

# GDP and the Economy

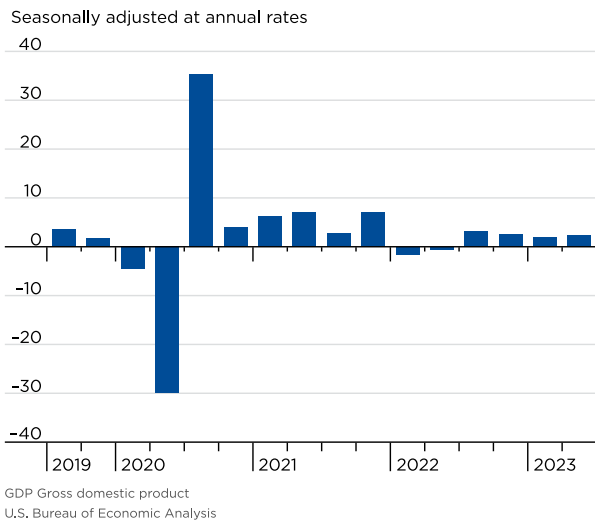
## Advance Estimates for the Second Quarter of 2023

August 2, 2023

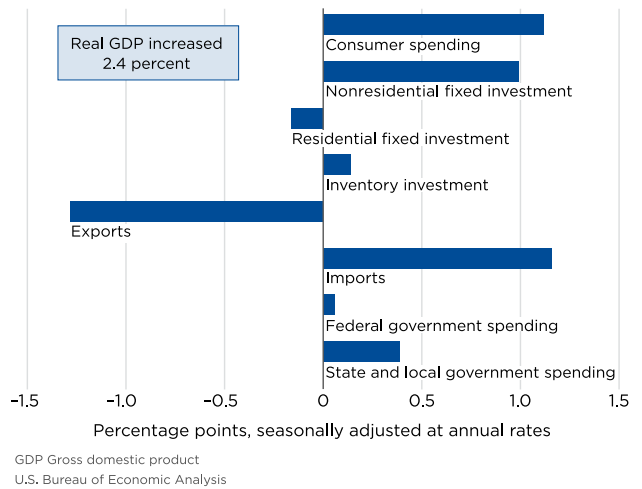
*This article reflects GDP statistics published on July 27, 2023. Refer to the GDP product page for the [latest statistics](#).*

Real gross domestic product (GDP) increased at an annual rate of 2.4 percent in the second quarter of 2023, according to the “advance” estimates of the National Income and Product Accounts (chart 1 and table 1).<sup>1</sup> In the first quarter, real GDP increased 2.0 percent.

**Chart 1. Real GDP: Percent Change from Preceding Quarter**



**Chart 2. Real GDP: Contributions to the Percent Change in 2023:Q2**



## GDP by Expenditure

The increase in second-quarter real GDP reflected increases in consumer spending, nonresidential fixed investment, state and local government spending, and private inventory investment that were partly offset by decreases in exports and residential fixed investment. Imports, which are a subtraction in the calculation of GDP, decreased (chart 2 and table 1).<sup>2</sup>

- The increase in consumer spending reflected increases in both services and goods. Within services, the leading contributors to the increase were housing and utilities, health care, financial services and insurance, and transportation services. Within goods, the increase was led by recreational goods and vehicles as well as gasoline and other energy goods.
- The increase in nonresidential fixed investment reflected increases in equipment, structures, and intellectual property products. The increase in equipment was led by transportation equipment, primarily reflecting an increase in trucks, buses, and truck trailers. The increase in structures was led by manufacturing structures. The increase in intellectual property products was led by software.
- The increase in state and local government spending primarily reflected increases in state and local government employee compensation and gross investment in structures.
- Within private inventory investment, both farm and nonfarm inventories increased. Within nonfarm, increases in durable wholesale trade, durable-goods manufacturing, and retail trade industries were partly offset by decreases in nondurable goods for wholesale and manufacturing industries.
- Within exports, a decrease in goods was partly offset by an increase in services. Within goods, the decrease was led by nondurable industrial supplies and materials; consumer goods, except food and automotive; and foods, feeds, and beverages. Within services, the increase was led by travel.
- The decrease in residential fixed investment was led by a decline in improvements.
- Within imports, both goods and services decreased. Within goods, the leading contributors to the decrease were nondurable industrial supplies and materials as well as nondurable consumer goods. Within services imports, the leading contributor to the decrease was transport.

Compared to the first quarter, the acceleration in GDP in the second quarter primarily reflected an upturn in private inventory investment and an acceleration in nonresidential fixed investment. These movements were partly offset by a downturn in exports and decelerations in consumer spending, federal government spending, and state and local government spending. Imports turned down.

Real final sales to private domestic purchasers, which measures private demand in the domestic economy and is derived as the sum of consumer spending and private fixed investment, increased 2.3 percent in the second quarter after increasing 3.2 percent in the first quarter.

**Table 1. Real Gross Domestic Product and Related Measures**

[Seasonally adjusted at annual rates]

Line	Series	Share of current-dollar GDP (percent)	Change from preceding period (percent)				Contribution to percent change in real GDP (percentage points)			
		2023	2022		2023		2022		2023	
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1	<b>Gross domestic product (GDP)<sup>1</sup></b>	<b>100.0</b>	<b>3.2</b>	<b>2.6</b>	<b>2.0</b>	<b>2.4</b>	<b>3.2</b>	<b>2.6</b>	<b>2.0</b>	<b>2.4</b>
2	<b>Personal consumption expenditures</b>	<b>68.2</b>	<b>2.3</b>	<b>1.0</b>	<b>4.2</b>	<b>1.6</b>	<b>1.54</b>	<b>0.70</b>	<b>2.79</b>	<b>1.12</b>
3	Goods	22.7	-0.4	-0.1	6.0	0.7	-0.08	-0.01	1.34	0.16
4	Durable goods	8.4	-0.8	-1.3	16.3	0.4	-0.07	-0.11	1.28	0.03
5	Nondurable goods	14.3	-0.1	0.6	0.5	0.9	-0.01	0.09	0.07	0.13
6	Services	45.5	3.7	1.6	3.2	2.1	1.63	0.72	1.44	0.95
7	<b>Gross private domestic investment</b>	<b>17.3</b>	<b>-9.6</b>	<b>4.5</b>	<b>-11.9</b>	<b>5.7</b>	<b>-1.80</b>	<b>0.79</b>	<b>-2.22</b>	<b>0.97</b>
8	Fixed investment	17.2	-3.5	-3.8	-0.4	4.9	-0.62	-0.68	-0.08	0.83
9	Nonresidential	13.5	6.2	4.0	0.6	7.7	0.80	0.52	0.08	0.99
10	Structures	2.8	-3.6	15.8	15.8	9.7	-0.09	0.38	0.40	0.26
11	Equipment	5.2	10.6	-3.5	-8.9	10.8	0.53	-0.18	-0.48	0.53
12	Intellectual property products	5.5	6.8	6.2	3.1	3.9	0.36	0.33	0.16	0.21
13	Residential	3.8	-27.1	-25.1	-4.0	-4.2	-1.42	-1.20	-0.16	-0.16
14	Change in private inventories	0.1	---	---	---	---	-1.19	1.47	-2.14	0.14
15	<b>Net exports of goods and services</b>	<b>-3.0</b>	<b>---</b>	<b>---</b>	<b>---</b>	<b>---</b>	<b>2.86</b>	<b>0.42</b>	<b>0.58</b>	<b>-0.12</b>
16	Exports	10.9	14.6	-3.7	7.8	-10.8	1.65	-0.44	0.86	-1.28
17	Goods	7.3	17.8	-7.4	12.3	-16.3	1.38	-0.62	0.91	-1.35
18	Services	3.6	7.5	5.0	-1.3	1.8	0.26	0.18	-0.05	0.07
19	Imports	13.9	-7.3	-5.5	2.0	-7.8	1.21	0.86	-0.28	1.16
20	Goods	11.3	-8.6	-5.9	2.3	-8.0	1.19	0.76	-0.27	0.98
21	Services	2.6	-0.8	-3.7	0.4	-6.8	0.02	0.10	-0.01	0.18
22	<b>Government consumption expenditures and gross investment</b>	<b>17.5</b>	<b>3.7</b>	<b>3.8</b>	<b>5.0</b>	<b>2.6</b>	<b>0.65</b>	<b>0.65</b>	<b>0.85</b>	<b>0.45</b>
23	Federal	6.5	3.7	5.8	6.0	0.9	0.24	0.37	0.38	0.06
24	National defense	3.6	4.7	2.3	2.5	2.5	0.17	0.08	0.09	0.09
25	Nondefense	2.9	2.5	10.6	10.5	-1.1	0.07	0.29	0.29	-0.03
26	State and local	10.9	3.7	2.6	4.4	3.6	0.41	0.29	0.47	0.39
	<b>Addenda:</b>									
27	Gross domestic income (GDI) <sup>2</sup>	---	2.8	-3.3	-1.8	---	---	---	---	---
28	Average of GDP and GDI	---	3.0	-0.4	0.1	---	---	---	---	---
29	Final sales of domestic product	---	4.5	1.1	4.2	2.3	---	---	---	---
30	Goods	31.3	7.3	5.9	-1.4	2.6	2.28	1.83	-0.44	0.84
31	Services	60.5	3.9	2.4	3.5	2.3	2.30	1.44	2.06	1.36
32	Structures	8.2	-14.6	-8.1	4.7	2.6	-1.34	-0.70	0.38	0.21

1. The GDP estimates under the contribution columns are also percent changes.
2. GDI is deflated by the implicit price deflator for GDP.

Note. Percent changes are from National Income and Product Accounts (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 are calculated from NIPA table 1.2.5.

## Prices

The U.S. Bureau of Economic Analysis' (BEA's) featured measure of inflation in the U.S. economy, the price index for gross domestic purchases (goods and services purchased by U.S. residents), increased 1.9 percent in the second quarter after increasing 3.8 percent in the first quarter (table 2 and chart 3).

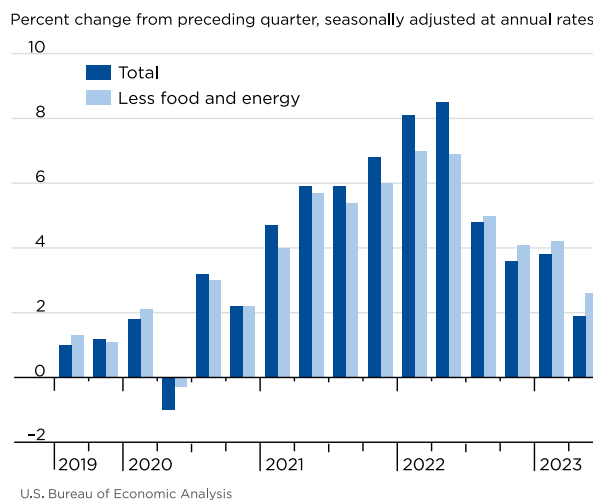
Within gross domestic purchases, food prices decreased less than 0.1 percent in the second quarter after increasing 3.8 percent in the first quarter. Prices for energy goods and services decreased 16.3 percent after decreasing 10.7 percent. Excluding food and energy, gross domestic purchases prices increased 2.6 percent after increasing 4.2 percent.

The price index for personal consumption expenditures (PCE) increased 2.6 percent in the second quarter after increasing 4.1 percent in the first quarter. The increase in PCE prices reflected increases in prices for both services and goods.

- Within services, price increases were widespread. The leading contributors were housing and utilities (led by housing), health care (led by hospitals), and other services (led by professional and other services). Food services and accommodations (led by food services) and insurance and other financial services (led by banking and other financial services) also increased. Partly offsetting these increases was a decrease in transportation services (led by public transportation).
- Within goods, the leading contributors to the increase were motor vehicles and parts (led by used light trucks) and other nondurable goods (led by pharmaceuticals). These increases were partly offset by a decrease in gasoline and other energy goods (led by gasoline).

Excluding food and energy, the “core” PCE price index increased 3.8 percent in the second quarter after increasing 4.9 percent in the first quarter.

**Chart 3. Prices for Gross Domestic Purchases**



**Table 2. Prices for Gross Domestic Purchases**

[Percent change at annual rates; based on seasonally adjusted index numbers (2012=100)]

Line	Series	Change from preceding period (percent)				Contribution to percent change in gross domestic purchases prices (percentage points)			
		2022		2023		2022		2023	
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
<b>1</b>	<b>Gross domestic purchases<sup>1</sup></b>	<b>4.8</b>	<b>3.6</b>	<b>3.8</b>	<b>1.9</b>	<b>4.8</b>	<b>3.6</b>	<b>3.8</b>	<b>1.9</b>
<b>2</b>	<b>Personal consumption expenditures</b>	<b>4.3</b>	<b>3.7</b>	<b>4.1</b>	<b>2.6</b>	<b>2.85</b>	<b>2.46</b>	<b>2.71</b>	<b>1.73</b>
3	Goods	2.7	-0.5	0.7	0.4	0.64	-0.10	0.17	0.09
4	Durable goods	3.5	-1.5	-1.0	0.6	0.29	-0.12	-0.07	0.05
5	Nondurable goods	2.3	0.1	1.7	0.3	0.35	0.02	0.25	0.04
6	Services	5.2	6.0	5.9	3.8	2.22	2.56	2.54	1.65
<b>7</b>	<b>Gross private domestic investment</b>	<b>7.6</b>	<b>3.3</b>	<b>4.5</b>	<b>0.7</b>	<b>1.30</b>	<b>0.57</b>	<b>0.76</b>	<b>0.13</b>
8	Fixed investment	7.7	4.0	4.9	0.7	1.28	0.67	0.81	0.13
9	Nonresidential	7.6	3.6	7.2	1.2	0.94	0.46	0.91	0.15
10	Structures	20.1	7.7	8.6	3.5	0.45	0.19	0.22	0.09
11	Equipment	5.9	6.1	7.6	-1.4	0.29	0.31	0.37	-0.07
12	Intellectual property products	3.7	-0.6	6.1	2.5	0.19	-0.03	0.32	0.13
13	Residential	8.1	5.1	-2.5	-0.7	0.34	0.20	-0.10	-0.03
14	Change in private inventories	---	---	---	---	0.02	-0.10	-0.05	0.00
<b>15</b>	<b>Government consumption expenditures and gross investment</b>	<b>3.6</b>	<b>3.6</b>	<b>1.6</b>	<b>0.4</b>	<b>0.62</b>	<b>0.61</b>	<b>0.28</b>	<b>0.07</b>
16	Federal	4.8	3.2	3.2	2.6	0.30	0.20	0.20	0.16
17	National defense	2.7	3.0	2.5	2.3	0.10	0.10	0.09	0.08
18	Nondefense	7.6	3.4	4.1	3.0	0.20	0.09	0.11	0.08
19	State and local	2.9	3.9	0.7	-0.9	0.32	0.41	0.08	-0.10
<b>Addenda:</b>									
20	Gross domestic purchases:								
	Food	13.4	7.1	3.8	0.0	0.60	0.33	0.18	0.00
21	Energy goods and services	-13.1	-13.9	-10.7	-16.3	-0.43	-0.46	-0.33	-0.47
22	Excluding food and energy	5.0	4.1	4.2	2.6	4.59	3.77	3.90	2.40
	Personal consumption expenditures:								
23	Food and beverages purchased for off-premises consumption	13.0	6.9	3.7	-0.1	---	---	---	---
24	Energy goods and services	-13.3	-12.8	-9.9	-16.1	---	---	---	---
25	Excluding food and energy	4.7	4.4	4.9	3.8	---	---	---	---
26	Gross domestic product	4.4	3.9	4.1	2.2	---	---	---	---
27	Exports of goods and services	-9.7	-6.1	0.2	-3.6	---	---	---	---
28	Imports of goods and services	-4.1	-5.5	-1.6	-4.2	---	---	---	---

1. The estimated prices for gross domestic purchases under the contribution columns are also percent changes.

Note. Most percent changes are from National Income and Product Accounts (NIPA) table 1.6.7; percent changes for personal consumption expenditures (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. Gross domestic product, export, and import prices are from NIPA table 1.1.7.

## Note on Prices

The U.S. Bureau of Economic Analysis' (BEA's) gross domestic purchases price index is the most comprehensive index of prices paid by U.S. residents for all goods and services, regardless of whether those goods and services were produced domestically or imported. It is derived from the prices of personal consumption expenditures (PCE), private investment, and government consumption expenditures and gross investment.

The gross domestic product (GDP) price index measures the prices of goods and services produced in the United States, including the prices of goods and services produced for export. The difference between the gross domestic purchases price index and the GDP price index reflects the differences between imports prices (included in the gross domestic purchases index) and exports prices (included in the GDP price index). For other measures that are affected by import and export prices, see the FAQ [“How do the effects of dollar depreciation show up in the GDP accounts?”](#) on BEA's website.

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 [“What is the core PCE price index?”](#) on BEA's website.)

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

Measured in current dollars, personal income increased \$236.1 billion in the second quarter, compared to an increase of \$278.0 billion in the first quarter (table 3). The increase in the second quarter reflected increases in compensation (led by private wages and salaries), personal income receipts on assets, rental income of persons, and personal current transfer receipts.

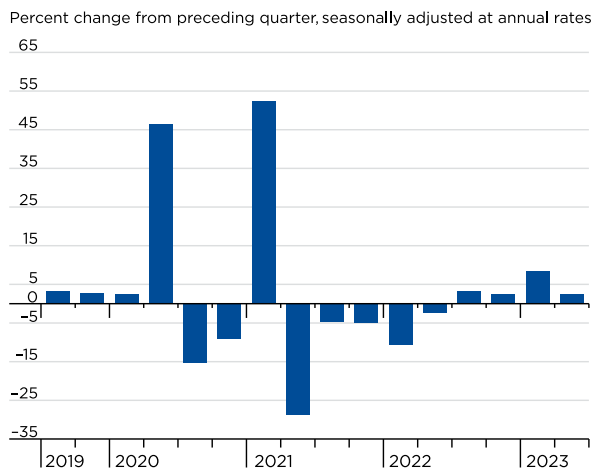
Personal current taxes decreased \$12.1 billion in the second quarter after decreasing \$310.0 billion in the first quarter.

Current-dollar disposable personal income (DPI) increased \$248.2 billion, or 5.2 percent, in the second quarter after increasing \$587.9 billion, or 12.9 percent, in the first quarter. Personal outlays increased \$219.5 billion after increasing \$395.0 billion in the first quarter.

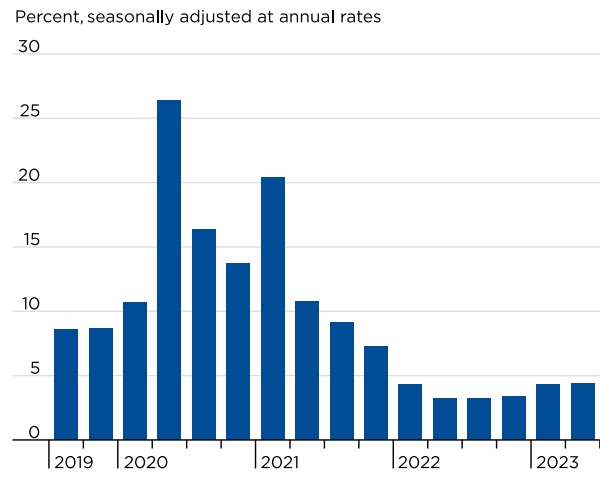
Real DPI (chart 4) increased 2.5 percent in the second quarter after increasing 8.5 percent in the first quarter. Current-dollar DPI is deflated by the implicit price deflator for consumer spending, which increased 2.6 percent in the second quarter after increasing 4.1 percent in the first quarter.

The personal saving rate (chart 5)—personal saving as a percentage of DPI—was 4.4 percent in the second quarter, compared with 4.3 percent in the first quarter.

**Chart 4. Real Disposable Personal Income**



**Chart 5. Personal Saving Rate**



Note. The personal saving rate is personal saving as a percentage of disposable personal income. U.S. Bureau of Economic Analysis

**Table 3. Personal Income and Its Disposition**

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

Line	Series	Level		Change from preceding period			
		2023		2022		2023	
		Q1	Q2	Q3	Q4	Q1	Q2
1	<b>Personal income</b>	<b>22,519.2</b>	<b>22,755.3</b>	<b>391.2</b>	<b>271.8</b>	<b>278.0</b>	<b>236.1</b>
2	Compensation of employees	13,985.5	14,167.3	339.8	73.1	157.4	181.8
3	Wages and salaries	11,545.6	11,701.3	303.0	52.9	131.7	155.8
4	Private industries	9,877.9	10,006.1	279.6	33.4	107.3	128.2
5	Goods-producing industries	1,814.2	1,840.6	48.9	11.4	21.2	26.4
6	Manufacturing	1,061.0	1,075.1	27.2	-0.6	6.4	14.1
7	Services-producing industries	8,063.7	8,165.5	230.7	22.0	86.1	101.8
8	Trade, transportation, and utilities	1,776.4	1,789.0	47.3	2.8	25.4	12.6
9	Other services-producing industries	6,287.3	6,376.5	183.4	19.3	60.7	89.2
10	Government	1,667.6	1,695.2	23.4	19.5	24.4	27.5
11	Supplements to wages and salaries	2,440.0	2,466.0	36.8	20.2	25.8	26.0
12	Proprietors' income with IVA and CCAdj	1,909.5	1,905.6	28.2	19.3	26.6	-3.9
13	Farm	96.7	86.0	0.3	4.9	-4.2	-10.7
14	Nonfarm	1,812.8	1,819.6	27.9	14.4	30.8	6.8
15	Rental income of persons with CCAdj	845.0	864.0	19.0	16.8	33.2	19.0
16	Personal income receipts on assets	3,452.6	3,494.5	35.8	65.2	28.6	41.9
17	Personal interest income	1,808.1	1,832.5	29.5	50.9	19.1	24.4
18	Personal dividend income	1,644.5	1,662.1	6.3	14.3	9.5	17.5
19	Personal current transfer receipts	4,057.5	4,073.8	9.6	105.4	59.2	16.3
20	Government social benefits to persons	3,986.2	4,001.6	13.9	105.7	57.5	15.4
21	Social security	1,340.1	1,353.5	7.7	11.0	114.5	13.4
22	Medicare	960.5	967.3	8.5	21.4	18.8	6.9
23	Medicaid	839.4	873.8	-3.3	10.1	43.1	34.4
24	Unemployment insurance	22.8	23.1	-0.1	1.8	2.4	0.3
25	Veterans' benefits	166.2	167.0	2.0	2.3	2.2	0.7
26	Other	657.3	616.8	-1.0	59.1	-123.5	-40.4
27	Other current transfer receipts, from business (net)	71.3	72.2	-4.2	-0.3	1.8	0.9
28	Less: Contributions for government social insurance	1,730.8	1,749.9	41.2	8.1	27.1	19.1
29	Less: Personal current taxes	2,906.2	2,894.0	48.0	-20.3	-310.0	-12.1
30	Equals: Disposable personal income	19,613.1	19,861.3	343.2	292.1	587.9	248.2
31	Less: Personal outlays	18,772.2	18,991.7	325.9	252.7	395.0	219.5
32	Personal consumption expenditures	18,113.1	18,305.3	281.3	207.2	363.2	192.2
33	Personal interest payments <sup>1</sup>	435.5	462.6	44.1	45.5	32.8	27.2
34	Personal current transfer payments	223.7	223.8	0.5	-0.1	-1.0	0.1
35	Equals: Personal saving	840.9	869.5	17.3	39.5	192.9	28.7
36	Personal saving as a percentage of DPI	4.3	4.4	0.0	0.2	0.9	0.1

**CCAdj** Capital consumption adjustment

**DPI** Disposable personal income

**IVA** Inventory valuation adjustment

1. Consists of nonmortgage interest paid by households. Note that mortgage interest paid by households is an expense item in the calculation of rental income of persons.

Note. Dollar levels and percent changes are from National Income and Product Account tables 2.1 and 2.2B.



## Information on Key Source Data, Assumptions, and Methodologies

A comprehensive table that presents the [key source data and assumptions](#) (under “Current Release”) that are used to prepare each vintage of the estimate of gross domestic product (GDP) for the current quarter is available on the U.S. Bureau of Economic Analysis (BEA) website. 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 estimates are released near the end of the second month after the close of the quarter, and third estimates are released near the end of the third month after the close of the quarter. 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 [NIPA Handbook: Concepts and Methods of the U.S. National Income and Product Accounts](#) on BEA's website.

## Looking Ahead: 2023 Comprehensive Update of the National Economic Accounts

BEA will release initial results from the comprehensive (or benchmark) update of the National Economic Accounts (NEAs), which include the National Income and Product Accounts as well as the Industry Economic Accounts, on September 28, 2023. Current-dollar measures of GDP and related components will be revised from the first quarter of 2013 through the first quarter of 2023. Current-dollar GDP by industry statistics will be revised from the first quarter of 2005 through the first quarter of 2023, although revisions prior to the first quarter of 2013 will be offset across industries within each period. Gross domestic income and select income components will be revised from the first quarter of 1979 through the first quarter of 2023.

Quantity and price measures will use 2017 as the reference year; currently, the reference year is 2012. Updating the reference year will not affect the percent changes in the price or quantity indexes (or in the chained-dollar estimates), because these changes are measured from chain-type indexes. Revisions to the percent changes in NEA estimates will reflect the incorporation of new and revised source data as well as changes in methodologies. For details, refer to "[Information on Updates to the National Economic Accounts](#)."

1. "Real" estimates are in chained (2012) 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."



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