10.8 | . 6 | 7.9 |
| Aug. | -. 1 | 3.0 | -. 1 | 6.3 | -1.2 | 6.0 | 4.6 | 12.1 |
| Sept. | -. 1 | 7.4 | 1.0 | 8.7 | 1.7 | 17.1 | 5.6 | 29.7 |
| Oct. | . 4 | r 8.8 | r 1.4 | r 10.9 | r -. 1 | r 10.9 | r -1.5 | r 31.8 |
| Nov. | . 1 | r -6.5 | r. 3 | 8.4 | r. 8 | r -4.4 | r 3.5 | 21.0 |
| Dec. | -. 1 | -. 5 | . 3 | 8.4 | 2.5 | -5.4 | . 5 | 22.1 |
| 2006 |  |  |  |  |  |  |  |  |
| Jan. | . 9 | 1.9 | 1.0 | 9.3 | -3.0 | . 6 | -. 1 | 23.6 |
| Feb. | -1.2 | -3.1 | . 5 | 8.2 | -3.0 | -16.2 | 3.3 | 12.9 |

$\mathrm{r}=\mathrm{revised}$. Some of the figures shown above and elsewhere in this release may differ from those previously reported because data for October 2005 have been revised to reflect the availability of late reports and corrections by respondents.

Prices for finished consumer foods declined 2.7 percent in February, following a 0.2-percent rise in the previous month. Leading this downturn, the fresh and dry vegetables index dropped 27.1 percent, after moving up 5.9 percent in January. Prices for beef and veal, pork, and eggs for fresh use also turned down in February, following increases a month earlier. The index for dairy products fell more in February than it had in the preceding month, and prices for processed fruits and vegetables rose less than they had in January. By contrast, the index for bakery products advanced 0.8 percent in February, after climbing 0.3 percent in the prior month. Prices for finfish and shellfish posted smaller declines than they had in January.

Price increases for finished consumer goods excluding foods and energy slowed from a 0.4 -percent rate in January to a 0.2 -percent rate in February. The light motor trucks index moved up 0.5 percent in February, following a 0.7 -percent gain in the preceding month. Prices for passenger cars, book publishing, and for sporting and athletic goods turned down, after rising in January. The index for men's and boys' apparel fell more in February than it had a month earlier. Alternatively, cigarette prices advanced 0.5 percent, following a 0.3 -percent decline in the prior month. The indexes for household furniture and for women's, girls', and infants' apparel also turned up in February, after decreasing in the previous month. Prices for periodical circulation rose more than they had in January.

Subsequent to a 0.3-percent gain in January, the index for capital equipment increased 0.1 percent in February. Prices for civilian aircraft moved up 0.4 percent, following a 0.7 -percent advance in January. The indexes for passenger cars and commercial furniture turned down in February, after rising a month earlier. Prices for light motor trucks and for agricultural machinery and equipment rose less than in January, while the electronic computers index fell more in February than it had a month earlier. By contrast, prices for integrating and measuring instruments turned up 0.4 percent, following a 0.8 -percent decline in the preceding month. The indexes for truck trailers and ships also turned up, after declining in January, while prices for metal cutting machine tools increased at faster rates in February than they had a month earlier.

## Intermediate goods

The Producer Price Index for Intermediate Materials, Supplies, and Components declined 0.3 percent in February, following a 1.2-percent gain in January. The majority of this downturn is attributable to prices for intermediate energy goods, which fell after advancing in the previous month. The index for intermediate foods and feeds also decreased, after rising in January. Prices for materials and components for construction and the index for materials for nondurable manufacturing increased at slower rates in February than they had in the preceding month. Conversely, prices for materials for durable manufacturing rose more than they had a month earlier. The index for intermediate goods other than foods and energy climbed 0.5 percent in February, following a 1.0-percent jump in January. (See table B.)

The index for intermediate energy goods declined 3.1 percent in February, after advancing 1.9 percent in the prior month. Prices for industrial natural gas fell 7.0 percent, following a 5.7-percent gain in January. The indexes for commercial electric power, commercial natural gas, and industrial electric power also moved down in February, after increasing a month earlier. Prices for gasoline, natural gas to electric utilities, diesel fuel, and liquefied petroleum gas decreased at quicker rates than they had in January. Alternatively, the residual fuels index rose 1.4 percent in February, compared with a 3.6-percent decline in the previous month. (See table 2.)

Prices for materials and components for construction moved up 0.3 percent in February, following a 1.0percent advance in the preceding month. The concrete products index increased 0.4 percent, after rising 1.9 percent in January. Prices for softwood lumber, plastic construction products, and for cast iron pressure and soil pipe fittings also went up at slower rates in February than they had a month earlier. The indexes for wiring devices, asphalt felts and coatings, and for building paper and board fell, following increases in January. Conversely, prices for nonferrous wire and cable climbed 1.8 percent in February, after decreasing 0.3 percent in the previous month. The index for environmental controls also turned up, while prices for fabricated structural metal products and gypsum products advanced at quicker rates than they had in January.

The index for intermediate foods and feeds declined 1.2 percent in February, following a 0.9-percent gain a month earlier. Prices for prepared animal feeds moved down 0.4 percent, after rising 2.5 percent in January. The indexes for beef and veal, pork, confectionery materials, and for shortening and cooking oils also turned down in February, following increases in the prior month. Dairy product prices decreased at faster rates than they had in January. By contrast, the flour index moved up 3.5 percent, compared with a 1.2-percent decline in the previous month. Prices for dry mix preparations advanced more in February than they had in January, while the index for non-frozen, perishable prepared foods fell less than in the preceding month.

Prices for materials for nondurable manufacturing increased 1.6 percent in February, following a 1.9percent advance in January. The index for primary basic organic chemicals moved down 1.4 percent in February, compared with a 10.4 -percent jump a month earlier. Prices for basic inorganic chemicals, paper, and gray fabrics rose less than they had in January, while the nitrogenates index fell more in February than it had in the prior month. Prices for inedible fats and oils declined, after advancing in the preceding month. By contrast, the paperboard index increased 5.3 percent in February, following a 0.7-percent gain in January. Prices for plastic resins and materials and for ethanol turned up, after decreasing in the previous month. The index for medicinal and botanical chemicals rose, after showing no change in January.

The index for materials for durable manufacturing advanced 1.6 percent in February, following a 1.0percent advance in January. Prices for cold rolled steel sheet and strip increased 2.0 percent, after decreasing 2.6 percent in the prior month. The indexes for semifinished steel mill products, thermoplastic resins, and unprocessed filament yarns also turned up in February, following declines a month earlier. Prices for nonferrous mill shapes and both primary and secondary aluminum rose more than they had in January. By contrast, the index for hot rolled steel sheet and strip fell 1.4 percent in February, after increasing 0.8 percent in the previous month. Prices for building paper and board and for hot rolled steel bars, plates, and structural shapes also moved down, following increases in the preceding month, while the softwood lumber index advanced less than it had in January.

## Crude goods

The Producer Price Index for Crude Materials for Further Processing decreased 9.2 percent in February, following a 0.5 -percent decline in January. Prices for crude energy materials turned down in February, after rising in the preceding month. Alternatively, the index for basic industrial materials increased, subsequent to edging down in January. Prices for crude foodstuffs and feedstuffs fell at the same rate as in the prior month. (See table B.)

The crude energy materials index fell 16.2 percent in February, after increasing 0.6 percent in January. Prices for natural gas sank 24.0 percent, following a 1.4-percent decline in the previous month. The crude petroleum index moved down 5.2 percent in February, after advancing 2.6 percent in January. Prices for coal moved up 0.3 percent, following a 10.1-percent jump in the preceding month. (See table 2.)

Prices for basic industrial materials advanced 3.3 percent in February, after inching down 0.1 percent in the preceding month. The majority of this upturn is attributable to the iron and steel scrap index, which gained 7.1 percent following an 8.4-percent decline in January. Prices for logs, bolts, timber, and pulpwood also turned up in February, after falling in the prior month. The indexes for aluminum base scrap, gold ores, and iron ore rose at faster rates than in January. By contrast, prices for wastepaper declined 3.6 percent, following a 1.6-percent increase a month earlier. The indexes for raw cotton and industrial sand also turned down in February, while prices for copper base scrap increased less than in the previous month.

The crude foodstuffs and feedstuffs index fell 3.0 percent in February, matching its January decline. In February, falling prices for slaughter cattle, fluid milk, fresh vegetables (except potatoes), slaughter hogs, and slaughter turkeys outweighed rising prices for wheat, alfalfa hay, corn, Irish potatoes for processing, and raw cane sugar.

## Net output price indexes for mining, manufacturing, and services industries

Mining. The Producer Price Index for the Net Output of Total Mining Industries fell 12.8 percent in February, after edging down 0.2 percent in the preceding month. (Net output price indexes are not seasonally adjusted.) Prices received by the industry for crude petroleum and natural gas extraction dropped 15.8 percent, after rising 3.4 percent in January. The industry index for natural gas liquid extraction decreased more than it had in the preceding month, while prices received by the industries for drilling oil and gas wells, bituminous coal underground mining, and bituminous coal and lignite surface mining advanced at slower rates than they had a month earlier. By contrast, the industry index for oil and gas operations support activities moved down 0.6 percent in February, compared with a 2.9 -percent decline in the prior month. Prices received by the industries for gold ore mining, iron ore mining, and for crushed and broken limestone mining and quarrying increased more than they had in January. In February, the Producer Price Index for Total Mining Industries was 207.3 (December $1984=100$ ), 24.7 percent above its year-ago level.

Manufacturing. The Producer Price Index for Total Manufacturing Industries declined 0.4 percent in February, following a 0.9 -percent rise in the previous month. Leading this downturn, prices received by manufacturers of petroleum and coal products fell 4.3 percent, after increasing 3.2 percent in January. The industry group indexes for transportation equipment, food manufacturing, and medical equipment and supplies manufacturing also turned down in February, after moving up in the preceding month. Prices received by the industry groups for beverage and tobacco manufacturing and nonmetallic mineral product manufacturing rose less than they had in the prior month. Alternatively, the chemical manufacturing industry group index went up 1.1 percent in February, following a 0.8 -percent gain a month earlier. Prices received by the industry groups for primary metal manufacturing and paper manufacturing also advanced more than they had in January, and the industry group index for furniture and related product manufacturing turned up, following a decline in the prior month. In February, the Producer Price Index for Total Manufacturing Industries was 153.5 (December $1984=100$ ), 4.4 percent above its year-ago level.

Services. Among services industries, prices received by commercial bankers decreased 0.8 percent in February, after advancing 0.9 percent in the previous month. The industry indexes for scheduled passenger air transportation, general medical and surgical hospitals, direct health and medical insurance carriers, and investment banking and securities dealing rose less than they had in January, while prices received by the United States Postal Service were unchanged, following increases in the preceding month. By contrast, the industry index for offices of certified public accountants moved up 3.2 percent in February, compared with a 2.1-percent decline in the prior month. Prices received by the industries for temporary help services; inland water freight transportation; long distance, general freight trucking (truckload); and radio stations also turned up, following decreases in January.

Producer Price Index data for March 2006 are scheduled to be released on Tuesday, April 18, 2006, at 8:30 a.m. (EDT).

## Technical Note

## Brief Explanation of Producer Prices Indexes

The Producer Price Index (PPI) of the Bureau of Labor Statistics (BLS) is a family of indexes that measure the average change over time in the prices received by domestic producers of goods and services. PPIs measure price change from the perspective of the seller. This contrasts with other measures, such as the Consumer Price Index (CPI). CPIs measure price change from the purchaser's perspective. Sellers' and purchasers' prices can differ due to government subsidies, sales and excise taxes, and distribution costs.

More than 8,000 PPIs for individual products and groups of products are released each month. PPIs are available for the products of virtually every industry in the mining and manufacturing sectors of the U.S. economy. New PPIs are gradually being introduced for the products of industries in the trade, finance, and services sectors of the economy.

More than 100,000 price quotations per month are organized into three sets of PPIs: (1) Stage-of-processing indexes; (2) commodity indexes; and (3) indexes for the net output of industries and their products. The stage-of-processing structure organizes products by class of buyer and degree of fabrication. The commodity structure organizes products by similarity of end use or material composition. The entire output of various industries is sampled to derive price indexes for the net output of industries and their products.

## Stage-of-Processing Indexes

Within the stage-of-processing system, finished goods are commodities that will not undergo further processing and are ready for sale to the final-demand user, either an individual consumer or business firm. Consumer foods include unprocessed foods such as eggs and fresh vegetables, as well as processed foods such as bakery products and meats. Other finished consumer goods include durable goods such as automobiles, household furniture, and appliances, as well as nondurable goods such as apparel and home heating oil. Capital equipment includes producer durable goods such as heavy motor trucks, tractors, and machine tools.

The stage-of-processing category for intermediate materials, supplies, and components consists partly of commodities that have been processed but require further processing. Examples of such semifinished goods include flour, cotton yarn, steel mill products, and lumber. The intermediate goods category also encompasses nondurable, physically complete items purchased by business firms as inputs for their operations. Examples include diesel fuel, belts and belting, paper boxes, and fertilizers.

Crude materials for further processing are products entering the market for the first time that have not been manufactured or fabricated and that are not sold directly to consumers. Crude foodstuffs and feedstuffs include items such as grains and livestock. Examples of crude nonfood materials include raw cotton, crude petroleum, coal, hides and skins, and iron and steel scrap.

## Commodity Indexes

The commodity classification structure of the PPI organizes products by similarity of end use or material composition, disregarding industry of origin. Fifteen major commodity groupings (2-digit commodity codes) make up the All Commodities Index. Each major commodity grouping includes (in descending order of aggregation) subgroups (3-digit), product classes (4-digit), subproduct classes (6-digit), and individual items (8-digit). Nearly all 8-digit commodities under the traditional commodity coding system are now derived from corresponding industry-classified product indexes. In such instances, movements in the traditional commodity price indexes and corresponding percent changes will be virtually identical to their industry-based counterparts, even if their index levels differ.

## Industry Net-Output Price Indexes

PPIs for the net output of industries and their products are grouped according to the North American Industry Classification System (NAICS). Prior to the release of January 2004, industry-based PPIs were published according to the Standard Industrial Classification (SIC) system. Industry price indexes are compatible with other economic time series organized by industry, such as data on employment, wages, and productivity. Table 5 of the PPI Detailed Report includes data for NAICS industries and industry groups (3-, $4-, 5$-, and 6 -digit codes); Census product classes ( 7 - and 8 -digits), products ( 9 -digits), and more detailed subproducts (11digits); and, for some industries, indexes for other sources of revenue.

Indexes may represent one of three kinds of product indexes. Every industry has primary product indexes to show changes in prices received by establishments classified in the industry for products made primarily, but not necessarily exclusively, by that industry. The industry classification of an establishment is determined by which products comprise a plurality of its total shipment value. In addition, most industries have secondary product indexes that show changes in prices received by establishments classified in the industry for products chiefly made in some other industry. Finally, some industries have miscellaneous receipts indexes to show price changes in other sources of revenue received by establishments within the industry that are not derived from sales of their products, for example, resales of purchased materials, or revenues from parking lots owned by a manufacturing plant.

## Data Collection

PPIs are based on selling prices reported by establishments of all sizes selected by probability sampling, with the probability of selection proportionate to size. Individual items and transaction terms from these firms are also chosen by probability proportionate to size. The BLS strongly encourages cooperating companies to supply actual transaction prices at the time of shipment to minimize the use of list prices. Prices submitted by survey respondents are effective on the Tuesday of the week containing the 13th day of the month. This survey is conducted primarily through the mail.

Price data are provided on a voluntary and confidential basis; only sworn BLS employees are allowed access to individual company price reports. BLS publishes price indexes instead of unit dollar prices. All PPIs are subject to revision 4 months after original publication to reflect the availability of late reports and corrections by respondents.

BLS periodically updates the PPI sample of survey respondents to better reflect current conditions when the structure, membership, technology, or product mix of an industry shifts significantly and to spread reporting burden among smaller firms. Results of these resampling efforts are incorporated into the PPI with the release of data for January and July.

As part of an ongoing effort to expand coverage to sectors of the economy other than mining and manufacturing, an increasing number of service sector industries have been introduced into the PPI. The following list of recently introduced industries includes the month and year in which an article describing the industry's content appeared in the PPI Detailed Report.

| Title | Code | PPI Detailed Report Issue |
| :---: | :---: | :---: |
|  | SIC |  |
| Wireless telecommunications | 4812 | July 1999 |
| Telephone communications, except radio telephone | 4813 | July 1995 |
| Television broadcasting | 4833 | July 2002 |
| Grocery stores | 5411 | July 2000 |
| Meat and fish (seafood) markets | 5421 | July 2000 |
| Fruit and vegetable markets | 5431 | July 2000 |
| Candy, nut, and confectionery stores | 5441 | July 2000 |
| Retail bakeries | 5461 | July 2000 |
| Miscellaneous food stores | 5499 | July 2000 |
| New car dealers | 5511 | July 2000 |
| Gasoline service stations | 5541 | January 2002 |
| Boat dealers | 5551 | January 2002 |
| Recreational vehicle dealers | 5561 | January 2002 |
| Miscellaneous retail | 59 | January 2001 |
| Security brokers, dealers, and investment bankers | 6211 | January 2001 |
| Investment advice | 6282 | January 2003 |
| Life insurance carriers | 6311 | January 1999 |
| Property and casualty insurance | 6331 | July 1998 |
| Insurance agencies and brokerages | 6412 | January 2003 |
| Operators and lessors of nonresidential buildings | 6512 | January 1996 |
| Real estate agents and managers | 6531 | January 1996 |
| Prepackaged software | 7372 | January 1998 |
| Data processing services | 7374 | January 2002 |
| Home health care services | 8082 | January 1997 |
| Legal services | 8111 | January 1997 |
| Engineering design, analysis, and consulting services | 8711 | January 1997 |
| Architectural design, analysis, and consulting services | 8712 | January 1997 |
| Premiums for property and casualty insurance | 9331 | July 1998 |


|  | NAICS |  |
| :--- | :---: | ---: |
| New warehouse building construction | 236221 | July 2005 |
| Merchant wholesalers, durable goods | 423 | July 2005 |
| Merchant wholesalers, nondurable goods | 424 | July 2005 |
| Wholesale trade agents and brokers | 425120 | July 2005 |
| Furniture and home furnishings stores | 442 | January 2004 |
| Electronics and appliance stores | 443 | January 2004 |
| Building material and garden equipment and supplies dealers | 444 | January 2004 |


| Title | Code | PPI Detailed <br> Report Issue |
| :--- | :---: | ---: |
| Clothing and clothing accessories stores | 448 | January 2004 |
| Sporting goods, hobby, book, and music stores | 451 | January 2004 |
| General merchandise stores | 452 | January 2004 |
| Miscellaneous store retailers | 453 | January 2004 |
| Internet service providers | 518111 | July 2005 |
| Web search portals | 518112 | July 2005 |
| Commercial banking | 522110 | January 2005 |
| Savings institutions | 522120 | January 2005 |
| Direct health and medical insurance carriers | 524114 | July 2004 |
| Construction, mining, and forestry machinery and equipment rental | 532412 | January 2005 |
| and leasing |  |  |
| Security guards and patrol services | 561612 | July 2005 |
| Fitness and recreational sports centers | 713940 | July 2005 |

## Weights

Weights for most traditional commodity groupings of the PPI, as well as weights for commodity-based aggregate indexes calculated using traditional commodity groupings, such as stage-of-processing indexes, currently reflect 1997 values of shipments as reported in the Census of Manufactures and other sources. From January 1996 through December 2001, PPI weights were derived from 1992 shipment values. Industry indexes also are now calculated with 1997 net output weights. This periodic update of the value weights used to calculate the PPI is done to more accurately reflect changes in production and marketing patterns in the economy. Net output values of shipments are used as weights for industry indexes. Net output values refer to the value of shipments from establishments within the industry to buyers outside the industry. However, weights for commodity price indexes are based on gross shipment values, including shipment values between establishments within the same industry. As a result, broad commodity grouping indexes, such as the PPI for All Commodities, are affected by the multiple counting of price change at successive stages of processing, which can lead to exaggerated or misleading signals about inflation. Stage-of-processing indexes partially correct this defect, but industry indexes consistently correct for this at all levels of aggregation. Therefore, industry and stage-of-processing indexes are more appropriate than broad commodity groupings for economic analysis of general price trends.

## Price Index Reference Base

Effective with publication of January 1988 data, many important PPI series (including stage-of-processing groupings and most commodity groups and individual items) were placed on a new reference base, 1982=100. From 1971 through 1987, the standard reference base for most PPI series was $1967=100$. Except for rounding differences, the shift to the new reference base did not alter any previously published percent changes for affected PPI series. (See "Calculating Index Changes," below.) The 1982 reference base is not used for commodity indexes with a base later than December 1981 or for industry net output indexes and their products.

For further information on the underlying concepts and methodology of the Producer Price Index, see chapter 14, "Producer Prices," in BLS Handbook of Methods (April 1997), Bulletin 2490. This document can be downloaded from the BLS Web site at (http://www.bls.gov/opub/hom/homch14_itc.htm), and reprints are available on request.

## Calculating Index Changes

Each PPI measures price changes from a reference period which equals 100.0. An increase of 5.5 percent from the reference period in the Finished Goods Price Index, for example, is shown as 105.5. This change also can be expressed in dollars, as follows: Prices received by domestic producers of a sample of finished goods have risen from $\$ 100$ in 1982 to $\$ 105.50$. Likewise, a current index of 90.0 would indicate that prices received by producers of finished goods are 10 percent lower than they were in 1982.

Movements of price indexes from one month to another are usually expressed as percent changes, rather than as changes in index points. Index point changes are affected by the level of the index in relation to its base period, whereas percent changes are not. The following example shows the computation of index point and percent changes.

## Index point change

| Finished Goods Price Index | 107.5 |
| :--- | ---: |
| Less previous index | 104.0 |
| Equals index point change | 3.5 |
| Index percent change |  |
| Index point change | 3.5 |
| Divided by the previous index | 104.0 |
| Equals | 0.034 |
| Result multiplied by 100 | $0.034 \times 100$ |
| Equals percent change | 3.4 |

## Seasonally Adjusted and Unadjusted Data

Because price data are used for different purposes by different groups, BLS publishes seasonally adjusted and unadjusted changes each month. Seasonally adjusted data are preferred for analyzing general price trends in the economy, because these data eliminate the effect of changes that normally occur at about the same time, and in about the same magnitude, every year-such as price movements resulting from normal weather patterns, regular production and marketing cycles, model changeovers, seasonal discounts, and holidays. For these reasons, seasonally adjusted data more clearly reveal underlying cyclical trends. Unadjusted data are of primary interest to users who need information that can be related to actual dollar values of transactions. Individuals requiring this information include marketing specialists, purchasing agents, budget and cost analysts, contract specialists, and commodity traders. It is the unadjusted data that are generally cited when escalating long-term contracts such as purchasing agreements or real estate leases. (See Escalation and Producer Price Indexes: A Guide for Contracting Parties, BLS Report 807, September 1991, available on request from the BLS.)

In 1998, the PPI implemented the X-12-ARIMA Seasonal Adjustment Method; prior to that year the PPI employed the X-11 method. Each year, the seasonal status of most commodity indexes is re-evaluated to reflect more recent price behavior. Industry net output indexes are not seasonally adjusted. For time series that exhibit seasonal pricing patterns, new seasonal factors are estimated and applied to the unadjusted data for the previous 5 years. These updated seasonally adjusted indexes replace the most recent 5 years of seasonal data.

Seasonal factors may be applied to series using either a direct or aggregative method. Generally, commodity indexes are seasonally adjusted using direct seasonal adjustment, which produces a more complete elimination of seasonal movements than the aggregative method. However, the direct seasonal adjustment process may not yield figures that possess additive consistency. Thus, a seasonally adjusted index for a broad category that is directly adjusted may notbe logically consistent with all seasonally adjusted indexes for its components. Seasonal movements for stage-of-processing indexes are derived indirectly through an aggregative method that combines movements of a wide variety of subproduct class ( 6 -digit) series.

Seasonally adjusted indexes can become problematic when previously stable and predictable price patterns abruptly change. If the new pattern persists, the seasonal adjustment method will eventually reflect it adequately; if these patterns keep shifting, however, seasonally adjusted data will become chronically troublesome. This problem occurs relatively infrequently for farm and food-related products but has more often affected manufactured products such as automobiles and steel.

Since January 1988, the PPI has used Intervention Analysis Seasonal Adjustment methods to enhance the calculation of seasonal factors. With this technique, outlier values that may distort the seasonal pattern are removed from the data prior to applying the standard seasonal factor estimation procedure. For example, a possible economic cause for large price movements for petroleumbased products might have been the Persian Gulf War. In this case, intervention techniques allowed for better estimates of seasonally adjusted data. On the whole, very few series have required intervention. Out of nearly 900 seasonally adjusted series, only 16 interventions were performed in 1997.

For more information relating to seasonal adjustment methods, see (1) "Appendix A: Seasonal Adjustment Methodology at BLS," in the BLS Handbook of Methods (April 1997), Bulletin 2490 and (2) "Summary of Changes to the PPI's Seasonal Adjustment Methodology" in the January 1995 issue of Producer Price Indexes.

## Producer Price Index Data Via the Internet

In 1995, the BLS began posting PPI series, news releases, and technical information to both a World Wide Web (WWW) site and a file transfer protocol (FTP) site. During the years following the introduction of PPI Internet services, usage of these sites eclipsed more traditional methods of data dissemination, such as subscriptions to the PPI Detailed Report. There were more than 1.6 million accesses of PPI series over the Internet during the 12 months ended December 31, 2003.

## Retrieving PPI data from the PPI Website

PPI data can be obtained from the WWW address (http://www.bls.gov/ppi). Scrolling down the page to the "Get Detailed Statistics" header reveals the following 5 methods of data retrieval:

- Most Requested Series is a form-based application that allows the user to quickly obtain PPI time series data by selecting from two separate lists (commodity and industry) of the most commonly requested time series, including the All Commodities Index and the stage-of-processing indexes (for example, Finished Goods). Within each list, any one-or all-of the time series shown can be selected. A user can modify the date range and output options after executing the query, using the reformat button above the data output table.
- Create Customized Tables is a form-based query application designed for users unfamiliar with the PPI coding structure. It guides a user through the PPI classification system by listing index titles and does not require knowledge of commodity or industry codes. Data retrieved are based on a query formulated by selecting data characteristics from lists provided. Two options are available to create customized tables, depending on a user's browser capability. The one-screen option is a JavaScript application that uses a single screen to guide a user through the available time series data. The second option is a multiple screen, nonJava-based application. Both methods allow a user to browse the PPI coding structure and select multiple series codes. Using the one-screen option, users can modify the date range and output options after executing the query using the reformat button above the data output table.
- Series Report is a form-based application that uses formatted PPI time series identifiers (commodity or industry codes) as input in extracting data according to a specified set of date ranges and output options. This application provides the most efficient path for those users who are familiar with the format of PPI time series identifiers. Up to 300 indexes can be extracted at one time.

There are three basic formats for creating a unique PPI time series identifier. For commodity and stage-of-processing indexes, enter a "wpu" prefix (not seasonally adjusted) or a "wps" prefix (seasonally adjusted) in combination with a commodity-based code to create a series identifier.

## Commodity code

wps063
wpu063803
wpusop3000

## Will provide data for:

Drugs and pharmaceuticals, seasonally adjusted
Pharmaceutical preparations, cardiovascular system
Finished goods, not seasonally adjusted

For a current industry-based price index organized according to the North American Industry Classification System (NAICS), enter the prefix "pcu" followed by the industry-product code. The series identifier for products primary to an industry include 12 numeric digits, the six-digit industry code is repeated, and up to seven additional digits of product detail. Dashes are used as place holders for higher-level industry group codes.

## Industry-product code,

Current NAICS series
pcu325---325---
pcu336110336110
pcu621111621111411

## Will provide data for:

Chemical manufacturing, not seasonally adjusted
Automobile and light duty motor vehicle manufacturing
Offices of physicians, one and two physician practices and single specialty group practices, general/family practice

To identify a discontinued industry-product code based on the Standard Industrial Classification (SIC), enter a "pdu" prefix and "\#" between the fourth and fifth characters of the product code. A series identifier for the discontinued dataset uses underscores as placeholders to complete a reference to an SIC industry group code of less than four digits. (All PPI industry-based indexes organized by SIC were discontinued with the introduction of the NAICS.) In all cases, no spaces are permitted.

## Industry-product code,

Discontinued SIC series
pdu28 \#
pdu331_\#
pdu3711\#111

## Will provide data for:

Chemicals and allied products, not seasonally adjusted
Blast furnaces, steel works, and rolling and finishing mills, not seasonally adjusted
Passenger cars

- Flat Files and the FTP server are best suited for those users requiring access to either a large volume of time series data or other PPI-related documentation (such as, seasonal factor and relative importance tables). The FTP site can be accessed at (ftp://ftp.bls.gov) or directly from the links on the "Get Detailed Statistics" page or the PPI homepage. Data and documentation available for download include:


## Directory:

- NAICS Current Series
/pub/time.series/pc
- SIC Discontinued Series
- Commodity Series
- Special Requests
- Latest News Release
/pub/time.series/wp
/pub/special.requests/ppi
/pub/news.release/ppi.txt

The FTP site maintains files to help with searches and downloads. These files are centrally located in the /pub/doc directory. Within this directory, go to the overview.txt file for an overview relating to all BLS data available through the FTP site. For commodity-based PPI data (which appear in tables $1,2,3,6,7$, and 8 of the PPI monthly detailed report and tables $1,2,3$, and 5 of the monthly news release), the program help file is wp.txt. For current industry-based PPI data based on the NAICS (which appear in tables 4,5 , and 9 of the monthly PPI report and table 4 of the monthly news release), the file is pc.txt. For industry-based SIC time series that have been discontinued, go to pd.txt. (These and other help files are also maintained within each of the five directories listed above.)

## Other Sources of PPI Data

PPI data can also be accessed via the BLS homepage (http://www.bls.gov). After clicking the "Get Detailed Statistics" link at the top of the homepage a chart appears listing all of the available BLS programs. The following four methods are available for PPI data: Most requested statistics, create customized tables (one screen or multiple screens), and flat files. Additional sources of BLS data also are accessible from this page including: Economic news releases, series report, and economy at a glance.

## Additional information

The PPI homepage (http://www.bls.gov/ppi) contains additional information regarding PPI data and methodology. The top section of the homepage provides PPI news releases, both current and archived, as well as general PPI information. The "Tables Created by BLS" section found beneath the statistics section provides relative importance and seasonal factor tables. The remaining sections offer special notices and publications pertaining to PPI methodology and applications.

For questions or comments regarding PPI data classification, methodology, or data availability on the Internet, call or e-mail the Section of Index Analysis and Public Information directly at (202) 691-7705 or ppi-info@bls.gov. Data also can be obtained by calling the national fax-on-demand service at (202) 691-6325. This service enables customers to request faxes of BLS data 24 hours a day, 7 days a week.

Table 1. Producer price indexes and percent changes by stage of processing
(1982=100)


[^0]4/ Excludes crude petroleum.
5/ Percent of total finished goods.
6/ Percent of total intermediate materials.
7/ Formerly titled "Crude materials for further processing, excluding crude foodstuffs and feedstuffs, plant and animal fibers, oilseeds, and leaf tobacco. 8/ Percent of total crude materials.

Table 2. Producer price indexes and percent changes for selected commodity groupings by stage of processing
(1982=100 unless otherwise indicated)


See footnotes at end of table.

Table 2. Producer price indexes and percent changes for selected commodity groupings by stage of processing - Continued (1982=100 unless otherwise indicated)


Table 3. Producer Price Indexes for selected commodity groupings
(1982=100 unless otherwise indicated)


1/ Data for October 2005 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.
2/ Prices of some items in this grouping are lagged 1 month.

Table 4. Producer price indexes for the net output of selected industries and industry groups, not seasonally adjusted


See footnotes at end of table.

Table 4. Producer price indexes for the net output of selected industries and industry groups, not seasonally adjusted - Continued


1/ Indexes in this table are derived from the net-output-weighted industry price indexes. Because of differences in coverage and aggregation methodology, they will generally not match the movements of similarly titled indexes which are derived from traditional commodity groupings.
2/ The indexes for October 2005 have been recalculated to incorporate late reports and corrections by respondents. All indexes are subject to revision 4 months after original publication.
3/ Not available.
Note: NAICS 2002 replaced the SIC system beginning with the release of PPI data for January 2004.

Table 5. Producer price indexes by stage of processing, seasonally adjusted
(1982=100)

| Grouping | Index 1/ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
|  | Sep. | Oct. | Nov. | Dec. | Jan. | Feb. |
|  | 2005 | 2005 | 2005 | 2005 | 2006 | 2006 |
| Finished goods. | 158.4 | 159.6 | 159.0 | 160.0 | 160.4 | 158.2 |
| Finished consumer goods | 164.0 | 165.6 | 164.7 | 166.1 | 166.4 | 163.3 |
| Finished consumer foods | 155.6 | 155.7 | 156.3 | 157.5 | 157.8 | 153.6 |
| Crude. | 141.2 | 135.7 | 140.4 | 153.9 | 154.7 | 128.1 |
| Processed | 156.7 | 157.3 | 157.6 | 157.7 | 157.9 | 155.8 |
| Finished consumer goods, excluding foods | 166.8 | 169.1 | 167.6 | 169.1 | 169.4 | 166.7 |
| Nondurable goods less foods. | 178.9 | 182.7 | 180.7 | 182.7 | 182.9 | 178.8 |
| Durable goods....... | 137.3 | 136.2 | 136.1 | 136.3 | 137.0 | 137.1 |
| Capital equipment | 145.3 | 145.0 | 145.0 | 145.2 | 145.7 | 145.9 |
| Manufacturing industries | 146.6 | 146.9 | 147.1 | 147.3 | 147.5 | 148.0 |
| Nonmanufacturing industries..................l | 144.7 | 144.3 | 144.2 | 144.4 | 144.9 | 145.1 |
| Intermediate materials, supplies, and components.\| | 157.3 | 162.0 | 159.8 | 160.0 | 161.9 | 161.4 |
| Materials and components for manufacturing..... | 146.7 | 149.3 | 149.0 | 149.4 | 151.0 | 152.2 |
| Materials for food manufacturing.............l | 145.1 | 146.4 | 147.5 | 147.2 | 147.3 | 145.1 |
| Materials for nondurable manufacturing | 166.7 | 173.0 | 168.6 | 168.6 | 171.8 | 174.5 |
| Materials for durable manufacturing. | 156.8 | 159.9 | 162.4 | 164.8 | 166.5 | 169.2 |
| Components for manufacturing.................. | 130.1 | 130.2 | 131.0 | 130.9 | 131.6 | 131.6 |
| Materials and components for construction......l | 176.9 | 179.3 | 181.1 | 182.1 | 184.0 | 184.6 |
| Processed fuels and lubricants.................. | 163.6 | 177.9 | 166.9 | 165.9 | 169.2 | 162.9 |
| Manufacturing industries | 162.5 | 176.3 | 167.4 | 165.0 | 170.7 | 163.4 |
| Nonmanufacturing industries................... | 164.4 | 179.0 | 166.6 | 166.6 | 168.4 | 162.6 |
| Containers.... . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 166.1 | 166.9 | 168.5 | 169.7 | 171.2 | 171.8 |
| Supplies | 152.5 | 153.6 | 153.9 | 154.0 | 155.3 | 155.7 |
| Manufacturing industries | 156.1 | 157.8 | 159.2 | 159.5 | 160.3 | 160.9 |
| Nonmanufacturing industries | 150.4 | 151.3 | 151.2 | 151.4 | 152.7 | 153.0 |
| Feeds... | 109.2 | 107.9 | 106.4 | 106.6 | 110.2 | 109.7 |
| Other supplies | 155.5 | 156.6 | 156.7 | 156.8 | 158.0 | 158.4 |
| Crude materials for further processing........... | 200.3 | 211.7 | 208.0 | 203.2 | 202.2 | 183.6 |
| Foodstuffs and feedstuffs | 120.7 | 120.6 | 121.6 | 124.7 | 121.0 | 117.4 |
| Nonfood materials. | 256.7 | 276.9 | 269.6 | 258.7 | 259.9 | 230.0 |
| Nonfood materials except fuel $2 /$ | 192.2 | 190.2 | 183.7 | 190.8 | 193.0 | 191.4 |
| Manufacturing 2/. | 177.9 | 176.1 | 169.9 | 176.6 | 178.6 | 177.1 |
| Construction. | 198.5 | 198.0 | 200.9 | 200.1 | 200.6 | 201.6 |
| Crude fuel 3/. | 340.4 | 397.0 | 389.3 | 348.3 | 347.4 | 272.2 |
| Manufacturing industries | 319.8 | 372.0 | 364.8 | 326.9 | 326.8 | 257.5 |
| Nonmanufacturing industries. | 348.5 | 406.5 | 398.6 | 356.6 | 355.6 | 278.4 |
|  |  |  |  |  |  |  |
| Special groupings \| |  |  |  |  |  |  |
| Finished goods, excluding foods........ | 158.9 | 160.3 | 159.4 | 160.4 | 160.8 | 159.1 |
| Intermediate materials less foods and feeds | 158.5 | 163.3 | 161.1 | 161.3 | 163.3 | 162.7 |
| Intermediate foods and feeds. | 133.8 | 134.3 | 134.5 | 134.4 | 135.6 | 134.0 |
| Crude materials less agricultural products 2/.... | 264.3 | 285.3 | 277.8 | 266.4 | 267.5 | 236.6 |
| Finished energy goods. | 142.7 | 148.8 | 144.9 | 147.8 | 147.8 | 140.8 |
| Finished goods less energy......................... | 156.4 | 156.1 | 156.5 | 156.9 | 157.4 | 156.6 |
| Finished consumer goods less energy.............. | 161.3 | 160.9 | 161.5 | 162.1 | 162.6 | 161.3 |
| Finished goods less foods and energy.............. | 157.1 | 156.6 | 156.9 | 157.1 | 157.7 | 158.1 |
| Finished consumer goods less foods and energy....। | 165.2 | 164.5 | 165.0 | 165.3 | 165.9 | 166.3 |
| Consumer nondurable goods less foods and energy.. | 188.2 | 187.9 | 189.0 | 189.3 | 189.8 | 190.6 |
| Intermediate energy goods.......................... | 163.4 | 177.7 | 166.2 | 165.3 | 168.4 | 163.2 |
| Intermediate materials less energy............... | 153.7 | 155.8 | 156.1 | 156.6 | 158.1 | 158.8 |
| Intermediate materials less foods and energy..... | 154.9 | 157.1 | 157.5 | 158.0 | 159.6 | 160.4 |
|  | 278.2 | 308.6 | 295.0 | 279.0 | 280.8 | 235.2 |
| Crude materials less energy....................... | 144.4 | 143.4 | 146.0 | 148.6 | 145.8 | 145.0 |
| Crude nonfood materials less energy 3/........... | 210.8 | 207.6 | 214.8 | 215.8 | 215.5 | 222.7 |

1/ All seasonally adjusted indexes are subject to change up to 5 years after original publication due to the recalculation of seasonal factors each January. The indexes for October 2005 have been recalculated to incorporate late reports and corrections by respondents.
2/ Includes crude petroleum.
3/ Excludes crude petroleum.


[^0]:    1/ Comprehensive relative importance figures are initially computed after the publication of December indexes and are recalculated after final December indexes are available.
    2/ The indexes for October 2005 have been recalculated to incorporate late reports and corrections by respondents. All indexes are subject to revision 4 months after original publication.
    3/ Includes crude petroleum.

