

GDP and the Economy

Advance Estimates for the Fourth Quarter of 2017

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Real gross domestic product (GDP) increased 2.6 percent an annual rate in the fourth quarter of 2017, according to the advance estimates of the national income and product accounts (NIPAs) (chart 1a, chart 1b, and table 1). In the third quarter, real GDP increased 3.2 percent. Real GDP increased 2.3 percent in 2017 (from the 2016 annual level to the 2017 annual level), compared with an increase of 1.5 percent in 2016.

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

Chart 1a. Real GDP: Percent Change From Preceding Quarter

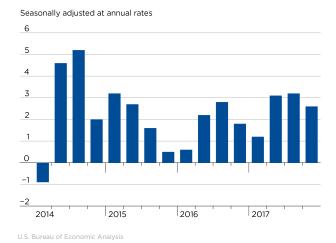
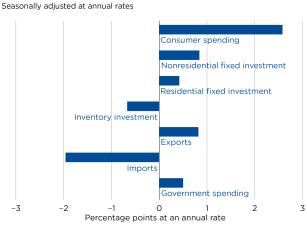


Chart 1b. Real GDP: Contributions to the Percent Change in 2017:IV



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- 1. "Real" estimates are in chained (2009) dollars, and price indexes are chain-type measures. Each GDP estimate for a quarter (advance, second, and third) incorporates increasingly comprehensive and improved source data; for more information, see "The Revisions to GDP, GDI, and Their Major Components" in the January 2018 Survey of Current Business. Quarterly estimates are expressed at seasonally adjusted annual rates, which reflect a rate of activity for a quarter as if it were maintained for a year.
- 2. In this article, "consumer spending" refers to "personal consumption expenditures," "inventory investment" refers to "change in private inventories," and "government spending" refers to "government consumption expenditures and gross investment."

GDP Component Detail

The deceleration in real GDP growth (table 1, line 1) in the fourth quarter reflected a downturn in private inventory investment that was partly offset by accelerations in consumer spending, exports, nonresidential fixed investment, state and local government spending, and federal government spending and by an upturn in residential fixed investment. Imports, which are a subtraction in the calculation of GDP, turned up.

- The acceleration in consumer spending (line 3) primarily reflected an acceleration in spending for consumer goods. The main contributors to the acceleration were an upturn in spending for clothing and footwear and accelerations in spending for recreational goods and vehicles and for food and beverages purchased for off-premises consumption.
- The acceleration in nonresidential fixed investment (line 9) primarily reflected an upturn in structures (mainly due to upturns in investment in commercial and health care structures and a smaller decrease in manufacturing structures).
- The upturn in residential fixed investment (line 13) primarily reflected an upturn in "other" structures (mainly due to upturns in brokers' commissions and other ownership transfer costs and in improvements).
- The downturn in inventory investment (line 14) primarily reflected downturns in wholesale trade industries and in manufacturing that were partly offset by an upturn in retail trade industries.
- The acceleration in exports (line 16) reflected an acceleration in exports of goods that was
 partly offset by a downturn in exports of services. The main contributor to the acceleration
 in exports of goods (line 17) was an upturn in industrial supplies and materials (mainly
 petroleum and products).
- The acceleration in federal government spending (line 23) primarily reflected an acceleration in national defense spending. The main contributor to the acceleration was an acceleration in gross investment in equipment.
- The acceleration in state and local government spending (line 26) primarily reflected an upturn in gross investment in structures.

Table 1. Real Gross Domestic Product (GDP) and Related Measures

[Seasonally adjusted at annual rates]

Line		Share of current- dollar GDP (percent)	Change from preceding period (percent)				Contribution to percent change in real GDP (percentage points)			
		2017	2017				2017			
		IV	I	II	III	IV	I	II	III	IV
1	Gross domestic product ¹	100.0	1.2	3.1	3.2	2.6	1.2	3.1	3.2	2.6
2	Personal consumption expenditures	69.1	1.9	3.3	2.2	3.8	1.32	2.24	1.49	2.58
3	Goods	22.3	0.7	5.4	4.5	8.2	0.15	1.16	0.97	1.76
4	Durable goods	7.7	-0.1	7.6	8.6	14.2	-0.01	0.56	0.63	1.02
5	Nondurable goods	14.6	1.1	4.2	2.3	5.2	0.16	0.61	0.34	0.74
6	Services	46.8	2.5	2.3	1.1	1.8	1.17	1.08	0.52	0.82
7	Gross private domestic investment	16.7	-1.2	3.9	7.3	3.6	-0.20	0.64	1.19	0.60
8	Fixed investment	16.6	8.1	3.2	2.4	7.9	1.27	0.53	0.40	1.27
9	Nonresidential	12.7	7.2	6.7	4.7	6.8	0.86	0.82	0.58	0.84
10	Structures	2.9	14.8	7.0	-7.0	1.4	0.39	0.20	-0.21	0.04
11	Equipment	5.8	4.4	8.8	10.8	11.4	0.24	0.48	0.58	0.62
12	Intellectual property products	4.1	5.7	3.7	5.2	4.5	0.23	0.15	0.21	0.18
13	Residential	3.9	11.1	-7.3	-4.7	11.6	0.41	-0.30	-0.18	0.42
14	Change in private inventories	0.0					-1.46	0.12	0.79	-0.67
15	Net exports of goods and services	-3.0					0.22	0.21	0.36	-1.13
16	Exports	12.3	7.3	3.5	2.1	6.9	0.85	0.42	0.25	0.82
17	Goods	8.2	10.8	2.2	1.8	12.6	0.81	0.18	0.15	0.96
18	Services	4.1	1.0	6.2	2.5	-3.3	0.04	0.25	0.10	-0.14
19	Imports	15.3	4.3	1.5	-0.7	13.9	-0.63	-0.22	0.11	-1.96
20	Goods	12.5	4.7	1.3	-0.2	16.8	-0.56	-0.16	0.03	-1.91
21	Services	2.8	2.5	2.2	-2.6	1.7	-0.07	-0.06	0.07	-0.05
22	Government consumption expenditures and gross investment	17.2	-0.6	-0.2	0.7	3.0	-0.11	-0.03	0.12	0.50
23	Federal	6.5	-2.4	1.9	1.3	3.5	-0.16	0.13	0.09	0.23
24	National defense	3.8	-3.3	4.7	2.4	6.0	-0.13	0.18	0.09	0.22
25	Nondefense	2.6	-1.2	-1.9	-0.2	0.1	-0.03	-0.05	-0.01	0.00
26	State and local	10.8	0.5	-1.5	0.2	2.6	0.05	-0.16	0.03	0.28
	Addenda:									
27	Gross domestic income (GDI) ²		2.7	2.3	2.0					
28	Average of GDP and GDI		2.0	2.7	2.6					
29	Final sales of domestic product	100.0	2.7	2.9	2.4	3.2	2.70	2.94	2.37	3.22
30	Goods	29.7	-1.6	7.3	9.6	3.3	-0.47	2.10	2.74	1.00
31	Services	62.2	1.5	2.1	1.5	1.4	0.91	1.32	0.93	0.86
32	Structures	8.1	10.3	-4.3	-6.2	9.0	0.80	-0.36	-0.51	0.69
33	Motor vehicle output	2.8	-7.3	0.8	-10.3	32.8	-0.22	0.02	-0.30	0.78
34	GDP excluding motor vehicle output	97.2	1.5	3.1	3.6	1.8	1.45	3.04	3.45	1.77
35	Final sales of computers	0.4	23.3	22.3	-24.2	12.9	0.08	0.08	-0.10	0.04
36	GDP excluding final sales of computers	99.6	1.2	3.0	3.3	2.5	1.16	2.98	3.26	2.51
37	Research and development (R&D)	2.5	7.1	1.3	0.9	-1.2	0.18	0.03	0.02	-0.03
38	GDP excluding R&D	97.5	1.1	3.1	3.2	2.7	1.06	3.03	3.13	2.58

^{1.} The estimates of GDP under the contribution columns are also percent changes.

^{2.} GDI is deflated by the implicit price deflator for GDP.

Note. Percent changes are from NIPA tables 1.1.1 and 1.2.1, contributions are from NIPA tables 1.1.2 and 1.2.2, and shares are from NIPA table 1.1.10, or they are calculated from NIPA table 1.2.5.

Prices

Prices paid by U.S. residents, as measured by the gross domestic purchases price index, increased 2.5 percent in the fourth quarter after increasing 1.7 percent in the third quarter (table 2, line 1). The acceleration mainly reflected an acceleration in consumer prices.

- Prices paid for consumer goods (line 3) accelerated, primarily reflecting an acceleration in the prices paid for gasoline and other energy goods. Notable offsets include downturns in the prices for clothing and footwear and for "other" nondurable goods (specifically pharmaceuticals) and a larger decrease in prices for recreational goods and vehicles.
- Prices paid for services (line 6) accelerated primarily reflecting accelerations in the prices
 of financial services, health care, and food services and accommodations.
- Consumer prices for energy (line 24) increased more in the fourth quarter than in the third quarter, and food prices (line 23) turned down slightly. Consumer prices excluding food and energy (line 25), a measure of the "core" rate of inflation, accelerated, increasing 1.9 percent in the fourth quarter after increasing 1.3 percent in the third quarter.

Table 2. Prices for Gross Domestic Purchases

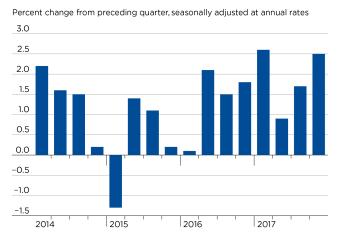
[Percent change at annual rates; based on seasonally adjusted index numbers (2009=100)]

Line		Change from preceding period (percent)				Contribution to percent change in gross domestic purchases prices (percentage points)					
Line		2017			2017						
		I	II	III	IV	I	II	III	IV		
1	Gross domestic purchases ¹	2.6	0.9	1.7	2.5	2.6	0.9	1.7	2.5		
2	Personal consumption expenditures	2.2	0.3	1.5	2.8	1.50	0.18	1.02	1.84		
3	Goods	2.7	-3.6	0.7	2.0	0.57	-0.79	0.16	0.43		
4	Durable goods	1.0	-3.6	-2.5	-1.8	0.07	-0.27	-0.19	-0.13		
5	Nondurable goods	3.6	-3.6	2.4	4.0	0.50	-0.52	0.34	0.56		
6	Services	2.0	2.2	1.9	3.1	0.92	0.97	0.87	1.42		
7	Gross private domestic investment	1.7	2.6	1.9	1.0	0.27	0.40	0.30	0.17		
8	Fixed investment	1.6	2.5	1.9	1.1	0.25	0.40	0.30	0.18		
9	Nonresidential	1.5	1.9	1.1	0.6	0.19	0.23	0.14	0.07		
10	Structures	3.1	3.8	4.5	2.1	0.08	0.11	0.12	0.06		
11	Equipment	0.7	0.8	0.2	-0.1	0.04	0.04	0.01	0.00		
12	Intellectual property products	1.6	1.9	0.1	0.4	0.06	0.08	0.00	0.02		
13	Residential	1.7	4.6	4.4	2.8	0.06	0.17	0.16	0.10		
14	Change in private inventories					0.02	0.01	0.00	-0.01		
15	Government consumption expenditures and gross investment	4.8	1.6	2.3	2.8	0.80	0.27	0.38	0.47		
16	Federal	5.5	1.8	1.1	1.4	0.34	0.11	0.07	0.09		
17	National defense	4.9	1.4	0.4	1.1	0.18	0.05	0.02	0.04		
18	Nondefense	6.3	2.3	2.1	2.0	0.16	0.06	0.05	0.05		
19	State and local	4.4	1.5	3.0	3.7	0.46	0.16	0.31	0.38		
	Addenda:										
	Gross domestic purchases:										
20	Food	0.3	2.1	0.2	-0.1	0.02	0.10	0.01	0.00		
21	Energy goods and services	15.9	-16.0	8.4	30.7	0.40	-0.45	0.21	0.72		
22	Excluding food and energy	2.3	1.3	1.6	1.9	2.14	1.21	1.49	1.77		
	Personal consumption expenditures (PCE):										
23	Food and beverages purchased for off-premises consumption	0.3	2.0	0.2	-0.1						
24	Energy goods and services	15.5	-16.0	8.4	30.5						
25	Excluding food and energy	1.8	0.9	1.3	1.9						
26	Gross domestic product (GDP)	2.0	1.0	2.1	2.4						
27	Exports of goods and services	2.5	-0.1	3.3	5.8						
28	Imports of goods and services	6.2	-1.0	0.4	6.0						

^{1.} The estimates for gross domestic purchases under the contribution columns are also percent changes.

Note. Most percent changes are from NIPA table 1.6.7; percent changes for PCE for food and energy goods and services and for PCE excluding food and energy are from NIPA table 2.3.7. Contributions are from NIPA table 1.6.8. GDP, export, and import prices are from NIPA table 1.1.7.

Chart 2. Prices of Gross Domestic Purchases



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Note on Prices

BEA's gross domestic purchases price index is the most comprehensive index of prices paid by U.S. residents for all goods and services. It is derived from the prices of personal consumption expenditures (PCE), private investment, and government consumption expenditures and gross investment.

BEA also produces price indexes for all the components of GDP. The PCE price index is a measure of the total cost of consumer goods and services, including durable goods, nondurable goods, and services. PCE prices for food, for energy goods and services, and for all items except food and energy are also estimated and reported.

Because prices for food and for energy can be volatile, the price measure that excludes food and energy is often used as a measure of underlying, or "core," inflation. The core PCE price index includes purchased meals and beverages, such as restaurant meals and pet food. (See the FAQ "What is the core PCE price index?" on BEA's Web site.)

BEA also prepares a supplemental PCE price index, the "market-based" PCE price index, that is based on market transactions for which there are corresponding price measures. This index excludes many imputed expenditures, such as financial services furnished without payment, that are included in PCE and in the PCE price index. BEA also prepares a market-based measure that excludes food and energy.

Personal Income

Personal income (table 3, line 1), which is measured in current dollars, accelerated in the fourth quarter, increasing \$178.9 billion after increasing \$112.3 billion in the third quarter. The acceleration primarily reflected an upturn in personal interest income (line 17) and an acceleration in nonfarm proprietors' income (line 14).

- Disposable personal income (line 30) increased \$139.0 billion in the fourth quarter; in the third quarter, it increased \$73.8 billion.
- Personal saving—disposable personal income less personal outlays—was \$384.4 billion in the fourth quarter, decreasing \$93.9 billion after decreasing \$47.4 billion in the third quarter.
- The personal saving rate (line 33)—personal saving as a percentage of disposable personal income—was 2.6 percent in the fourth quarter; the last time this rate was below 3.0 percent was in the fourth quarter of 2007 (2.8 percent).
- Real disposable personal income (DPI) increased 1.1 percent in the fourth quarter after increasing 0.5 percent in the third quarter. Current-dollar DPI increased 3.9 percent after increasing 2.1 percent. The differences in the movements in real DPI and current-dollar DPI reflected an acceleration in the implicit price deflator for consumer spending, which is used to deflate DPI.

Table 3. Personal Income and Its Disposition

[Billions of dollars; quarterly estimates are seasonally adjusted at annual rates]

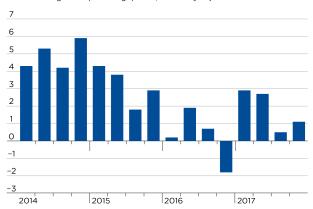
		Le	vel	Change from preceding period				
Line		20	17	2017				
		III	IV	I	II	III	IV	
1	Personal Income	16,451.9	16,630.8	219.5	94.3	112.3	178.9	
2	Compensation of employees	10,336.5	10,432.8	151.4	76.7	93.5	96.2	
3	Wages and salaries	8,374.3	8,456.7	124.3	63.1	79.1	82.4	
4	Private industries	7,029.2	7,104.5	108.9	56.8	70.7	75.4	
5	Goods-producing industries	1,374.6	1,389.3	20.7	9.3	14.7	14.8	
6	Manufacturing	834.2	841.2	12.9	4.6	5.1	7.0	
7	Services-producing industries	5,654.6	5,715.2	88.2	47.5	56.0	60.6	
8	Trade, transportation, and utilities	1,303.5	1,315.7	25.6	7.1	7.9	12.3	
9	Other services-producing industries	4,351.1	4,399.5	62.6	40.5	48.1	48.3	
10	Government	1,345.1	1,352.2	15.3	6.3	8.4	7.1	
11	Supplements to wages and salaries	1,962.2	1,976.0	27.1	13.6	14.4	13.8	
12	Proprietors' income with IVA and CCAdj	1,381.9	1,401.9	25.7	-1.6	3.3	19.9	
13	Farm	31.9	29.7	4.0	-4.8	-5.1	-2.2	
14	Nonfarm	1,350.0	1,372.1	21.6	3.3	8.4	22.2	
15	Rental income of persons with CCAdj	747.2	759.7	11.9	9.5	6.9	12.5	
16	Personal income receipts on assets	2,433.9	2,476.5	28.5	14.4	-0.6	42.6	
17	Personal interest income	1,460.6	1,501.4	38.1	-11.5	-4.5	40.7	
18	Personal dividend income	973.2	975.1	-9.6	25.9	3.9	1.8	
19	Personal current transfer receipts	2,858.4	2,878.9	35.9	5.1	21.4	20.5	
20	Government social benefits to persons	2,798.5	2,818.2	35.5	4.3	20.7	19.8	
21	Social security	930.0	935.5	10.1	6.8	7.2	5.5	
22	Medicare	676.4	681.9	4.5	4.1	4.9	5.5	
23	Medicaid	583.4	589.1	3.5	-4.0	6.0	5.8	
24	Unemployment insurance	28.5	27.8	-0.4	-1.7	-0.1	-0.7	
25	Veterans' benefits	99.2	100.2	1.5	2.5	1.2	0.9	
26	Other	481.0	483.7	16.3	-3.4	1.6	2.7	
27	Other current transfer receipts, from business (net)	59.9	60.7	0.5	0.7	0.7	8.0	
28	Less: Contributions for government social insurance	1,306.0	1,318.9	33.9	9.7	12.2	12.9	
29	Less: Personal current taxes	2,046.4	2,086.3	41.6	-10.9	38.4	40.0	
30	Equals: Disposable personal income (DPI)	14,405.5	14,544.4	177.9	105.2	73.8	139.0	
31	Less: Personal outlays	13,927.2	14,160.0	134.9	134.1	121.2	232.8	
32	Equals: Personal saving	478.3	384.4	43.0	-28.9	-47.4	-93.9	
33	Personal saving as a percentage of DPI	3.3	2.6					
	Addenda: Percent change at annual rate							
34	Current-dollar DPI			5.2	3.0	2.1	3.9	
35	Real DPI, chained (2009) dollars			2.9	2.7	0.5	1.1	

CCAdj Capital consumption adjustment IVA Inventory valuation adjustment

Note. Dollar levels and percent changes are from NIPA tables 2.1 and 2.2B.

Chart 3. Real Disposable Personal Income

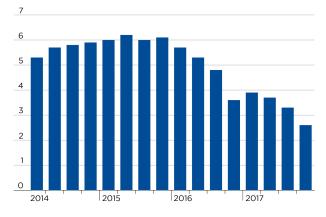
Percent change from preceding quarter, seasonally adjusted at annual rates



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Chart 4. Personal Saving Rate

Percent seasonally adjusted at annual rates



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Real GDP, 2017

Real GDP (table 4, line 1) increased 2.3 percent in 2017 (from the 2016 annual level to the 2017 annual level) after increasing 1.5 percent in 2016. The increase in real GDP in 2017 primarily reflected positive contributions from consumer spending, nonresidential fixed investment, and exports. Imports, which are a subtraction in the calculation of GDP, increased. The acceleration in real GDP from 2016 to 2017 reflected upturns in nonresidential fixed investment and in exports and a smaller decrease in inventory investment. These movements were partly offset by decelerations in residential fixed investment and in state and local government spending. Imports accelerated.

- The upturn in nonresidential fixed investment (line 9) reflected upturns in equipment and in structures that were partly offset by a deceleration in investment in intellectual property products. The upturn in equipment was widespread. The upturn in structures investment was more than accounted for by an upturn in mining exploration, shafts, and wells.
- The deceleration in residential fixed investment (line 13) primarily reflected no change to investment in "other" structures in 2017 after an increase of 5.2 percent in 2016. A downturn in residential improvements was the main contributor.
- The smaller decrease in inventory investment (line 14) primarily reflected a smaller decrease in manufacturing industries and an upturn in mining, utilities, and construction industries.
- The upturn in exports (line 16) primarily reflected an upturn in nonautomotive capital goods and an acceleration in industrial supplies and materials.
- The acceleration in imports (line 19) primarily reflected an acceleration in nonautomotive capital goods and an upturn in consumers goods excluding food and automotive.
- The deceleration in state and local government spending (line 26) primarily reflected a deceleration in consumption expenditures and a larger decrease in structures investment.

Table 4. Real Gross Domestic Product (GDP) and Components for 2016 and 2017

[Seasonally adjusted at annual rates]

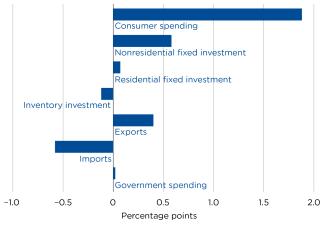
Line		Share of current- dollar GDP (percent)	Chang precedin (perc	g period	Contribution to percent change in real GDP (percentage points)			
		2017	2016	2017	2016	2017		
1	Gross domestic product ¹	100.0	1.5	2.3	1.5	2.3		
2	Personal consumption expenditures	69.1	2.7	2.7	1.86	1.88		
3	Goods	22.2	3.7	3.9	0.81	0.85		
4	Durable goods	7.6	5.5	6.7	0.41	0.50		
5	Nondurable goods	14.6	2.8	2.4	0.40	0.36		
6	Services	46.9	2.3	2.2	1.05	1.03		
7	Gross private domestic investment	16.6	-1.6	3.2	-0.28	0.53		
8	Fixed investment	16.5	0.7	4.0	0.12	0.65		
9	Nonresidential	12.6	-0.6	4.7	-0.08	0.58		
10	Structures	2.9	-4.1	5.3	-0.12	0.15		
11	Equipment	5.7	-3.4	4.8	-0.20	0.26		
12	Intellectual property products	4.1	6.3	4.2	0.25	0.17		
13	Residential	3.9	5.5	1.7	0.20	0.07		
14	Change in private inventories	0.1			-0.40	-0.12		
15	Net exports of goods and services	-2.9			-0.23	-0.18		
16	Exports	12.1	-0.3	3.4	-0.04	0.40		
17	Goods	8.0	0.3	4.5	0.02	0.35		
18	Services	4.1	-1.5	1.1	-0.06	0.05		
19	Imports	15.0	1.3	3.9	-0.19	-0.58		
20	Goods	12.3	0.9	4.3	-0.11	-0.51		
21	Services	2.8	3.1	2.5	-0.09	-0.07		
22	Government consumption expenditures and gross investment	17.3	0.8	0.1	0.13	0.02		
23	Federal	6.5	0.0	0.2	0.00	0.01		
24	National defense	3.8	-0.7	0.3	-0.03	0.01		
25	Nondefense	2.7	1.2	0.1	0.03	0.00		
26	State and local	10.8	1.2	0.1	0.13	0.01		
	Addenda:							
27	Gross domestic income (GDI) ²		0.9					
28	Average of GDP and GDI		1.2					

^{1.} The estimates of GDP under the contribution columns are also percent changes.

Note. Percent changes are from NIPA table 1.1.1, contributions to percent change are from NIPA table 1.1.2, and shares are from NIPA table 1.1.10.

^{2.} GDI is deflated by the implicit price deflator for GDP.

Chart 5. Contributions to the Change in Real GDP in 2017



U.S. Bureau of Economic Analysis

Information on Key Source Data, Assumptions, and Methodologies

A comprehensive table that presents the "Key Source Data and Assumptions" that are used to prepare each vintage of the estimate of GDP for the current quarter is available on BEA's Web site. For the "advance" estimates that are released near the end of the month after the close of the quarter, the table shows the months of source data for the quarter that are available; for most components of GDP, 3 months of data are available. For the components for which only 2 months of source data are available, BEA's assumptions for the third month are shown. "Second" and "third" estimates are released near the end of the second and third months after the close of the quarter, respectively. With each vintage, the table is updated to add newly available and revised source data that have been incorporated into the estimates.

For additional details about the source data and the methodologies that are used to prepare the estimates, see *Concepts and Methods of the U.S. National Income and Product Accounts* on BEA's Web site.



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