

News Release

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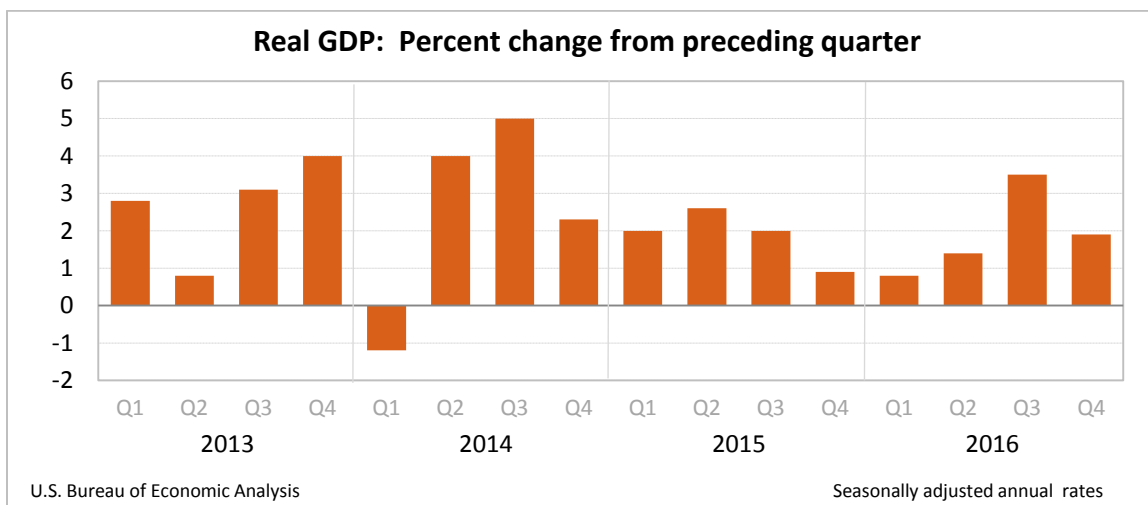
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Gross Domestic Product: Fourth Quarter and Annual 2016 (Advance Estimate)

Real gross domestic product (GDP) increased at an annual rate of 1.9 percent in the fourth quarter of 2016 (table 1), according to the "advance" estimate released by the Bureau of Economic Analysis. In the third quarter, real GDP increased 3.5 percent.

The Bureau emphasized that the fourth-quarter advance estimate released today is based on source data that are incomplete or subject to further revision by the source agency (see "Source Data for the Advance Estimate" on page 3). The "second" estimate for the fourth quarter, based on more complete data, will be released on February 28, 2017.



The increase in real GDP in the fourth quarter reflected positive contributions from personal consumption expenditures (PCE), private inventory investment, residential fixed investment, nonresidential fixed investment, and state and local government spending that were partly offset by negative contributions from exports and federal government spending. Imports, which are a subtraction in the calculation of GDP, increased (table 2).

The deceleration in real GDP in the fourth quarter reflected a downturn in exports, an acceleration in imports, a deceleration in PCE, and a downturn in federal government spending that were partly offset by an upturn in residential fixed investment, an acceleration in private inventory investment, an upturn in state and local government spending, and an acceleration in nonresidential fixed investment.

Current-dollar GDP increased 4.0 percent, or \$185.5 billion, in the fourth quarter to a level of \$18,860.8 billion. In the third quarter, current dollar GDP increased 5.0 percent, or \$225.2 billion (table 1 and table 3).

The **price index for gross domestic purchases** increased 2.0 percent in the fourth quarter, compared with an increase of 1.5 percent in the third quarter (table 4). **The PCE price index** increased 2.2 percent, compared with an increase of 1.5 percent. Excluding food and energy prices, the PCE price index increased 1.3 percent, compared with an increase of 1.7 percent (appendix table A).

Personal Income (table 10)

Current-dollar personal income increased \$152.0 billion in the fourth quarter, compared with an increase of \$172.3 billion in the third. The deceleration in personal income primarily reflected a deceleration in wages and salaries.

Disposable personal income increased \$130.2 billion, or 3.7 percent, in the fourth quarter, compared with an increase of \$141.5 billion, or 4.1 percent, in the third. **Real disposable personal income** increased 1.5 percent, compared with an increase of 2.6 percent.

Personal saving was \$791.2 billion in the fourth quarter, compared with \$818.1 billion in the third. The **personal saving rate** -- personal saving as a percentage of disposable personal income -- was 5.6 percent in the fourth quarter, compared with 5.8 percent in the third.

2016 GDP

Real GDP increased 1.6 percent in 2016 (that is, from the 2015 annual level to the 2016 annual level), compared with an increase of 2.6 percent in 2015 (table 1).

The increase in real GDP in 2016 reflected positive contributions from PCE, residential fixed investment, state and local government spending, exports, and federal government spending that were partly offset by negative contributions from private inventory investment and nonresidential fixed investment. Imports, which are a subtraction in the calculation of GDP, increased (table 2).

The deceleration in real GDP from 2015 to 2016 reflected a downturn in private inventory investment, a deceleration in PCE, a downturn in nonresidential fixed investment, and decelerations in residential fixed investment and in state and local government spending that were offset by a deceleration in imports and accelerations in federal government spending and in exports.

Current-dollar GDP increased 2.9 percent, or \$530.3 billion, in 2016 to a level of \$18,566.9 billion, compared with an increase of 3.7 percent, or \$643.5 billion, in 2015 (table 1 and table 3).

The price index for gross domestic purchases increased 1.0 percent in 2016, compared with an increase of 0.4 percent in 2015 (table 4).

During 2016 (that is, measured from the fourth quarter of 2015 to the fourth quarter of 2016), real GDP increased 1.9 percent, the same rate as during 2015. The price index for gross domestic purchases increased 1.5 percent during 2016, compared with an increase of 0.4 percent during 2015 (table 7).

Source Data for the Advance Estimate

Information on the assumptions used for unavailable source data in the advance estimate is provided in a [Technical Note](#) that is posted with the news release on BEA's Web site. Within a few days after the release, a detailed "[Key Source Data and Assumptions](#)" file is posted on the Web site. For information on updates to GDP, see the "Additional Information" section that follows.

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Next release: February 28, 2017 at 8:30 A.M. EST
Gross Domestic Product: Fourth Quarter and Annual 2016 (Second Estimate)

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Additional Information

Resources

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- Access BEA data by registering for BEA's Data [Application Programming Interface](#) (API).
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- BEA's [news release schedule](#)
- [NIPA Handbook](#): Concepts and Methods of the U.S. National Income and Product Accounts

Definitions

Gross domestic product (GDP) is the value of the goods and services produced by the nation's economy less the value of the goods and services used up in production. GDP is also equal to the sum of personal consumption expenditures, gross private domestic investment, net exports of goods and services, and government consumption expenditures and gross investment.

Current-dollar estimates are valued in the prices of the period when the transactions occurred—that is, at “market value.” Also referred to as “nominal estimates” or as “current-price estimates.”

Real values are inflation-adjusted estimates—that is, estimates that exclude the effects of price changes.

The **gross domestic purchases price index** measures the prices of final goods and services purchased by U.S. residents.

The **personal consumption expenditure price index** measures the prices paid for the goods and services purchased by, or on the behalf of, “persons.”

Personal income is the income received by, or on behalf of, all persons from all sources: from participation as laborers in production, from owning a home or business, from the ownership of financial assets, and from government and business in the form of transfers. It includes income from domestic sources as well as the rest of world. It does not include realized or unrealized capital gains or losses.

Disposable personal income is the income available to persons for spending or saving. It is equal to personal income less personal current taxes.

Personal outlays is the sum of personal consumption expenditures, personal interest payments, and personal current transfer payments.

Personal saving is personal income less personal outlays and personal current taxes.

The **personal saving rate** is personal saving as a percentage of disposable personal income.

For more definitions, see the [Glossary: National Income and Product Accounts](#).

Statistical conventions

Annual rates. Quarterly values are expressed at seasonally-adjusted annual rates (SAAR), unless otherwise specified. Dollar changes are calculated as the difference between these SAAR values. For detail, see the FAQ [“Why does BEA publish estimates at annual rates?”](#)

Percent changes in quarterly series are calculated from unrounded data and are displayed at annual rates, unless otherwise specified. For details, see the FAQ [“How is average annual growth calculated?”](#)

Quantities and prices. Quantities, or “real” volume measures, and prices are expressed as index numbers with a specified reference year equal to 100 (currently 2009). Quantity and price indexes are calculated using a Fisher-chained weighted formula that incorporates weights from two adjacent periods (quarters for quarterly data and annuals for annual data). “Real” dollar series are calculated by multiplying the published quantity index by the current dollar value in the reference year (2009) and then dividing by 100. Percent changes calculated from real quantity indexes and chained-dollar levels are conceptually the same; any differences are due to rounding.

Chained-dollar values are not additive because the relative weights for a given period differ from those of the reference year. In tables that display chained-dollar values, a “residual” line shows the difference between the sum of detailed chained-dollar series and its corresponding aggregate.

Updates to GDP

BEA releases three vintages of the current quarterly estimate for GDP: "Advance" estimates are released near the end of the first month following the end of the quarter and are based on source data that are incomplete or subject to further revision by the source agency; "second" and "third" estimates are released near the end of the second and third months, respectively, and are based on more detailed and more comprehensive data as they become available.

Annual and comprehensive updates are typically released in late July. Annual updates generally cover at least the 3 most recent calendar years (and their associated quarters) and incorporate newly available major annual source data as well as some changes in methods and definitions to improve the accounts. Comprehensive (or benchmark) updates are carried out at about 5-year intervals and incorporate major periodic source data, as well as major conceptual improvements.

The table below shows the average revisions to the quarterly percent changes in real GDP between different estimate vintages, without regard to sign.

Vintage	Average Revision Without Regard to Sign (percentage points, annual rates)
Advance to second	0.5
Advance to third	0.6
Second to third	0.2
Advance to latest	1.1
Note - Based on estimates from 1993 through 2015. For more information on GDP updates, see Revision Information on the BEA Web site.	

The larger average revision from the advance to the latest estimate reflects the fact that periodic comprehensive updates include major statistical and methodological improvements.

Unlike GDP, an advance current quarterly estimate of GDI is not released because data on domestic profits and on net interest of domestic industries are not available. For fourth quarter estimates, these data are not available until the third estimate.

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Appendix Table A. Real Gross Domestic Product and Related Aggregates and Price Indexes: Percent Change From Preceding Period and Contributions to Percent Change

Table 3. Gross Domestic Product: Level and Change From Preceding Period—Table Ends

Line		Billions of dollars						Billions of chained (2009) dollars									Line
		2016	Seasonally adjusted at annual rates					2016	Seasonally adjusted at annual rates					Change from preceding period			
			2015	2016					2015	2016				2016	2016		
				IV	I	II	III			IV	IV	I	II		III	IV		III	IV
52	Government consumption expenditures and gross investment	3,278.7	3,245.0	3,254.3	3,262.3	3,285.9	3,312.1	2,908.8	2,901.7	2,913.2	2,900.9	2,906.4	2,914.9	25.1	5.5	8.5	52
53	Federal	1,244.5	1,234.0	1,233.8	1,239.2	1,251.8	1,253.2	1,120.5	1,123.0	1,118.7	1,117.7	1,124.4	1,121.1	6.6	6.7	-3.3	53
54	National defense	732.2	735.6	731.4	729.3	736.0	732.0	667.0	676.3	670.9	665.5	668.9	662.8	-5.0	3.3	-6.0	54
55	Consumption expenditures.....	587.6	590.4	587.0	585.8	591.3	586.2	531.7	539.9	535.3	531.0	533.5	526.8	-7.6	2.5	-6.7	55
56	Gross investment	144.6	145.2	144.3	143.5	144.7	145.8	135.2	136.1	135.3	134.3	135.1	135.8	2.8	0.8	0.7	56
57	Nondefense.....	512.3	498.4	502.4	509.9	515.8	521.2	452.6	446.2	447.2	451.4	454.7	457.3	11.4	3.3	2.6	57
58	Consumption expenditures.....	390.4	377.7	382.0	388.8	393.7	397.3	341.1	334.9	336.4	340.4	343.0	344.6	10.2	2.7	1.6	58
59	Gross investment	121.9	120.8	120.5	121.1	122.2	123.9	111.4	111.1	110.6	110.8	111.5	112.5	1.1	0.6	1.0	59
60	State and local	2,034.2	2,011.0	2,020.5	2,023.1	2,034.1	2,058.9	1,786.6	1,777.1	1,792.6	1,781.4	1,780.4	1,792.0	18.4	-1.0	11.6	60
61	Consumption expenditures	1,677.4	1,658.5	1,654.0	1,669.2	1,687.4	1,698.8	1,468.5	1,461.3	1,463.6	1,466.3	1,471.6	1,472.6	16.1	5.3	1.0	61
62	Gross investment	356.8	352.6	366.5	353.9	346.7	360.1	317.3	315.0	328.3	314.3	308.0	318.8	2.4	-6.4	10.8	62
63	Residual.....							-106.0	-94.0	-98.2	-104.3	-110.0	-111.5				63
	Addenda:																
64	Gross domestic income (GDI) ¹	18,487.6	18,546.0	18,684.0	18,969.2			16,730.3	16,763.9	16,793.4	16,990.2			196.9			64
65	Average of GDP and GDI	18,355.2	18,413.8	18,567.0	18,822.3			16,610.5	16,644.5	16,688.3	16,858.6			170.3			65
66	Final sales of domestic product	18,546.4	18,160.1	18,239.7	18,465.0	18,671.2	18,809.6	16,624.0	16,422.4	16,473.5	16,579.5	16,703.6	16,739.5	323.4	124.0	35.9	66
67	Gross domestic purchases	19,066.5	18,743.7	18,789.0	18,942.5	19,135.2	19,399.0	17,222.4	17,057.2	17,091.5	17,142.6	17,252.6	17,402.8	284.6	110.0	150.1	67
68	Final sales to domestic purchasers.....	19,045.9	18,681.0	18,747.1	18,957.5	19,131.2	19,347.9	17,187.1	16,989.4	17,040.5	17,139.9	17,230.0	17,337.9	345.4	90.1	107.9	68
69	Final sales to private domestic purchasers...	15,767.2	15,436.0	15,492.8	15,695.2	15,845.2	16,035.8	14,290.3	14,099.1	14,138.7	14,251.0	14,335.9	14,435.6	321.2	84.9	99.6	69
70	Gross domestic product	18,566.9	18,222.8	18,281.6	18,450.1	18,675.3	18,860.8	16,660.0	16,490.7	16,525.0	16,583.1	16,727.0	16,804.8	262.8	143.8	77.9	70
71	Plus: Income receipts from the rest of the world.....		798.5	807.0	848.3	848.9			664.9	671.0	701.8	699.6			-2.2		71
72	Less: Income payments to the rest of the world.....		587.1	634.5	640.5	644.9			486.3	524.0	526.0	527.4			1.4		72
73	Equals: Gross national product		18,434.1	18,454.2	18,657.9	18,879.3			16,668.4	16,668.3	16,757.6	16,897.4			139.7		73
74	Net domestic product	15,657.2	15,360.0	15,408.1	15,548.3	15,753.6	15,918.6	13,974.1	13,836.9	13,857.5	13,902.9	14,034.6	14,101.2	207.8	131.6	66.6	74

1. Real gross domestic income is gross domestic income deflated by the implicit price deflator for gross domestic product.
 NOTE: Users are cautioned that particularly for components that exhibit rapid change in prices relative to other prices in the economy, the chained-dollar estimates should not be used to measure the component's relative importance or its contribution to the growth rate of more aggregate series. For accurate estimates of the contributions to percent changes in real gross domestic product, use table 2.
 See Explanatory Note at the end of the tables.

Table 4. Price Indexes for Gross Domestic Product and Related Measures: Percent Change From Preceding Period

Line		2014	2015	2016	Seasonally adjusted at annual rates																Line
					2013				2014				2015				2016				
					I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	
1	Gross domestic product (GDP).....	1.8	1.1	1.3	1.4	0.9	2.1	2.1	1.7	2.1	1.7	0.5	-0.1	2.3	1.3	0.8	0.5	2.3	1.4	2.1	1
2	Personal consumption expenditures.....	1.5	0.3	1.1	1.4	0.2	1.5	1.7	2.0	1.9	1.1	0.0	-1.6	1.8	1.1	0.4	0.3	2.0	1.5	2.2	2
3	Goods.....	-0.4	-2.9	-1.4	-0.5	-3.7	0.3	0.0	0.6	0.2	-1.0	-3.5	-8.0	1.2	-0.9	-2.6	-4.0	0.8	-0.9	2.1	3
4	Durable goods.....	-2.3	-2.1	-2.1	-1.2	-2.4	-2.6	-2.1	-2.4	-1.9	-2.3	-3.0	-2.2	-0.6	-2.6	-1.8	-0.9	-2.5	-4.1	-2.7	4
5	Nondurable goods.....	0.6	-3.3	-1.0	-0.2	-4.3	1.8	1.0	2.0	1.3	-0.3	-3.7	-10.8	2.2	0.0	-2.9	-5.6	2.5	0.8	4.7	5
6	Services.....	2.5	2.0	2.3	2.5	2.2	2.1	2.7	2.7	2.7	2.1	1.8	1.7	2.1	2.2	1.8	2.4	2.6	2.6	2.2	6
7	Gross private domestic investment.....	2.1	0.8	0.9	1.3	1.9	1.9	1.9	3.0	1.4	2.4	1.8	-0.1	-0.1	1.2	0.3	0.6	1.8	1.1	1.4	7
8	Fixed investment.....	2.3	1.0	1.0	1.3	2.0	2.0	2.3	3.2	1.4	2.4	1.7	0.5	-0.3	1.3	0.4	0.6	2.2	1.4	1.5	8
9	Nonresidential.....	1.4	0.6	0.4	0.2	1.2	1.2	1.0	1.8	1.5	1.2	0.9	0.6	-0.3	0.8	-0.1	0.2	1.2	0.2	1.0	9
10	Structures.....	3.8	0.0	0.2	1.3	4.0	2.7	4.8	4.6	3.3	3.2	1.9	-2.3	-2.5	0.9	-0.2	-1.5	3.2	-0.6	2.4	10
11	Equipment.....	0.4	0.8	0.2	-0.4	-0.3	0.5	-1.8	1.2	1.5	0.8	1.1	1.5	0.0	0.1	0.1	0.3	0.1	1.0	-0.1	11
12	Intellectual property products.....	1.0	0.8	0.9	0.4	1.6	1.2	2.7	0.8	0.1	0.4	-0.2	1.6	0.8	1.8	-0.2	1.3	1.4	-0.4	1.6	12
13	Residential.....	6.0	2.4	3.2	6.3	5.3	5.4	7.6	8.7	1.3	7.1	4.9	0.2	-0.1	2.9	2.2	2.0	5.6	5.2	3.2	13
14	Change in private inventories.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14
15	Net exports of goods and services.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15
16	Exports.....	0.1	-4.8	-1.8	1.2	-2.9	0.7	-0.3	3.2	0.0	-1.0	-6.8	-9.2	-0.9	-4.0	-5.5	-5.1	3.9	2.4	2.2	16
17	Goods.....	-0.9	-6.8	-3.5	0.6	-4.4	0.1	-1.7	3.5	-1.1	-2.4	-9.5	-12.1	-1.8	-5.8	-7.8	-10.0	5.9	2.4	1.3	17
18	Services.....	2.1	-0.5	1.6	2.3	0.5	1.9	2.9	2.4	2.3	2.3	-0.6	-3.2	0.8	-0.4	-1.1	4.8	0.4	2.4	3.9	18
19	Imports.....	-0.2	-7.6	-3.0	1.0	-4.2	-1.8	0.0	5.2	-1.6	-2.1	-7.0	-15.5	-4.8	-4.5	-7.6	-6.0	2.1	2.9	1.6	19
20	Goods.....	-0.6	-8.9	-3.6	1.0	-5.0	-2.4	-0.9	5.9	-2.1	-2.7	-8.0	-17.8	-5.9	-5.0	-9.0	-7.3	2.5	3.7	1.9	20
21	Services.....	1.7	-1.3	-0.5	1.4	-0.1	1.1	4.7	1.9	1.3	0.9	-1.6	-3.7	0.7	-2.2	-1.3	-0.1	0.6	-0.8	0.3	21
22	Government consumption expenditures and gross investment.....	2.0	0.3	1.0	1.5	1.1	1.9	3.7	1.8	1.9	2.0	0.0	-2.1	2.2	0.5	0.1	-0.4	2.7	2.1	2.0	22
23	Federal.....	1.7	0.5	1.0	0.5	0.9	1.6	6.3	-0.7	1.6	1.5	0.2	0.2	0.9	0.0	-0.8	1.5	2.1	1.7	1.6	23
24	National defense.....	1.4	0.2	0.8	0.1	0.4	1.3	4.2	0.4	1.1	1.2	-0.1	-0.3	0.8	-0.2	-0.9	0.9	2.1	1.6	1.5	24
25	Nondefense.....	2.2	1.0	1.3	1.0	1.7	2.1	9.8	-2.6	2.3	2.0	0.7	0.9	1.1	0.3	-0.6	2.3	2.2	1.7	1.8	25
26	State and local.....	2.2	0.2	1.0	2.1	1.2	2.0	2.0	3.4	2.1	2.3	-0.1	-3.5	3.0	0.8	0.6	-1.6	3.1	2.4	2.3	26
Addenda:																					
27	Final sales of domestic product.....	1.8	1.1	1.3	1.5	0.9	2.1	2.2	1.8	2.1	1.7	0.5	0.0	2.3	1.3	0.9	0.5	2.4	1.5	2.1	27
28	Gross domestic purchases.....	1.7	0.4	1.0	1.4	0.6	1.6	2.1	2.1	1.8	1.5	0.3	-1.4	1.6	1.0	0.3	0.2	2.1	1.5	2.0	28
29	Final sales to domestic purchasers.....	1.7	0.4	1.1	1.4	0.6	1.6	2.2	2.1	1.8	1.4	0.3	-1.4	1.5	1.0	0.3	0.2	2.2	1.6	2.0	29
30	Final sales to private domestic purchasers.....	1.7	0.5	1.1	1.4	0.5	1.6	1.8	2.2	1.8	1.3	0.3	-1.2	1.4	1.2	0.4	0.3	2.0	1.4	2.0	30
31	Gross national product (GNP).....	1.8	1.0	.....	1.5	0.9	2.1	2.1	1.7	2.1	1.7	0.5	-0.1	2.3	1.3	0.8	0.5	2.3	1.4	.....	31
Implicit price deflators:																					
32	GDP.....	1.8	1.1	1.3	1.6	0.8	1.9	2.1	1.8	2.2	1.7	0.5	0.0	2.2	1.2	0.9	0.5	2.3	1.4	2.1	32
33	Gross domestic purchases.....	1.7	0.4	1.0	1.5	0.5	1.5	2.1	2.2	1.9	1.4	0.3	-1.4	1.5	1.0	0.4	0.2	2.1	1.5	2.0	33
34	GNP.....	1.8	1.0	.....	1.6	0.8	1.9	2.1	1.8	2.2	1.7	0.5	0.0	2.2	1.2	0.9	0.4	2.3	1.4	.....	34

See *Explanatory Note* at the end of the tables.

Table 5. Real Gross Domestic Product, Quantity Indexes

[Index numbers, 2009=100]

Line		2014	2015	2016	Seasonally adjusted					Line
					2015	2016				
						IV	I	II	III		IV
1	Gross domestic product	110.844	113.721	115.544	114.370	114.608	115.011	116.009	116.549	1
2	Personal consumption expenditures	110.378	113.890	116.938	114.952	115.418	116.633	117.488	118.213	2
3	Goods	117.414	122.166	126.503	123.602	123.957	126.089	127.180	128.787	3
4	Durable goods.....	136.919	146.395	154.807	149.251	149.013	152.538	156.784	160.892	4
5	Nondurable goods.....	109.253	112.146	114.884	113.023	113.608	115.185	115.049	115.692	5
6	Services.....	107.004	109.954	112.442	110.849	111.361	112.184	112.935	113.287	6
7	Gross private domestic investment	145.549	152.761	150.510	152.570	151.294	148.226	149.336	153.185	7
8	Fixed investment.....	131.342	136.633	137.641	137.895	137.570	137.179	137.202	138.614	8
9	Nonresidential	131.967	134.697	134.114	134.611	133.442	133.766	134.223	135.024	9
10	Structures.....	107.918	103.166	100.017	99.291	99.317	98.794	101.623	100.335	10
11	Equipment.....	160.752	166.451	161.745	167.400	163.270	162.053	160.207	161.452	11
12	Intellectual property products	117.733	123.422	129.616	125.376	126.532	129.279	130.303	132.350	12
13	Residential	128.846	143.923	150.968	150.290	153.133	150.079	148.505	152.155	13
14	Change in private inventories									14
15	Exports of goods and services	133.414	133.560	134.054	132.629	132.389	132.974	136.170	134.684	15
16	Imports of goods and services	128.279	134.155	135.644	134.752	134.544	134.620	135.352	138.062	16
17	Government consumption expenditures and gross investment ...	91.710	93.350	94.164	93.933	94.304	93.907	94.085	94.361	17
18	Federal.....	91.471	91.472	92.017	92.226	91.874	91.791	92.337	92.066	18
19	State and local	91.806	94.485	95.470	94.959	95.790	95.192	95.137	95.759	19
	Addenda:									
20	Final sales of domestic product	109.245	111.906	114.127	112.743	113.093	113.821	114.673	114.919	20
21	Gross domestic purchases	110.765	114.335	116.256	115.141	115.373	115.718	116.460	117.474	21
22	Final sales to domestic purchasers	109.212	112.565	114.874	113.552	113.894	114.558	115.161	115.881	22
23	Final sales to private domestic purchasers.....	113.849	117.658	120.363	118.753	119.086	120.032	120.747	121.587	23
24	Gross national product.....	111.138	113.731	.....	114.404	114.403	115.016	115.975	.....	24

See *Explanatory Note* at the end of the tables.

Table 6. Price Indexes for Gross Domestic Product

[Index numbers, 2009=100]

Line		2014	2015	2016	Seasonally adjusted					Line
					2015	2016				
						IV	I	II	III		IV
1	Gross domestic product	108.838	109.999	111.452	110.498	110.635	111.268	111.662	112.243	1
2	Personal consumption expenditures (PCE)	109.150	109.532	110.731	109.892	109.969	110.519	110.921	111.515	2
3	Goods	105.727	102.680	101.277	102.144	101.109	101.301	101.083	101.617	3
4	Durable goods	92.411	90.463	88.581	89.813	89.619	89.045	88.128	87.530	4
5	Nondurable goods	112.595	108.920	107.844	108.459	106.917	107.582	107.809	109.067	5
6	Services.....	110.946	113.149	115.744	113.990	114.663	115.405	116.142	116.768	6
7	Gross private domestic investment	105.655	106.539	107.480	106.742	106.889	107.366	107.649	108.015	7
8	Fixed investment	106.030	107.062	108.185	107.300	107.467	108.048	108.412	108.814	8
9	Nonresidential.....	104.423	105.051	105.492	105.116	105.172	105.476	105.532	105.788	9
10	Structures.....	112.213	112.202	112.430	112.113	111.682	112.566	112.402	113.069	10
11	Equipment.....	100.482	101.277	101.509	101.299	101.366	101.392	101.655	101.625	11
12	Intellectual property products.....	104.772	105.583	106.485	105.825	106.168	106.526	106.416	106.830	12
13	Residential.....	112.795	115.479	119.149	116.371	116.952	118.553	120.070	121.021	13
14	Change in private inventories									14
15	Exports of goods and services	112.134	106.778	104.874	105.039	103.669	104.671	105.292	105.865	15
16	Imports of goods and services	113.368	104.726	101.537	102.252	100.675	101.211	101.933	102.331	16
17	Government consumption expenditures and gross investment	111.263	111.605	112.716	111.835	111.713	112.462	113.061	113.628	17
18	Federal	109.431	109.979	111.067	109.881	110.286	110.869	111.331	111.780	18
19	State and local.....	112.522	112.732	113.859	113.169	112.715	113.570	114.254	114.897	19
	Addenda:									
20	PCE excluding food and energy ¹	108.048	109.540	111.352	110.095	110.657	111.150	111.626	111.974	20
21	Market-based PCE ²	108.219	108.179	109.094	108.450	108.395	108.893	109.249	109.839	21
22	Market-based PCE excluding food and energy ²	106.800	107.957	109.524	108.436	108.911	109.336	109.770	110.079	22
23	Final sales of domestic product.....	108.891	110.077	111.563	110.584	110.724	111.375	111.782	112.369	23
24	Gross domestic purchases	109.109	109.569	110.712	109.881	109.936	110.509	110.925	111.479	24
25	Final sales to domestic purchasers	109.159	109.640	110.813	109.959	110.017	110.606	111.036	111.595	25
26	Final sales to private domestic purchasers	108.637	109.148	110.333	109.484	109.579	110.135	110.530	111.087	26
27	Gross national product	108.957	110.090	.....	110.587	110.719	111.350	111.743	.....	27
	Implicit price deflators:									
28	Gross domestic product.....	108.828	109.998	111.446	110.504	110.630	111.258	111.648	112.234	28
29	Final sales of domestic product	108.891	110.077	111.564	110.581	110.722	111.372	111.780	112.367	29
30	Gross domestic purchases	109.099	109.569	110.707	109.887	109.932	110.500	110.912	111.471	30
31	Final sales to domestic purchasers	109.159	109.640	110.815	109.957	110.015	110.604	111.034	111.593	31
32	Gross national product.....	108.947	110.090	.....	110.593	110.714	111.340	111.729	.....	32

1. Food excludes personal consumption expenditures for purchased meals and beverages, which are classified in food services.

2. This index is a supplemental measure that is based on household expenditures for which there are observable price measures. It excludes most implicit prices (for example, financial services furnished without payment) and the final consumption expenditures of nonprofit institutions serving households. Percentage changes for these series are included in the addenda to table 8 and appendix table A. See *Explanatory Note* at the end of the tables.

Table 7. Real Gross Domestic Product: Annual Percent Change

Line		Percent change from preceding year								Percent change fourth quarter to fourth quarter								Line
		2009	2010	2011	2012	2013	2014	2015	2016	2009	2010	2011	2012	2013	2014	2015	2016	
1	Gross domestic product (GDP)	-2.8	2.5	1.6	2.2	1.7	2.4	2.6	1.6	-0.2	2.7	1.7	1.3	2.7	2.5	1.9	1.9	1
2	Personal consumption expenditures (PCE)	-1.6	1.9	2.3	1.5	1.5	2.9	3.2	2.7	-0.2	3.1	1.5	1.3	2.0	3.5	2.6	2.8	2
3	Goods	-3.0	3.4	3.1	2.7	3.1	3.9	4.0	3.6	0.9	5.1	1.7	2.8	3.5	4.6	3.3	4.2	3
4	Durable goods.....	-5.5	6.1	6.1	7.4	6.2	6.7	6.9	5.7	2.5	9.3	4.8	7.2	5.2	8.6	5.5	7.8	4
5	Nondurable goods.....	-1.8	2.2	1.8	0.6	1.7	2.6	2.6	2.4	0.2	3.3	0.4	0.8	2.6	2.8	2.3	2.4	5
6	Services	-0.9	1.2	1.8	0.8	0.6	2.3	2.8	2.3	-0.8	2.0	1.4	0.6	1.3	2.9	2.2	2.2	6
7	Gross private domestic investment	-21.6	12.9	5.2	10.6	6.1	4.5	5.0	-1.5	-11.0	11.1	9.6	3.7	9.3	3.8	2.6	0.4	7
8	Fixed investment.....	-16.7	1.5	6.3	9.8	5.0	5.5	4.0	0.7	-11.9	5.5	8.4	7.0	5.2	5.3	3.4	0.5	8
9	Nonresidential	-15.6	2.5	7.7	9.0	3.5	6.0	2.1	-0.4	-12.2	8.1	9.0	5.2	4.8	5.0	0.8	0.3	9
10	Structures.....	-18.9	-16.4	2.3	12.9	1.4	10.3	-4.4	-3.1	-27.1	-4.0	8.0	4.1	5.8	8.0	-8.8	1.1	10
11	Equipment.....	-22.9	15.9	13.6	10.8	4.6	5.4	3.5	-2.8	-11.5	20.9	13.1	6.9	6.1	2.9	3.7	-3.6	11
12	Intellectual property products.....	-1.4	1.9	3.6	3.9	3.4	3.9	4.8	5.0	1.3	1.8	4.1	3.4	2.2	6.1	3.8	5.6	12
13	Residential	-21.2	-2.5	0.5	13.5	11.9	3.5	11.7	4.9	-10.8	-5.2	6.0	15.7	6.8	6.2	13.1	1.2	13
14	Change in private inventories																	14
15	Net exports of goods and services																	15
16	Exports.....	-8.8	11.9	6.9	3.4	3.5	4.3	0.1	0.4	0.8	10.1	4.2	2.2	5.9	3.1	-2.2	1.5	16
17	Goods	-12.1	14.4	6.5	3.6	3.1	4.4	-0.6	0.6	-0.2	10.9	4.8	1.2	7.0	2.7	-3.4	2.0	17
18	Services	-1.1	6.8	7.6	3.0	4.4	3.9	1.6	0.0	3.2	8.4	2.7	4.5	3.6	3.9	0.5	0.6	18
19	Imports.....	-13.7	12.7	5.5	2.2	1.1	4.4	4.6	1.1	-6.2	12.0	3.5	0.3	2.5	6.1	2.5	2.5	19
20	Goods	-15.8	14.9	5.8	2.1	1.2	4.8	4.9	0.7	-6.7	13.6	3.4	0.1	2.7	6.5	2.7	2.4	20
21	Services	-3.8	3.8	4.0	3.0	0.6	2.6	2.9	2.8	-4.2	4.9	3.8	1.2	1.1	4.0	1.9	2.6	21
22	Government consumption expenditures and gross investment	3.2	0.1	-3.0	-1.9	-2.9	-0.9	1.8	0.9	2.3	-1.1	-3.0	-2.2	-2.8	0.3	2.2	0.5	22
23	Federal.....	5.7	4.4	-2.7	-1.9	-5.8	-2.5	0.0	0.6	3.9	3.2	-4.0	-2.1	-6.7	-1.3	1.7	-0.2	23
24	National defense	5.4	3.2	-2.3	-3.4	-6.8	-4.1	-2.1	-0.7	3.6	2.0	-4.1	-3.9	-7.1	-4.1	0.6	-2.0	24
25	Nondefense.....	6.2	6.4	-3.4	0.9	-4.1	0.1	3.3	2.6	4.6	5.5	-3.9	1.0	-6.0	3.4	3.4	2.5	25
26	State and local	1.6	-2.7	-3.3	-1.9	-0.8	0.2	2.9	1.0	1.3	-4.0	-2.3	-2.3	-0.1	1.3	2.5	0.8	26
	Addenda:																	
27	Gross domestic income (GDI) ¹	-2.6	2.7	2.2	3.3	1.2	3.0	2.5	.....	0.3	2.6	2.1	2.8	1.3	4.0	1.5	.....	27
28	Average of GDP and GDI	-2.7	2.6	1.9	2.7	1.5	2.7	2.6	.....	0.0	2.7	1.9	2.1	2.0	3.2	1.7	.....	28
29	Final sales of domestic product	-2.0	1.1	1.7	2.1	1.5	2.5	2.4	2.0	-0.4	2.0	1.5	1.7	2.0	2.7	2.0	1.9	29
30	Gross domestic purchases	-3.8	2.9	1.6	2.1	1.3	2.4	3.2	1.7	-1.3	3.2	1.7	1.0	2.2	3.0	2.5	2.0	30
31	Final sales to domestic purchasers	-3.1	1.5	1.7	1.9	1.2	2.6	3.1	2.1	-1.4	2.5	1.5	1.4	1.6	3.2	2.6	2.1	31
32	Final sales to private domestic purchasers.....	-4.6	1.9	2.9	2.9	2.1	3.4	3.3	2.3	-2.4	3.5	2.6	2.3	2.6	3.8	2.7	2.4	32
33	Gross national product.....	-2.9	2.8	1.8	2.1	1.7	2.3	2.3	.....	0.1	2.9	2.0	1.0	2.7	2.3	1.7	.....	33
34	Real disposable personal income	-0.4	1.0	2.5	3.2	-1.4	3.5	3.5	2.7	-0.7	2.6	1.7	5.1	-2.8	4.5	3.0	2.3	34
	Price indexes:																	
35	Gross domestic purchases.....	-0.2	1.5	2.4	1.8	1.4	1.7	0.4	1.0	0.3	1.6	2.4	1.7	1.4	1.4	0.4	1.5	35
36	Gross domestic purchases excluding food and energy ²	0.5	1.3	1.8	1.8	1.5	1.8	1.1	1.4	0.5	1.4	1.9	1.7	1.7	1.6	1.0	1.6	36
37	GDP	0.8	1.2	2.1	1.8	1.6	1.8	1.1	1.3	0.4	1.8	1.9	1.9	1.6	1.5	1.1	1.6	37
38	GDP excluding food and energy ²	0.5	1.4	1.9	1.8	1.7	1.9	1.2	1.6	0.6	1.6	1.9	1.8	1.9	1.7	1.2	1.8	38
39	PCE	-0.1	1.7	2.5	1.9	1.3	1.5	0.3	1.1	1.2	1.3	2.7	1.8	1.2	1.2	0.4	1.5	39
40	PCE excluding food and energy ²	1.2	1.3	1.5	1.9	1.5	1.6	1.4	1.7	1.4	1.0	1.9	1.8	1.5	1.6	1.4	1.7	40
41	Market-based PCE ³	0.4	1.5	2.5	1.8	1.0	1.1	0.0	0.8	1.5	1.1	2.8	1.6	0.9	0.9	0.1	1.3	41
42	Market-based PCE excluding food and energy ³	1.9	1.0	1.4	1.8	1.2	1.2	1.1	1.5	1.8	0.7	1.9	1.5	1.1	1.2	1.1	1.5	42

1. Gross domestic income deflated by the implicit price deflator for gross domestic product.
2. Food excludes personal consumption expenditures for purchased meals and beverages, which are classified in food services.
3. This index is a supplemental measure that is based on household expenditures for which there are observable price measures. It excludes most implicit prices (for example, financial services furnished without payment) and the final consumption expenditures of nonprofit institutions serving households.
NOTE. Estimates under the *Percent change from the preceding year* columns are calculated from annual data. Estimates under the *Percent change fourth quarter to fourth quarter* columns are calculated from fourth quarter values relative to the same quarter one year prior.
See *Explanatory Note* at the end of the tables.

Table 8. Real Gross Domestic Product: Percent Change From Quarter One Year Ago

Line	2013				2014				2015				2016				Line
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	
1	Gross domestic product (GDP)																1
2	Personal consumption expenditures (PCE)																2
3	Goods																3
4	Durable goods																4
5	Nondurable goods																5
6	Services																6
7	Gross private domestic investment																7
8	Fixed investment																8
9	Nonresidential																9
10	Structures																10
11	Equipment																11
12	Intellectual property products																12
13	Residential																13
14	Change in private inventories																14
15	Net exports of goods and services																15
16	Exports																16
17	Goods																17
18	Services																18
19	Imports																19
20	Goods																20
21	Services																21
22	Government consumption expenditures and gross investment																22
23	Federal																23
24	National defense																24
25	Nondefense																25
26	State and local																26
27	Addenda:																27
28	Gross domestic income (GDI) ¹																28
29	Average of GDP and GDI																29
30	Final sales of domestic product																30
31	Gross domestic purchases																31
32	Final sales to domestic purchasers																32
33	Final sales to private domestic purchasers																33
34	Gross national product																34
35	Real disposable personal income																35
36	Price indexes:																36
37	Gross domestic purchases																37
38	Gross domestic purchases excluding food and energy ²																38
39	GDP																39
40	GDP excluding food and energy ²																40
41	PCE																41
42	PCE excluding food and energy ²																42
43	Market-based PCE ³																43
44	Market-based PCE excluding food and energy ³																44

1. Gross domestic income deflated by the implicit price deflator for gross domestic product.

2. Food excludes personal consumption expenditures for purchased meals and beverages, which are classified in food services.

3. This index is a supplemental measure that is based on household expenditures for which there are observable price measures. It excludes most implicit prices (for example, financial services furnished without payment) and the final consumption expenditures of nonprofit institutions serving households.

See *Explanatory Note* at the end of the tables.

Table 9. Relation of Gross Domestic Product, Gross National Product, and National Income

[Billions of dollars]

Line		2014	2015	2016	Seasonally adjusted at annual rates					Line
					2015	2016				
					IV	I	II	III	IV	
1	Gross domestic product (GDP)	17,393.1	18,036.6	18,566.9	18,222.8	18,281.6	18,450.1	18,675.3	18,860.8	1
2	Plus: Income receipts from the rest of the world.....	852.1	813.1		798.5	807.0	848.3	848.9		2
3	Less: Income payments to the rest of the world.....	604.0	607.4		587.1	634.5	640.5	644.9		3
4	Equals: Gross national product	17,641.2	18,242.4		18,434.1	18,454.2	18,657.9	18,879.3		4
5	Less: Consumption of fixed capital.....	2,745.2	2,830.8	2,909.8	2,862.8	2,873.6	2,901.8	2,921.7	2,942.2	5
6	Less: Statistical discrepancy.....	-257.9	-253.7		-264.8	-264.3	-233.9	-293.9		6
7	Equals: National income	15,153.9	15,665.3		15,836.2	15,844.9	15,990.1	16,251.6		7
8	Compensation of employees.....	9,253.4	9,693.1	10,096.0	9,892.4	9,892.6	10,046.5	10,176.0	10,268.9	8
9	Wages and salaries.....	7,476.3	7,854.8	8,184.1	8,024.6	8,011.3	8,142.9	8,252.3	8,330.1	9
10	Supplements to wages and salaries.....	1,777.1	1,838.2	1,911.9	1,867.8	1,881.3	1,903.6	1,923.8	1,938.8	10
11	Proprietors' income with inventory valuation and capital consumption adjustments.....	1,337.7	1,376.8	1,416.8	1,400.9	1,403.9	1,407.8	1,420.8	1,434.5	11
12	Rental income of persons with capital consumption adjustment.....	606.1	659.6	705.2	677.3	692.8	700.6	705.9	721.5	12
13	Corporate profits with inventory valuation and capital consumption adjustments.....	2,152.1	2,088.1		1,967.5	2,033.5	2,021.0	2,138.8		13
14	Net interest and miscellaneous payments.....	533.7	524.1	486.1	503.7	493.1	485.5	485.5	480.3	14
15	Taxes on production and imports less subsidies.....	1,153.5	1,181.0	1,196.8	1,190.0	1,191.5	1,187.4	1,200.8	1,207.6	15
16	Business current transfer payments (net).....	137.6	161.4	161.1	224.5	158.1	164.6	146.9	174.8	16
17	Current surplus of government enterprises.....	-20.2	-18.8	-22.4	-20.1	-20.5	-23.3	-23.2	-22.5	17
	Addenda:									
18	Gross domestic income (GDI).....	17,651.1	18,290.3		18,487.6	18,546.0	18,684.0	18,969.2		18
19	Average of GDP and GDI.....	17,522.1	18,163.5		18,355.2	18,413.8	18,567.0	18,822.3		19
20	Statistical discrepancy as a percentage of GDP.....	-1.5	-1.4		-1.5	-1.4	-1.3	-1.6		20

Table 10. Personal Income and Its Disposition

[Billions of dollars]

Line		2014	2015	2016	Seasonally adjusted at annual rates					Line
					2015	2016				
					IV	I	II	III	IV	
1	Personal income ¹	14,809.7	15,458.5	16,006.2	15,690.2	15,740.1	15,929.4	16,101.7	16,253.7	1
2	Compensation of employees.....	9,253.4	9,693.1	10,096.0	9,892.4	9,892.6	10,046.5	10,176.0	10,268.9	2
3	Wages and salaries.....	7,476.3	7,854.8	8,184.1	8,024.6	8,011.3	8,142.9	8,252.3	8,330.1	3
4	Supplements to wages and salaries.....	1,777.1	1,838.2	1,911.9	1,867.8	1,881.3	1,903.6	1,923.8	1,938.8	4
5	Proprietors' income with inventory valuation and capital consumption adjustments.....	1,337.7	1,376.8	1,416.8	1,400.9	1,403.9	1,407.8	1,420.8	1,434.5	5
6	Farm.....	68.5	39.9	28.5	38.1	32.3	29.8	28.3	23.5	6
7	Nonfarm.....	1,269.2	1,336.8	1,388.3	1,362.8	1,371.6	1,378.0	1,392.4	1,411.1	7
8	Rental income of persons with capital consumption adjustment.....	606.1	659.6	705.2	677.3	692.8	700.6	705.9	721.5	8
9	Personal income receipts on assets.....	2,227.0	2,253.8	2,262.9	2,235.5	2,235.9	2,255.8	2,270.3	2,289.8	9
10	Personal interest income.....	1,300.9	1,302.7	1,314.5	1,293.0	1,296.1	1,310.2	1,317.8	1,333.9	10
11	Personal dividend income.....	926.1	951.1	948.4	942.5	939.8	945.5	952.5	955.9	11
12	Personal current transfer receipts.....	2,540.4	2,678.6	2,775.0	2,708.2	2,744.0	2,763.6	2,786.5	2,805.9	12
13	Less: Contributions for government social insurance, domestic.....	1,154.9	1,203.5	1,249.6	1,224.1	1,229.0	1,244.8	1,257.8	1,266.9	13
14	Less: Personal current taxes.....	1,787.0	1,938.7	1,968.1	1,963.8	1,932.7	1,952.1	1,982.9	2,004.7	14
15	Equals: Disposable personal income	13,022.7	13,519.8	14,038.1	13,726.4	13,807.4	13,977.3	14,118.8	14,249.0	15
16	Less: Personal outlays.....	12,296.7	12,736.2	13,218.7	12,899.6	12,961.9	13,154.5	13,300.7	13,457.7	16
17	Equals: Personal saving	726.0	783.6	819.4	826.8	845.5	822.8	818.1	791.2	17
18	Personal saving as a percentage of disposable personal income.....	5.6	5.8	5.8	6.0	6.1	5.9	5.8	5.6	18
	Addenda:									
19	Personal income excluding current transfer receipts, billions of chained (2009) dollars ²	11,240.8	11,667.7	11,948.7	11,813.7	11,818.2	11,912.9	12,004.5	12,059.5	19
20	Disposable personal income, billions of chained (2009) dollars ²	11,931.0	12,343.3	12,677.4	12,491.0	12,556.0	12,647.2	12,729.0	12,777.9	20

1. Personal income is also equal to national income less corporate profits with inventory valuation and capital consumption adjustments, taxes on production and imports less subsidies, contributions for government social insurance, net interest and miscellaneous payments, business current transfer payments (net), and current surplus of government enterprises, plus personal income receipts on assets, and personal current transfer receipts.

2. The current-dollar measure is deflated by the implicit price deflator for personal consumption expenditures.

**Appendix Table A. Real Gross Domestic Product and Related Aggregates and Price Indexes:
Percent Change From Preceding Period and Contributions to Percent Change**

Line		2014	2015	2016	Seasonally adjusted at annual rates																Line
					2013				2014				2015				2016				
					I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	
Percent change from preceding period																					
Gross domestic product (GDP) and related aggregates:																					
1	GDP.....	2.4	2.6	1.6	2.8	0.8	3.1	4.0	-1.2	4.0	5.0	2.3	2.0	2.6	2.0	0.9	0.8	1.4	3.5	1.9	1
2	Goods.....	3.1	2.5	1.5	10.2	0.6	7.5	10.0	-8.9	7.9	10.0	-0.2	0.8	2.3	2.5	-0.8	-1.4	2.2	7.6	2.5	2
3	Services.....	1.7	2.4	1.7	-0.5	0.0	0.4	1.8	1.9	1.4	3.1	2.9	2.9	1.9	1.5	2.1	1.1	2.4	2.1	1.0	3
4	Structures.....	5.2	4.3	1.1	1.8	8.7	8.6	-2.6	7.3	9.3	0.6	7.7	0.4	9.6	3.9	-1.9	7.4	-8.7	-0.6	6.8	4
5	Motor vehicle output.....	7.6	5.0	1.6	20.9	4.1	-13.8	25.5	3.2	14.2	14.5	-5.2	4.5	7.6	16.5	-15.2	2.2	7.5	3.2	0.9	5
6	GDP excluding motor vehicle output.....	2.2	2.5	1.6	2.4	0.7	3.6	3.4	-1.3	3.7	4.7	2.5	2.0	2.5	1.6	1.4	0.8	1.2	3.5	1.9	6
7	Final sales of computers ¹	9.4	9.8	17.4	-4.0	12.3	-4.7	12.7	15.0	19.4	11.4	-22.3	19.3	40.7	4.7	2.9	54.3	17.8	-9.0	1.8	7
8	GDP excluding final sales of computers.....	2.3	2.6	1.5	2.9	0.7	3.2	3.9	-1.2	3.9	4.9	2.4	2.0	2.5	2.0	0.9	0.7	1.3	3.6	1.9	8
9	Research and development.....	0.4	2.2	4.4	6.9	-0.7	-1.0	-3.7	2.0	0.5	3.1	5.3	-5.2	7.6	3.3	4.7	0.6	11.8	-0.1	5.9	9
10	GDP excluding research and development.....	2.4	2.6	1.5	2.7	0.8	3.2	4.2	-1.3	4.1	5.0	2.2	2.2	2.5	2.0	0.8	0.8	1.2	3.6	1.8	10
11	Farm gross value added ²	-1.9	3.1	11.7	90.5	37.3	28.2	-9.2	-18.6	2.1	-6.9	10.5	-5.5	-3.0	32.7	5.9	6.6	11.5	26.5	1.4	11
12	Nonfarm business gross value added ³	3.0	3.1	1.7	2.8	0.6	3.8	5.6	-1.8	5.1	6.5	2.7	2.4	3.1	1.8	0.8	0.7	1.6	4.2	2.2	12
Price indexes:																					
13	GDP.....	1.8	1.1	1.3	1.4	0.9	2.1	2.1	1.7	2.1	1.7	0.5	-0.1	2.3	1.3	0.8	0.5	2.3	1.4	2.1	13
14	GDP excluding food and energy ⁴	1.9	1.2	1.6	1.8	1.4	2.0	2.3	1.9	2.0	1.8	1.0	0.5	1.8	1.4	0.9	1.5	2.1	1.9	1.7	14
15	GDP excluding final sales of computers.....	1.8	1.1	1.4	1.5	1.0	2.1	2.1	1.8	2.2	1.8	0.6	0.0	2.3	1.3	0.9	0.6	2.4	1.5	2.1	15
16	Gross domestic purchases.....	1.7	0.4	1.0	1.4	0.6	1.6	2.1	2.1	1.8	1.5	0.3	-1.4	1.6	1.0	0.3	0.2	2.1	1.5	2.0	16
17	Gross domestic purchases excluding food and energy ⁴ ...	1.8	1.1	1.4	1.6	1.3	1.6	2.2	1.9	1.9	1.7	1.0	0.4	1.5	1.2	0.8	1.4	2.0	1.7	1.4	17
18	Gross domestic purchases excluding final sales of computers to domestic purchasers.....	1.7	0.5	1.1	1.5	0.6	1.7	2.1	2.2	1.8	1.5	0.3	-1.4	1.6	1.1	0.3	0.3	2.1	1.5	2.0	18
19	Personal consumption expenditures (PCE).....	1.5	0.3	1.1	1.4	0.2	1.5	1.7	2.0	1.9	1.1	0.0	-1.6	1.8	1.1	0.4	0.3	2.0	1.5	2.2	19
20	PCE excluding food and energy ⁴	1.6	1.4	1.7	1.7	1.1	1.4	1.8	1.6	2.0	1.5	1.1	1.1	1.8	1.4	1.2	2.1	1.8	1.7	1.3	20
21	Market-based PCE ⁵	1.1	0.0	0.8	1.3	-0.5	1.4	1.3	1.7	1.5	0.8	-0.4	-2.3	1.7	0.8	0.2	-0.2	1.9	1.3	2.2	21
22	Market-based PCE excluding food and energy ⁵	1.2	1.1	1.5	1.5	0.5	1.3	1.2	1.2	1.5	1.2	0.8	0.7	1.6	1.1	1.1	1.8	1.6	1.6	1.1	22
Contributions to percent change in real gross domestic product																					
Percent change at annual rate:																					
23	Gross domestic product.....	2.4	2.6	1.6	2.8	0.8	3.1	4.0	-1.2	4.0	5.0	2.3	2.0	2.6	2.0	0.9	0.8	1.4	3.5	1.9	23
Percentage points at annual rates:																					
24	Goods.....	0.94	0.77	0.43	2.98	0.17	2.26	3.02	-2.85	2.39	3.02	-0.03	0.24	0.71	0.75	-0.24	-0.42	0.66	2.22	0.75	24
25	Services.....	1.04	1.49	1.08	-0.28	-0.01	0.24	1.14	1.13	0.87	1.89	1.75	1.77	1.17	0.92	1.26	0.68	1.48	1.34	0.60	25
26	Structures.....	0.39	0.34	0.09	0.13	0.61	0.62	-0.20	0.54	0.70	0.06	0.59	0.04	0.74	0.31	-0.15	0.57	-0.73	-0.05	0.52	26
27	Motor vehicle output.....	0.21	0.14	0.05	0.52	0.11	-0.41	0.63	0.09	0.38	0.40	-0.15	0.13	0.22	0.46	-0.49	0.06	0.21	0.09	0.03	27
28	Final sales of computers.....	0.04	0.04	0.07	-0.02	0.05	-0.02	0.05	0.06	0.07	0.05	-0.10	0.07	0.14	0.02	0.01	0.18	0.07	-0.04	0.01	28
29	Research and development.....	0.01	0.05	0.11	0.17	-0.02	-0.03	-0.10	0.05	0.01	0.08	0.13	-0.13	0.19	0.08	0.12	0.01	0.29	0.00	0.15	29

1. For some components of final sales of computers, includes computer parts.
2. Farm output less intermediate goods and services purchased.
3. Consists of GDP less gross value added of farm, of households and institutions, and of general government.
4. Food excludes personal consumption expenditures for purchased meals and beverages, which are classified in food services.
5. This index is a supplemental measure that is based on household expenditures for which there are observable price measures. It excludes most implicit prices (for example, financial services furnished without payment) and the final consumption expenditures of nonprofit institutions serving households.
See *Explanatory Note* at the end of the tables.

Explanatory Note: NIPA Measures of Quantities and Prices

Current-dollar GDP is a measure of the market value of goods, services, and structures produced in the economy in a particular period. Changes in current-dollar GDP can be decomposed into quantity and price components. Quantities, or "real" measures, and prices are expressed as index numbers with the reference year -- at present, the year 2009 -- equal to 100.

Annual changes in quantities and prices are calculated using a Fisher formula that incorporates weights from two adjacent years. (Quarterly changes in quantities and prices are calculated using a Fisher formula that incorporates weights from two adjacent quarters; quarterly indexes are adjusted for consistency to the annual indexes before percent changes are calculated.) For example, the 2008-09 annual percent change in real GDP uses prices for 2008 and 2009 as weights, and the 2008-09 annual percent change in GDP prices uses quantities for 2008 and 2009 as weights. These annual changes are "chained" (multiplied) together to form time series of quantity and price indexes. Percent changes in Fisher indexes are not affected by the choice of reference year. (BEA also publishes a measure of the price level known as the implicit price deflator (IPD), which is calculated as the ratio of the current-dollar value to the corresponding chained-dollar value, multiplied by 100. The values of the IPD are very close to the values of the corresponding "chain-type" price index.)

Index numbers of quantity and price indexes for GDP and its major components are presented in this release in tables 5 and 6. Percent changes from the preceding period are presented in tables 1, 4, 7, 8, and appendix table A. Contributions by major components to the percent change in real GDP are presented in table 2.

Measures of real GDP and its major components are also presented in dollar-denominated form, designated "chained (2009) dollar estimates." For most series, these estimates, which are presented in table 3, are computed by multiplying the current-dollar value in 2009 by a corresponding quantity index number and then dividing by 100. For example, if a current-dollar GDP component equaled \$100 in 2009 and if real output for this component increased 10 percent in 2010, then the chained (2009) dollar value of this component in 2010 would be \$110 (= \$100 x 110 / 100). Percent changes calculated from chained-dollar estimates and from chain-type quantity indexes are the same; any differences will be small and due to rounding.

Chained-dollar values for the detailed GDP components will not necessarily sum to the chained-dollar estimate of GDP (or to any intermediate aggregate). This is because the relative prices used as weights for any period other than the reference year differ from those of the reference year. A measure of the extent of such differences is provided by a "residual" line, which indicates the difference between GDP (or other major aggregate) and the sum of the most detailed components in the table. For periods close to the reference year, when there usually has not been much change in the relative prices that are used as weights, the residuals tend to be small, and the chained-dollar estimates can be used to approximate the contributions to growth and to aggregate the detailed estimates. For periods further from the reference year, the residuals tend to be larger, and the chained-dollar estimates are less useful for analyses of contributions to growth. Thus, the contributions to percent change shown in table 2 provide a better measure of the composition of GDP growth. In particular, for components for which relative prices are changing rapidly, calculation of contributions using chained-dollar estimates may be misleading even just a few years from the reference year.

Reference "Chained-Dollar Indexes: Issues, Tips on Their Use, and Upcoming Changes," November 2003 *Survey*, pp. 8-16.