

Annual Industry Accounts

Advance Statistics on GDP by Industry for 2009

Revised Statistics for 1998–2008, Comprehensive Revision

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ON MAY 25, 2010, the Bureau of Economic Analysis (BEA) released advance GDP by Industry statistics for 2009 and revised statistics for 1998–2008. The annual industry accounts provide statistics on interactions among industries and the roles these industries play in the economy, including each industry's contributions to gross domestic product (GDP).

The industry accounts statistics show that the economic downturn in 2009 was widespread across industries: 15 of 22 industry groups contributed to the 2.4 percent decline in real GDP (see page 16). Construction, durable-goods manufacturing and “real estate and rental and leasing” were among the largest contributors to the decline, which was partly offset by strong contribution by health care and social assistance (see page 17). In addition, the revised statistics confirm the broad shifts in industry trends that were seen in the previously published statistics: the downturn in the private goods-producing sector in 2001, the expansion

of the information and communication technology sector over the past decade, and the broad economic slowdown of 2008.

Additional highlights include the following:

- Growth in the private services-producing sector outpaced growth in the private goods-producing sector in the 2002–2007 business cycle expansion. Services average annual growth was 3.1 percent, and goods increased 2.3 percent.
- The information-communications-technology-producing industries experienced double-digit growth throughout 1998–2007. During this period, its slowest rate of growth was 2.2 percent in 2001.
- Real GDP growth decelerated sharply in 2008, to 0.4 percent, led by a downturn in nondurable-goods manufacturing.

The statistics discussed in this presentation include advance estimates for 2009, which reflect preliminary source data on the distribution of growth in real GDP

Chart 1. Annual Growth in Real GDP

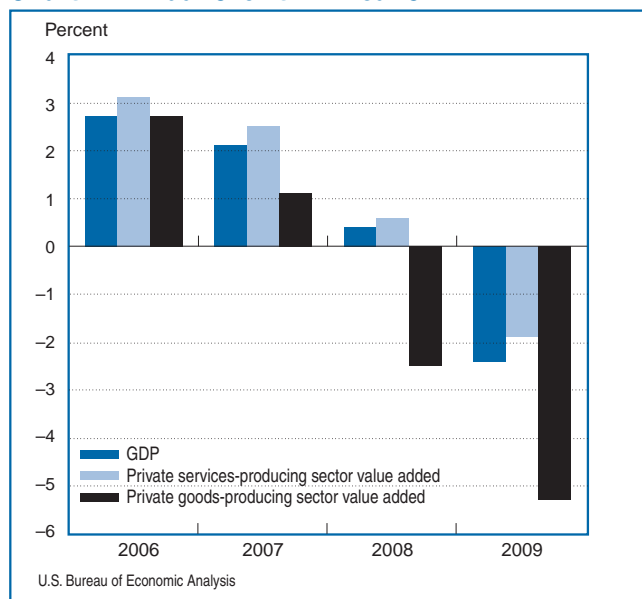
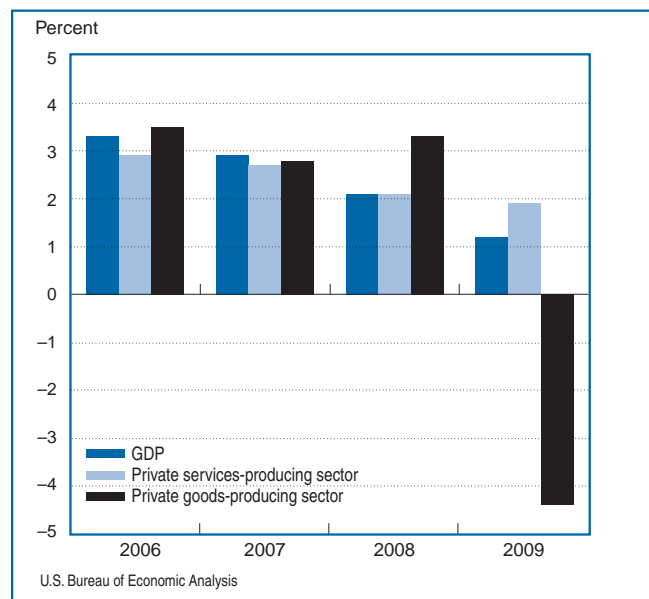


Chart 2. Annual Growth in Value-Added Prices



and inflation by industry (see the box “Advance Methodology” on page 20). The statistics for 1998–2008 reflect the 2010 comprehensive revision of the annual industry accounts, a significant improvement based on high-quality source data. The comprehensive revision, which was previewed in a SURVEY OF CURRENT BUSINESS article in March 2010, differs from annual revisions, in the scope of improvements and in the number of years subject to revision. The 2010 comprehensive revision introduces two major types of improvements: (1) updated definitions and classifications and (2) statistical changes that reflect the introduction of new and improved methodologies and the incorporation of newly available and revised source data. Combined, these improvements allow the accounts to accurately capture and reflect the changing structure of the U.S. economy.¹

Comprehensive revisions, which occur every 5 years, go beyond annual revisions by incorporating more detailed methodological and other changes. This revision incorporates major changes in definitions, classifications, and statistical methods. Major changes introduced with this revision include the following:

- Updated industry and commodity definitions consistent with the 2002 North American Industry Classification System (NAICS).
- The results of the 2002 benchmark input-output (I-O) accounts, including Census Bureau data on shipments, receipts, and business expenses from the 2002 Economic Census, Business Expenses Survey, and Service Annual Survey (SAS).
- The results of the 2009 comprehensive revision of the national income and product accounts, including the new classification system for personal consumption expenditures and new estimates of underreporting and nonreporting of income.
- New producer price indexes from the Bureau of Labor Statistics used to deflate gross margin output for the retail trade sector.
- Expanded annual business expense data from the SAS.
- A new interpolation method to prepare time series annual industry accounts between the 1997 benchmark I-O tables and the newly available 2002 benchmark I-O tables.
- An improved method to “reconcile” value added by industry within a balanced I-O framework.

Data Availability

The annual GDP-by-industry and I-O accounts for 1998–2008 and the advance statistics on value added by industry for 2009, are available on BEA’s Web site. The advance statistics are presented in current dollars, chained (2005) dollars, chain-type quantity indexes, and chain-type price indexes. Annual input-output accounts for 2009 will be available in the fall of 2010. The statistics for 2009 and the full set of annual industry accounts are available interactively on BEA’s Web site. Visit www.bea.gov/industry/index.htm#annual for more information.

For a guide to the annual industry accounts, see “A Primer on BEA’s Industry Accounts” in the June 2009 SURVEY OF CURRENT BUSINESS.

1. See Nicole M. Mayerhauser and Erich H. Strassner, “Preview of the Comprehensive Revision of the Annual Industry Accounts,” SURVEY OF CURRENT BUSINESS 90 (March 2010): 21–34.

Real Value Added

Table A. Percent Changes in Real Value Added by Industry Group

Line		2006	2007	2008	2009
1	Gross domestic product	2.7	2.1	0.4	-2.4
2	Private industries	3.0	2.2	-0.1	-2.6
3	Agriculture, forestry, fishing, and hunting.....	0.8	-5.7	9.5	4.6
4	Mining.....	8.1	-4.5	0.3	3.7
5	Utilities.....	0.7	3.5	3.2	3.1
6	Construction.....	-2.9	-3.9	-3.3	-9.9
7	Manufacturing.....	4.4	4.5	-3.6	-5.9
8	Durable goods.....	6.8	4.1	0.3	-7.5
9	Nondurable goods.....	1.3	5.0	-8.2	-3.8
10	Wholesale trade.....	3.1	2.5	-0.6	-1.0
11	Retail trade.....	1.8	1.6	-5.2	-4.5
12	Transportation and warehousing.....	4.5	3.0	-2.5	-2.8
13	Information.....	1.0	6.0	1.4	1.6
14	Finance, insurance, real estate, rental, and leasing.....	4.2	2.2	1.6	-2.4
15	Finance and insurance.....	6.7	-1.4	3.2	-2.7
16	Real estate and rental and leasing.....	2.6	4.6	0.7	-2.3
17	Professional and business services.....	3.4	2.7	1.5	-3.0
18	Professional, scientific, and technical services.....	4.7	2.6	1.8	-1.8
19	Management of companies and enterprises.....	1.0	-1.3	2.4	-2.6
20	Administrative and waste management services.....	1.7	5.3	0.2	-6.5
21	Educational services, health care, and social assistance.....	3.3	2.0	3.2	1.4
22	Educational services.....	0.8	1.7	2.2	-1.1
23	Health care and social assistance.....	3.7	2.1	3.3	1.7
24	Arts, entertainment, recreation, accommodation, and food services.....	3.0	1.4	-1.3	-3.1
25	Arts, entertainment, and recreation.....	4.9	0.8	2.5	-2.2
26	Accommodation and food services.....	2.4	1.6	-2.6	-3.4
27	Other services, except government.....	0.1	2.2	-0.3	-4.5
28	Government	0.5	1.3	2.0	1.9
29	Federal.....	-0.3	0.3	2.7	5.7
30	State and local.....	0.8	1.8	1.8	0.1
Addenda:					
31	Private goods-producing industries ¹	2.7	1.1	-2.5	-5.3
32	Private services-producing industries ²	3.1	2.5	0.6	-1.9
33	Information-communications-technology-producing industries ³	7.8	7.6	5.4	-0.1

Real GDP declined 2.4 percent in 2009, reflecting declines in 15 of 22 industry groups.

Construction fell for the fifth straight year.

Durable-goods manufacturing fell 7.5 percent in 2009. This decline was larger than the 6.1 percent decline in 2001, the last year the industry group declined.

Nondurable-goods manufacturing fell 3.8 percent in 2009 after falling 8.2 percent in 2008.

Information grew for the ninth consecutive year; broadcasting and telecommunications grew 6.1 percent in 2000–2008.

Professional and business services declined in 2009, reflecting declines in “professional, scientific, and technical services,” “management of companies and enterprises,” and “administrative and waste management services.”

Health care and social assistance increased 1.7 percent in 2009, providing the largest private sector contribution to real GDP.

Federal government grew 5.7 percent in 2009 and was the largest positive contributor, helping to partly offset widespread declines in the private sector.

The goods-producing sector contracted for the second consecutive year, falling 5.3 percent in 2009 after decreasing 2.5 percent in 2008.

The services-producing sector fell 1.9 percent in 2009; the largest contributors to the decline were “real estate and rental and leasing,” retail trade, and finance and insurance.

1. Consists of agriculture, forestry, fishing, and hunting; mining; construction; and manufacturing.

2. Consists of utilities; wholesale trade; retail trade; transportation and warehousing; information; finance, insurance, real estate, rental, and leasing; professional and business services; educational services, health care, and social assistance; arts, entertainment, recreation, accommodation, and food services; and other services, except government.

3. Consists of computer and electronic products; publishing industries (includes software); information and data processing services; and computer systems design and related services.

Real Value Added

Table B. Contributions to Growth in Real Gross Domestic Product by Industry Group
[Percentage points]

Line		2006	2007	2008	2009
1	Gross domestic product	2.7	2.1	0.4	-2.4
2	Private industries	2.63	1.91	-0.10	-2.29
3	Agriculture, forestry, fishing, and hunting	0.01	-0.06	0.10	0.05
4	Mining	0.13	-0.08	0.01	0.07
5	Utilities	0.01	0.06	0.06	0.06
6	Construction	-0.15	-0.19	-0.15	-0.44
7	Manufacturing	0.54	0.54	-0.44	-0.68
8	Durable goods	0.46	0.28	0.02	-0.48
9	Nondurable goods	0.07	0.27	-0.46	-0.20
10	Wholesale trade	0.18	0.15	-0.03	-0.06
11	Retail trade	0.12	0.10	-0.33	-0.27
12	Transportation and warehousing	0.13	0.09	-0.07	-0.08
13	Information	0.04	0.26	0.06	0.07
14	Finance, insurance, real estate, rental, and leasing	0.86	0.45	0.34	-0.52
15	Finance and insurance	0.54	-0.12	0.26	-0.23
16	Real estate and rental and leasing	0.33	0.57	0.08	-0.29
17	Professional and business services	0.39	0.32	0.18	-0.37
18	Professional, scientific, and technical services	0.32	0.19	0.13	-0.13
19	Management of companies and enterprises	0.02	-0.02	0.04	-0.05
20	Administrative and waste management services	0.05	0.15	0.00	-0.19
21	Educational services, health care, and social assistance	0.25	0.16	0.24	0.11
22	Educational services	0.01	0.02	0.02	-0.01
23	Health care and social assistance	0.24	0.14	0.22	0.12
24	Arts, entertainment, recreation, accommodation, and food services	0.11	0.05	-0.05	-0.12
25	Arts, entertainment, and recreation	0.04	0.01	0.02	-0.02
26	Accommodation and food services	0.07	0.05	-0.07	-0.10
27	Other services, except government	0.00	0.06	-0.01	-0.12
28	Government	0.06	0.16	0.26	0.24
29	Federal	-0.01	0.01	0.11	0.23
30	State and local	0.07	0.15	0.15	0.01
	Addenda:				
31	Private goods-producing industries ¹	0.53	0.22	-0.49	-1.00
32	Private services-producing industries ²	2.11	1.69	0.39	-1.29
33	Information-communications-technology-producing industries ³	0.32	0.31	0.21	0.00

Construction accounted for 10 percent of the downturn in real GDP in 2009. Both residential and nonresidential construction also contributed to the downturn in real GDP growth.

Durable-goods manufacturing turned down in 2009 and accounted for nearly 20 percent of the downturn in real GDP growth, reflecting widespread declines throughout the industry group.

Nondurable-goods manufacturing turned down in 2008 and accounted for 40 percent of the slowdown in GDP. In 2009, this industry group subtracted 0.2 percentage point from real GDP growth.

Retail trade accounted for about 25 percent of the overall slowdown in real GDP in 2008. This sector was also the largest contributor to the slowdown in real value-added growth in the services-producing sector. In 2009, the sector partly offset the downturn in real GDP growth.

Finance and insurance also accounted for nearly 20 percent of the downturn in real GDP in 2009. In 2008, this industry group contributed the most to help offset the widespread deceleration in real GDP.

Real estate and rental and leasing contracted for the first time since 2002 and subtracted from real GDP growth in 2009. This industry group accounted for about 15 percent of the downturn in real GDP.

ICT-producing industries decelerated in 2009 after averaging double-digit growth in 1998–2008, when growth was led primarily by computer and electronic products.

1. Consists of agriculture, forestry, fishing, and hunting; mining; construction; and manufacturing.

2. Consists of utilities; wholesale trade; retail trade; transportation and warehousing; information; finance, insurance, real estate, rental, and leasing; professional and business services; educational services, health care, and social assistance; arts, entertainment, recreation, accommodation, and food services; and other services, except government.

3. Consists of computer and electronic products; publishing industries (includes software); information and data processing services; and computer systems design and related services.

Note. Percentage-point contributions do not sum to the percent change in real gross domestic product because the contribution of the "Not allocated by industry" line is excluded.

Value-Added Prices

**Table C. Percent Changes in Chain-Type Price Indexes
for Value Added by Industry Group**

Line		2006	2007	2008	2009
1	Gross domestic product	3.3	2.9	2.1	1.2
2	Private industries	3.0	2.7	2.3	0.5
3	Agriculture, forestry, fishing, and hunting.....	-4.4	27.2	1.4	-20.1
4	Mining.....	10.3	10.7	26.4	-27.4
5	Utilities.....	14.0	1.1	0.1	2.3
6	Construction.....	9.6	5.6	0.0	0.4
7	Manufacturing.....	0.9	-1.0	1.4	-0.2
8	Durable goods.....	-1.5	-1.4	-2.8	-0.8
9	Nondurable goods.....	4.1	-0.4	6.8	0.6
10	Wholesale trade.....	3.0	3.5	1.2	-2.4
11	Retail trade.....	2.4	0.4	2.3	1.8
12	Transportation and warehousing.....	2.4	0.1	1.9	0.0
13	Information.....	-0.8	-0.9	-1.4	0.2
14	Finance, insurance, real estate, rental, and leasing.....	2.3	2.4	3.0	3.0
15	Finance and insurance.....	0.8	2.9	3.6	2.7
16	Real estate and rental and leasing.....	3.3	2.1	2.6	3.3
17	Professional and business services.....	4.0	5.2	1.5	1.7
18	Professional, scientific, and technical services.....	3.9	4.8	2.7	2.5
19	Management of companies and enterprises.....	6.6	10.4	-0.2	-0.7
20	Administrative and waste management services.....	2.8	3.1	-0.5	1.2
21	Educational services, health care, and social assistance.....	3.0	3.9	2.4	3.1
22	Educational services.....	6.3	4.8	4.1	5.8
23	Health care and social assistance.....	2.6	3.8	2.1	2.7
24	Arts, entertainment, recreation, accommodation, and food services.....	3.1	3.6	2.8	3.2
25	Arts, entertainment, and recreation.....	2.9	3.4	2.1	2.1
26	Accommodation and food services.....	3.1	3.7	3.1	3.6
27	Other services, except government.....	4.1	3.9	3.9	3.3
28	Government	4.7	4.3	3.1	2.4
29	Federal.....	5.3	4.5	2.0	2.3
30	State and local.....	4.4	4.2	3.5	2.4
	Addenda:				
31	Private goods-producing industries ¹	3.5	2.8	3.3	-4.4
32	Private services-producing industries ²	2.9	2.7	2.1	1.9
33	Information-communications-technology-producing industries ³	-3.3	-5.0	-3.6	-3.2

Growth in GDP prices decelerated to 1.2 percent in 2009, reflecting a downturn in value-added prices for the goods-producing sector.

Value-added prices for agriculture industries fell 20.1 percent in 2009 after rising 1.4 percent in 2008, primarily reflecting decreases in prices for crops and livestock.

Value-added prices for mining declined in 2009 for the first time since 2002, decreasing 27.4 percent after increasing 26.4 percent in 2008. The average growth in 2003–2008 was 21.5 percent.

Price growth for nondurable-goods manufacturing decelerated sharply in 2009 because of declines in food and beverage and tobacco products, petroleum and coal products, and chemical products.

Wholesale prices fell in 2009 for the first time since 2003.

Information prices turned up in 2009 after falling for 7 consecutive years.

Growth in value-added prices for finance and insurance and real estate in 2009 partly offset the sharp declines in prices for mining and agriculture.

Value-added prices for the goods-producing sector turned down in 2009, the first decline since 2002.

Value-added prices for the services-producing sector slowed for the third consecutive year; the major contributor to the slowdown was wholesale trade.

1. Consists of agriculture, forestry, fishing, and hunting; mining; construction; and manufacturing.

2. Consists of utilities; wholesale trade; retail trade; transportation and warehousing; information; finance, insurance, real estate, rental, and leasing; professional and business services; educational services, health care, and social assistance; arts, entertainment, recreation, accommodation, and food services; and other services, except government.

3. Consists of computer and electronic products; publishing industries (includes software); information and data processing services; and computer systems design and related services.

Revisions

Table D. Revisions in Percent Changes in Real Value Added

Line		Average annual rate of change, 1998–2002			Average annual rate of change, 2002–2007			2008		
		Revised	Previously Published	Revision	Revised	Previously Published	Revision	Revised	Previously Published	Revision
1	Gross domestic product	3.0	2.6	0.4	2.8	2.8	0.0	0.4	1.1	-0.7
2	Private industries	3.2	2.8	0.4	2.9	3.1	-0.2	-0.1	0.6	-0.7
3	Agriculture, forestry, fishing, and hunting	4.1	3.4	0.7	3.0	4.7	-1.7	9.5	-0.5	10.0
4	Mining	-1.8	-3.4	1.6	-5.7	0.7	-6.4	0.3	-0.8	1.1
5	Utilities	0.6	2.3	-1.7	1.3	1.7	-0.4	3.2	1.9	1.3
6	Construction	0.7	0.3	0.4	-1.6	-3.6	2.0	-3.3	-5.6	2.3
7	Manufacturing	2.3	1.9	0.4	4.6	3.2	1.4	-3.6	-2.7	-0.9
8	Durable goods	3.9	3.2	0.7	6.0	5.4	0.6	0.3	-1.3	1.6
9	Nondurable goods	0.1	-0.2	0.3	2.8	0.4	2.4	-8.2	-4.6	-3.6
10	Wholesale trade	4.5	3.2	1.3	3.6	1.8	1.8	-0.6	-1.5	0.9
11	Retail trade	3.3	4.9	-1.6	1.6	5.1	-3.5	-5.2	-0.5	-4.7
12	Transportation and warehousing	1.2	2.1	-0.9	5.6	3.9	1.7	-2.5	-3.7	1.2
13	Information	6.9	6.6	0.3	6.0	6.8	-0.8	1.4	5.2	-3.8
14	Finance, insurance, real estate, rental, and leasing	4.7	3.8	0.9	3.0	3.1	-0.1	1.6	-0.1	1.7
15	Finance and insurance	7.6	5.6	2.0	3.0	3.7	-0.7	3.2	-3.0	6.2
16	Real estate and rental and leasing	3.0	2.7	0.3	3.0	2.8	0.2	0.7	1.8	-1.1
17	Professional and business services	3.1	1.9	1.2	3.4	4.3	-0.9	1.5	5.5	-4.0
18	Professional, scientific, and technical services	3.4	3.4	0.0	3.9	6.0	-2.1	1.8	8.7	-6.9
19	Management of companies and enterprises	2.6	0.2	2.4	-0.8	-0.7	-0.1	2.4	0.2	2.2
20	Administrative and waste management services	2.7	-0.3	3.0	5.0	3.6	1.4	0.2	1.2	-1.0
21	Educational services, health care, and social assistance	2.9	3.0	-0.1	2.7	3.2	-0.5	3.2	4.4	-1.2
22	Educational services	1.9	1.8	0.1	0.6	2.0	-1.4	2.2	3.5	-1.3
23	Health care and social assistance	3.1	3.1	0.0	3.0	3.3	-0.3	3.3	4.6	-1.3
24	Arts, entertainment, recreation, accommodation, and food services	2.6	2.0	0.6	2.5	2.8	-0.3	-1.3	1.7	-3.0
25	Arts, entertainment, and recreation	1.7	2.8	-1.1	2.0	2.3	-0.3	2.5	2.0	0.5
26	Accommodation and food services	2.9	1.7	1.2	2.7	3.0	-0.3	-2.6	1.5	-4.1
27	Other services, except government	-1.4	-0.8	-0.6	0.4	0.8	-0.4	-0.3	0.3	-0.6
28	Government	1.5	1.4	0.1	0.8	0.9	-0.1	2.0	2.0	0.0
29	Federal	0.3	0.3	0.0	0.7	0.8	-0.1	2.7	3.0	-0.3
30	State and local	2.0	1.9	0.1	0.9	0.9	0.0	1.8	1.5	0.3
	Addenda:									
31	Private goods-producing industries ¹	1.9	1.3	0.6	2.3	1.4	0.9	-2.5	-3.0	0.5
32	Private services-producing industries ²	3.6	3.3	0.3	3.1	3.5	-0.4	0.6	1.6	-1.0
33	Information-communications-technology-producing industries ³	12.7	10.4	2.3	11.3	10.6	0.7	5.4	9.0	-3.6

1. Consists of agriculture, forestry, fishing, and hunting; mining; construction; and manufacturing.

2. Consists of utilities; wholesale trade; retail trade; transportation and warehousing; information; finance, insurance, real estate, rental, and leasing; professional and business services; educational services, health care, and social assistance; arts, entertainment, recreation, accommodation, and food

services; and other services, except government.

3. Consists of computer and electronic products within durable-goods manufacturing; publishing industries (includes software) and information and data processing services within information; and computer systems design and related services within professional, scientific, and technical services.

1998–2002

- The largest revision occurred in administrative and waste management, reflecting an upward revision to compensation for the administrative and support services industry.
- The downward revision to utilities reflects revisions to gross operating surplus and a methodology improvement that incorporates price data from the Energy Information Agency that replaces aggregate Standard Industrial Classification-based Bureau of Labor Statistics (BLS) price indexes.

2002–2007

- The largest revision was to mining, which resulted from the incorporation of updated I-O relationships from the 2002 benchmark I-O accounts. This revision included increased purchases of mining support services and a downward revision to gross operating surplus of oil and gas extraction.
- Nondurable-goods manufacturing was revised up, primarily reflecting an upward revision to petroleum and coal products due to incorporating updated I-O relationships from the 2002 benchmark I-O accounts. Revisions included an upward revision to intermediate input prices,

reflecting increased purchases of oil and gas, and an upward revision to the gross operating surplus of the petroleum and coal products industry.

- Retail trade real value added was revised down for 2003–2007, reflecting newly available producer price indexes (PPIs) used to deflate gross margin output that replaced sales-based prices starting in 2002. The BLS PPIs more accurately align with the measurement of gross margin output for the industry.

2008

- The largest revision was to the agriculture, forestry, fishing, and hunting group, primarily due to upward revisions to noncorporate gross operating surplus of farms.
- Professional, scientific, and technical services was revised down, primarily reflecting downward revisions to the corporate component of gross operating surplus of legal services, computer systems design, and miscellaneous professional and technical services.
- Finance and insurance was revised up, primarily reflecting upward revisions to corporate components of gross operating surplus.

Tables 1 through 7 follow on page 21.

Methodology and Acknowledgments

Advance Methodology

This comprehensive revision of the annual industry accounts presents advance gross domestic product (GDP) by industry statistics for 2009. These statistics are prepared for broad industry groups and are based on summary source data and on an abbreviated methodology that differs from the integration methodology used to prepare the standard set of statistics for 1998–2008.¹ The advance statistics are published at approximately the two-digit sector level of the 2002 North American Industry Classification System. The detailed industry source data required to implement the integration methodology are not available for 2009; therefore, the advance methodology draws heavily on data from the national income and product accounts (NIPAs) for both current-dollar and real value added by industry statistics.

Current-dollar statistics

The advance current-dollar value-added by industry statistics for 2009 are prepared by extrapolating the major components of value added by industry, compensation of

1. For more information, see Nicole M. Mayerhauser and Erich H. Strassner, "Preview of the Comprehensive Revision of the Annual Industry Accounts," *SURVEY OF CURRENT BUSINESS* 90 (March 2010): 21.

employees, taxes on production and imports less subsidies, and gross operating surplus for 2008 forward using published and unpublished industry source data from the NIPAs, other government agencies, and private institutions. Statistics for farms and general government are obtained directly from the NIPAs.

Real statistics

The advance chain-type price and quantity indexes and the chained-dollar value-added by industry statistics are prepared using the single deflation method: an industry's current-dollar value added statistics are divided by the industry's gross output price index.² A Fisher aggregation of the detailed industries yields the chain-type price and quantity indexes for industry groups. The gross output price indexes for detailed industries are implicit price deflators that are computed as current-dollar gross output divided by chained-dollar gross output.

2. Single deflation approximates the results obtained by double deflation when the prices of an industry's intermediate inputs increase at about the same rate as its output prices. For more information, see Robert E. Yuskavage, "Gross Domestic Product by Industry: A Progress Report on Accelerated Estimates," *SURVEY* 82 (June 2002): 21.

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