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PRODUCER PRICE INDEXES – JULY 2019

The Producer Price Index for final demand advanced 0.2 percent in July, seasonally adjusted, the U.S. Bureau of Labor Statistics reported today. Final demand prices moved up 0.1 percent in both June and May. (See table A.) On an unadjusted basis, the final demand index rose 1.7 percent for the 12 months ended in July.

In July, the rise in final demand prices was led by a 0.4-percent increase in the index for final demand goods. Prices for final demand construction rose 0.6 percent. In contrast, the index for final demand services declined 0.1 percent.

The index for final demand less foods, energy, and trade services fell 0.1 percent in July, the first decrease since declining 0.1 percent in October 2015. For the 12 months ended in July, prices for final demand less foods, energy, and trade services moved up 1.7 percent.

Chart 1. One-month percent changes in selected PPI final demand price indexes, seasonally adjusted

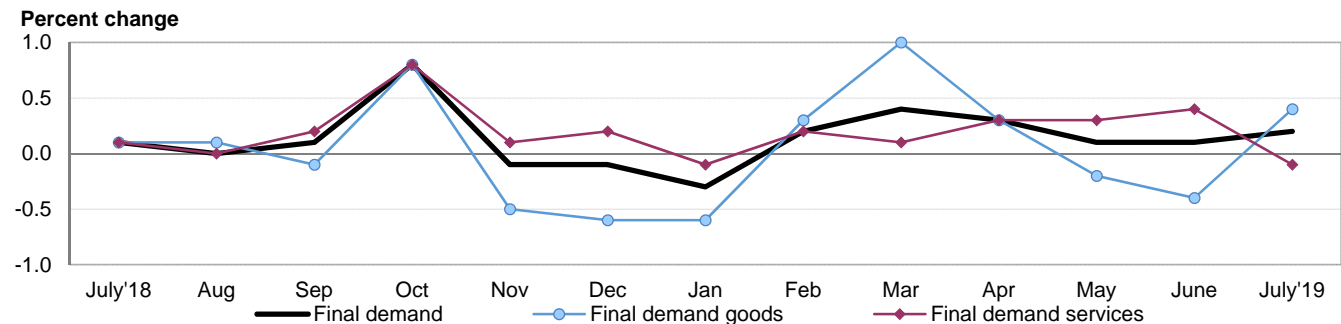
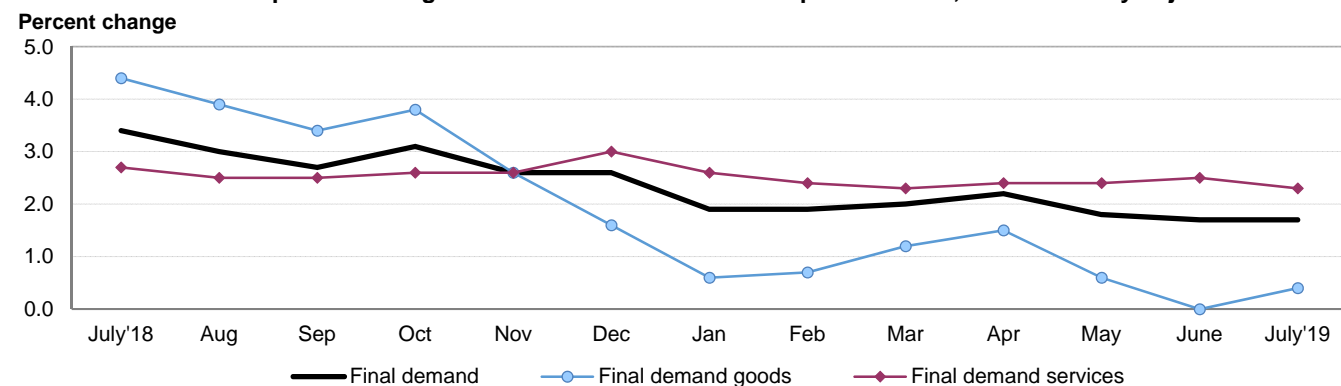


Chart 2. Twelve-month percent changes in selected PPI final demand price indexes, not seasonally adjusted



Final Demand

Final demand goods: The index for final demand goods rose 0.4 percent in July, the largest increase since a 1.0-percent jump in March. Over 80 percent of the broad-based advance is attributable to prices for final demand energy, which rose 2.3 percent. The index for final demand goods less foods and energy inched up 0.1 percent, and prices for final demand foods increased 0.2 percent.

Product detail: Over half of the July rise in the index for final demand goods can be traced to prices for gasoline, which advanced 5.2 percent. The indexes for diesel fuel, electric power, corn, beef and veal, and tobacco products also advanced. Conversely, prices for jet fuel fell 3.5 percent. The indexes for pork and carbon steel scrap also decreased. (See table 4.)

Final demand services: The index for final demand services declined 0.1 percent in July after rising for five consecutive months. The decrease is attributable to prices for final demand services less trade, transportation, and warehousing, which moved down 0.3 percent. In contrast, the indexes for final demand trade services and for final demand transportation and warehousing services both advanced 0.2 percent.

Product detail: A major factor in the decline in prices for final demand services was the index for guestroom rental, which moved down 4.3 percent. The indexes for fuels and lubricants retailing, loan services (partial), machinery and equipment parts and supplies wholesaling, and truck transportation of freight also decreased. Conversely, margins for machinery and vehicle wholesaling advanced 3.0 percent. The indexes for hospital outpatient care; health, beauty, and optical goods retailing; and transportation of passengers (partial) also rose.

Table A. Monthly and 12-month percent changes in selected final demand price indexes, seasonally adjusted

Month	Total final demand	Final demand less foods, energy, and trade	Final demand goods				Final demand services				Change in final demand from 12 months ago (unadj.)	Change in final demand less foods, energy, and trade from 12 mo. ago (unadj.)
			Total	Foods	Energy	Less foods and energy	Total	Trade	Transportation and warehousing	Other		
2018												
July....	0.1	0.3	0.1	-0.1	-0.4	0.3	0.1	-0.3	0.5	0.2	3.4	3.0
Aug....	0.0	0.2	0.1	-0.5	0.1	0.2	0.0	-0.3	0.0	0.2	3.0	3.0
Sept....	0.1	0.3	-0.1	-0.1	-0.7	0.1	0.2	-0.3	1.3	0.3	2.7	3.1
Oct....	0.8	0.3	0.8	0.9	2.7	0.3	0.8	1.7	0.7	0.3	3.1	3.0
Nov....	-0.1	0.2	-0.5	1.0	-4.1	0.2	0.1	0.1	0.5	0.1	2.6	2.9
Dec....	-0.1	0.0	-0.6	2.1	-5.8	0.0	0.2	0.7	-0.2	0.0	2.6	2.8
2019												
Jan....	-0.3	0.2	-0.6	-1.3	-3.3	0.3	-0.1	-0.4	-0.1	0.1	1.9	2.6
Feb....	0.2	0.1	0.3	-0.2	1.6	0.1	0.2	0.0	-0.8	0.3	1.9	2.4
Mar. ¹ ..	0.4	0.1	1.0	0.3	5.2	0.1	0.1	0.3	-0.4	0.1	2.0	2.2
Apr. ¹ ..	0.3	0.2	0.3	-0.1	2.2	0.0	0.3	0.6	0.6	0.2	2.2	2.2
May...	0.1	0.4	-0.2	-0.3	-1.0	0.0	0.3	-0.5	0.7	0.5	1.8	2.3
June...	0.1	0.0	-0.4	0.6	-3.1	0.0	0.4	1.3	0.3	0.0	1.7	2.1
July....	0.2	-0.1	0.4	0.2	2.3	0.1	-0.1	0.2	0.2	-0.3	1.7	1.7

¹ Some of the figures shown above and elsewhere in this release may differ from those previously reported because data for March 2019 have been revised to reflect the availability of late reports and corrections by respondents.

Intermediate Demand by Commodity Type

Within intermediate demand in July, prices for processed goods increased 0.2 percent, the index for unprocessed goods climbed 1.6 percent, and prices for services fell 0.2 percent. (See tables B and C.)

Processed goods for intermediate demand: The index for processed goods for intermediate demand moved up 0.2 percent in July, the first increase since rising 0.6 percent in March. The July advance is attributable to prices for processed energy goods, which climbed 2.2 percent. In contrast, the index for processed materials less foods and energy declined 0.2 percent, and prices for processed foods and feeds edged down 0.1 percent. For the 12 months ended in July, the index for processed goods for intermediate demand fell 2.0 percent, the third consecutive 12-month decrease.

Product detail: Leading the July advance in prices for processed goods for intermediate demand, the diesel fuel index jumped 7.9 percent. Prices for gasoline; commercial electric power; lubricating oil base stocks; natural, processed, and imitation cheese; and advertising printing also moved higher. Conversely, the index for steel mill products declined 2.6 percent. Prices for utility natural gas and for soybean cake and meal also fell. (See table 5.)

Unprocessed goods for intermediate demand: The index for unprocessed goods for intermediate demand rose 1.6 percent in July after declining 3.3 percent in June. Three-quarters of the advance can be traced to prices for unprocessed energy materials, which increased 2.8 percent. The index for unprocessed nonfood materials less energy also moved higher, rising 1.9 percent. In contrast, prices for unprocessed foodstuffs and feedstuffs decreased 0.2 percent. For the 12 months ended in July, the index for unprocessed goods for intermediate demand fell 10.4 percent, the seventh straight 12-month decline.

Product detail: Leading the July increase in prices for unprocessed goods for intermediate demand, the crude petroleum index moved up 10.9 percent. Prices for corn, slaughter poultry, gold ores, coal, and unprocessed finfish also moved higher. Conversely, the index for slaughter hogs dropped 16.1 percent. Prices for natural gas and carbon steel scrap also fell.

Table B. Monthly and 12-month percent changes in selected intermediate demand price indexes for goods by commodity type, seasonally adjusted

Month	Processed goods for intermediate demand					Unprocessed goods for intermediate demand				
	Total	Foods and feeds	Energy goods	Less foods and energy	Total, change from 12 months ago (unadj.)	Total	Food-stuffs and feed-stuffs	Energy materials	Nonfood materials less energy	Total, change from 12 months ago (unadj.)
2018										
July.....	0.1	-1.0	-0.4	0.3	6.7	0.9	-2.5	5.2	-1.9	6.7
Aug.....	0.2	-0.6	0.0	0.3	6.4	-3.7	-3.5	-4.4	-2.6	3.7
Sept.....	0.2	-0.4	-0.1	0.4	6.0	0.9	0.8	2.0	-1.0	4.3
Oct.....	0.7	0.5	3.0	0.1	6.1	3.3	4.3	3.7	0.8	7.6
Nov.....	-0.6	0.2	-2.3	-0.3	4.5	-3.3	-0.3	-7.2	0.8	1.3
Dec.....	-1.2	0.5	-4.5	-0.5	2.8	3.7	1.8	6.9	1.4	3.7
2019										
Jan.....	-0.9	0.5	-4.9	0.0	1.2	-4.6	0.3	-10.3	-1.8	-3.1
Feb.....	0.1	0.0	1.1	-0.2	0.6	-2.5	-0.8	-5.6	-0.1	-6.7
Mar. ¹	0.6	-0.2	3.9	-0.1	1.2	-0.4	-2.6	0.6	1.4	-3.8
Apr. ¹	0.0	0.5	1.1	-0.3	0.7	3.1	2.5	6.2	-1.9	-2.0
May.....	-0.2	-0.5	-1.4	0.1	-0.6	-5.1	-1.9	-8.2	-4.5	-8.9
June.....	-1.1	-0.3	-4.9	-0.1	-2.1	-3.3	-0.1	-7.5	-0.5	-11.0
July.....	0.2	-0.1	2.2	-0.2	-2.0	1.6	-0.2	2.8	1.9	-10.4

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Services for intermediate demand: The index for services for intermediate demand declined 0.2 percent in July following a 0.2-percent rise in June. Most of the decrease can be attributed to margins for trade services for intermediate demand, which fell 0.8 percent. Prices for services less trade, transportation, and warehousing for intermediate demand edged down 0.1 percent. In contrast, the index for transportation and warehousing services for intermediate demand advanced 0.3 percent. For the 12 months ended in July, the index for services for intermediate demand climbed 2.0 percent.

Product detail: A major factor in the July decline in the index for services for intermediate demand was margins for machinery and equipment parts and supplies wholesaling, which decreased 2.2 percent. The indexes for business loans (partial); paper and plastics products wholesaling; securities brokerage, dealing, and investment advice; fuels and lubricants retailing; and truck transportation of freight also moved down. Conversely, prices for courier, messenger, and U.S. postal services advanced 0.8 percent. The indexes for staffing services and for chemicals and allied products wholesaling also increased.

Table C. Monthly and 12-month percent changes in selected intermediate demand price indexes for services by commodity type, seasonally adjusted

Month	Services for intermediate demand				Total, change from 12 months ago (unadj.)
	Total	Trade	Transportation and warehousing	Other	
2018					
July.....	0.4	0.4	0.3	0.4	3.4
Aug.....	0.0	-0.7	0.1	0.2	3.0
Sept.....	0.3	-0.4	0.6	0.3	3.3
Oct.....	0.6	1.9	0.5	0.3	3.3
Nov.....	0.1	0.0	0.2	0.1	3.1
Dec.....	0.1	0.2	-0.1	0.2	3.1
2019					
Jan.....	0.2	0.4	0.2	0.1	2.8
Feb.....	0.0	-0.3	0.0	0.1	2.6
Mar. ¹	0.5	1.1	0.0	0.3	2.7
Apr. ¹	0.2	0.6	0.5	0.2	2.8
May.....	0.0	-0.6	0.4	0.0	2.5
June.....	0.2	1.1	0.1	0.1	2.6
July.....	-0.2	-0.8	0.3	-0.1	2.0

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Intermediate Demand by Production Flow

Stage 4 intermediate demand: The index for stage 4 intermediate demand edged up 0.1 percent in July following a 0.1-percent decline in the previous month. In July, prices for total goods inputs to stage 4 intermediate demand advanced 0.4 percent. In contrast, the index for total services inputs decreased 0.2 percent. (See table D.) Higher prices for diesel fuel, commercial electric power, gasoline, portfolio management, and corn outweighed declines in the indexes for machinery and equipment parts and supplies wholesaling, paper and plastics products wholesaling, business loans (partial), and steel mill products. (See table 6.) For the 12 months ended in July, prices for stage 4 intermediate demand moved up 1.3 percent.

Stage 3 intermediate demand: The index for stage 3 intermediate demand declined 0.2 percent in July, the third consecutive decrease. In July, prices for total services inputs to stage 3 intermediate demand moved down 0.2 percent, and the index for total goods inputs was unchanged. Declines in the indexes for machinery and equipment parts and supplies wholesaling, slaughter hogs, primary basic organic chemicals, jet fuel, steel mill products, and paper and plastics products wholesaling outweighed increases in prices for gasoline; diesel fuel; and courier, messenger, and U.S. postal services. For the 12 months ended in July, the index for stage 3 intermediate demand fell 0.7 percent, the largest 12-month decrease since moving down 1.8 percent in October 2016.

Stage 2 intermediate demand: The index for stage 2 intermediate demand advanced 0.5 percent in July following a 1.3-percent decrease in June. In July, prices for total goods inputs to stage 2 intermediate demand climbed 0.8 percent, and the index for total services inputs moved up 0.3 percent. Higher prices for crude petroleum, cable network advertising time sales, corn, staffing services, portfolio management, and pipeline transportation of petroleum products outweighed declines in the indexes for natural gas, steel mill products, and network compensation for broadcast and cable television. For the 12 months ended in July, prices for stage 2 intermediate demand moved down 3.6 percent, the largest 12-month drop since decreasing 4.0 percent in March 2016.

Stage 1 intermediate demand: The index for stage 1 intermediate demand advanced 0.3 percent in July following a 1.0-percent decline in June. In July, prices for total goods inputs to stage 1 intermediate demand increased 0.8 percent. Conversely, the index for total services inputs fell 0.4 percent. Increases in the indexes for diesel fuel, corn, crude petroleum, ethanol, gasoline, and chemicals and allied products wholesaling outweighed decreases in prices for business loans (partial), primary basic organic chemicals, and carbon steel scrap. For the 12 months ended in July, the index for stage 1 intermediate demand fell 2.7 percent.

Table D. Monthly percent changes in selected intermediate demand price indexes by production flow, seasonally adjusted

Month	Stage 4 intermediate demand			Stage 3 intermediate demand			Stage 2 intermediate demand			Stage 1 intermediate demand		
	Total	Goods inputs	Ser-vices inputs	Total	Goods inputs	Ser-vices inputs	Total	Goods inputs	Ser-vices inputs	Total	Goods inputs	Ser-vices inputs
2018												
July.....	0.3	0.0	0.4	0.1	-0.3	0.4	0.8	1.7	0.3	0.3	-0.1	0.6
Aug.....	0.0	0.0	-0.1	-0.4	-0.8	0.0	-0.5	-1.1	0.0	-0.3	-0.3	-0.2
Sept.....	0.2	0.2	0.3	0.3	0.6	0.1	0.6	0.9	0.4	0.2	0.1	0.2
Oct.....	0.6	0.5	0.7	1.4	2.3	0.6	0.6	1.3	0.1	1.1	1.4	0.7
Nov.....	-0.2	-0.3	-0.1	-0.8	-1.6	0.2	-1.5	-3.4	0.1	-0.4	-0.8	0.1
Dec.....	0.0	-0.4	0.3	-1.2	-2.6	0.3	0.8	1.9	-0.1	-1.0	-2.0	0.2
2019												
Jan.....	-0.2	-0.3	0.0	-0.3	-0.8	0.3	-1.9	-4.4	0.1	-1.3	-2.5	0.3
Feb.....	0.2	0.2	0.0	0.1	0.2	0.0	-0.8	-2.3	0.2	-0.1	0.0	-0.3
Mar. ¹	0.5	0.4	0.7	0.7	1.0	0.3	0.1	-0.3	0.4	0.9	1.3	0.3
Apr. ¹	0.3	0.2	0.4	0.6	1.0	0.3	0.8	1.7	0.3	0.0	-0.2	0.3
May.....	-0.2	-0.2	-0.1	-0.3	-0.5	-0.2	-1.1	-3.4	0.5	-1.0	-1.9	0.0
June.....	-0.1	-0.5	0.4	-0.6	-1.8	0.4	-1.3	-2.7	-0.3	-1.0	-2.2	0.4
July.....	0.1	0.4	-0.2	-0.2	0.0	-0.2	0.5	0.8	0.3	0.3	0.8	-0.4

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The Producer Price Index for August 2019 is scheduled to be released on Wednesday, September 11, 2019 at 8:30 a.m. (EDT).

Technical Note

Brief Explanation of Producer Price Indexes

The Producer Price Index (PPI) of the Bureau of Labor Statistics (BLS) is a family of indexes that measures the average change over time in prices received (price changes) by producers for domestically produced goods, services, and construction. 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.

More than 10,000 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. Over time, new PPIs have been introduced for products of industries in the services and construction sectors of the U.S. economy. As of January 2018, the PPI covered 71 percent of services as measured by 2012 Census revenue, and 31 percent of construction.

More than 100,000 price quotations per month are organized into three sets of PPIs: (1) Final demand-Intermediate demand (FD-ID) indexes, (2) commodity indexes, and (3) indexes for the net output of industries and their products. The FD-ID structure organizes products by class of buyer and degree of fabrication as well as by stage of production. The commodity structure organizes products by similarity of end use or product type. The entire output of various industries is sampled to derive price indexes for the net output of industries and their products.

Final Demand–Intermediate Demand Indexes

The PPI FD-ID structure measures price change for goods, services, and construction sold to final demand and to intermediate demand. The FD-ID system replaced the PPI stage-of-processing (SOP) system as PPI's primary aggregation model with the release of data for January 2014. The FD-ID model expands coverage beyond that of the SOP system through the addition of services, construction, exports, and government purchases.

Compared with finished goods under the SOP system, the PPI for final demand goods includes nearly a 50 percent expansion of coverage. This increase can be traced to the addition of government purchases and exports. For overall final demand, expansion to include final demand services represents an even larger increase in coverage. In December 2017, final demand goods were about 33 percent of overall final demand, final demand services were roughly 65.5 percent, and final demand construction was about 1.5 percent of final demand. Within intermediate demand, coverage of services for intermediate demand resulted in about a 45 percent increase in coverage of the intermediate demand portion of the economy.

FD-ID indexes are constructed from commodity-based producer output price indexes. Commodities are allocated to aggregate indexes primarily based on the type of buyer. The main source of data used to determine the type of buyer is the "Use of commodities by industries, before redefinition," table

from the Benchmark Input-Output Accounts of the U.S. In many cases, the same commodity is purchased by different types of buyers. As a result, commodities are often included in several FD-ID indexes. For example, regular gasoline is purchased for personal consumption, export, government use, and business use. The PPI program publishes only one commodity index for regular gasoline (wpu057104), reflecting sales to all types of buyers, and this index is used in all aggregations regardless of whether the gasoline is sold for personal consumption, as an export, to government, or to businesses. Proportions based on BEA "Use of Commodities" data are used to allocate the correct portion of the total weight of gasoline to each use category. In cases when buyer type is an important price determining characteristic, indexes are created based on specific buyer type. For example, within the PPI category for loan services, separate indexes for consumer loans and business loans were constructed. For more information relating to the FD-ID structure, see "A new, experimental system of indexes from the PPI program" in the February 2011 *Monthly Labor Review*.

Final Demand: The final demand portion of the FD-ID structure measures price change for commodities sold for personal consumption, capital investment, government, and export. The system is composed of six main price indexes: final demand goods; final demand trade services; final demand transportation and warehousing services; final demand services less trade, transportation, and warehousing; final demand construction; and overall final demand.

The final demand goods index measures price change for both unprocessed and processed goods sold to final demand. Fresh fruits sold to consumers and computers sold for capital investment are examples of transactions included in the final demand goods price index. The final demand trade services index measures price change for the retailing and wholesaling of merchandise sold to final demand, generally without transformation. (Trade indexes measure changes in margins received by wholesalers and retailers.) The final demand transportation and warehousing services index tracks price change for transportation of passengers, as well as, transportation of cargo sold to final demand, and also includes prices for warehousing and storage of goods sold to final demand. The final demand services less trade, transportation, and warehousing index measures price change for all services other than trade and transportation sold to final demand. Publishing, banking, lodging, and health care are examples of these services. The final demand construction index tracks price change for new construction, as well as maintenance and repair construction sold to final demand. Construction of office buildings is an example of a commodity that would be included in the final demand construction index. Lastly, the overall final demand index tracks price change for all types of commodities sold to final demand by combining the five final demand component indexes described above.

Intermediate Demand: The intermediate demand portion of the FD-ID system tracks price change for goods, services, and construction products sold to businesses as inputs to

production, excluding capital investment. The system includes two parallel treatments of intermediate demand. The first treatment organizes intermediate demand commodities by type. The second organizes intermediate demand commodities into production stages, with the explicit goal of developing a forward-flow model of production and price change.

The intermediate demand by commodity type portion of the system organizes commodities by similarity of product. The system is composed of six main price indexes: unprocessed goods for intermediate demand; processed goods for intermediate demand; intermediate demand trade services; intermediate demand transportation and warehousing services; intermediate demand services less trade, transportation, and warehousing; and intermediate demand construction.

The unprocessed goods for intermediate demand price index measures price change for goods sold to businesses as inputs to production that have undergone no fabrication. Crude petroleum sold to refineries is an example of an unprocessed good sold to intermediate demand. The processed goods for intermediate demand index tracks price change for fabricated goods sold as business inputs. Examples include car parts sold to car manufacturers and gasoline sold to trucking companies. The index for trade services for intermediate demand measures price change for the services of retailing and wholesaling goods purchased by businesses as inputs to production. The intermediate demand transportation and warehousing services index measures price change for business travel, as well as, transportation and warehousing of cargo sold to intermediate demand. The intermediate demand services less trade, transportation, and warehousing index measures price change for services other than trade, transportation, and warehousing sold as inputs to production. Legal and accounting services purchased by businesses are examples of intermediate demand services excluding trade, transportation, and warehousing. Finally, the construction for intermediate demand index measures price change for construction purchased by firms as inputs to production. The index for construction for intermediate demand tracks price change for maintenance and repair construction purchased by firms.

The production flow treatment of intermediate demand is a stage-based system of price indexes. These indexes can be used to study price transmission across stages of production and final demand. This system is constructed in a manner that maximizes forward flow of production between stages, while minimizing back-flow of production. The production flow treatment contains four main indexes: intermediate demand stage 1, intermediate demand stage 2, intermediate demand stage 3, and intermediate demand stage 4.

Indexes for the four stages were developed by first assigning each industry in the economy to one of four stages of production, where industries assigned to the fourth stage primarily produce output consumed as final demand, industries in the third stage primarily produce output consumed by stage 4 industries, industries assigned to the second stage primarily produce output consumed by stage 3 industries, and industries assigned to the first stage produce output primarily consumed by stage 2 industries. The four indexes then track prices for the net inputs consumed by

industries in each of the four stages of production. The stage 4 intermediate demand index, for example, tracks price change for inputs consumed, but not produced, by industries included in the fourth stage of production. Hence, the index tracks price change in inputs to industries that primarily produce final demand commodities (stage 4 producers primarily produce commodities sold to final demand).

Examples of heavily weighted goods-producing industries in stage 4 include the manufacture of light trucks and utility vehicles, automobiles, and pharmaceuticals. Retail trade, food service and drinking places, and hospitals are examples of heavily weighted service industries included in stage 4. Stage 4 also includes all new construction industries. Examples of goods consumed by stage 4 industries include motor vehicle parts, commercial electric power, plastic construction products, biological products, and beef and veal. Engineering services, machinery and equipment wholesaling, long distance motor carrying, and legal services constitute examples of services consumed by stage 4 industries.

Examples of highly weighted goods-producing industries included in stage 3 are motor vehicle parts manufacturing, animal (except poultry) slaughtering and processing, and semiconductor manufacturing. Services industries classified in stage 3 include wholesale trade; insurance carriers; architecture, engineering, and related services; and hotels and motels. Examples of goods consumed by stage 3 industries include slaughter steers and heifers, industrial electric power, and hot rolled steel bars, plates, and structural shapes. Services commonly consumed by stage 3 industries include commissions from sales of property and casualty insurance, business loans, temporary help services, and administrative and general management consulting services.

Petroleum refineries; electricity generation, transmission, and distribution; natural gas distribution; cattle ranching and farming; and plastic materials and resin manufacturing are among the goods-based industries assigned to stage 2. Services industries that are heavily weighted in stage 2 include management of companies and enterprises; non-depository credit intermediation; insurance agencies and brokerages; and services to buildings and dwellings. Goods commonly purchased by stage 2 industries include crude oil, natural gas, formula feeds, and primary basic organic chemicals. Services that are heavily weighted in the intermediate demand stage 2 index are legal services, business loans, and cellular phone and other wireless telecommunication.

Goods producing industries in stage 1 include oil and gas extraction, paper mills, and grain farming. Real estate, legal services, and advertising services are examples of highly weighted services industries included in stage 1. Examples of goods consumed by stage 1 industries are commercial and industrial electric power and gasoline. Services commonly consumed by stage 1 industries include solid waste collection, chemicals and allied products wholesaling, and guestroom or unit rental. It should be noted that all inputs purchased by stage 1 industries are by definition produced either within stage 1 or by latter stages of processing, leaving stage 1 less useful for price transmission analysis. For additional information on industry stage assignments, see <https://www.bls.gov/ppi/industryflowstage.htm>.

Comparing the PPI with CPI

Although some data users utilize the PPI as a potential indicator of the Consumer Price Index (CPI), there are many reasons why the PPI and the CPI may diverge. The scope of the personal consumption portion of the PPI includes all marketable output sold by domestic producers for households. The scope of the CPI includes goods and services provided by business or government, where explicit user charges are paid by consumers. For example, the most heavily weighted item in the CPI, owners' equivalent rent, is excluded from the PPI. The scope of the CPI includes imports. The PPI excludes imports. The CPI only includes components of personal consumption directly paid for by the consumers, while the PPI includes components of personal consumption that may not be paid for by consumers. For example, the PPI includes medical services paid for by third parties. In contrast to CPI, PPI does not completely cover services. PPIs exclude taxes, since they do not represent producer revenue. Conversely, sales and other taxes paid by consumers are part of household expenditure and are included in the CPI. Additional technical differences between PPI and CPI also exist. For more information see "Comparing new final demand producer price indexes with other Government price indexes," *Monthly Labor Review*, January 2014, at <https://www.bls.gov/opub/mlr/>.

Commodity Indexes

The commodity classification of the PPI organizes goods, services, and construction by similarity of product or end use, disregarding industry of origin. With the release of data for July 2009, PPI expanded its commodity structure to include indexes for services and construction products. Prior to this date, the PPI commodity structure only included products from goods producing sectors. Table 9 of the *PPI Detailed Report* includes data for commodity indexes, organized in a hierarchal structure, including major groupings, subgroups, product classes, sub-product classes, and individual items.

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 11 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-digit codes), products (9-digit codes), more detailed sub-products (11-digit codes), and, for some industries, indexes for other sources of revenue.

Indexes may represent one of three kinds of product categories. Every industry has primary product indexes that 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 make up a plurality of its total shipment value. In

addition, most industries have secondary product indexes that show changes in prices received by establishments for products chiefly made in some other industry. Some industries have miscellaneous receipts indexes that track price changes for 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 constructed using 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 also are chosen by probability proportionate to size. 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. The survey is conducted online via the BLS Internet Data Collection Facility (IDCF).

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 actual 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. Information on these resampling efforts are noted in the *PPI News Release* and *PPI Detailed Report* in the months they occur.

As part of an ongoing effort to expand coverage to sectors of the economy other than mining and manufacturing, an increasing number of service and construction sector industries have been introduced into the PPI. The following list of industries introduced since the mid-1990s includes the month and year in which an article describing the industry's content appeared in the *PPI Detailed Report*.

Service and construction sector industries introduced into the Producer Price Index, by SIC or NAICS code and the *PPI Detailed Report* that announces their introduction

Title	Code	<i>PPI Detailed Report Issue</i>
	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

Title	Code	PPI Detailed Report Issue
SIC		
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 Industrial building construction	236211	January 2008
New warehouse building construction ..	236221	July 2005
New school construction	236222	July 2006
New office construction	236223	January 2007
New health care building construction...	236224	January 2013
Concrete contractors, nonresidential building work	23811X	July 2008
Roofing contractors, nonresidential building work	23816X	July 2008
Electrical contractors, nonresidential building work	23821X	July 2008
Plumbing / HVAC contractors, nonresidential building work	23822X	July 2008
Merchant wholesalers, durable goods ..	423	July 2005
Merchant wholesalers, nondurable goods	424	July 2005
Electronics and appliance stores	443	January 2004
Building material and garden equipment and supplies dealers.....	444	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
Internet publishing and web search portals	519130	January 2010
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 and leasing	532412	January 2005
Management consulting services	541610	January 2007

Title	Code	PPI Detailed Report Issue
NAICS		
Security guards and patrol services	561612	July 2005
Offices of dentists	621210	January 2011
Blood and organ banks	621991	January 2007
Amusement and theme parks	713110	July 2006
Golf courses and country clubs	713910	July 2006
Fitness and recreational sports centers .	713940	July 2005
Commercial machinery repair and maintenance.....	811310	July 2007

Weights

Weights for most commodity groupings of the PPI, as well as, weights for commodity-based aggregate indexes calculated from commodity groupings, such as FD-ID indexes, currently reflect 2012 values of shipments as reported in the *Census of Manufactures* and other sources. From January 2012 to December 2017, PPI weights were derived from 2007 shipment values. Industry indexes now are calculated under the 2017 NAICS structure utilizing 2012 value of shipment weights and 2007 net output ratios. The 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 indexes are based on gross shipment values, including values of shipments between establishments within the same industry. As a result, broad commodity grouping indexes, such as the PPI for All Commodities (which is composed of major commodity groupings 01 through 15), are affected by the multiple counting of price change at successive stages of processing, which can lead to exaggerated or misleading signals about inflation. The intermediate demand by commodity type FD-ID indexes partially correct for this defect, but industry indexes, final demand FD-ID indexes, and intermediate demand by production flow FD-ID indexes consistently correct for this at all levels of aggregation. Therefore, industry and FD-ID indexes are more appropriate than broad commodity groupings for analysis of general price trends.

Price Index Reference Base

Effective with publication of January 1988 data, many important PPI series (including 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. The FD-ID indexes typically have a reference base of November 2009 = 100.

For further information on the underlying concepts and methodology of the Producer Price Index, see chapter 14, “Producer Prices,” in the *BLS Handbook of Methods*. This chapter can be downloaded from the BLS Web site at <https://www.bls.gov/pub/hom/homch14.htm>.

Calculating Index Changes

Each PPI measures price changes from a reference period that equals 100.0. An increase of 5.5 percent from the reference period in the Final Demand 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 final demand goods have risen from \$100 in November 2009 to \$105.50. Likewise, a current index of 90.0 would indicate that prices received by producers of final demand goods are 10 percent lower than they were in November 2009.

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

Final Demand 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 x 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 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. For more

information, see *Price Adjustment Guide for Contracting Parties*, on the Web at <https://www.bls.gov/ppi/ppiescalation.htm>.

Seasonal adjustment is accomplished using X-13 ARIMA, a software package published by the U.S. Census Bureau. Each year, the seasonal status of most commodity indexes is reevaluated 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 from the prior 5 years. 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 an aggregative method. Generally, commodity indexes are seasonally adjusted using direct seasonal adjustment, which produces a more complete elimination of seasonal movements than does 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 not be logically consistent with all seasonally adjusted indexes for its components. Seasonal movements for FD-ID indexes are derived indirectly through an aggregative method that combines movements of a wide variety of subproduct class (six-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; if the pattern keeps 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 petroleum-based 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 almost 400 seasonally adjusted series, only 42 were subject to intervention in 2018.

For more information relating to seasonal adjustment methods, see “Summary of Changes to the PPI’s Seasonal Adjustment Methodology” in the January 1995 issue of *Producer Price Indexes*, and “PPI and CPI Seasonal Adjustment: an Update” in the July 2010 *Monthly Labor Review*.

Producer Price Index Data on 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, use of these sites eclipsed more traditional methods of data dissemination, such as subscriptions to the *PPI Detailed Report*. There were more than 4 million instances of PPI data

and tables being downloaded from the BLS website during the 12 months ended December 31, 2017.

Retrieving PPI data from the PPI Web site

PPI data can be obtained from the WWW address (<https://www.bls.gov/ppi>). On this page, under the tab labeled “Featured PPI databases” links provide the following methods of data retrieval:

- **Top Picks** is a form-based application for both Industry Data and Commodity Data that allows the user to quickly obtain PPI time series data by selecting the high-level aggregate and other commonly requested time series, including the All Commodities Index and the FD-ID indexes (for example, Final Demand). 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.
- **One-Screen Data Search and Multi-Screen Data Search** are form-based query applications for both Industry Data and Commodity Data designed for users unfamiliar with the PPI coding structure. These applications guide a user through the PPI classification by listing index titles and do 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, non-Java-based application. Both methods allow a user to browse the PPI coding structure and select multiple series. 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 allows users to input multiple, formatted PPI time series identifiers (commodity or industry codes) as inputs in extracting data according to a specified set of date ranges and output options. This application provides the most efficient path for users who are familiar with the format of PPI time series identifiers. There are five alphabetic prefixes used to create unique PPI time series identifiers: WP, WD, PC, PD, and ND. Each provides the user access to a different PPI database. Adding either a “u” (not seasonally adjusted) or an “s” (seasonally adjusted) to the end of these prefixes further specifies the type of data needed.

EXAMPLES

For commodity and FD-ID indexes, series identifiers combine a “wpu” prefix (not seasonally adjusted) or a “wps” prefix (seasonally adjusted) with a commodity code.

<u>Commodity code</u>	<u>Provides data for:</u>
wps141101	Passenger cars, seasonally adjusted
wpu141101	Passenger cars, not seasonally adjusted
wpufd4	Final demand, not seasonally adjusted
wpsid63	Services for intermediate demand, seasonally adjusted

For discontinued commodity indexes, series identifiers combine a “wdu” prefix (not seasonally adjusted) or a “wds” prefix (seasonally adjusted) with a commodity code.

<u>Commodity code</u>	<u>Provides data for:</u>
wds019	Other farm products, seasonally adjusted
wdu0635	Preparations, ethical (prescription), not seasonally adjusted
wdusi138011	Stainless steel mill products, not seasonally adjusted

Current price indexes grouped by industry according to NAICS have series identifiers that begin with the prefix “pcu.” After the prefix, there are 12 digits (the 6-digit industry code is listed twice) followed by up to 7 alphanumeric characters identifying product detail. Dashes are used as placeholders for higher-level industry group codes.

<u>Industry-product code, current NAICS series</u>	<u>Provides data for:</u>
pcu325---325---	Chemical manufacturing
pcu336110336110	Automobile and light duty motor vehicle manufacturing
pcu621111621111411	Offices of physicians, one- and two-physician practices and single-specialty group practices, general/family practice

Discontinued industry-product codes based on SIC combine a “pdu” prefix and “#” between the fourth and fifth characters of the product code. Series identifiers for the discontinued dataset use underscores as placeholders to complete a reference to an SIC industry group code of fewer than four digits. (All PPI industry-based indexes organized by SIC were discontinued with the introduction of NAICS in 2004.)

<u>Industry-product code, discontinued SIC series</u>	<u>Provides data for:</u>
pdu28_#	Chemicals and allied products
pdu331_#	Blast furnaces, steel works, and rolling and finishing mills
pdu3711#111	Passenger cars

Price indexes for discontinued series grouped by industry according to NAICS have identifiers that begin with the prefix “ndu”. After the prefix, there are 12

numeric digits (the 6-digit industry code is listed twice), and up to 7 additional alphanumeric characters that identify product detail. Dashes are used as placeholders for higher-level group codes.

Industry-product code, discontinued NAICS series
 ndu212231212231
 ndu2122312122312
 ndu212231212231214

Provides data for
 Lead and zinc ore mining
 Lead, zinc concentrates
 Lead concentrates

- **Text Files** are best suited for users requiring access to either a large volume of time series data or other PPI-related documentation, such as seasonal factor tables and relative importance tables. The text files can be accessed at <https://download.bls.gov/> or directly from links on the “PPI Databases” page or the PPI homepage. Data and documentation available for download include the following:

Industry Data	<u>Directory:</u> /pub/time.series/pc
Industry Data - Discontinued (NAICS basis)	/pub/time.series/nd
(SIC basis)	/pub/time.series/pd
Commodity Data (incl. FD-ID)	/pub/time.series/wp
Commodity Data – Discontinued	/pub/time.series/wd
Special requests	/pub/special.requests/ppi

Additional information

The PPI homepage (<https://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 “PPI Tables” 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 at (202) 691-7705 or ppi-info@bls.gov.

Table 1. Producer price indexes and percent changes for final demand¹
 [Nov 2009=100, unless otherwise indicated]

Grouping	Other index base	Relative Importance Dec. 2018 ²	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ³	June 2019 ³	July 2019 ³	July 2018	June 2019	Apr. to May	May to June	June to July
Final demand.....		100.000	117.7	118.6	118.8	1.7	0.2	0.1	0.1	0.2
Final demand goods.....		32.799	115.4	116.0	116.4	0.4	0.3	-0.2	-0.4	0.4
Final demand foods.....		5.744	118.0	119.5	119.2	2.5	-0.3	-0.3	0.6	0.2
Finished consumer foods ⁴	00/82	4.623	210.5	212.1	211.3	2.1	-0.4	-0.1	0.2	0.0
Finished consumer foods, crude.....	00/82	0.553	214.8	207.5	202.8	1.4	-2.3	-3.1	6.6	-0.6
Finished consumer foods, processed.....	00/82	4.070	210.5	213.0	212.7	2.2	-0.1	0.2	-0.4	0.1
Government purchased foods.....		0.340	121.3	123.3	123.0	2.5	-0.2	0.2	-0.7	-0.1
Foods for export.....		0.781	111.1	115.6	115.9	4.5	0.3	-1.4	3.4	1.1
Final demand energy.....		5.279	104.7	107.1	109.8	-4.4	2.5	-1.0	-3.1	2.3
Finished consumer energy goods ⁴	00/82	4.265	164.6	170.1	174.7	-3.6	2.7	-0.9	-2.6	2.5
Government purchased energy.....		0.778	109.6	107.8	110.1	-6.5	2.1	-1.2	-5.2	1.7
Energy for export.....		0.236	98.7	93.8	95.2	-12.2	1.5	-1.0	-7.5	1.4
Final demand goods less foods and energy.....		21.776	117.8	117.6	117.6	1.2	0.0	0.0	0.0	0.1
Finished goods less foods and energy ⁴	00/82	12.814	207.5	207.7	207.7	2.2	0.0	0.1	0.0	0.1
Finished consumer goods less foods and energy.....	00/82	6.934	231.9	232.1	232.1	2.2	0.0	0.1	0.0	0.1
Nondurable consumer goods less foods and energy.....	00/82	4.256	298.6	298.9	299.1	2.7	0.1	0.1	0.0	0.1
Durable consumer goods.....	00/82	2.678	163.1	163.2	162.9	1.2	-0.2	0.2	0.1	0.1
Private capital equipment.....	00/82	5.880	176.9	177.1	177.3	2.2	0.1	0.1	0.1	0.2
Private capital equipment for manufacturing industries.....	00/82	1.325	180.9	181.0	181.2	2.3	0.1	0.1	0.1	0.2
Private capital equipment for nonmanufacturing industries.....	00/82	4.555	175.5	175.8	175.9	2.2	0.1	0.2	0.1	0.2
Government purchased goods, excluding foods and energy.....		2.240	114.9	115.2	115.3	1.9	0.1	0.1	0.1	0.2
Government purchased goods excluding foods, energy, and capital equipment.....		1.316	117.2	117.5	117.5	1.8	0.0	0.0	0.2	0.2
Government purchased capital equipment.....		0.924	110.4	110.8	110.8	2.0	0.0	0.1	0.1	0.1
Goods for export, excluding foods and energy.....		6.722	114.2	113.4	113.3	-0.8	-0.1	-0.4	-0.2	0.0
Final demand services.....		65.510	118.5	119.5	119.5	2.3	0.0	0.3	0.4	-0.1
Final demand trade services ⁵		20.411	119.1	120.5	120.6	3.3	0.1	-0.5	1.3	0.2
Trade of finished goods ⁴		17.758	118.4	119.8	119.9	3.2	0.1	-0.5	1.4	0.2
Trade of personal consumption goods.....		14.518	117.6	119.1	118.7	3.3	-0.3	-0.5	1.6	-0.2
Trade of private capital equipment.....		3.240	120.9	122.1	123.8	2.4	1.4	-0.5	0.4	1.4
Trade of government purchased goods.....		0.727	123.5	125.0	125.1	3.9	0.1	-0.5	1.1	0.1
Trade of government purchased goods, excluding capital equipment.....		0.444	122.4	124.2	123.0	4.9	-1.0	-0.6	1.6	-0.9
Trade of government purchased capital equipment.....		0.283	124.8	125.9	128.1	2.6	1.7	-0.3	0.2	1.7
Trade of exports.....		1.926	123.9	125.6	125.6	3.9	0.0	-0.5	1.0	0.1
Final demand transportation and warehousing services.....		4.666	124.8	126.7	126.6	3.0	-0.1	0.7	0.3	0.2
Transportation of passengers for final demand.....		1.304	118.6	122.1	123.0	5.5	0.7	1.8	-0.7	1.5
Transportation of private passengers.....		0.891	118.6	122.2	123.0	5.4	0.7	1.8	-0.6	1.4
Transportation of government passengers.....		0.134	118.7	122.2	123.0	5.4	0.7	1.7	-0.6	1.4
Transportation of passengers for export.....		0.279	118.5	122.1	123.0	5.5	0.7	1.8	-0.6	1.5
Transportation and warehousing of goods for final demand.....		3.362	126.5	127.7	127.3	2.1	-0.3	0.4	0.6	-0.3
Transportation and warehousing of finished goods ⁴		2.380	125.4	126.7	126.2	2.0	-0.4	0.4	0.7	-0.4
Transportation and warehousing of personal consumption goods.....		1.863	125.7	127.0	126.5	2.1	-0.4	0.4	0.6	-0.3
Transportation and warehousing of private capital equipment.....		0.517	124.2	125.5	124.9	1.9	-0.5	0.4	0.7	-0.5
Transportation and warehousing of government purchased goods.....		0.246	125.1	126.2	126.0	2.2	-0.2	0.3	0.6	-0.2
Transportation and warehousing of exports.....		0.736	130.3	131.4	131.1	2.3	-0.2	0.3	0.5	-0.2
Final demand services less trade, transportation, and warehousing.....		40.433	117.6	118.3	118.3	1.7	0.0	0.5	0.0	-0.3
Finished services less trade, transportation, and warehousing ⁴		35.976	118.0	118.7	118.7	1.8	0.0	0.6	0.0	-0.3
Finished consumer services less trade, transportation, and warehousing.....		32.478	118.0	118.6	118.6	1.7	0.0	0.6	0.0	-0.3
Private capital investment services less trade, transportation, and warehousing.....		3.498	118.8	119.8	119.8	2.0	0.0	0.8	-0.5	-0.2
Government purchased services less trade, transportation, and warehousing.....		3.009	112.2	112.3	112.4	1.1	0.1	0.2	-0.2	0.0
Gov. purchased services less trade, transportation, and warehousing, excl. capital investment.....		2.910	112.6	112.6	112.7	1.1	0.1	0.1	-0.2	-0.1
Government purchased capital investment services less trade, transportation, and warehousing.....		0.099	101.6	102.9	104.6	2.4	1.7	1.1	-1.2	1.7
Services for export less trade, transportation, and warehousing.....		1.448	118.6	120.0	120.2	2.4	0.2	0.6	-0.3	0.2
Final demand construction.....		1.688	125.2	127.1	127.9	5.5	0.6	0.0	0.2	0.6
Construction for private capital investment.....		1.140	125.3	126.9	127.7	5.2	0.6	-0.2	0.1	0.6
Construction for government.....		0.548	124.7	127.5	128.0	6.0	0.4	0.3	0.4	0.4
Special groupings										
Final demand less exports.....	04/10	87.872	116.2	117.1	117.3	1.8	0.2	0.1	0.2	0.1
Final demand less government.....	04/10	91.978	116.2	117.0	117.2	1.7	0.2	0.1	0.2	0.1
Final demand less foods, food and nonalcoholic beverages for immediate consumption, and energy ⁶	04/10	88.453	117.2	118.0	118.0	2.1	0.0	0.2	0.3	0.0
Final demand less foods and energy ⁶	04/10	88.977	117.2	117.9	117.9	2.1	0.0	0.2	0.3	-0.1

See footnotes at end of table.

Table 1. Producer price indexes and percent changes for final demand¹ — Continued
 [Nov 2009=100, unless otherwise indicated]

Grouping	Other index base	Relative importance Dec. 2018 ²	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ³	June 2019 ³	July 2019 ³	July 2018	June 2019	Apr. to May	May to June	June to July
Final demand less foods and food and nonalcoholic beverages for immediate consumption ⁶	04/10	93.732	116.0	116.8	117.0	1.7	0.2	0.1	0.1	0.2
Final demand less foods ⁶	04/10	94.256	116.0	116.8	117.0	1.7	0.2	0.1	0.1	0.1
Final demand less energy.....	04/10	94.721	117.0	117.8	117.8	2.2	0.0	0.2	0.3	0.0
Final demand less trade services.....	01/10	79.589	116.1	116.8	117.0	1.3	0.2	0.3	-0.2	0.1
Final demand less distributive services ⁷	01/10	76.227	115.7	116.4	116.6	1.2	0.2	0.2	-0.2	0.1
Final demand goods less energy.....	01/10	27.520	116.8	117.0	116.9	1.5	-0.1	-0.1	0.1	0.2
Final demand goods less foods.....	04/10	27.055	112.2	112.6	113.2	0.0	0.5	-0.3	-0.6	0.5
Final demand services less trade services.....	04/10	45.099	117.4	118.1	118.1	1.8	0.0	0.6	0.0	-0.2
Final demand distributive services ⁷	04/10	23.773	117.9	119.3	119.2	3.0	-0.1	-0.4	1.3	0.1
Final demand goods plus final demand distributive services ⁷	04/10	56.572	114.8	115.7	115.9	1.5	0.2	-0.3	0.3	0.3
Final demand less foods, energy, and trade services ⁶	08/13	68.566	110.2	110.7	110.7	1.7	0.0	0.4	0.0	-0.1
Private and government purchased capital equipment.....	08/13	6.804	107.8	107.9	108.0	2.2	0.1	0.2	0.1	0.2
Private and government purchased capital investment services.....	08/13	7.637	110.5	111.5	112.2	2.2	0.6	0.2	0.0	0.5
Total private and government purchased capital investment.....	08/13	14.441	110.2	110.9	111.3	2.5	0.4	0.2	0.0	0.5
Total finished ⁴	01/10	79.847	117.1	118.1	118.3	1.9	0.2	0.1	0.3	0.1
Total finished less foods, food and nonalcoholic beverages for immediate consumption, and energy ^{4, 6}	12/10	70.447	117.3	118.1	118.1	2.3	0.0	0.2	0.4	-0.1
Total finished less foods and energy ^{4, 6}	01/10	70.959	118.2	119.0	119.0	2.2	0.0	0.2	0.4	-0.1
Total finished less foods and food and nonalcoholic beverages for immediate consumption ^{4, 6}	12/10	74.712	115.7	116.7	116.9	1.9	0.2	0.2	0.2	0.1
Total finished less foods ^{4, 6}	01/10	75.224	117.1	118.1	118.3	1.9	0.2	0.2	0.2	0.1
Total finished less energy ⁴	01/10	75.582	118.1	118.9	118.9	2.2	0.0	0.2	0.4	-0.1
Finished goods ⁴	00/82	21.702	204.9	206.7	207.7	0.8	0.5	-0.1	-0.4	0.6
Finished goods less energy ⁴	00/82	17.437	207.9	208.5	208.3	2.2	-0.1	0.0	0.1	0.1
Finished goods, excluding foods ^{4, 6}	00/82	17.079	202.7	204.6	206.0	0.5	0.7	-0.1	-0.6	0.7
Finished services ⁴	01/10	57.005	117.5	118.5	118.5	2.2	0.0	0.3	0.4	-0.1
Private capital investment services.....	04/10	7.255	118.8	119.9	120.6	2.1	0.6	0.3	0.0	0.5
Finished distributive services ^{4, 7}	04/10	20.138	116.8	118.2	118.2	3.1	0.0	-0.4	1.3	0.1
Finished services less trade services ⁴	04/10	39.247	117.5	118.3	118.3	1.8	0.0	0.6	0.0	-0.2
Finished services less distributive services ^{4, 7}	04/10	36.867	117.3	118.0	118.0	1.8	0.0	0.6	0.0	-0.2
Total private capital investment (goods, services, and construction).....	04/10	14.275	116.5	117.2	117.6	2.3	0.3	0.2	0.0	0.4
Finished goods plus finished distributive services ⁴	04/10	41.840	115.5	116.7	117.0	1.8	0.3	-0.3	0.3	0.3
Total exports.....	04/10	12.128	113.7	114.0	114.0	0.7	0.0	-0.3	0.1	0.2
Goods for export.....	00/82	7.739	189.9	189.2	189.2	-0.6	0.0	-0.5	0.0	0.1
Services for export.....	04/10	4.389	121.6	123.2	123.2	3.2	0.0	0.2	0.3	0.2
Total government purchases.....	04/10	8.022	112.8	113.1	113.5	1.2	0.4	0.0	-0.4	0.3
Government purchased goods.....	00/82	3.358	186.9	186.8	187.7	-0.2	0.5	-0.2	-1.2	0.5
Government purchased services.....	04/10	4.116	114.7	115.2	115.3	1.8	0.1	0.1	0.1	0.0
Total government purchased capital investment (goods, services, construction).....	08/13	1.854	110.1	111.2	111.8	3.3	0.5	0.1	0.2	0.5
Personal consumption.....	01/10	65.572	117.2	118.2	118.3	1.8	0.1	0.2	0.2	0.1
Personal consumption goods (finished consumer goods).....	00/82	15.822	216.5	219.0	220.4	0.4	0.6	-0.3	-0.7	0.7
Personal consumption goods less energy.....	00/82	11.557	223.5	224.3	223.9	2.1	-0.2	0.0	0.1	0.1
Personal consumption goods less foods.....	00/82	11.199	217.3	220.2	222.5	-0.3	1.0	-0.3	-1.0	1.0
Personal consumption nondurable goods less foods.....	00/82	8.521	241.3	245.5	249.0	-0.7	1.4	-0.5	-1.3	1.3
Personal consumption services.....	04/10	49.750	116.8	117.8	117.7	2.3	-0.1	0.3	0.5	-0.2
Personal consumption less trade services.....	04/10	51.054	116.7	117.7	117.9	1.4	0.2	0.3	-0.2	0.1
Personal consumption less distributive services ⁷	04/10	49.191	116.5	117.5	117.7	1.3	0.2	0.3	-0.2	0.1
Personal consumption less foods and energy.....	04/14	56.684	109.4	110.2	110.1	2.2	-0.1	0.2	0.5	-0.1
Personal consumption less foods, energy, and trade services ⁵	04/14	42.166	109.9	110.5	110.5	1.8	0.0	0.5	0.0	-0.1
Personal consumption less foods, energy, and distributive services ⁷	04/14	40.303	110.1	110.7	110.7	1.9	0.0	0.5	0.1	-0.2
Personal consumption goods plus personal consumption distributive services ⁷	08/13	32.203	105.3	106.6	106.8	1.8	0.2	-0.4	0.5	0.3

¹ Further information about the Final Demand-Intermediate Demand Aggregation system is available online at <https://www.bls.gov/ppi/fdidaggregation.htm>.
² Comprehensive relative importance figures are initially computed after the publication of December indexes and are recalculated after final December indexes are available. Individual items and subtotals may not add exactly to totals because of rounding differences.
³ The indexes for March 2019 have been recalculated to incorporate late reports and corrections by respondents. All indexes are subject to revision 4 months after original publication.
⁴ PPI defines Total finished as including only the personal consumption and private capital investment portions of final demand.
⁵ Trade indexes measure changes in margins received by wholesalers and retailers.
⁶ The PPI definition of foods does not include food and beverages for immediate consumption. PPI defines food and beverages for immediate consumption as the service of preparing meals, snacks, and beverages to customer order for immediate on-premises and off-premises consumption.
⁷ Distributive services include transportation, warehousing, and trade of goods.
 "-" Data not available.

Table 2. Producer price indexes and percent changes for intermediate demand by commodity type¹
 [Nov. 2009=100, unless otherwise indicated]

Grouping	Other index base	Relative Importance Dec. 2018 ²	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ³	June 2019 ³	July 2019 ³	July 2018	June 2019	Apr. to May	May to June	June to July
Processed goods										
Processed goods for intermediate demand.....	00/82	100.000	199.6	199.1	199.6	-2.0	0.3	-0.2	-1.1	0.2
Materials and components for manufacturing.....	00/82	45.806	186.5	185.8	184.9	-2.0	-0.5	0.2	-0.2	-0.4
Materials for manufacturing.....		28.389	113.5	112.7	111.8	-3.9	-0.8	0.2	-0.4	-0.6
Materials for food manufacturing.....	00/82	3.928	194.5	197.3	197.1	1.1	-0.1	-0.2	-0.6	0.2
Materials for nondurable manufacturing.....	00/82	13.308	217.9	217.4	215.4	-5.1	-0.9	0.8	0.2	-0.6
Materials for durable manufacturing.....	00/82	11.153	207.5	203.4	201.5	-4.1	-0.9	-0.4	-1.0	-0.9
Components for manufacturing.....	00/82	17.417	155.4	155.7	155.7	1.1	0.0	0.1	0.0	0.1
Components for nondurable manufacturing.....		0.738	115.2	115.3	115.6	0.8	0.3	0.2	0.3	0.3
Components for durable manufacturing.....		16.679	110.0	110.1	110.2	1.1	0.1	0.1	0.0	0.0
Materials and components for construction.....	00/82	8.978	251.2	251.4	251.6	0.9	0.1	0.1	-0.2	0.2
Materials for construction.....		3.915	124.9	125.2	125.2	-0.8	0.0	-0.1	-0.1	0.1
Components for construction.....		5.063	123.4	123.4	123.5	2.2	0.1	0.2	-0.3	0.2
Processed fuels and lubricants for intermediate demand.....	00/82	18.597	181.0	179.8	184.5	-6.9	2.6	-1.4	-4.9	2.2
Processed fuels and lubricants to manufacturing industries.....	00/82	4.693	192.9	193.1	198.2	-5.1	2.6	-0.9	-3.7	1.5
Processed fuels and lubricants to nonmanufacturing industries.....	00/82	13.904	177.4	175.7	180.4	-7.4	2.7	-1.6	-5.3	2.4
Containers for intermediate demand.....	00/82	2.927	238.4	239.0	238.2	1.0	-0.3	0.5	0.2	-0.3
Supplies for intermediate demand.....	00/82	23.690	201.0	201.3	201.2	0.8	0.0	-0.1	0.0	0.0
Supplies to manufacturing industries.....	00/82	2.918	202.3	201.9	201.7	1.2	-0.1	0.0	0.0	-0.1
Supplies to nonmanufacturing industries.....	00/82	20.772	199.3	199.7	199.6	0.8	-0.1	-0.2	-0.1	0.0
Supplies to nonmanufacturing industries, feeds.....	00/82	1.645	177.8	177.3	175.1	-6.3	-1.2	-2.6	1.0	-1.8
Supplies to nonmanufacturing industries, other than feeds.....	00/82	19.127	203.0	203.5	203.6	1.4	0.0	0.0	-0.1	0.1
Unprocessed goods										
Unprocessed goods for intermediate demand.....	00/82	100.000	190.6	181.8	183.5	-10.4	0.9	-5.1	-3.3	1.6
Unprocessed foodstuffs and feedstuffs.....	00/82	35.130	164.0	167.4	165.3	-0.5	-1.3	-1.9	-0.1	-0.2
Unprocessed nonfood materials.....	00/82	64.869	200.9	183.4	187.8	-15.9	2.4	-6.9	-5.2	2.7
Unprocessed nonfood materials except fuel.....	00/82	38.744	249.6	231.6	244.9	-13.4	5.7	-5.2	-7.6	6.2
Unprocessed nonfood materials except fuel to manufacturing industries.....	00/82	37.017	230.5	213.0	225.8	-14.1	6.0	-5.5	-8.0	6.4
Unprocessed nonfood materials except fuel to nonmanufacturing industries.....	00/82	1.727	265.9	270.2	271.0	4.0	0.3	0.0	1.1	0.4
Unprocessed fuel.....	00/82	26.125	122.8	107.8	101.1	-22.5	-6.2	-11.3	1.4	-5.8
Unprocessed fuel to manufacturing industries.....	00/82	0.812	166.0	154.2	149.2	-12.8	-3.2	-7.3	1.1	-2.5
Unprocessed fuel to nonmanufacturing industries.....	00/82	25.313	123.8	108.5	101.6	-22.9	-6.4	-11.4	1.4	-6.0
Services										
Services for intermediate demand.....		100.000	120.9	121.7	121.4	2.0	-0.2	0.0	0.2	-0.2
Trade services for intermediate demand ⁴		18.633	123.6	125.3	124.2	2.6	-0.9	-0.6	1.1	-0.8
Trade services for manufacturing industries.....	12/12	9.107	111.6	113.4	112.1	2.7	-1.1	-0.4	1.3	-1.1
Trade services for nonmanufacturing industries.....	12/12	9.526	111.3	112.4	111.7	2.7	-0.6	-0.4	0.8	-0.5
Transportation and warehousing services for intermediate demand.....		12.123	128.2	129.1	129.5	2.8	0.3	0.4	0.1	0.3
Transportation of passengers for intermediate demand.....		1.166	118.7	122.2	123.0	5.4	0.7	1.7	-0.6	1.4
Transportation of passengers for manufacturing industries.....		0.194	118.5	122.1	123.0	5.5	0.7	1.8	-0.6	1.5
Transportation of passengers for nonmanufacturing industries.....		0.972	118.7	122.2	123.0	5.4	0.7	1.7	-0.6	1.5
Transportation and warehousing of goods for intermediate demand.....		10.957	129.1	129.7	130.0	2.5	0.2	0.2	0.2	0.2
Transportation and warehousing of goods for manufacturing industries.....	12/12	1.688	107.6	108.6	108.8	2.4	0.2	0.4	0.3	0.2
Transportation and warehousing of goods for nonmanufacturing industries.....	12/12	9.269	115.2	115.7	115.9	2.5	0.2	0.2	0.2	0.3
Services less trade, transportation, and warehousing for intermediate demand.....		69.244	118.9	119.3	119.2	1.7	-0.1	0.0	0.1	-0.1
Services less trade, transportation, and warehousing for manufacturing industries.....		2.314	109.7	109.2	109.6	1.8	0.4	0.0	-0.4	0.4
Services less trade, transportation, and warehousing for nonmanufacturing industries.....		66.930	119.2	119.7	119.5	1.7	-0.2	0.0	0.1	0.0
Construction										
Construction for intermediate demand.....		100.000	118.8	120.3	120.7	4.0	0.3	0.8	0.3	0.3
Special groupings										
Processed materials less foods and feeds.....	00/82	91.656	200.5	199.8	200.4	-2.1	0.3	-0.2	-1.1	0.3
Processed foods and feeds.....	00/82	8.344	190.5	192.8	192.4	0.1	-0.2	-0.5	-0.3	-0.1
Processed energy goods.....	00/82	18.597	181.8	180.6	185.4	-6.9	2.7	-1.4	-4.9	2.2
Processed materials less energy.....	00/82	81.403	201.6	201.3	200.7	-0.7	-0.3	0.1	-0.2	-0.2
Processed materials less foods and energy.....	00/82	73.059	202.6	202.0	201.4	-0.8	-0.3	0.1	-0.1	-0.2
Intermediate distributive services ⁵	04/10	29.590	123.2	124.5	123.9	2.6	-0.5	-0.2	0.7	-0.4
Processed goods plus intermediate distributive services.....	04/10	-	112.6	112.7	112.8	-0.7	0.1	-0.3	-0.5	0.1
Unprocessed materials less agricultural products.....	00/82	62.122	202.8	183.4	187.6	-17.1	2.3	-7.1	-5.9	2.4

See footnotes at end of table.

Table 2. Producer price indexes and percent changes for intermediate demand by commodity type¹ — Continued

[Nov. 2009=100, unless otherwise indicated]

Grouping	Other index base	Relative Importance Dec. 2018 ²	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ³	June 2019 ³	July 2019 ³	July 2018	June 2019	Apr. to May	May to June	June to July
Unprocessed energy materials ⁶	00/82	43.256	150.0	135.2	138.7	-20.9	2.6	-8.2	-7.5	2.8
Unprocessed materials less energy.....	00/82	56.744	208.3	206.1	205.3	-2.5	-0.4	-2.9	-0.2	0.5
Unprocessed nonfood materials less energy ⁷	00/82	21.614	339.6	317.3	321.2	-6.2	1.2	-4.5	-0.5	1.9

¹ Further information about the Final Demand-Intermediate Demand Aggregation system is available online at <https://www.bls.gov/ppi/fdidaggregation.htm>

² Comprehensive relative importance figures are initially computed after the publication of December indexes and are recalculated after final December indexes are available. Individual items and subtotals may not add exactly to totals because of rounding differences.

³ The indexes for March 2019 have been recalculated to incorporate late reports and corrections by respondents. All indexes are subject to revision 4 months after original publication.

⁴ Trade indexes measure changes in margins received by wholesalers and retailers.

⁵ Includes intermediate trade, transportation, and warehousing services.

⁶ Includes crude petroleum.

⁷ Excludes crude petroleum.

"-" Data not available.

Table 3. Producer price indexes and percent changes for intermediate demand by production flow¹
 [Nov. 2009=100, unless otherwise indicated]

Grouping	Other index base	Relative Importance Dec. 2018 ²	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ³	June 2019 ³	July 2019 ³	July 2018	June 2019	Apr. to May	May to June	June to July
Stage 4										
Stage 4 intermediate demand.....		100.000	118.6	119.2	119.2	1.3	0.0	-0.2	-0.1	0.1
Inputs to stage 4 goods producers.....		30.585	114.9	115.7	115.2	1.1	-0.4	-0.2	0.4	-0.4
Goods.....		22.920	112.7	113.1	113.0	0.2	-0.1	0.0	0.1	-0.1
Foods.....		2.678	110.8	114.2	113.1	0.4	-1.0	-0.7	2.3	0.1
Energy.....		1.111	113.6	114.8	116.3	-4.2	1.3	-0.1	-3.6	0.3
Goods excluding foods and energy.....		19.131	112.8	112.7	112.5	0.4	-0.2	0.1	0.0	-0.2
Services.....		7.665	122.1	123.9	122.3	3.7	-1.3	-0.6	1.4	-1.2
Trade services.....		6.108	125.6	127.7	125.7	4.1	-1.6	-0.8	1.8	-1.6
Transportation and warehousing services.....		0.235	122.5	124.6	124.6	3.2	0.0	0.9	0.3	0.2
Transportation of passengers.....		0.085	118.5	122.1	123.0	5.5	0.7	1.8	-0.6	1.5
Transportation and warehousing of goods.....		0.150	124.4	125.7	125.1	2.0	-0.5	0.4	0.8	-0.5
Services less trade, transportation, and warehousing.....		1.322	110.3	110.5	110.4	2.1	-0.1	0.1	-0.1	0.0
Inputs to stage 4 services producers.....		50.049	120.2	121.2	121.3	1.9	0.1	-0.1	0.1	0.2
Goods.....		13.163	115.9	117.0	117.8	1.2	0.7	-0.2	-0.7	0.7
Foods.....		2.741	117.8	120.5	121.0	2.7	0.4	-0.2	-0.9	0.8
Energy.....		2.236	108.3	111.3	114.6	-1.3	3.0	-0.6	-2.9	2.5
Goods excluding foods and energy.....		8.186	119.9	120.0	120.1	1.4	0.1	0.0	0.0	0.1
Services.....		36.738	121.6	122.6	122.4	2.3	-0.2	-0.1	0.3	0.0
Trade services.....		4.111	120.1	121.7	120.8	4.8	-0.7	-0.3	1.2	-0.7
Transportation and warehousing services.....		2.305	123.7	124.9	125.1	2.6	0.2	0.4	0.3	0.2
Transportation of passengers.....		0.362	118.4	122.0	122.8	5.4	0.7	1.8	-0.7	1.5
Transportation and warehousing of goods.....		1.943	124.8	125.6	125.7	2.2	0.1	0.2	0.4	0.1
Services less trade, transportation, and warehousing.....		30.322	121.3	122.1	122.1	1.9	0.0	-0.1	0.2	0.0
Construction.....		0.148	118.8	120.3	120.7	4.0	0.3	0.8	0.3	0.3
Inputs to stage 4 construction producers.....		19.366	119.9	119.5	120.1	-0.2	0.5	-0.4	-1.0	0.6
Goods.....		13.280	120.4	119.6	120.6	-0.6	0.8	-0.5	-1.3	0.8
Energy.....		1.639	98.9	92.4	98.7	-10.5	6.8	-4.5	-9.8	6.6
Goods excluding foods and energy.....		11.641	124.3	124.4	124.5	1.1	0.1	0.1	-0.1	0.1
Services.....		6.086	118.6	119.0	118.8	0.8	-0.2	-0.3	-0.1	-0.1
Trade services.....		3.241	118.9	119.7	119.1	-0.3	-0.5	-0.6	0.1	-0.2
Transportation and warehousing services.....		0.842	123.7	125.1	124.5	2.0	-0.5	0.5	0.7	-0.5
Transportation of passengers.....		0.041	119.1	122.2	123.0	5.1	0.7	1.5	-0.5	1.3
Transportation and warehousing of goods.....		0.801	123.8	125.2	124.5	1.9	-0.6	0.4	0.8	-0.6
Services less trade, transportation, and warehousing.....		2.003	117.9	117.3	117.7	1.6	0.3	0.0	-0.8	0.3
Stage 3										
Stage 3 intermediate demand.....		100.000	117.3	117.9	117.6	-0.7	-0.3	-0.3	-0.6	-0.2
Inputs to stage 3 goods producers.....		48.428	119.7	119.8	118.9	-1.6	-0.8	-0.3	-0.8	-0.7
Goods.....		38.613	117.5	117.3	116.3	-2.6	-0.9	-0.3	-1.2	-0.7
Foods.....		11.035	124.9	126.0	123.6	-3.5	-1.9	-1.3	-2.9	-1.2
Energy.....		1.991	103.0	104.1	107.7	-3.1	3.5	-2.5	-3.1	2.0
Goods excluding foods and energy.....		25.587	117.8	116.8	116.0	-2.1	-0.7	0.3	-0.3	-0.7
Services.....		9.750	120.7	122.2	121.4	2.4	-0.7	-0.3	0.9	-0.7
Trade services.....		7.972	120.5	122.2	121.1	2.5	-0.9	-0.3	1.0	-0.8
Transportation and warehousing services.....		0.629	124.2	125.8	125.8	3.0	0.0	0.6	-0.2	0.1
Transportation of passengers.....		0.031	120.1	123.2	123.9	5.0	0.6	1.4	-0.5	1.3
Transportation and warehousing of goods.....		0.598	124.3	125.9	125.8	2.9	-0.1	0.6	-0.1	-0.1
Services less trade, transportation, and warehousing.....		1.149	112.8	112.5	113.4	1.2	0.8	-0.5	0.4	0.4
Construction.....		0.065	118.8	120.3	120.7	4.0	0.3	0.8	0.3	0.3
Inputs to stage 3 services producers.....		49.475	115.8	117.1	117.3	0.4	0.2	-0.1	-0.3	0.3
Goods.....		10.217	99.6	103.1	104.4	-4.8	1.3	-0.2	-2.8	1.3
Foods.....		0.003	127.7	130.5	132.7	4.2	1.7	0.5	-0.4	1.9
Energy.....		6.862	94.4	99.1	100.9	-7.0	1.8	-0.4	-3.9	1.8
Goods excluding foods and energy.....		3.352	109.9	110.1	110.2	0.7	0.1	0.1	-0.1	0.2
Services.....		38.197	120.4	120.8	120.8	2.0	0.0	-0.1	0.3	0.0
Trade services.....		3.389	136.8	139.5	138.2	4.9	-0.9	-0.6	2.2	-0.9
Transportation and warehousing services.....		8.253	133.3	133.7	134.1	2.5	0.3	0.2	-0.1	0.3
Transportation of passengers.....		0.034	119.3	122.5	123.3	5.2	0.7	1.5	-0.5	1.3
Transportation and warehousing of goods.....		8.219	133.6	133.9	134.3	2.4	0.3	0.1	0.0	0.3
Services less trade, transportation, and warehousing.....		26.555	116.9	117.2	117.2	1.5	0.0	-0.2	0.3	-0.1
Construction.....		1.061	118.8	120.3	120.7	4.0	0.3	0.8	0.3	0.3
Inputs to stage 3 construction producers.....		2.097	114.6	107.0	110.9	-6.8	3.6	-2.9	-6.4	3.6
Goods.....		1.661	107.7	98.7	103.4	-8.7	4.8	-3.5	-7.9	4.5
Energy.....		1.019	96.0	83.2	89.8	-13.6	7.9	-5.4	-12.9	7.8
Goods excluding foods and energy.....		0.642	126.9	126.5	126.6	-0.2	0.1	-0.2	-0.2	0.2
Services.....		0.436	125.4	125.8	125.4	0.6	-0.3	-0.6	0.0	-0.1
Trade services.....		0.396	127.4	127.9	127.4	0.6	-0.4	-0.7	0.1	-0.1
Transportation and warehousing services.....		0.001	118.5	122.1	123.0	5.5	0.7	1.8	-0.6	1.5

See footnotes at end of table.

Table 3. Producer price indexes and percent changes for intermediate demand by production flow¹ — Continued
 [Nov. 2009=100, unless otherwise indicated]

Grouping	Other index base	Relative Importance Dec. 2018 ²	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ³	June 2019 ³	July 2019 ³	July 2018	June 2019	Apr. to May	May to June	June to July
			Transportation of passengers.....	0.001	118.5	122.1	123.0	5.5	0.7	1.8
Services less trade, transportation, and warehousing.....	0.039	107.2	107.0	107.3	0.5	0.3	0.0	-0.5	0.3	
Stage 2										
Stage 2 intermediate demand.....	100.000	106.9	105.2	105.7	-3.6	0.5	-1.1	-1.3	0.5	
Inputs to stage 2 goods producers.....	46.121	96.5	92.6	93.3	-10.0	0.8	-3.1	-2.6	0.8	
Goods.....	39.658	91.7	87.2	88.0	-12.0	0.9	-3.7	-3.1	0.9	
Foods.....	3.574	108.6	112.1	113.7	3.7	1.4	-3.0	4.3	1.4	
Energy.....	16.893	67.1	59.5	61.2	-23.7	2.9	-8.3	-8.6	3.0	
Goods excluding foods and energy.....	19.191	115.9	114.3	113.4	-4.6	-0.8	-0.1	-0.3	-0.6	
Services.....	6.016	120.9	121.7	122.3	2.5	0.5	0.4	0.1	0.5	
Trade services.....	0.423	122.8	126.6	124.6	3.1	-1.6	0.3	1.8	-1.6	
Transportation and warehousing services.....	3.435	140.7	141.9	143.0	2.7	0.8	0.4	0.1	0.8	
Transportation of passengers.....	0.261	119.1	122.5	123.3	5.3	0.7	1.6	-0.5	1.3	
Transportation and warehousing of goods.....	3.174	141.2	142.2	143.3	2.5	0.8	0.3	0.1	0.7	
Services less trade, transportation, and warehousing.....	2.158	108.2	108.1	108.4	2.0	0.3	0.4	-0.1	0.3	
Construction.....	0.447	118.8	120.3	120.7	4.0	0.3	0.8	0.3	0.3	
Inputs to stage 2 services producers.....	53.879	117.2	117.6	117.9	1.8	0.3	0.4	-0.4	0.3	
Goods.....	4.617	111.7	111.5	112.2	0.3	0.6	-0.4	-0.5	0.8	
Foods.....	0.064	87.9	100.1	101.5	18.9	1.4	0.1	14.0	5.6	
Energy.....	0.398	111.7	104.8	110.1	-8.4	5.1	-3.6	-7.9	5.2	
Goods excluding foods and energy.....	4.155	112.0	112.1	112.4	1.0	0.3	-0.1	0.0	0.4	
Services.....	47.840	117.7	118.2	118.4	1.9	0.2	0.5	-0.4	0.3	
Trade services.....	1.074	124.3	122.9	122.2	-1.5	-0.6	-1.4	-0.7	-0.4	
Transportation and warehousing services.....	6.184	123.7	124.5	124.9	3.1	0.3	0.4	0.0	0.5	
Transportation of passengers.....	0.957	118.7	122.2	123.1	5.5	0.7	1.7	-0.6	1.5	
Transportation and warehousing of goods.....	5.227	125.1	125.4	125.7	2.8	0.2	0.1	0.2	0.3	
Services less trade, transportation, and warehousing.....	40.582	117.4	117.8	118.0	1.8	0.2	0.6	-0.5	0.3	
Construction.....	1.422	118.8	120.3	120.7	4.0	0.3	0.8	0.3	0.3	
Stage 1										
Stage 1 intermediate demand.....	100.000	116.2	114.7	115.0	-2.7	0.3	-1.0	-1.0	0.3	
Inputs to stage 1 goods producers.....	46.631	111.4	108.7	108.7	-5.8	0.0	-1.6	-1.2	0.2	
Goods.....	36.389	108.6	104.7	104.7	-7.8	0.0	-2.2	-1.5	0.3	
Foods.....	2.636	106.4	115.4	115.3	5.4	-0.1	-1.5	7.1	1.6	
Energy.....	6.512	101.8	96.0	98.4	-12.6	2.5	-3.3	-7.0	2.1	
Goods excluding foods and energy.....	27.241	112.1	107.4	106.9	-7.8	-0.5	-2.0	-1.1	-0.3	
Services.....	10.236	120.5	122.3	121.7	1.1	-0.5	0.5	0.3	-0.3	
Trade services.....	7.392	123.7	125.5	125.3	0.9	-0.2	0.0	0.6	-0.2	
Transportation and warehousing services.....	1.264	125.2	126.7	126.9	3.1	0.2	0.6	0.3	0.2	
Transportation of passengers.....	0.219	118.5	122.1	122.9	5.4	0.7	1.8	-0.6	1.4	
Transportation and warehousing of goods.....	1.045	126.1	127.2	127.2	2.6	0.0	0.3	0.6	0.0	
Services less trade, transportation, and warehousing.....	1.580	103.8	105.3	103.4	0.7	-1.8	2.5	-0.9	-1.8	
Construction.....	0.006	118.8	120.3	120.7	4.0	0.3	0.8	0.3	0.3	
Inputs to stage 1 services producers.....	46.501	120.6	120.1	120.7	0.0	0.5	-0.6	-1.0	0.4	
Goods.....	15.044	112.1	108.5	111.1	-4.2	2.4	-1.7	-4.1	2.3	
Foods.....	0.096	96.4	90.3	88.9	-18.3	-1.6	-4.7	-1.0	-1.6	
Energy.....	7.682	109.2	102.5	107.7	-8.0	5.1	-3.3	-7.9	4.8	
Goods excluding foods and energy.....	7.266	117.7	117.7	117.5	0.4	-0.2	0.1	-0.1	-0.1	
Services.....	31.453	124.7	125.8	125.2	2.0	-0.5	-0.1	0.5	-0.5	
Trade services.....	4.290	123.0	125.3	123.8	4.4	-1.2	-0.4	1.7	-1.0	
Transportation and warehousing services.....	2.481	127.9	130.2	131.0	3.8	0.6	1.0	-0.5	0.9	
Transportation of passengers.....	1.557	118.4	122.0	122.9	5.5	0.7	1.8	-0.6	1.5	
Transportation and warehousing of goods.....	0.924	132.7	132.6	133.1	1.0	0.4	-0.2	-0.2	0.1	
Services less trade, transportation, and warehousing.....	24.682	124.7	125.5	125.0	1.5	-0.4	-0.1	0.3	-0.6	
Construction.....	0.004	118.8	120.3	120.7	4.0	0.3	0.8	0.3	0.3	
Inputs to stage 1 construction producers.....	6.869	120.6	120.8	121.2	0.5	0.3	-0.4	-0.6	0.4	
Goods.....	4.574	119.6	119.9	120.7	0.6	0.7	-0.3	-0.7	0.8	
Energy.....	0.468	96.9	97.2	102.9	-6.8	5.9	-3.9	-6.4	5.2	
Goods excluding foods and energy.....	4.106	124.1	124.4	124.5	1.7	0.1	0.2	0.0	0.2	
Services.....	2.295	122.4	122.4	122.1	0.4	-0.2	-0.6	-0.4	-0.1	
Trade services.....	1.668	123.6	123.7	123.0	-0.3	-0.6	-0.9	-0.2	-0.2	
Transportation and warehousing services.....	0.090	113.4	114.7	115.6	4.3	0.8	0.6	-0.2	1.0	
Transportation of passengers.....	0.023	118.5	122.1	123.0	5.5	0.7	1.8	-0.6	1.5	
Transportation and warehousing of goods.....	0.067	112.9	113.5	114.4	3.9	0.8	0.3	-0.1	0.8	
Services less trade, transportation, and warehousing.....	0.537	118.3	117.5	117.9	1.6	0.3	0.1	-0.9	0.3	
Special groupings										
Total goods inputs to stage 4 intermediate demand.....	04/10	49.363	112.8	113.1	113.4	0.2	0.3	-0.2	-0.5	0.4

See footnotes at end of table.

Table 3. Producer price indexes and percent changes for intermediate demand by production flow¹ — Continued

[Nov. 2009=100, unless otherwise indicated]

Grouping	Other index base	Relative Importance Dec. 2018 ²	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ³	June 2019 ³	July 2019 ³	July 2018	June 2019	Apr. to May	May to June	June to July
Total services inputs to stage 4 intermediate demand.....	04/10	50.489	120.7	121.7	121.4	2.3	-0.2	-0.1	0.4	-0.2
Total construction inputs to stage 4 intermediate demand.....	04/10	0.148	117.9	119.3	119.7	3.9	0.3	0.8	0.3	0.3
Total foods inputs to stage 4 intermediate demand.....	04/10	5.419	111.4	114.3	114.0	1.5	-0.3	-0.4	0.5	0.5
Total energy goods inputs to stage 4 intermediate demand.....	04/10	4.986	100.1	99.3	103.1	-5.2	3.8	-1.8	-5.4	3.3
Total goods less foods and energy inputs to stage 4 intermediate demand. ...	04/10	38.958	115.7	115.8	115.7	0.8	-0.1	0.1	-0.1	0.0
Total goods inputs to stage 3 intermediate demand.....	04/10	50.491	107.2	107.5	107.3	-3.3	-0.2	-0.5	-1.8	0.0
Total services inputs to stage 3 intermediate demand.....	04/10	48.383	119.1	119.7	119.5	2.0	-0.2	-0.2	0.4	-0.2
Total construction inputs to stage 3 intermediate demand.....	04/10	1.126	117.9	119.3	119.7	3.9	0.3	0.8	0.3	0.3
Total foods inputs to stage 3 intermediate demand.....	04/10	11.038	111.2	112.2	110.1	-3.5	-1.9	-1.3	-2.9	-1.1
Total energy goods inputs to stage 3 intermediate demand.....	04/10	9.872	92.3	94.5	97.0	-6.9	2.6	-1.3	-4.7	2.4
Total goods less foods and energy inputs to stage 3 intermediate demand. ...	04/10	29.581	111.8	111.0	110.3	-1.8	-0.6	0.3	-0.3	-0.5
Total goods inputs to stage 2 intermediate demand.....	04/10	44.275	89.3	85.4	86.1	-10.8	0.8	-3.4	-2.7	0.8
Total services inputs to stage 2 intermediate demand.....	04/10	53.856	118.8	119.3	119.6	2.0	0.3	0.5	-0.3	0.3
Total construction inputs to stage 2 intermediate demand.....	04/10	1.869	117.9	119.3	119.7	3.9	0.3	0.8	0.3	0.3
Total foods inputs to stage 2 intermediate demand.....	04/10	3.638	109.0	112.7	114.3	4.0	1.4	-2.9	4.5	1.5
Total energy goods inputs to stage 2 intermediate demand.....	04/10	17.291	66.2	58.7	60.5	-23.2	3.1	-8.3	-8.4	2.9
Total goods less foods and energy inputs to stage 2 intermediate demand. ...	04/10	23.346	108.6	107.3	106.7	-3.7	-0.6	-0.1	-0.3	-0.5
Total goods inputs to stage 1 intermediate demand.....	04/10	56.007	99.1	96.0	96.7	-6.2	0.7	-1.9	-2.2	0.8
Total services inputs to stage 1 intermediate demand.....	04/10	43.984	122.6	123.8	123.3	1.8	-0.4	0.0	0.4	-0.4
Total construction inputs to stage 1 intermediate demand.....	04/10	0.010	117.9	119.3	119.7	3.9	0.3	0.8	0.3	0.3
Total foods inputs to stage 1 intermediate demand.....	04/10	2.732	100.1	108.1	108.0	4.5	-0.1	-1.6	6.8	1.5
Total energy goods inputs to stage 1 intermediate demand.....	04/10	14.662	101.1	95.3	99.1	-10.0	4.0	-3.3	-7.5	3.8
Total goods less foods and energy inputs to stage 1 intermediate demand. ...	04/10	38.613	96.8	94.0	93.6	-5.4	-0.4	-1.4	-0.7	-0.2

¹ Further information about the Final Demand-Intermediate Demand Aggregation system is available online at <https://www.bls.gov/ppi/fdidaggregation.htm>

² Comprehensive relative importance figures are initially computed after the publication of December indexes and are recalculated after final December indexes are available. Individual items and subtotals may not add exactly to totals because of rounding differences.

³ The indexes for March 2019 have been recalculated to incorporate late reports and corrections by respondents. All indexes are subject to revision 4 months after original publication.

“-” Data not available.

Table 4. Producer price indexes and percent changes for selected commodity groupings by final demand category¹
 [1982=100, unless otherwise indicated]

Grouping	Commodity code	Other index base	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ²	June 2019 ²	July 2019 ²	July 2018	June 2019	Apr. to May	May to June	June to July
Final demand.....		11/09	117.7	118.6	118.8	1.7	0.2	0.1	0.1	0.2
Final demand goods.....		11/09	115.4	116.0	116.4	0.4	0.3	-0.2	-0.4	0.4
Final demand foods.....		11/09	118.0	119.5	119.2	2.5	-0.3	-0.3	0.6	0.2
Fresh fruits and melons.....	01-11		136.5	139.3	129.3	-15.8	-7.2	-6.8	13.7	-4.1
Fresh and dry vegetables ³	01-13		254.0	245.9	246.7	43.3	0.3	3.6	4.1	0.3
Grains.....	01-2		141.4	165.3	167.7	21.2	1.5	0.1	16.8	6.2
Eggs for fresh use ³	01-71-07	12/91	124.3	93.3	85.0	-53.5	-8.9	-28.3	24.7	-8.9
Oilseeds.....	01-83-01		156.3	155.4	161.7	2.7	4.1	-7.6	3.1	-0.3
Bakery products ³	02-11		292.0	292.4	292.2	1.9	-0.1	0.1	0.3	-0.1
Milled rice ³	02-13		204.8	204.1	205.8	-1.3	0.8	-0.3	0.2	0.8
Pasta products.....	02-14-02	06/85	202.3	204.3	206.7	2.1	1.2	-0.9	0.9	1.2
Beef and veal.....	02-21-01		213.6	214.4	206.4	1.7	-3.7	-2.9	-4.4	1.8
Pork.....	02-21-04		123.4	138.7	138.1	-2.4	-0.4	2.7	-2.3	-3.4
Processed young chickens.....	02-22-03		163.0	169.3	165.0	0.7	-2.5	-4.5	1.2	-2.5
Processed turkeys.....	02-22-06		138.7	148.9	147.5	2.0	-0.9	3.7	1.7	-2.4
Finfish and shellfish.....	02-23		359.1	335.4	351.7	3.9	4.9	0.1	2.6	3.0
Dairy products.....	02-3		196.2	200.8	203.3	5.7	1.2	0.5	0.0	0.6
Processed fruits and vegetables ³	02-4		209.4	209.2	208.3	0.2	-0.4	0.0	0.0	-0.4
Confectionery end products ³	02-55		280.9	281.5	282.3	1.4	0.3	0.0	0.0	0.3
Soft drinks ³	02-62		215.3	214.3	212.9	4.4	-0.7	0.4	-0.6	-0.7
Roasted coffee ³	02-63-01		195.0	193.9	193.8	-0.2	-0.1	0.0	-0.1	-0.1
Shortening and cooking oils ³	02-78		241.2	237.9	239.7	-3.1	0.8	-0.1	-0.3	0.8
Frozen specialty food ³	02-85		185.5	186.7	187.9	0.8	0.6	1.2	0.0	0.6
Final demand energy.....		11/09	104.7	107.1	109.8	-4.4	2.5	-1.0	-3.1	2.3
Liquefied petroleum gas ³	05-32		147.7	87.8	90.1	-58.2	2.6	-7.6	-22.2	2.6
Residential electric power.....	05-41	12/90	179.0	185.6	188.3	2.2	1.5	-0.1	0.4	0.9
Residential natural gas.....	05-51	12/90	203.3	198.2	198.0	1.3	-0.1	-0.2	-0.9	-1.3
Gasoline.....	05-71		177.6	195.5	204.9	-6.7	4.8	-1.7	-5.0	5.2
Home heating oil and distillates.....	05-73-02		191.4	195.7	207.8	0.2	6.2	-0.2	-5.0	8.0
No. 2 diesel fuel.....	05-73-03		239.3	204.4	221.0	-14.0	8.1	-5.7	-13.3	7.9
Final demand goods less foods and energy.....		11/09	117.8	117.6	117.6	1.2	0.0	0.0	0.0	0.1
Alcoholic beverages ³	02-61		200.1	200.1	200.4	0.8	0.1	-0.4	0.4	0.1
Pet food ³	02-94-02		270.3	271.1	270.9	3.4	-0.1	0.2	0.0	-0.1
Women's, girls', and infants' apparel ³	03-81-06	12/03	106.9	107.0	107.0	-1.7	0.0	0.1	0.1	0.0
Men's and boys' apparel ³	03-81-07	12/03	116.5	117.7	117.8	1.9	0.1	0.5	0.0	0.1
Textile housefurnishings ³	03-82		169.4	169.9	169.9	0.8	0.0	0.2	0.1	0.0
Footwear.....	04-3		206.4	209.4	210.3	3.2	0.4	0.2	-0.2	0.2
Industrial chemicals.....	06-1		258.3	259.3	256.3	-6.5	-1.2	0.5	0.6	-0.9
Pharmaceutical preparations.....	06-38	06/01	268.6	268.2	268.4	3.1	0.1	0.1	-0.5	0.1
Soaps and detergents ³	06-71		181.3	182.3	182.5	0.5	0.1	0.1	0.3	0.1
Cleaning and polishing products ³	06-72	06/83	198.0	198.4	198.8	2.8	0.2	0.1	0.1	0.2
Cosmetics and other toiletries ³	06-75		166.7	166.7	166.7	0.9	0.0	0.0	0.4	0.0
Tires ³	07-12-01		149.6	147.8	148.0	1.4	0.1	-0.3	-0.3	0.1
Consumer, institutional, and commercial products, n.e.c. ³	07-2B	12/06	138.8	138.2	138.5	0.2	0.2	0.1	-0.1	0.2
Sanitary paper products ³	09-15-01		183.1	182.8	180.8	0.5	-1.1	0.2	0.1	-1.1
Iron and steel scrap ³	10-12		494.9	396.1	383.4	-28.8	-3.2	-8.3	-8.9	-3.2
Agricultural machinery and equipment ³	11-1		236.5	237.2	237.8	3.2	0.3	-0.3	0.4	0.3
Construction machinery and equipment.....	11-2		231.6	232.4	232.6	5.4	0.1	0.1	0.3	-0.4
Metal cutting machine tools ³	11-37		203.7	204.2	204.0	1.3	-0.1	0.0	0.1	-0.1
Metal forming machine tools.....	11-38		236.7	236.8	237.6	5.0	0.3	-0.2	0.1	0.8
Tools, dies, jigs, fixtures, and industrial molds ³	11-39		157.0	156.9	156.9	2.5	0.0	0.1	0.1	0.0
Pumps, compressors, and equipment.....	11-41		265.1	266.5	267.0	2.7	0.2	0.2	0.1	0.2
Industrial material handling equipment.....	11-44		225.0	225.4	225.0	2.5	-0.2	0.0	0.3	-0.3
Electronic computers and computer equipment ³	11-5	12/98	26.7	26.0	26.0	-5.1	0.0	-2.2	-0.8	0.0
Textile machinery and equipment ³	11-62		172.0	172.2	172.2	0.3	0.0	0.0	0.0	0.0
Paper industries machinery ³	11-64	06/82	226.9	228.7	228.5	2.8	-0.1	2.0	0.0	-0.1
Printing trades machinery and equipment ³	11-65		164.6	164.1	164.5	-0.1	0.2	0.6	-0.7	0.2
Transformers and power regulators ³	11-74		231.3	230.9	232.6	1.3	0.7	0.5	-0.3	0.7
Communication and related equipment.....	11-76	12/85	115.9	116.7	116.4	3.7	-0.3	0.1	0.3	-0.1
Electronic components and accessories.....	11-78		65.0	65.5	65.4	-0.5	-0.2	0.0	0.6	-0.2
X-ray and electromedical equipment ³	11-79-05		86.6	86.6	86.6	0.3	0.0	0.0	0.0	0.0
Oil field and gas field machinery ³	11-91		220.1	220.3	220.3	1.9	0.0	0.0	0.1	0.0
Mining machinery and equipment.....	11-92		294.8	294.5	299.3	9.4	1.6	0.3	0.2	1.6
Office and store machines and equipment ³	11-93		119.7	108.3	122.1	1.1	12.7	2.5	-11.7	12.7
Household furniture ³	12-1		218.3	219.4	219.6	2.2	0.1	0.4	0.0	0.1
Commercial furniture ³	12-2		231.3	234.0	235.7	5.1	0.7	0.3	1.3	0.7
Floor coverings ³	12-3		199.7	197.3	198.5	1.4	0.6	-0.5	-0.3	0.6

See footnotes at end of table.

Table 4. Producer price indexes and percent changes for selected commodity groupings by final demand category¹ — Continued
 [1982=100, unless otherwise indicated]

Grouping	Commodity code	Other index base	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ²	June 2019 ²	July 2019 ²	July 2018	June 2019	Apr. to May	May to June	June to July
Household appliances ³	12-4		123.0	124.3	123.6	3.6	-0.6	0.6	-0.1	-0.6
Home electronic equipment ³	12-5		51.6	51.7	51.8	0.8	0.2	0.6	-0.4	0.2
Lawn and garden equipment excl. garden tractors ³	12-66		149.3	149.8	149.2	1.7	-0.4	0.3	0.1	-0.4
Passenger cars.....	14-11-01		135.0	134.8	134.4	0.4	-0.3	-0.1	0.0	0.4
Light motor trucks.....	14-11-05		178.0	176.7	176.2	0.2	-0.3	0.4	0.0	0.2
Heavy motor trucks.....	14-11-06		231.9	231.9	231.9	1.0	0.0	0.0	0.4	-0.1
Motor vehicles parts ³	14-12		127.1	127.7	127.6	0.4	-0.1	0.0	0.1	-0.1
Truck trailers ³	14-14		222.6	224.4	227.4	6.5	1.3	0.2	0.0	1.3
Travel trailers and campers.....	14-16	06/84	214.3	214.4	214.5	1.4	0.0	-0.3	0.1	0.2
Aircraft.....	14-21		306.1	307.4	307.4	2.0	0.0	0.1	0.2	-0.1
Ships ³	14-31	12/85	225.4	227.4	229.1	2.1	0.7	0.4	0.5	0.7
Railroad equipment ³	14-4		206.5	206.5	203.5	-0.3	-1.5	0.0	-0.5	-1.5
Toys, games, and children's vehicles ³	15-11		156.3	158.1	158.0	0.3	-0.1	0.1	-0.1	-0.1
Sporting and athletic goods ³	15-12		140.5	149.1	142.5	3.3	-4.4	5.8	0.1	-4.4
Cigarettes ³	15-21		1,114.4	1,116.3	1,125.6	7.8	0.8	0.0	0.2	0.8
Mobile homes ³	15-5		299.0	299.4	300.1	-0.9	0.2	0.4	0.0	0.2
Medical, surgical & personal aid devices.....	15-6		182.6	182.5	182.9	1.4	0.2	0.1	0.2	0.2
Jewelry, platinum and karat gold ³	15-94-02		231.1	230.1	230.6	2.2	0.2	-0.5	0.1	0.2
Costume jewelry and novelties ³	15-94-04		191.0	197.4	197.0	5.0	-0.2	-0.4	2.3	-0.2
Final demand services.....		11/09	118.5	119.5	119.5	2.3	0.0	0.3	0.4	-0.1
Final demand trade services ⁴		11/09	119.1	120.5	120.6	3.3	0.1	-0.5	1.3	0.2
Machinery and equipment parts and supplies wholesaling ³	57-11-02	03/09	126.6	129.3	126.4	6.0	-2.2	-1.2	2.5	-2.2
Machinery and vehicle wholesaling ³	57-11-03	05/19	—	100.0	103.0	—	3.0	—	0.0	3.0
Professional and commercial equipment wholesaling ³	57-11-04	05/19	—	100.1	99.2	—	-0.9	—	0.1	-0.9
Furnishings wholesaling ³	57-2	03/09	91.9	101.3	103.5	11.3	2.2	4.2	4.1	2.2
Chemicals and allied products wholesaling ³	57-5	03/09	110.2	111.4	112.7	5.5	1.2	0.5	0.4	1.2
Paper and plastics products wholesaling ³	57-6	03/09	134.9	137.5	129.1	-1.3	-6.1	0.1	1.3	-6.1
Apparel wholesaling ³	57-7	03/09	121.7	123.6	124.7	4.4	0.9	0.0	1.2	0.9
Food and alcohol wholesaling ³	57-8	06/09	114.8	114.9	114.1	4.8	-0.7	-0.9	0.7	-0.7
Food and alcohol retailing.....	58-1	03/09	135.0	134.8	134.3	2.4	-0.4	0.2	1.1	-0.1
Health, beauty, and optical goods retailing ³	58-2	03/09	120.3	123.0	124.6	5.0	1.3	-1.7	4.0	1.3
Apparel, jewelry, footwear, and accessories retailing.....	58-3	06/09	113.3	110.2	110.1	-0.3	-0.1	-4.5	1.4	0.2
Computer hardware, software, and supplies retailing ³	58-4	03/09	99.6	96.8	96.7	3.9	-0.1	-4.2	2.2	-0.1
TV, video, and photographic equipment and supplies retailing ³	58-5	03/09	57.0	54.8	54.0	-20.2	-1.5	-4.5	0.4	-1.5
Automobiles retailing (Partial).....	58-61-01	03/09	78.2	80.4	77.5	-2.5	-3.6	7.1	3.1	-3.2
Automotive parts, including tires, retailing ³	58-61-02	03/09	115.2	111.4	118.3	10.5	6.2	-1.0	-0.7	6.2
RVs, trailers, and campers retailing ³	58-8	03/09	106.8	105.7	106.1	-0.4	0.4	-1.3	0.2	0.4
Sporting goods, including boats, retailing ³	58-9	03/09	114.2	113.7	116.8	-0.2	2.7	-3.4	1.8	2.7
Lawn, garden, and farm equipment and supplies retailing ³	58-A	03/09	103.9	106.5	106.1	1.3	-0.4	-3.3	0.9	-0.4
Furniture retailing ³	58-B	03/09	104.0	104.1	105.3	3.2	1.2	-0.5	0.3	1.2
Flooring and floor coverings retailing ³	58-C	03/09	99.6	99.2	102.2	3.7	3.0	0.3	-1.4	3.0
Hardware, building materials, and supplies retailing.....	58-D	03/09	125.4	121.8	121.6	-5.0	-0.2	-2.2	-1.1	-0.2
Major household appliances retailing.....	58-E	03/09	99.3	99.6	100.4	11.2	0.8	-2.3	-2.1	6.1
Fuels and lubricants retailing ³	58-F	06/09	155.0	188.1	169.4	8.9	-9.9	5.9	12.2	-9.9
Cleaning supplies and paper products retailing ³	58-G	03/09	145.9	145.0	144.0	1.2	-0.7	2.3	-2.6	-0.7
Book retailing ³	58-H	03/09	117.6	118.9	118.4	9.4	-0.4	0.8	-1.6	-0.4
Final demand transportation and warehousing services.....		11/09	124.8	126.7	126.6	3.0	-0.1	0.7	0.3	0.2
Rail transportation of freight and mail ³	30-11	12/08	127.0	128.7	128.7	3.0	0.0	0.7	-0.2	0.0
Truck transportation of freight ³	30-12	06/09	125.0	126.4	125.6	1.6	-0.6	0.4	1.0	-0.6
Air transportation of freight ³	30-14	12/08	111.8	110.7	111.7	0.1	0.9	-1.1	-0.6	0.9
Courier, messenger, and U.S. postal services.....	30-16	06/09	145.6	145.8	146.4	4.6	0.4	0.3	0.1	0.8
Rail transportation of passengers.....	30-21	12/08	124.5	124.8	124.8	2.8	0.0	0.2	0.2	0.1
Airline passenger services.....	30-22	12/08	116.5	120.0	120.8	5.4	0.7	1.7	-0.6	1.5
Final demand services less trade, transportation, and warehousing.....		11/09	117.6	118.3	118.3	1.7	0.0	0.5	0.0	-0.3
Sales of books ³	33-11		391.3	397.3	391.5	1.6	-1.5	0.2	1.1	-1.5
Sales and subscriptions of periodicals and newspapers ³	33-12		123.0	124.9	125.2	5.8	0.2	2.0	-0.2	0.2
Application software publishing ³	34-2	06/09	98.8	101.4	104.1	4.0	2.7	2.2	-1.9	2.7
Advertising space sales in periodicals, newspapers, directories, and mailing lists ³	36-1	06/09	103.2	101.6	101.2	-2.2	-0.4	0.7	-1.2	-0.4
Residential wired telecommunication services.....	37-11	06/09	139.7	139.4	139.4	0.3	0.0	-0.1	0.1	-0.5
Wireless telecommunication services ³	37-2	06/09	64.9	64.6	63.9	-1.5	-1.1	-0.8	0.0	-1.1
Cable and satellite subscriber services ³	37-3	12/08	135.4	135.7	135.7	3.4	0.0	0.1	-0.1	0.0
Internet access services ³	37-4	03/09	93.0	93.7	92.7	-1.1	-1.1	-0.3	1.1	-1.1
Bundled wired telecommunications access services ³	37-5	12/11	109.2	107.8	108.1	3.3	0.3	-0.3	-0.6	0.3
Consumer loans (partial).....	39-12	06/09	116.9	119.5	115.5	-1.9	-3.3	-1.9	2.5	-2.4
Deposit services (partial) ³	39-2	04/09	69.2	67.9	68.1	5.9	0.3	-2.2	0.9	0.3
Other credit intermediation, incl. trust services (partial) ³	39-3	04/09	101.7	108.0	108.5	7.0	0.5	4.3	-0.1	0.5

See footnotes at end of table.

Table 4. Producer price indexes and percent changes for selected commodity groupings by final demand category¹ — Continued
 [1982=100, unless otherwise indicated]

Grouping	Commodity code	Other index base	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ²	June 2019 ²	July 2019 ²	July 2018	June 2019	Apr. to May	May to June	June to July
Securities brokerage, dealing, investment advice, and related services ³	40-1	06/09	161.0	164.7	164.3	3.6	-0.2	0.6	0.4	-0.2
Portfolio management ³	40-2	12/08	208.2	217.7	219.4	3.7	0.8	1.8	-1.8	0.8
Life insurance ³	41-11-01	03/09	103.9	104.2	104.1	-0.2	-0.1	-0.1	0.4	-0.1
Disability insurance, including accidental death ³	41-11-02	03/09	104.0	104.0	104.0	0.0	0.0	0.0	0.0	0.0
Health and medical insurance.....	41-11-03	03/09	135.1	135.1	135.4	1.7	0.2	0.5	0.4	-0.2
Property and casualty insurance ³	41-11-04	03/09	123.1	123.6	123.5	1.6	-0.1	0.0	0.2	-0.1
Annuities ³	41-2	03/09	116.9	117.2	116.8	-0.9	-0.3	-0.1	0.2	-0.3
Residential property sales and leases, brokerage fees and commissions.....	43-21	12/08	143.8	145.6	146.8	3.6	0.8	-0.1	0.7	0.4
Passenger car rental.....	44-1	03/09	85.5	85.7	94.0	-2.0	9.7	-5.2	2.4	0.0
Legal services.....	45-1	03/09	134.4	134.9	135.0	3.7	0.1	0.4	0.3	0.3
Tax preparation and planning.....	45-21-02	04/09	117.1	116.5	116.7	1.8	0.2	3.0	-1.3	-0.3
Architectural and engineering services ³	45-3	06/09	118.2	117.4	117.8	1.9	0.3	0.1	-0.9	0.3
Management, scientific, and technical consulting services.....	45-4	06/09	104.7	103.7	103.0	-2.5	-0.7	-0.8	-0.3	-0.7
Arrangement of flights (partial) ³	47-1	06/09	101.9	101.7	103.9	2.4	2.2	-0.4	-0.1	2.2
Arrangement of vehicle rentals and lodging ³	47-2	12/08	88.9	81.8	82.1	-7.9	0.4	-4.2	-0.7	0.4
Arrangement of cruises and tours ³	47-3	12/08	120.3	140.2	135.8	19.6	-3.1	8.4	-1.5	-3.1
Physician care.....	51-11-01	03/09	109.2	109.9	109.4	0.4	-0.5	0.6	0.0	-0.5
Medical laboratory and diagnostic imaging care ³	51-11-02	03/09	95.1	95.4	95.5	-0.7	0.1	0.0	0.3	0.1
Home health and hospice care ³	51-11-03	12/08	112.0	112.1	112.1	2.6	0.0	0.0	0.0	0.0
Hospital outpatient care.....	51-11-04	12/08	129.3	130.1	130.8	1.9	0.5	0.0	0.5	0.7
Dental care.....	51-11-05	06/10	115.8	116.2	116.3	0.9	0.1	0.5	0.0	0.2
Hospital inpatient care.....	51-21-01	12/08	128.7	129.1	129.2	2.9	0.1	0.4	0.4	-0.2
Nursing home care.....	51-21-02	12/08	125.7	126.1	126.5	2.7	0.3	0.2	0.3	0.1
Traveler accommodation services.....	53-11	06/09	125.1	126.9	128.1	-0.2	0.9	9.2	-4.0	-3.6
Food and beverages for immediate consumption services (partial) ³ ..	54-1	06/09	120.5	120.5	120.6	0.8	0.1	0.6	0.2	0.1
Motor vehicle repair and maintenance (partial).....	55-2	12/08	136.6	137.2	137.3	2.2	0.1	2.1	-0.1	-0.1
Membership dues and admissions and recreation facility use fees (partial).....	56-1	06/09	126.1	122.9	122.3	0.2	-0.5	-1.2	-1.9	-0.3
Recreational activity instruction fees (partial) ³	56-2	12/08	120.2	120.2	120.2	2.0	0.0	0.2	0.0	0.0
Gaming receipts (partial) ³	56-3	12/08	110.7	109.5	107.7	-0.7	-1.6	-1.5	1.3	-1.6
Mining services ³	60-1	06/85	235.2	238.2	233.6	0.2	-1.9	2.4	-1.0	-1.9
Final demand construction.....		11/09	125.2	127.1	127.9	5.5	0.6	0.0	0.2	0.6
New warehouse building construction ³	80-11-01	12/04	155.6	159.3	160.2	5.4	0.6	-0.3	0.4	0.6
New school building construction ³	80-11-02	12/05	165.9	170.9	171.5	7.1	0.4	0.4	0.5	0.4
New office building construction ³	80-11-03	06/06	140.7	141.6	142.9	4.5	0.9	-0.1	-0.3	0.9
New industrial building construction ³	80-11-04	06/07	133.0	135.6	136.5	6.6	0.7	0.0	-0.1	0.7
New health care building construction ³	80-11-05	06/12	115.6	116.4	117.0	4.5	0.5	-0.5	0.4	0.5

¹ Further information about the Final Demand-Intermediate Demand Aggregation system is available online at <https://www.bls.gov/ppi/fdidaggregation.htm>

² The indexes for March 2019 have been recalculated to incorporate late reports and corrections by respondents. All indexes are subject to revision 4 months after original publication.

³ Not seasonally adjusted.

⁴ Trade indexes measure changes in margins received by wholesalers and retailers.

"-" Data not available.

NOTE: The term "(partial)" denotes incomplete coverage of the index category.

Table 5. Producer price indexes and percent changes for selected commodity groupings of intermediate demand by commodity type category¹
 [1982=100, unless otherwise indicated]

Grouping	Commodity code	Other index base	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ²	June 2019 ²	July 2019 ²	July 2018	June 2019	Apr. to May	May to June	June to July
Processed goods for intermediate demand.....			199.6	199.1	199.6	-2.0	0.3	-0.2	-1.1	0.2
Processed foods and feeds.....			190.5	192.8	192.4	0.1	-0.2	-0.5	-0.3	-0.1
Meats.....	02-21		175.7	182.9	180.0	1.0	-1.6	-0.1	-2.6	0.1
Processed poultry ³	02-22		151.7	157.9	156.8	1.9	-0.7	1.3	-0.1	-0.7
Dairy products.....	02-3		196.2	200.8	203.3	5.7	1.2	0.5	0.0	0.6
Processed fruits and vegetables ³	02-4		209.4	209.2	208.3	0.2	-0.4	0.0	0.0	-0.4
Refined sugar and byproducts ³	02-53		173.0	174.3	174.7	2.7	0.2	-0.2	0.8	0.2
Fats and oils ³	02-7		239.8	236.3	237.7	-2.9	0.6	-0.3	-0.7	0.6
Prepared animal feeds.....	02-9		189.4	189.1	187.3	-3.9	-1.0	-1.9	1.1	-1.6
Processed materials less foods and feeds.....			200.5	199.8	200.4	-2.1	0.3	-0.2	-1.1	0.3
Synthetic fibers ³	03-1		132.8	131.6	131.8	1.2	0.2	0.0	-0.1	0.2
Processed yarns and threads ³	03-2		141.8	142.0	141.8	-2.1	-0.1	0.4	0.0	-0.1
Finished fabrics ³	03-4		161.2	161.2	161.3	3.2	0.1	-0.1	0.1	0.1
Liquefied petroleum gas ³	05-32		147.7	87.8	90.1	-58.2	2.6	-7.6	-22.2	2.6
Commercial electric power.....	05-42		196.2	206.9	211.7	1.4	2.3	0.4	-1.1	1.8
Industrial electric power.....	05-43		241.6	248.5	250.9	-3.1	1.0	0.4	-2.8	-0.4
Commercial natural gas.....	05-52	12/90	198.5	186.7	185.1	0.0	-0.9	-1.1	-1.9	-1.0
Industrial natural gas.....	05-53	12/90	155.5	145.9	140.0	-8.6	-4.0	1.2	-2.0	-4.6
Natural gas to electric utilities.....	05-54	12/90	158.3	150.1	142.5	-13.6	-5.1	-2.5	-2.5	-5.1
Gasoline.....	05-71		177.6	195.5	204.9	-6.7	4.8	-1.7	-5.0	5.2
Jet fuel ³	05-72-03		208.0	206.4	199.2	-12.5	-3.5	2.0	-3.7	-3.5
No. 2 diesel fuel.....	05-73-03		239.3	204.4	221.0	-14.0	8.1	-5.7	-13.3	7.9
Residual fuels ³	05-74		172.2	162.4	151.0	-20.8	-7.0	6.2	-14.8	-7.0
Finished lubricants ³	05-76		427.8	436.9	437.5	2.7	0.1	0.5	1.8	0.1
Lubricating oil base stocks ³	05-78	06/09	110.7	123.2	132.0	5.9	7.1	0.7	6.5	7.1
Asphalt.....	05-81-02	06/85	211.5	234.2	257.5	4.8	9.9	-11.6	1.1	3.8
Basic inorganic chemicals ³	06-13		283.3	278.8	277.8	-0.4	-0.4	-0.4	-1.2	-0.4
Basic organic chemicals.....	06-14		255.3	257.1	253.7	-7.5	-1.3	0.7	0.9	-1.0
Prepared paint ³	06-21		297.0	299.1	300.5	4.9	0.5	1.2	-0.1	0.5
Paint materials ³	06-22		252.4	258.1	266.6	3.7	3.3	2.7	-0.5	3.3
Medicinal and botanical chemicals ³	06-31		181.4	181.4	181.4	-0.3	0.0	0.0	0.0	0.0
Biological products, including diagnostics ³	06-37		275.3	275.1	275.3	3.3	0.1	-0.2	0.0	0.1
Fats and oils, inedible.....	06-4		193.0	188.5	190.6	1.8	1.1	-1.4	1.5	2.8
Nitrogenates.....	06-52-01		278.5	267.9	270.2	9.1	0.9	5.2	-1.3	6.1
Phosphates ³	06-52-02		214.2	194.1	181.6	-12.9	-6.4	-1.4	-3.0	-6.4
Other agricultural chemicals ³	06-53		205.7	205.7	208.6	8.0	1.4	0.2	0.0	1.4
Plastic resins and materials.....	06-6		226.6	227.1	226.8	-8.7	-0.1	1.8	1.9	0.2
Industrial gases ³	06-79-03		279.7	283.9	282.7	12.6	-0.4	1.5	1.1	-0.4
Adhesives and sealants ³	06-79-04	12/83	266.6	267.1	267.1	2.5	0.0	-0.3	0.0	0.0
Synthetic rubber ³	07-11-02		209.8	209.2	207.5	-5.9	-0.8	-0.1	-1.3	-0.8
Tires ³	07-12-01		149.6	147.8	148.0	1.4	0.1	-0.3	-0.3	0.1
Plastic construction products.....	07-21		230.1	229.5	230.2	1.9	0.3	-0.3	0.3	0.7
Unsupported plastic film, sheet, other shapes ³	07-22		221.5	223.7	223.3	0.3	-0.2	0.2	0.9	-0.2
Parts for manufacturing from plastics ³	07-26		152.8	152.2	154.3	1.2	1.4	0.1	-0.1	1.4
Plastic packaging products ³	07-2A	12/06	118.9	117.5	116.9	0.4	-0.5	-0.3	0.1	-0.5
Softwood lumber.....	08-11		216.3	210.4	213.9	-19.5	1.7	-1.3	-1.7	2.0
Hardwood lumber ³	08-12		222.2	217.4	212.1	-8.8	-2.4	-2.2	-1.0	-2.4
Millwork.....	08-2		263.0	264.3	264.3	0.8	0.0	0.3	-0.3	0.1
Plywood ³	08-3		212.6	206.4	201.7	-15.7	-2.3	-0.5	-1.4	-2.3
Paper ²	09-13		201.3	202.0	201.1	1.1	-0.4	-0.1	-0.2	-0.4
Paperboard ³	09-14		273.9	270.1	263.8	-5.2	-2.3	0.1	-1.0	-2.3
Paper boxes and containers ³	09-15-03		270.6	270.8	269.7	0.9	-0.4	0.0	0.4	-0.4
Building paper and board ³	09-2		204.1	203.1	196.6	-17.9	-3.2	-0.1	-0.5	-3.2
Commercial printing ³	09-47	06/82	175.1	175.8	177.9	3.3	1.2	0.1	-0.1	1.2
Foundry and forge shop products ³	10-15		212.6	211.8	212.0	0.2	0.1	-0.1	-0.1	0.1
Steel mill products ³	10-17		215.6	206.6	201.3	-7.5	-2.6	-0.6	-2.0	-2.6
Primary nonferrous metals ³	10-22		188.1	180.8	184.1	-4.2	1.8	-2.5	-0.9	1.8
Secondary nonferrous metals ³	10-24		234.1	230.4	234.1	-1.4	1.6	-1.6	0.1	1.6
Aluminum mill shapes ³	10-25-01		201.4	198.4	198.3	-4.9	-0.1	-0.9	-1.0	-0.1
Copper and brass mill shapes ³	10-25-02		406.9	392.3	393.7	-1.6	0.4	-1.1	-3.0	0.4
Nonferrous wire and cable ³	10-26		248.9	249.9	246.5	-3.1	-1.4	1.2	-0.9	-1.4
Nonferrous foundry shop products.....	10-28		216.0	214.5	213.5	-1.9	-0.5	-0.2	-0.3	-0.4
Metal containers ³	10-3		166.2	167.3	166.9	2.3	-0.2	2.2	-0.2	-0.2
Hardware ³	10-4		223.4	223.8	224.0	2.7	0.1	0.3	0.0	0.1
Plumbing fixtures and brass fittings.....	10-5		281.2	281.8	281.8	4.6	0.0	0.1	0.0	0.1
Heating equipment ³	10-6		277.0	282.1	282.8	4.9	0.2	0.1	1.3	0.2
Fabricated structural metal products.....	10-7		241.0	239.4	239.4	1.0	0.0	0.3	-1.1	0.1

See footnotes at end of table.

Table 5. Producer price indexes and percent changes for selected commodity groupings of intermediate demand by commodity type category¹ — Continued
 [1982=100, unless otherwise indicated]

Grouping	Commodity code	Other index base	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ²	June 2019 ²	July 2019 ²	July 2018	June 2019	Apr. to May	May to June	June to July
Bolts, nuts, screws, rivets, and washers ³	10-81	00/82	208.6	209.2	208.8	6.2	-0.2	-0.4	0.8	-0.2
Lighting fixtures ³	10-83	00/82	181.4	183.5	184.1	5.0	0.3	0.7	0.3	0.3
Fabricated ferrous wire products ³	10-88	06/82	259.5	257.9	256.7	3.3	-0.5	-0.1	-0.2	-0.5
Other miscellaneous metal products ³	10-89		166.9	167.9	166.8	1.8	-0.7	0.1	0.1	-0.7
Fluid power equipment ³	11-43		264.6	266.6	266.1	3.2	-0.2	0.3	-0.1	-0.2
Mechanical power transmission equipment ³	11-45		277.0	278.9	278.4	2.6	-0.2	0.1	0.3	-0.2
Air conditioning and refrigeration equipment	11-48		199.0	200.7	201.3	3.8	0.3	-0.2	0.2	0.2
Metal valves, except fluid power	11-49-02	12/82	338.3	340.9	341.1	4.1	0.1	0.6	0.4	0.3
Ball and roller bearings ³	11-49-05		278.7	278.4	278.6	4.5	0.1	-0.4	0.0	0.1
Wiring devices ³	11-71		236.2	237.3	237.9	1.6	0.3	0.4	-0.4	0.3
Motors, generators, motor generator sets ³	11-73		221.1	221.2	221.2	2.5	0.0	0.0	0.0	0.0
Switchgear, switchboard, and industrial controls equip. ³	11-75		229.8	230.6	231.0	2.3	0.2	0.0	0.3	0.2
Electronic components and accessories	11-78		65.0	65.5	65.4	-0.5	-0.2	0.0	0.6	-0.2
Internal combustion engines ³	11-94		169.0	169.8	169.8	1.0	0.0	0.5	0.0	0.0
Machine shop products ³	11-95		193.4	193.4	193.4	2.3	0.0	0.0	-0.1	0.0
Flat glass ³	13-11		136.4	136.6	137.1	0.7	0.4	0.1	-0.3	0.4
Cement	13-22		254.4	261.5	260.6	2.8	-0.3	-0.3	1.5	-0.3
Concrete products	13-3		267.3	273.2	273.9	3.6	0.3	0.3	0.9	0.4
Asphalt felts and coatings	13-6		238.5	244.6	244.5	4.2	0.0	1.4	-1.8	-0.1
Paving mixtures and blocks ³	13-94		330.2	322.6	323.3	3.4	0.2	0.2	0.7	0.2
Motor vehicle parts ³	14-12		127.1	127.7	127.6	0.4	-0.1	0.0	0.1	-0.1
Aircraft engines and engine parts	14-23	12/85	229.6	229.7	229.7	1.4	0.0	0.4	0.1	0.0
Aircraft parts and auxiliary equipment, n.e.c.	14-25	06/85	187.9	188.1	188.1	0.9	0.0	0.2	0.0	0.0
Medical, surgical, and personal aid devices	15-6		182.6	182.5	182.9	1.4	0.2	0.1	0.2	0.2
Unprocessed goods for intermediate demand			190.6	181.8	183.5	-10.4	0.9	-5.1	-3.3	1.6
Unprocessed foodstuffs and feedstuffs			164.0	167.4	165.3	-0.5	-1.3	-1.9	-0.1	-0.2
Wheat ³	01-21		139.0	146.6	137.5	-7.4	-6.2	-3.1	11.6	-6.2
Corn	01-22-02		140.3	170.4	176.6	33.6	3.6	1.2	19.9	10.3
Slaughter cattle	01-31		185.8	170.0	168.0	-0.3	-1.2	-4.0	1.8	-0.4
Slaughter hogs	01-32		66.7	99.7	87.6	-13.2	-12.1	-3.5	-18.5	-16.1
Slaughter chickens	01-41-02		251.7	260.3	254.4	-20.1	-2.3	-0.4	-10.1	4.5
Slaughter turkeys	01-42		177.2	173.5	180.5	5.7	4.0	-8.4	-1.8	2.0
Raw milk	01-6		133.5	130.2	131.1	11.6	0.7	5.0	2.3	0.4
Alfalfa hay	01-81		331.9	334.1	313.6	-1.1	-6.1	0.3	-12.9	-7.6
Oilseeds	01-83-01		156.3	155.4	161.7	2.7	4.1	-7.6	3.1	-0.3
Raw cane sugar and byproducts ³	02-52-01		152.1	154.2	155.5	1.9	0.8	1.5	-0.1	0.8
Unprocessed nonfood materials			200.9	183.4	187.8	-15.9	2.4	-6.9	-5.2	2.7
Raw cotton ³	01-51		111.2	97.9	92.9	-30.2	-5.1	-14.9	-0.9	-5.1
Hides and skins	04-1		147.2	123.2	120.4	-27.5	-2.3	-9.3	-4.1	-1.7
Coal	05-1		201.1	198.2	198.6	-0.6	0.2	-1.8	0.6	1.2
Natural gas ³	05-31		96.6	80.1	72.7	-31.0	-9.2	-15.2	1.6	-9.2
Crude petroleum ³	05-61		158.9	146.6	162.6	-20.3	10.9	-6.2	-14.7	10.9
Logs, bolts, timber, pulpwood, and woodchips	08-5		241.1	237.1	236.5	-4.6	-0.3	-0.3	-1.2	-0.3
Wastepaper ³	09-12		224.4	143.9	153.0	-42.4	6.3	-16.8	-15.8	6.3
Iron ores	10-11		143.3	149.6	146.8	2.0	-1.9	-3.7	1.7	-0.4
Iron and steel scrap ³	10-12		494.9	396.1	383.4	-28.8	-3.2	-8.3	-8.9	-3.2
Nonferrous metal ores ³	10-21	12/83	356.7	344.0	362.8	11.6	5.5	-2.5	0.5	5.5
Copper base scrap ³	10-23-01		435.7	406.0	404.5	-15.3	-0.4	-3.7	-5.8	-0.4
Aluminum base scrap	10-23-02		211.7	174.0	172.7	-24.5	-0.7	-12.0	-4.4	0.1
Construction sand, gravel, and crushed stone	13-21		344.0	350.5	351.8	4.6	0.4	-0.1	1.2	0.5
Services for intermediate demand			120.9	121.7	121.4	2.0	-0.2	0.0	0.2	-0.2
Trade services for intermediate demand ⁴			123.6	125.3	124.2	2.6	-0.9	-0.6	1.1	-0.8
Machinery and equipment parts and supplies wholesaling ³	57-11-02	03/09	126.6	129.3	126.4	6.0	-2.2	-1.2	2.5	-2.2
Building materials, paint, and hardware wholesaling	57-3	03/09	96.8	100.0	101.1	3.8	1.1	2.4	-1.2	2.0
Metals, minerals, and ores wholesaling ³	57-4	03/09	158.4	159.0	160.5	-11.7	0.9	-1.9	-0.2	0.9
Chemicals and allied products wholesaling ³	57-5	03/09	110.2	111.4	112.7	5.5	1.2	0.5	0.4	1.2
Paper and plastics products wholesaling ³	57-6	03/09	134.9	137.5	129.1	-1.3	-6.1	0.1	1.3	-6.1
Food wholesaling ³	57-81-01	03/09	113.7	113.5	112.5	5.0	-0.9	-0.9	0.5	-0.9
Automotive parts, including tires, retailing ³	58-61-02	03/09	115.2	111.4	118.3	10.5	6.2	-1.0	-0.7	6.2
Hardware, building material, and supplies retailing	58-D	03/09	125.4	121.8	121.6	-5.0	-0.2	-2.2	-1.1	-0.2
Transportation and warehousing services for intermediate demand			128.2	129.1	129.5	2.8	0.3	0.4	0.1	0.3
Rail transportation of freight and mail ³	30-11	12/08	127.0	128.7	128.7	3.0	0.0	0.7	-0.2	0.0
Truck transportation of freight ³	30-12	06/09	125.0	126.4	125.6	1.6	-0.6	0.4	1.0	-0.6
Water transportation of freight ³	30-13	06/09	122.1	122.7	123.8	3.9	0.9	0.3	-0.2	0.9
Air transportation of freight ³	30-14	12/08	111.8	110.7	111.7	0.1	0.9	-1.1	-0.6	0.9
Pipeline transportation of petroleum products ³	30-15-01	06/09	155.3	156.0	161.6	4.7	3.6	0.0	0.0	3.6
U.S. Postal Service	30-16-01	06/89	229.6	229.6	232.1	4.5	1.1	0.2	0.1	1.2

See footnotes at end of table.

Table 5. Producer price indexes and percent changes for selected commodity groupings of intermediate demand by commodity type category¹ — Continued
 [1982=100, unless otherwise indicated]

Grouping	Commodity code	Other index base	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ²	June 2019 ²	July 2019 ²	July 2018	June 2019	Apr. to May	May to June	June to July
Courier and messenger services, except air mail.....	30-16-02	04/09	160.9	161.3	161.1	4.6	-0.1	0.2	0.3	0.2
Air mail and package delivery services, excluding by USPS.....	30-16-03	04/09	177.7	178.1	178.1	4.7	0.0	0.6	-0.3	0.4
Transportation of passengers (partial).....	30-2	06/09	126.4	130.2	131.1	5.4	0.7	1.7	-0.7	1.5
Services related to water transportation.....	31-1	06/09	121.4	121.9	123.1	2.5	1.0	0.0	0.2	0.7
Arrangement of freight and cargo ³	31-31	12/08	107.2	107.8	107.4	-0.3	-0.4	0.0	0.1	-0.4
Warehousing, storage, and related services ³	32-1	12/08	106.2	107.3	107.1	-0.3	-0.2	-0.5	0.7	-0.2
Services less trade, transportation, and warehousing for intermediate demand.....		11/09	118.9	119.3	119.2	1.7	-0.1	0.0	0.1	-0.1
Network compensation from broadcast TV, cable TV, radio ³	35	06/09	142.9	142.7	140.0	2.0	-1.9	0.0	0.0	-1.9
Advertising space sales in periodicals and newspapers ³	36-11	06/09	104.5	102.5	102.1	-2.7	-0.4	0.8	-1.4	-0.4
Advertising space sales in directories and mail lists ³	36-12	12/08	100.7	100.8	100.8	0.2	0.0	0.0	0.0	0.0
Television advertising time sales.....	36-2	06/09	109.4	109.1	105.9	1.0	-2.9	-0.6	-1.1	1.6
Radio advertising time sales.....	36-3	03/09	102.1	104.8	102.9	5.3	-1.8	-1.5	2.2	-1.3
Internet advertising space sales, excluding Internet ads sold by print publishers ³	36-5	12/09	60.2	60.4	59.3	-3.9	-1.8	-1.3	0.5	-1.8
Business wired telecommunication services ³	37-12	06/09	101.6	101.7	101.6	-0.2	-0.1	0.2	0.0	-0.1
Wireless telecommunication services ³	37-2	06/09	64.9	64.6	63.9	-1.5	-1.1	-0.8	0.0	-1.1
Cable and satellite subscriber services ³	37-3	12/08	135.4	135.7	135.7	3.4	0.0	0.1	-0.1	0.0
Bundled wired telecommunication access services ³	37-5	12/11	109.2	107.8	108.1	3.3	0.3	-0.3	-0.6	0.3
Data processing and related services ³	38-1	06/09	100.8	101.2	101.0	-0.3	-0.2	0.2	0.4	-0.2
Business loans (partial).....	39-11	04/09	237.9	244.6	230.3	2.3	-5.8	-1.7	2.1	-3.7
Deposit services (partial) ³	39-2	04/09	69.2	67.9	68.1	5.9	0.3	-2.2	0.9	0.3
Other credit intermediation, incl. trust services (partial) ³	39-3	04/09	101.7	108.0	108.5	7.0	0.5	4.3	-0.1	0.5
Securities brokerage, dealing, investment advice, and related services ³	40-1	06/09	161.0	164.7	164.3	3.6	-0.2	0.6	0.4	-0.2
Portfolio management ³	40-2	12/08	208.2	217.7	219.4	3.7	0.8	1.8	-1.8	0.8
Investment banking ³	40-3	12/08	176.9	179.4	183.3	4.3	2.2	-0.4	0.8	2.2
Life insurance ³	41-11-01	03/09	103.9	104.2	104.1	-0.2	-0.1	-0.1	0.4	-0.1
Health and medical insurance.....	41-11-03	03/09	135.1	135.1	135.4	1.7	0.2	0.5	0.4	-0.2
Property and casualty insurance ³	41-11-04	03/09	123.1	123.6	123.5	1.6	-0.1	0.0	0.2	-0.1
Annuities ³	41-2	03/09	116.9	117.2	116.8	-0.9	-0.3	-0.1	0.2	-0.3
Commissions from sales of insurance ³	42-1	06/09	107.5	107.5	107.7	0.6	0.2	-0.1	-0.1	0.2
Nonresidential real estate rents ³	43-11	06/09	116.0	117.5	117.5	2.5	0.0	-2.2	3.6	0.0
Nonresidential property sales and leases ³	43-12	12/08	123.0	122.5	123.7	1.1	1.0	-0.9	-0.3	1.0
Residential property management fees ³	43-22	12/08	118.1	118.2	118.2	1.3	0.0	0.2	0.0	0.0
Passenger car rental.....	44-1	03/09	85.5	85.7	94.0	-2.0	9.7	-5.2	2.4	0.0
Truck, utility trailer, and RV rental and leasing ³	44-2	06/09	107.1	107.2	109.6	1.7	2.2	1.7	-2.5	2.2
Construction, mining, and forestry machinery and equipment rental and leasing ³	44-3	03/09	99.4	99.6	99.8	1.0	0.2	-0.2	-1.0	0.2
Legal services.....	45-1	03/09	134.4	134.9	135.0	3.7	0.1	0.4	0.3	0.3
Accounting services (partial).....	45-2	06/09	112.1	111.2	111.7	2.2	0.4	1.1	-1.1	0.1
Architectural and engineering services ³	45-3	06/09	118.2	117.4	117.8	1.9	0.3	0.1	-0.9	0.3
Management, scientific, and technical consulting services.....	45-4	06/09	104.7	103.7	103.0	-2.5	-0.7	-0.8	-0.3	-0.7
Advertising and related services (partial) ³	45-5	12/08	109.6	109.7	109.7	0.5	0.0	1.1	-0.8	0.0
Permanent placement services ³	46-1	03/09	116.9	115.6	116.2	-3.6	0.5	-0.3	0.2	0.5
Executive search services ³	46-2	12/08	96.3	90.3	95.0	-0.4	5.2	-4.4	-0.7	5.2
Staffing services.....	46-3	06/09	115.7	114.6	115.6	2.6	0.9	1.0	-0.3	0.8
Security guard services ³	48-1	03/09	116.7	117.1	117.4	4.0	0.3	-0.1	0.4	0.3
Janitorial services ³	49-1	03/09	111.2	111.3	110.8	-0.5	-0.4	0.0	0.1	-0.4
Waste collection.....	50-1	12/08	132.2	127.5	131.7	3.5	3.3	-0.4	-0.3	3.5
Traveler accommodation services.....	53-11	06/09	125.1	126.9	128.1	-0.2	0.9	9.2	-4.0	-3.6
Commercial and industrial machinery and equipment repair and maintenance ³	55-1	03/09	124.4	124.4	124.4	1.6	0.0	0.0	0.0	0.0
Aircraft repair and maintenance.....	55-4	04/09	126.1	126.6	126.0	2.7	-0.5	0.2	0.1	-0.2
Metal treatment services ³	59-1	12/84	188.4	187.4	188.3	0.2	0.5	-0.1	-0.2	0.5
Construction for intermediate demand.....		11/09	118.8	120.3	120.7	4.0	0.3	0.8	0.3	0.3
Maintenance and repair of non-residential buildings (partial) ³	80-2	12/10	120.1	121.6	122.0	3.9	0.3	0.7	0.3	0.3

¹ Further information about the Final Demand-Intermediate Demand Aggregation system is available online at <https://www.bls.gov/ppi/fdidaggregation.htm>

² The indexes for March 2019 have been recalculated to incorporate late reports and corrections by respondents. All indexes are subject to revision 4 months after original publication.

³ Not seasonally adjusted.

⁴ Trade indexes measure changes in margins received by wholesalers and retailers.

"-" Data not available.

NOTE: The term "(partial)" denotes incomplete coverage of the index category.

Table 6. Producer price indexes and percent changes for selected commodity groupings of intermediate demand by production flow category¹
 [1982=100, unless otherwise indicated]

Grouping	Commodity code	Other index base	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ²	June 2019 ²	July 2019 ²	July 2018	June 2019	Apr. to May	May to June	June to July
Stage 4 intermediate demand.³		11/09	118.6	119.2	119.2	1.3	0.0	-0.2	-0.1	0.1
Stage 4 intermediate demand goods		04/10	112.8	113.1	113.4	0.2	0.3	-0.2	-0.5	0.4
Grains	01-2		141.4	165.3	167.7	21.2	1.5	0.1	16.8	6.2
Meats	02-21		175.7	182.9	180.0	1.0	-1.6	-0.1	-2.6	0.1
Unprocessed and packaged fish	02-23		359.1	335.4	351.7	3.9	4.9	0.1	2.6	3.0
Dairy products	02-3		196.2	200.8	203.3	5.7	1.2	0.5	0.0	0.6
Commercial electric power	05-42		196.2	206.9	211.7	1.4	2.3	0.4	-1.1	1.8
Industrial electric power	05-43		241.6	248.5	250.9	-3.1	1.0	0.4	-2.8	-0.4
Gasoline	05-71		177.6	195.5	204.9	-6.7	4.8	-1.7	-5.0	5.2
No. 2 diesel fuel	05-73-03		239.3	204.4	221.0	-14.0	8.1	-5.7	-13.3	7.9
Basic organic chemicals	06-14		255.3	257.1	253.7	-7.5	-1.3	0.7	0.9	-1.0
Prepared paint ³	06-21		297.0	299.1	300.5	4.9	0.5	1.2	-0.1	0.5
Medicinal and botanical chemicals ³	06-31		181.4	181.4	181.4	-0.3	0.0	0.0	0.0	0.0
Biological products, including diagnostics ³	06-37		275.3	275.1	275.3	3.3	0.1	-0.2	0.0	0.1
Pharmaceutical preparations	06-38	06/01	268.6	268.2	268.4	3.1	0.1	0.1	-0.5	0.1
Plastic construction products	07-21	00/82	230.1	229.5	230.2	1.9	0.3	-0.3	0.3	0.7
Unsupported plastic film, sheet, and other shapes ³	07-22		221.5	223.7	223.3	0.3	-0.2	0.2	0.9	-0.2
Parts for manufacturing from plastics ³	07-26		152.8	152.2	154.3	1.2	1.4	0.1	-0.1	1.4
Plastic packaging products ³	07-2A	12/06	118.9	117.5	116.9	0.4	-0.5	-0.3	0.1	-0.5
Lumber	08-1	00/82	213.5	208.1	208.4	-16.0	0.1	-1.6	-1.5	0.4
Millwork	08-2		263.0	264.3	264.3	0.8	0.0	0.3	-0.3	0.1
Paper boxes and containers ³	09-15-03		270.6	270.8	269.7	0.9	-0.4	0.0	0.4	-0.4
Commercial printing ³	09-47	06/82	175.1	175.8	177.9	3.3	1.2	0.1	-0.1	1.2
Steel mill products ³	10-17		215.6	206.6	201.3	-7.5	-2.6	-0.6	-2.0	-2.6
Nonferrous wire and cable ³	10-26		248.9	249.9	246.5	-3.1	-1.4	1.2	-0.9	-1.4
Fabricated structural metal products	10-7		241.0	239.4	239.4	1.0	0.0	0.3	-1.1	0.1
Other miscellaneous metal products ³	10-89		166.9	167.9	166.8	1.8	-0.7	0.1	0.1	-0.7
Air conditioning and refrigeration equipment	11-48		199.0	200.7	201.3	3.8	0.3	-0.2	0.2	0.2
Wiring devices ³	11-71		236.2	237.3	237.9	1.6	0.3	0.4	-0.4	0.3
Electronic components and accessories	11-78		65.0	65.5	65.4	-0.5	-0.2	0.0	0.6	-0.2
Miscellaneous electrical machinery and equipment ³	11-79		127.2	126.7	126.8	-0.1	0.1	0.0	0.4	0.1
Internal combustion engines ³	11-94		169.0	169.8	169.8	1.0	0.0	0.5	0.0	0.0
Machine shop products ³	11-95		193.4	193.4	193.4	2.3	0.0	0.0	-0.1	0.0
Concrete ingredients and related products	13-2		305.2	311.7	312.2	4.1	0.2	-0.2	1.3	0.3
Concrete products	13-3		267.3	273.2	273.9	3.6	0.3	0.3	0.9	0.4
Prepared asphalt, tar roofing and siding products ³	13-61		237.4	244.4	244.3	5.0	0.0	1.1	-0.9	0.0
Paving mixtures and blocks ³	13-94		330.2	322.6	323.3	3.4	0.2	0.2	0.7	0.2
Motor vehicle parts ³	14-12		127.1	127.7	127.6	0.4	-0.1	0.0	0.1	-0.1
Aircraft engines and engine parts	14-23	12/85	229.6	229.7	229.7	1.4	0.0	0.4	0.1	0.0
Aircraft parts and auxiliary equipment, n.e.c.	14-25	06/85	187.9	188.1	188.1	0.9	0.0	0.2	0.0	0.0
Medical, surgical and personal aid devices	15-6		182.6	182.5	182.9	1.4	0.2	0.1	0.2	0.2
Stage 4 intermediate demand services		04/10	120.7	121.7	121.4	2.3	-0.2	-0.1	0.4	-0.2
Truck transportation of freight ³	30-12	06/09	125.0	126.4	125.6	1.6	-0.6	0.4	1.0	-0.6
Courier, messenger, and U.S. postal services	30-16	06/09	145.6	145.8	146.4	4.6	0.4	0.3	0.1	0.8
Airline passenger services	30-22	12/08	116.5	120.0	120.8	5.4	0.7	1.7	-0.6	1.5
Warehousing, storage, and related services ³	32-1	12/08	106.2	107.3	107.1	-0.3	-0.2	-0.5	0.7	-0.2
Advertising space sales in periodicals and newspapers ³	36-11	06/09	104.5	102.5	102.1	-2.7	-0.4	0.8	-1.4	-0.4
Data processing and related services ³	38-1	06/09	100.8	101.2	101.0	-0.3	-0.2	0.2	0.4	-0.2
Business loans (partial)	39-11	04/09	237.9	244.6	230.3	2.3	-5.8	-1.7	2.1	-3.7
Deposit services (partial) ³	39-2	04/09	69.2	67.9	68.1	5.9	0.3	-2.2	0.9	0.3
Securities brokerage, dealing, investment advice, and related services ³	40-1	06/09	161.0	164.7	164.3	3.6	-0.2	0.6	0.4	-0.2
Portfolio management ³	40-2	12/08	208.2	217.7	219.4	3.7	0.8	1.8	-1.8	0.8
Investment banking ³	40-3	12/08	176.9	179.4	183.3	4.3	2.2	-0.4	0.8	2.2
Insurance	41-11	06/09	123.4	123.6	123.7	1.5	0.1	0.2	0.3	-0.2
Annuities ³	41-2	03/09	116.9	117.2	116.8	-0.9	-0.3	-0.1	0.2	-0.3
Nonresidential real estate rents ³	43-11	06/09	116.0	117.5	117.5	2.5	0.0	-2.2	3.6	0.0
Nonresidential property sales and leases ³	43-12	12/08	123.0	122.5	123.7	1.1	1.0	-0.9	-0.3	1.0
Nonresidential property management fees ³	43-13	12/08	93.7	91.3	90.9	-0.1	-0.4	-0.3	-3.6	-0.4
Residential property management fees ³	43-22	12/08	118.1	118.2	118.2	1.3	0.0	0.2	0.0	0.0
Construction, mining, and forestry machinery and equipment rental and leasing ³	44-3	03/09	99.4	99.6	99.8	1.0	0.2	-0.2	-1.0	0.2
Legal services	45-1	03/09	134.4	134.9	135.0	3.7	0.1	0.4	0.3	0.3
Advertising agency services ³	45-51	12/08	109.6	109.7	109.7	0.5	0.0	1.1	-0.8	0.0
Accounting services (partial)	45-2	06/09	112.1	111.2	111.7	2.2	0.4	1.1	-1.1	0.1
Architectural and engineering services ³	45-3	06/09	118.2	117.4	117.8	1.9	0.3	0.1	-0.9	0.3
Management, scientific, and technical consulting services	45-4	06/09	104.7	103.7	103.0	-2.5	-0.7	-0.8	-0.3	-0.7
Staffing services	46-3	06/09	115.7	114.6	115.6	2.6	0.9	1.0	-0.3	0.8

See footnotes at end of table.

Table 6. Producer price indexes and percent changes for selected commodity groupings of intermediate demand by production flow category¹ — Continued
 [1982=100, unless otherwise indicated]

Grouping	Commodity code	Other index base	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ²	June 2019 ²	July 2019 ²	July 2018	June 2019	Apr. to May	May to June	June to July
Janitorial services ³	49-1	03/09	111.2	111.3	110.8	-0.5	-0.4	0.0	0.1	-0.4
Commercial and industrial machinery and equipment repair and maintenance ³	55-1	03/09	124.4	124.4	124.4	1.6	0.0	0.0	0.0	0.0
Machinery and equipment parts and supplies wholesaling ³	57-11-02	03/09	126.6	129.3	126.4	6.0	-2.2	-1.2	2.5	-2.2
Building materials, paint, and hardware wholesaling.....	57-3	03/09	96.8	100.0	101.1	3.8	1.1	2.4	-1.2	2.0
Metals, minerals, and ores wholesaling ³	57-4	03/09	158.4	159.0	160.5	-11.7	0.9	-1.9	-0.2	0.9
Chemicals and allied products wholesaling ³	57-5	03/09	110.2	111.4	112.7	5.5	1.2	0.5	0.4	1.2
Paper and plastics products wholesaling ³	57-6	03/09	134.9	137.5	129.1	-1.3	-6.1	0.1	1.3	-6.1
Food and alcohol wholesaling ³	57-8	06/09	114.8	114.9	114.1	4.8	-0.7	-0.9	0.7	-0.7
Hardware and building materials and supplies retailing.....	58-D	03/09	125.4	121.8	121.6	-5.0	-0.2	-2.2	-1.1	-0.2
Metal treatment services ³	59-1	12/84	188.4	187.4	188.3	0.2	0.5	-0.1	-0.2	0.5
Stage 3 intermediate demand.....		11/09	117.3	117.9	117.6	-0.7	-0.3	-0.3	-0.6	-0.2
Stage 3 intermediate demand goods.....		04/10	107.2	107.5	107.3	-3.3	-0.2	-0.5	-1.8	0.0
Slaughter cattle.....	01-31		185.8	170.0	168.0	-0.3	-1.2	-4.0	1.8	-0.4
Slaughter hogs.....	01-32		66.7	99.7	87.6	-13.2	-12.1	-3.5	-18.5	-16.1
Slaughter poultry.....	01-4		233.4	239.2	236.0	-16.7	-1.3	-1.6	-8.7	4.0
Raw milk.....	01-6		133.5	130.2	131.1	11.6	0.7	5.0	2.3	0.4
Commercial electric power.....	05-42		196.2	206.9	211.7	1.4	2.3	0.4	-1.1	1.8
Industrial electric power.....	05-43		241.6	248.5	250.9	-3.1	1.0	0.4	-2.8	-0.4
Gasoline.....	05-71		177.6	195.5	204.9	-6.7	4.8	-1.7	-5.0	5.2
Jet fuel ³	05-72-03		208.0	206.4	199.2	-12.5	-3.5	2.0	-3.7	-3.5
No. 2 diesel fuel.....	05-73-03		239.3	204.4	221.0	-14.0	8.1	-5.7	-13.3	7.9
Finished lubricants ³	05-76		427.8	436.9	437.5	2.7	0.1	0.5	1.8	0.1
Lubricating oil base stocks ³	05-78	06/09	110.7	123.2	132.0	5.9	7.1	0.7	6.5	7.1
Asphalt.....	05-81-02	06/85	211.5	234.2	257.5	4.8	9.9	-11.6	1.1	3.8
Basic inorganic chemicals ³	06-13		283.3	278.8	277.8	-0.4	-0.4	-0.4	-1.2	-0.4
Basic organic chemicals.....	06-14		255.3	257.1	253.7	-7.5	-1.3	0.7	0.9	-1.0
Paints and allied products ³	06-2		289.2	292.3	295.4	4.3	1.1	1.6	-0.2	1.1
Agricultural chemicals and chemical products.....	06-5		233.9	226.8	224.4	1.6	-1.1	1.0	-0.8	1.3
Plastic resins and materials.....	06-6		226.6	227.1	226.8	-8.7	-0.1	1.8	1.9	0.2
Synthetic rubber ³	07-11-02		209.8	209.2	207.5	-5.9	-0.8	-0.1	-1.3	-0.8
Unsupported plastic film, sheet, and other shapes ³	07-22		221.5	223.7	223.3	0.3	-0.2	0.2	0.9	-0.2
Paper ³	09-13		201.3	202.0	201.1	1.1	-0.4	-0.1	-0.2	-0.4
Paperboard ³	09-14		273.9	270.1	263.8	-5.2	-2.3	0.1	-1.0	-2.3
Converted paper and paperboard products ³	09-15		241.8	242.4	241.1	1.0	-0.5	0.2	0.3	-0.5
Commercial printing ³	09-47	06/82	175.1	175.8	177.9	3.3	1.2	0.1	-0.1	1.2
Foundry and forge shop products ³	10-15		212.6	211.8	212.0	0.2	0.1	-0.1	-0.1	0.1
Steel mill products ³	10-17		215.6	206.6	201.3	-7.5	-2.6	-0.6	-2.0	-2.6
Nonferrous mill shapes ³	10-25		217.2	213.4	213.3	-3.3	0.0	-0.7	-1.5	0.0
Nonferrous foundry shop products.....	10-28		216.0	214.5	213.5	-1.9	-0.5	-0.2	-0.3	-0.4
Metal containers ³	10-3		166.2	167.3	166.9	2.3	-0.2	2.2	-0.2	-0.2
Structural, architectural, and pre-engineered metal products.....	10-74		234.3	232.1	232.2	-0.3	0.0	1.1	-2.0	0.1
Bolts, nuts, screws, rivets, and washers ³	10-81		208.6	209.2	208.8	6.2	-0.2	-0.4	0.8	-0.2
Other miscellaneous metal products ³	10-89		166.9	167.9	166.8	1.8	-0.7	0.1	0.1	-0.7
General purpose machinery and equipment.....	11-4		246.0	247.4	247.7	3.3	0.1	0.1	0.2	0.1
Electrical machinery and equipment.....	11-7		116.8	117.3	117.2	1.4	-0.1	0.1	0.3	0.0
Construction sand, gravel, and crushed stone.....	13-21		344.0	350.5	351.8	4.6	0.4	-0.1	1.2	0.5
Cement.....	13-22		254.4	261.5	260.6	2.8	-0.3	-0.3	1.5	-0.3
Motor vehicle parts ³	14-12		127.1	127.7	127.6	0.4	-0.1	0.0	0.1	-0.1
Aircraft and aircraft equipment.....	14-2		276.5	277.2	277.2	1.6	0.0	0.2	0.1	0.0
Stage 3 intermediate demand services.....		04/10	119.1	119.7	119.5	2.0	-0.2	-0.2	0.4	-0.2
Rail transportation of freight and mail ³	30-11	12/08	127.0	128.7	128.7	3.0	0.0	0.7	-0.2	0.0
Courier, messenger, and U.S. postal services.....	30-16	06/09	145.6	145.8	146.4	4.6	0.4	0.3	0.1	0.8
Arrangement of freight and cargo ³	31-31	12/08	107.2	107.8	107.4	-0.3	-0.4	0.0	0.1	-0.4
Freight forwarding ³	31-32-01	12/08	98.5	98.2	98.4	-0.1	0.2	0.0	-0.3	0.2
Warehousing, storage, and related services ³	32-1	12/08	106.2	107.3	107.1	-0.3	-0.2	-0.5	0.7	-0.2
Advertising space sales in periodicals, newspapers, directories, and mailing lists ³	36-1	06/09	103.2	101.6	101.2	-2.2	-0.4	0.7	-1.2	-0.4
Wired telephone services ³	37-1	06/09	116.7	116.8	116.7	0.0	-0.1	0.1	0.0	-0.1
Bundled wired telecommunications access services ³	37-5	12/11	109.2	107.8	108.1	3.3	0.3	-0.3	-0.6	0.3
Data processing and related services ³	38-1	06/09	100.8	101.2	101.0	-0.3	-0.2	0.2	0.4	-0.2
Business loans (partial).....	39-11	04/09	237.9	244.6	230.3	2.3	-5.8	-1.7	2.1	-3.7
Deposit services (partial) ³	39-2	04/09	69.2	67.9	68.1	5.9	0.3	-2.2	0.9	0.3
Securities brokerage, dealing, investment advice, and related services ³	40-1	06/09	161.0	164.7	164.3	3.6	-0.2	0.6	0.4	-0.2
Insurance.....	41-11	06/09	123.4	123.6	123.7	1.5	0.1	0.2	0.3	-0.2
Nonresidential real estate rents ³	43-11	06/09	116.0	117.5	117.5	2.5	0.0	-2.2	3.6	0.0
Legal services.....	45-1	03/09	134.4	134.9	135.0	3.7	0.1	0.4	0.3	0.3

See footnotes at end of table.

Table 6. Producer price indexes and percent changes for selected commodity groupings of intermediate demand by production flow category¹ — Continued
 [1982=100, unless otherwise indicated]

Grouping	Commodity code	Other index base	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ²	June 2019 ²	July 2019 ²	July 2018	June 2019	Apr. to May	May to June	June to July
Accounting services (partial).....	45-2	06/09	112.1	111.2	111.7	2.2	0.4	1.1	-1.1	0.1
Architectural and engineering services ³	45-3	06/09	118.2	117.4	117.8	1.9	0.3	0.1	-0.9	0.3
Management, scientific, and technical consulting services.....	45-4	06/09	104.7	103.7	103.0	-2.5	-0.7	-0.8	-0.3	-0.7
Advertising agency services ³	45-51	12/08	109.6	109.7	109.7	0.5	0.0	1.1	-0.8	0.0
Staffing services.....	46-3	06/09	115.7	114.6	115.6	2.6	0.9	1.0	-0.3	0.8
Aircraft repair maintenance.....	55-4	04/09	126.1	126.6	126.0	2.7	-0.5	0.2	0.1	-0.2
Machinery and equipment parts and supplies wholesaling ³	57-11-02	03/09	126.6	129.3	126.4	6.0	-2.2	-1.2	2.5	-2.2
Building materials, paint, and hardware wholesaling.....	57-3	03/09	96.8	100.0	101.1	3.8	1.1	2.4	-1.2	2.0
Metals, minerals, and ores wholesaling ³	57-4	03/09	158.4	159.0	160.5	-11.7	0.9	-1.9	-0.2	0.9
Chemicals and allied products wholesaling ³	57-5	03/09	110.2	111.4	112.7	5.5	1.2	0.5	0.4	1.2
Paper and plastics products wholesaling ³	57-6	03/09	134.9	137.5	129.1	-1.3	-6.1	0.1	1.3	-6.1
Food wholesaling ³	57-81-01	03/09	113.7	113.5	112.5	5.0	-0.9	-0.9	0.5	-0.9
Metal treatment services ³	59-1	12/84	188.4	187.4	188.3	0.2	0.5	-0.1	-0.2	0.5
Stage 2 intermediate demand.....		11/09	106.9	105.2	105.7	-3.6	0.5	-1.1	-1.3	0.5
Stage 2 intermediate demand goods.....		04/10	89.3	85.4	86.1	-10.8	0.8	-3.4	-2.7	0.8
Corn.....	01-22-02		140.3	170.4	176.6	33.6	3.6	1.2	19.9	10.3
Oilseeds.....	01-83		156.3	155.4	161.7	2.7	4.1	-7.6	3.1	-0.3
Prepared animal feeds.....	02-9		189.4	189.1	187.3	-3.9	-1.0	-1.9	1.1	-1.6
Coal.....	05-1		201.1	198.2	198.6	-0.6	0.2	-1.8	0.6	1.2
Natural gas ³	05-31		96.6	80.1	72.7	-31.0	-9.2	-15.2	1.6	-9.2
Liquefied petroleum gas ³	05-32		147.7	87.8	90.1	-58.2	2.6	-7.6	-22.2	2.6
Crude petroleum ³	05-61		158.9	146.6	162.6	-20.3	10.9	-6.2	-14.7	10.9
No. 2 diesel fuel.....	05-73-03		239.3	204.4	221.0	-14.0	8.1	-5.7	-13.3	7.9
Industrial chemicals.....	06-1		258.3	259.3	256.3	-6.5	-1.2	0.5	0.6	-0.9
Plastic resins and materials.....	06-6		226.6	227.1	226.8	-8.7	-0.1	1.8	1.9	0.2
Plastic products ³	07-2		209.9	209.2	209.7	0.8	0.2	-0.1	0.4	0.2
Logs, bolts, timber, pulpwood, and wood chips.....	08-5		241.1	237.1	236.5	-4.6	-0.3	-0.3	-1.2	-0.3
Paper ³	09-13		201.3	202.0	201.1	1.1	-0.4	-0.1	-0.2	-0.4
Paperboard, excluding corrugated paperboard ³	09-14-11	12/82	287.1	282.5	275.0	-6.1	-2.7	0.3	-1.3	-2.7
Commercial printing ³	09-47	06/82	175.1	175.8	177.9	3.3	1.2	0.1	-0.1	1.2
Iron and steel scrap ³	10-12		494.9	396.1	383.4	-28.8	-3.2	-8.3	-8.9	-3.2
Steel mill products ³	10-17		215.6	206.6	201.3	-7.5	-2.6	-0.6	-2.0	-2.6
Nonferrous mill shapes ³	10-25		217.2	213.4	213.3	-3.3	0.0	-0.7	-1.5	0.0
Electrical machinery and equipment.....	11-7		116.8	117.3	117.2	1.4	-0.1	0.1	0.3	0.0
Electronic components and accessories.....	11-78		65.0	65.5	65.4	-0.5	-0.2	0.0	0.6	-0.2
Stage 2 intermediate demand services.....		04/10	118.8	119.3	119.6	2.0	0.3	0.5	-0.3	0.3
Rail transportation of freight and mail ³	30-11	12/08	127.0	128.7	128.7	3.0	0.0	0.7	-0.2	0.0
Truck transportation of freight ³	30-12	06/09	125.0	126.4	125.6	1.6	-0.6	0.4	1.0	-0.6
Pipeline transportation of petroleum products ³	30-15-01	12/08	155.3	156.0	161.6	4.7	3.6	0.0	0.0	3.6
U.S. Postal Service.....	30-16-01	06/89	229.6	229.6	232.1	4.5	1.1	0.2	0.1	1.2
Courier and messenger services, except air.....	30-16-02	04/09	160.9	161.3	161.1	4.6	-0.1	0.2	0.3	0.2
Air mail and package delivery services, excluding by USPS.....	30-16-03	04/09	177.7	178.1	178.1	4.7	0.0	0.6	-0.3	0.4
Airline passenger services.....	30-22	12/08	116.5	120.0	120.8	5.4	0.7	1.7	-0.6	1.5
Arrangement of freight and cargo ³	31-31	12/08	107.2	107.8	107.4	-0.3	-0.4	0.0	0.1	-0.4
Television advertising time sales.....	36-21	06/09	109.4	109.1	105.9	1.0	-2.9	-0.6	-1.1	1.6
Wireless telecommunication services ³	37-2	06/09	64.9	64.6	63.9	-1.5	-1.1	-0.8	0.0	-1.1
Data processing and related services ³	38-1	06/09	100.8	101.2	101.0	-0.3	-0.2	0.2	0.4	-0.2
Securities brokerage, dealing, investment advice, and related services ³	40-1	06/09	161.0	164.7	164.3	3.6	-0.2	0.6	0.4	-0.2
Portfolio management ³	40-2	12/08	208.2	217.7	219.4	3.7	0.8	1.8	-1.8	0.8
Investment banking ³	40-31	12/08	176.9	179.4	183.3	4.3	2.2	-0.4	0.8	2.2
Insurance.....	41-11	06/09	123.4	123.6	123.7	1.5	0.1	0.2	0.3	-0.2
Commissions from sales of insurance ³	42-11	06/09	107.5	107.5	107.7	0.6	0.2	-0.1	-0.1	0.2
Legal services.....	45-1	03/09	134.4	134.9	135.0	3.7	0.1	0.4	0.3	0.3
Accounting services (partial).....	45-2	06/09	112.1	111.2	111.7	2.2	0.4	1.1	-1.1	0.1
Management, scientific, and technical consulting services.....	45-4	06/09	104.7	103.7	103.0	-2.5	-0.7	-0.8	-0.3	-0.7
Advertising agency services ³	45-51	12/08	109.6	109.7	109.7	0.5	0.0	1.1	-0.8	0.0
Staffing services.....	46-3	06/09	115.7	114.6	115.6	2.6	0.9	1.0	-0.3	0.8
Security guard services ³	48-1	03/09	116.7	117.1	117.4	4.0	0.3	-0.1	0.4	0.3
Janitorial services ³	49-1	03/09	111.2	111.3	110.8	-0.5	-0.4	0.0	0.1	-0.4
Traveler accommodation services.....	53-1	06/09	125.1	126.9	128.1	-0.2	0.9	9.2	-4.0	-3.6
Commercial and industrial machinery and equipment repair and maintenance ³	55-1	03/09	124.4	124.4	124.4	1.6	0.0	0.0	0.0	0.0
Hardware and building materials and supplies retailing.....	58-D	03/09	125.4	121.8	121.6	-5.0	-0.2	-2.2	-1.1	-0.2
Stage 1 intermediate demand.....		11/09	116.2	114.7	115.0	-2.7	0.3	-1.0	-1.0	0.3
Stage 1 intermediate demand goods.....		04/10	99.1	96.0	96.7	-6.2	0.7	-1.9	-2.2	0.8
Prepared animal feeds.....	02-9		189.4	189.1	187.3	-3.9	-1.0	-1.9	1.1	-1.6
Commercial electric power.....	05-42		196.2	206.9	211.7	1.4	2.3	0.4	-1.1	1.8

See footnotes at end of table.

Table 6. Producer price indexes and percent changes for selected commodity groupings of intermediate demand by production flow category¹ — Continued
 [1982=100, unless otherwise indicated]

Grouping	Commodity code	Other index base	Unadjusted index			Unadjusted percent change to July 2019 from:		Seasonally adjusted percent change from:		
			Mar. 2019 ²	June 2019 ²	July 2019 ²	July 2018	June 2019	Apr. to May	May to June	June to July
Industrial electric power.....	05-43		241.6	248.5	250.9	-3.1	1.0	0.4	-2.8	-0.4
Commercial natural gas.....	05-52	12/90	198.5	186.7	185.1	0.0	-0.9	-1.1	-1.9	-1.0
Industrial natural gas.....	05-53	12/90	155.5	145.9	140.0	-8.6	-4.0	1.2	-2.0	-4.6
Gasoline.....	05-71		177.6	195.5	204.9	-6.7	4.8	-1.7	-5.0	5.2
No. 2 diesel fuel.....	05-73-03		239.3	204.4	221.0	-14.0	8.1	-5.7	-13.3	7.9
Industrial chemicals.....	06-1		258.3	259.3	256.3	-6.5	-1.2	0.5	0.6	-0.9
Prepared paint ³	06-21		297.0	299.1	300.5	4.9	0.5	1.2	-0.1	0.5
Plastic construction products.....	07-21		230.1	229.5	230.2	1.9	0.3	-0.3	0.3	0.7
Wastepaper ³	09-12		224.4	143.9	153.0	-42.4	6.3	-16.8	-15.8	6.3
Paper ³	09-13		201.3	202.0	201.1	1.1	-0.4	-0.1	-0.2	-0.4
Converted paper and paperboard products ³	09-15		241.8	242.4	241.1	1.0	-0.5	0.2	0.3	-0.5
Iron and steel scrap ³	10-12		494.9	396.1	383.4	-28.8	-3.2	-8.3	-8.9	-3.2
Steel mill products ³	10-17		215.6	206.6	201.3	-7.5	-2.6	-0.6	-2.0	-2.6
Primary nonferrous metals ³	10-22		188.1	180.8	184.1	-4.2	1.8	-2.5	-0.9	1.8
Nonferrous scrap.....	10-23		376.8	337.4	348.4	-5.4	3.3	-6.8	-1.9	3.5
Nonferrous wire and cable ³	10-26		248.9	249.9	246.5	-3.1	-1.4	1.2	-0.9	-1.4
Fabricated structural metal products.....	10-7		241.0	239.4	239.4	1.0	0.0	0.3	-1.1	0.1
General purpose machinery and equipment.....	11-4		246.0	247.4	247.7	3.3	0.1	0.1	0.2	0.1
Construction sand, gravel, and crushed stone.....	13-21		344.0	350.5	351.8	4.6	0.4	-0.1	1.2	0.5
Stage 1 intermediate demand services.....		04/10	122.6	123.8	123.3	1.8	-0.4	0.0	0.4	-0.4
Truck transportation of freight ³	30-12	06/09	125.0	126.4	125.6	1.6	-0.6	0.4	1.0	-0.6
Airline passenger services.....	30-22	12/08	116.5	120.0	120.8	5.4	0.7	1.7	-0.6	1.5
Advertising space sales in periodicals, newspapers, directories, and mailing lists ³	36-1	06/09	103.2	101.6	101.2	-2.2	-0.4	0.7	-1.2	-0.4
Business wired telecommunication services ³	37-12	06/09	101.6	101.7	101.6	-0.2	-0.1	0.2	0.0	-0.1
Wireless telecommunication services ³	37-2	06/09	64.9	64.6	63.9	-1.5	-1.1	-0.8	0.0	-1.1
Bundled wired telecommunications access services ³	37-5	12/11	109.2	107.8	108.1	3.3	0.3	-0.3	-0.6	0.3
Business loans (partial).....	39-11	04/09	237.9	244.6	230.3	2.3	-5.8	-1.7	2.1	-3.7
Deposit services (partial) ³	39-2	04/09	69.2	67.9	68.1	5.9	0.3	-2.2	0.9	0.3
Securities brokerage, dealing, investment advice, and related services ³	40-1	06/09	161.0	164.7	164.3	3.6	-0.2	0.6	0.4	-0.2
Portfolio management ³	40-2	12/08	208.2	217.7	219.4	3.7	0.8	1.8	-1.8	0.8
Investment banking ³	40-3	12/08	176.9	179.4	183.3	4.3	2.2	-0.4	0.8	2.2
Insurance.....	41-11	06/09	123.4	123.6	123.7	1.5	0.1	0.2	0.3	-0.2
Nonresidential real estate rents ³	43-11	06/09	116.0	117.5	117.5	2.5	0.0	-2.2	3.6	0.0
Architectural and engineering services ³	45-3	06/09	118.2	117.4	117.8	1.9	0.3	0.1	-0.9	0.3
Management consulting services.....	45-41	06/09	104.7	103.7	103.0	-2.5	-0.7	-0.8	-0.3	-0.7
Waste collection.....	50-1	12/08	132.2	127.5	131.7	3.5	3.3	-0.4	-0.3	3.5
Traveler accommodation services.....	53-11	06/09	125.1	126.9	128.1	-0.2	0.9	9.2	-4.0	-3.6
Commercial and industrial machinery and equipment repair and maintenance ³	55-1	03/09	124.4	124.4	124.4	1.6	0.0	0.0	0.0	0.0
Machinery and equipment parts and supplies wholesaling ³	57-11-02	03/09	126.6	129.3	126.4	6.0	-2.2	-1.2	2.5	-2.2
Building materials, paint, and hardware wholesaling.....	57-3	03/09	96.8	100.0	101.1	3.8	1.1	2.4	-1.2	2.0
Metals, minerals, and ores wholesaling ³	57-4	03/09	158.4	159.0	160.5	-11.7	0.9	-1.9	-0.2	0.9
Chemicals and allied products wholesaling ³	57-5	03/09	110.2	111.4	112.7	5.5	1.2	0.5	0.4	1.2
Paper and plastics products wholesaling ³	57-6	03/09	134.9	137.5	129.1	-1.3	-6.1	0.1	1.3	-6.1
Hardware and building materials and supplies retailing.....	58-D	03/09	125.4	121.8	121.6	-5.0	-0.2	-2.2	-1.1	-0.2
Mining services ³	60-1	06/85	235.2	238.2	233.6	0.2	-1.9	2.4	-1.0	-1.9

¹ Further information about the Final Demand-Intermediate Demand Aggregation system is available online at <https://www.bls.gov/ppi/fdidaggregation.htm>

² The indexes for March 2019 have been recalculated to incorporate late reports and corrections by respondents. All indexes are subject to revision 4 months after original publication.

³ Not seasonally adjusted.

"-" Data not available.

NOTE: The term "(partial)" denotes incomplete coverage of the index category.

Table 7. Producer price indexes for selected final demand and intermediate demand categories, seasonally adjusted

[Nov 2009=100, unless otherwise indicated]

Grouping	Other index base	Index ¹					
		Feb. 2019	Mar. 2019	Apr. 2019	May 2019	June 2019	July 2019
Final demand.....		117.2	117.7	118.1	118.2	118.3	118.5
Final demand goods.....		114.6	115.7	116.1	115.9	115.4	115.9
Final demand foods.....		118.0	118.3	118.2	117.8	118.5	118.7
Final demand energy.....		101.5	106.8	109.2	108.1	104.7	107.1
Final demand goods less foods and energy.....		117.5	117.6	117.6	117.6	117.6	117.7
Final demand services.....		118.1	118.2	118.6	118.9	119.4	119.3
Final demand trade services.....		118.6	118.9	119.6	119.0	120.6	120.8
Final demand transportation and warehousing services.....		124.3	123.8	124.6	125.5	125.9	126.1
Final demand services less trade, transportation, and warehousing.....		117.3	117.4	117.6	118.2	118.2	117.9
Intermediate demand by commodity type							
Processed goods for intermediate demand.....	00/82	199.1	200.3	200.3	199.9	197.8	198.2
Materials and components for manufacturing.....	00/82	186.9	186.4	185.5	185.8	185.4	184.7
Materials and components for construction.....	00/82	251.3	250.9	251.3	251.5	251.0	251.4
Processed fuels and lubricants for intermediate demand.....	00/82	177.6	184.6	186.7	184.0	175.0	178.9
Containers for intermediate demand.....	00/82	236.8	238.4	237.3	238.6	239.0	238.2
Supplies for intermediate demand.....	00/82	201.0	201.0	201.0	200.8	200.7	200.7
Unprocessed goods for intermediate demand.....	00/82	189.7	189.0	194.8	184.9	178.8	181.7
Unprocessed foodstuffs and feedstuffs.....	00/82	165.0	160.7	164.7	161.5	161.4	161.1
Unprocessed nonfood materials except fuel.....	00/82	241.0	249.1	263.5	249.8	230.7	244.9
Unprocessed fuel.....	00/82	127.9	122.4	119.7	106.2	107.7	101.4
Services for intermediate demand.....		120.3	120.9	121.2	121.2	121.5	121.3
Trade services for intermediate demand.....		122.3	123.7	124.4	123.7	125.1	124.1
Transportation and warehousing services for intermediate demand.....		127.6	127.6	128.2	128.7	128.8	129.2
Services less trade, transportation, and warehousing for intermediate demand.....		118.5	118.9	119.1	119.1	119.2	119.1
Intermediate demand by production flow							
Stage 4 intermediate demand.....		118.1	118.7	119.1	118.9	118.8	118.9
Inputs to stage 4 goods producers.....		114.7	115.0	115.1	114.9	115.4	114.9
Inputs to stage 4 services producers.....		119.7	120.3	120.8	120.7	120.8	121.0
Inputs to stage 4 construction producers.....		119.1	120.2	120.7	120.2	119.0	119.7
Stage 3 intermediate demand.....		116.6	117.4	118.1	117.7	117.0	116.8
Inputs to stage 3 goods producers.....		119.5	119.4	119.9	119.5	118.6	117.8
Inputs to stage 3 services producers.....		114.7	116.1	117.0	116.9	116.5	116.8
Inputs to stage 3 construction producers.....		110.5	115.8	116.5	113.1	105.9	109.7
Stage 2 intermediate demand.....		106.6	106.7	107.6	106.4	105.0	105.5
Inputs to stage 2 goods producers.....		96.6	96.3	97.8	94.8	92.3	93.0
Inputs to stage 2 services producers.....		116.4	117.0	117.4	117.9	117.4	117.8
Stage 1 intermediate demand.....		115.4	116.4	116.4	115.2	114.0	114.3
Inputs to stage 1 goods producers.....		110.7	111.4	111.1	109.3	108.0	108.2
Inputs to stage 1 services producers.....		119.6	121.0	121.2	120.5	119.3	119.8
Inputs to stage 1 construction producers.....		119.9	120.8	121.5	121.0	120.3	120.8
Special groupings							
Final demand less foods and energy.....	04/10	116.9	117.0	117.3	117.5	117.9	117.8
Final demand less foods.....	04/10	115.5	115.9	116.4	116.5	116.6	116.7
Final demand less energy.....	04/10	116.7	116.8	117.1	117.3	117.7	117.7
Total finished ²	01/10	116.6	117.1	117.5	117.6	117.9	118.0
Total exports.....	04/10	113.2	113.5	113.8	113.5	113.6	113.8
Total Government purchases.....	04/10	112.2	112.8	113.3	113.3	112.8	113.1
Total private capital investment (goods, services, and construction).....	04/10	116.4	116.5	117.0	117.2	117.2	117.7
Finished goods ²	00/82	203.2	205.8	206.7	206.4	205.5	206.7
Processed materials less foods and feeds.....	00/82	199.8	201.2	201.1	200.7	198.5	199.0
Processed foods and feeds.....	00/82	191.8	191.4	192.3	191.3	190.8	190.6
Processed energy goods.....	00/82	178.4	185.4	187.5	184.9	175.9	179.7
Processed materials less foods and energy.....	00/82	202.7	202.4	201.7	202.0	201.7	201.3
Unprocessed materials less agricultural products.....	00/82	200.5	202.7	209.6	194.7	183.2	187.6
Unprocessed energy materials.....	00/82	148.9	149.8	159.1	146.0	135.1	138.9
Unprocessed nonfood materials less energy.....	00/82	333.6	338.4	331.9	316.8	315.1	321.1
Total goods inputs to stage 4 intermediate demand.....	04/10	112.6	113.1	113.3	113.1	112.5	112.9
Total services inputs to stage 4 intermediate demand.....	04/10	119.9	120.7	121.2	121.1	121.6	121.3
Total goods inputs to stage 3 intermediate demand.....	04/10	106.2	107.3	108.4	107.9	106.0	106.0
Total services inputs to stage 3 intermediate demand.....	04/10	118.6	119.0	119.3	119.1	119.6	119.4
Total goods inputs to stage 2 intermediate demand.....	04/10	89.4	89.1	90.6	87.5	85.1	85.8
Total services inputs to stage 2 intermediate demand.....	04/10	118.1	118.6	119.0	119.6	119.2	119.5
Total goods inputs to stage 1 intermediate demand.....	04/10	98.1	99.4	99.2	97.3	95.2	96.0
Total services inputs to stage 1 intermediate demand.....	04/10	122.1	122.5	122.9	122.9	123.4	122.9

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 March 2019 have been recalculated to incorporate late reports and corrections by respondents.

² PPI defines Total finished as including only the personal consumption and private capital investment portions of final demand.

Table 8. Producer price indexes for selected commodity groupings, not seasonally adjusted
[1982=100, unless otherwise indicated]

Grouping	Commodity code	Other index base	Index			Percent change to July 2019 from:	
			Mar. 2019 ¹	June 2019 ¹	July 2019 ¹	July 2018	June 2019
Goods							
All commodities.....			200.8	200.3	201.0	-1.6	0.3
Farm products, processed foods and feeds.....			191.9	194.6	193.8	1.3	-0.4
Farm products.....	01		160.4	164.7	162.6	1.0	-1.3
Processed foods and feeds.....	02		207.5	209.5	209.3	1.4	-0.1
Industrial commodities.....			202.2	201.0	202.0	-2.2	0.5
Textile products and apparel.....	03		150.9	150.6	150.6	0.8	0.0
Hides, skins, leather, and related products.....	04		172.5	163.6	162.6	-8.6	-0.6
Fuels and related products and power.....	05		170.8	169.0	173.4	-8.4	2.6
Chemicals and allied products.....	06		291.7	291.8	290.8	-1.8	-0.3
Rubber and plastic products.....	07		196.8	196.2	196.5	0.6	0.2
Lumber and wood products.....	08		238.3	236.3	236.0	-5.9	-0.1
Pulp, paper, and allied products.....	09		261.5	259.4	258.4	-1.3	-0.4
Metals and metal products.....	10		227.5	220.8	219.8	-3.1	-0.5
Machinery and equipment.....	11		143.1	143.4	143.6	2.2	0.1
Furniture and household durables.....	12		175.5	176.4	176.8	3.0	0.2
Nonmetallic mineral products.....	13		251.4	253.5	254.1	2.6	0.2
Transportation equipment.....	14		182.7	182.8	182.7	0.9	-0.1
Miscellaneous products.....	15		273.1	274.2	274.5	3.7	0.1
Industrial commodities less fuels.....			208.4	207.5	207.3	0.0	-0.1
Other commodity groupings							
Petroleum products, refined.....	057		197.1	197.5	206.2	-8.8	4.4
Industrial chemicals.....	061		258.3	259.3	256.3	-6.5	-1.2
Rubber and rubber products.....	071		180.5	180.1	179.9	0.3	-0.1
Lumber.....	081		213.5	208.1	208.4	-16.0	0.1
Iron and steel.....	101		238.6	222.3	217.3	-11.1	-2.2
Nonferrous metals.....	102		249.8	241.7	245.0	-1.3	1.4
General purpose machinery and equipment.....	114		246.0	247.4	247.7	3.3	0.1
Electrical machinery and equipment.....	117		116.8	117.3	117.2	1.4	-0.1
Electronic components and accessories.....	1178		65.0	65.5	65.4	-0.5	-0.2
Aircraft and aircraft equipment.....	142		276.5	277.2	277.2	1.6	0.0
Services and construction							
Transportation services.....	30	06/09	131.6	133.3	133.4	3.3	0.1
Services related to transportation activities.....	31	06/09	114.3	114.4	114.7	0.5	0.3
Warehousing, storage, and related activities.....	32	12/08	106.2	107.3	107.1	-0.3	-0.2
Publishing sales, excluding software.....	33	06/09	121.5	122.3	121.8	3.0	-0.4
Software publishing.....	34	06/09	90.7	92.3	94.1	2.7	2.0
Network compensation from broadcast and cable television and radio.....	35	06/09	142.9	142.7	140.0	2.0	-1.9
Advertising space and time sales.....	36	06/09	98.0	97.7	95.9	-0.5	-1.8
Telecommunication, cable, and internet user services.....	37	06/09	102.0	101.6	101.3	0.9	-0.3
Data processing and related services.....	38	06/09	100.8	101.2	101.0	-0.3	-0.2
Credit intermediation services (partial).....	39	06/09	96.9	98.2	95.4	2.4	-2.9
Investment services.....	40	06/09	173.7	179.5	180.5	3.7	0.6
Insurance and annuities.....	41	06/09	122.1	122.4	122.3	1.2	-0.1
Commissions and fees from sales and administration of insurance policies (partial).....	42	06/09	107.5	107.5	107.7	0.6	0.2
Real estate services (partial).....	43	06/09	123.9	124.9	125.3	2.5	0.3
Rental and leasing of goods (partial).....	44	06/09	94.4	94.5	98.8	-0.1	4.6
Professional services (partial).....	45	06/09	120.5	120.1	120.2	1.6	0.1
Employment services.....	46	06/09	115.4	114.1	115.3	2.2	1.1
Travel arrangement services.....	47	06/09	105.1	107.7	107.6	3.8	-0.1
Selected security services (partial).....	48	03/09	116.7	117.1	117.4	4.0	0.3
Cleaning and building maintenance services (partial).....	49	03/09	111.2	111.3	110.8	-0.5	-0.4
Waste collection and remediation services (partial).....	50	12/08	132.2	127.5	131.7	3.5	3.3
Health care services.....	51	06/09	120.2	120.8	120.9	1.8	0.1
Accommodation services.....	53	06/09	125.1	126.9	128.1	-0.2	0.9
Food and beverages for immediate consumption services (partial).....	54	06/09	120.5	120.5	120.6	0.8	0.1
Repair and maintenance services (partial).....	55	06/09	129.5	129.9	129.9	2.0	0.0
Entertainment services (partial).....	56	06/09	118.0	115.8	114.6	-0.3	-1.0
Wholesale trade services.....	57	06/09	121.8	123.5	123.5	3.6	0.0
Retail trade services.....	58	06/09	117.6	118.9	118.2	2.2	-0.6
Metal treatment services.....	59	12/84	188.4	187.4	188.3	0.2	0.5
Mining services.....	60	06/85	235.2	238.2	233.6	0.2	-1.9
Contract work on textile products, apparel, and leather.....	61	06/10	114.4	115.3	115.4	4.4	0.1
Construction (partial).....	80	06/09	120.8	122.6	123.3	5.1	0.6

¹ The indexes for March 2019 have been recalculated to incorporate late reports and corrections by respondents. All indexes are subject to revision 4 months after original publication.
"-" Data not available.

NOTE: The term "(partial)" denotes incomplete coverage of the index category.