

# Improved Estimates of the National Economic Accounts

## Results of the 2023 Comprehensive Update

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On September 28, 2023, the U.S. Bureau of Economic Analysis (BEA) released the initial results of the 16th comprehensive update of the National Economic Accounts, which include the National Income and Product Accounts (NIPAs) and the Industry Economic Accounts (IEAs). The update marks the culmination of a multi-year effort to harmonize the production and publication of the NIPAs, the IEAs, and the Regional Economic Accounts (REAs).<sup>1</sup>

Many incremental and important improvements were prerequisites to the harmonization, including the expansion and acceleration of the gross domestic product (GDP) by industry accounts, the acceleration of the annual Input-Output (I-O) Accounts, and the integration of the annual I-O Accounts and the GDP by industry accounts. Underlying these steps was close collaboration with the U.S. Census Bureau (Census) to provide additional source data and improve the quality and timeliness of existing data. The first milestone of the harmonization was the simultaneous release of quarterly statistics for national, industry, and state GDP in September 2020. This was followed by the accelerated release of the annual updates of industry and state GDP statistics in September 2021, and the simultaneous release of the annual updates of national, industry, and state GDP statistics in September 2022. With this year's simultaneous release of the comprehensive updates, BEA provides users with benchmark estimates that are consistent across the accounts and based on the best available source data and methods.<sup>2</sup>

Comprehensive updates provide an opportunity to introduce new and improved methodologies; incorporate newly available and revised source data; update definitions and classifications to portray the evolving U.S. economy more accurately and provide consistency for international comparisons; and update presentations, where necessary, or provide additional data or perspectives for users.

A key feature of comprehensive updates is benchmarking GDP and its components to data from the most recently available Census Bureau quinquennial Economic Census. This year's update benchmarked the accounts to the 2017 Economic Census. Benchmarked 2017 I-O statistics, including new 2017 supply and use tables (SUTs), provide a detailed picture of the economy, showing relationships among approximately 402 industries and commodities that serve as the statistical foundation for other BEA estimates. More specifically, the levels and commodity distributions of final-use categories are set as part of a reconciliation process between production-based estimates from the SUT framework and expenditure-based estimates from the NIPAs.

This article summarizes the impacts of the update on the NIPA and IEA estimates with a focus on the most recent 5 years. Refer to “[Information on 2023 Comprehensive Updates to the National, Industry, and State Economic Accounts](#)” for additional background materials and results. (In particular, the “Summary of Results” tables include detail on quarterly NIPA revisions through 2022 and revisions to selected time spans.)

Current-dollar measures of GDP and related components were revised from the first quarter of 2013 through the first quarter of 2023. Gross domestic income (GDI) and select income components were revised from the first quarter of 1979 through the first quarter of 2023. Annual GDP by industry statistics for 2017–2022 were updated on September 28 and are summarized in this article; the remaining annual GDP by industry statistics as well as quarterly GDP by industry statistics will be available this fall.<sup>3</sup> 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 offset across industries within each period.

Output and price measures now use 2017 as the reference year; previously, the reference year was 2012. Quantity and price indexes are expressed as 2017 equal to 100. Updating the reference year did 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.<sup>4</sup> However, there are revisions to the percent changes in NIPA aggregates resulting from the incorporation of newly available and revised source data and changes in methodologies.

The classification of measures now follows the 2017 North American Industry Classification System (NAICS). Overall, changes stemming from the use of the 2017 NAICS were small. One notable change is the reclassification of equity real estate investment trusts (REITs) from the financial industry to the real estate industry as discussed below.<sup>5</sup>

### Updated Table Presentations

As part of the 2023 comprehensive update, BEA introduced several presentational improvements to the NIPA tables to better meet customer needs. These include:

- New tables showing the contributions to the percent change in personal consumption expenditures (PCE) prices and quantities.
- New tables showing the percent change from the same period one year ago for quarterly and monthly PCE prices and quantities.
- New series for PCE excluding food, energy, and housing and PCE services excluding energy and housing.
- Expanded detail for monthly PCE tables that now align with the quarterly and annual presentations.
- Expanded foreign trade tables to include additional series and to consolidate data that were previously included only in the underlying tables.
- Added detail for spending on new domestic and foreign light trucks, alternative electric structures, and investment by industry in the Fixed Asset Accounts.

## Sources of Revision

The updated estimates reflect the incorporation of newly available and revised source data—the primary driver of this year's revisions—as well as the adoption of improved estimating methods and, for quarterly and monthly measures, the incorporation of updated seasonal adjustment factors.

### Major Source Data Incorporated

The comprehensive update incorporated a wide array of new and revised source data. In addition to the 2017 Economic Census, the revised estimates also reflect the incorporation of newly available and revised source data for 2018–2022 that are regularly incorporated in annual updates but became available after the last update in September 2022. Some of the most significant data sources are shown in table 1. These data include Census surveys; Office of Management and Budget federal government budget data; BEA data from the International Transactions Accounts; U.S. Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages (QCEW) data; Internal Revenue Service (IRS) data; and U.S. Department of Agriculture (USDA) farm statistics.

**Table 1. Summary of Major Source Data Incorporated**

Agency	Data	Years covered and vintage
Census Bureau	Economic Census	2017
	Annual Capital Expenditures Survey	2020 (revised) 2021 (new)
	Annual Wholesale Trade Survey	2018–2020 (revised) 2021 (new)
	Annual Retail Trade Survey	2018–2020 (revised) 2021 (new)
	Annual Survey of Manufactures	2020 (revised) 2021 (new)
	Monthly indicators of manufactures, merchant wholesale trade, and retail trade	2018–2022 (revised)
	Service Annual Survey	2018–2020 (revised) 2021 (new)
	Annual Survey of State and Local Government Finances	Fiscal years 2018–2020 (revised) Fiscal year 2021 (new)
	Monthly survey of construction spending (value put in place)	2018–2022 (revised)
	Quarterly Services Survey	2018–2022 (revised)
	Current Population Survey/Housing Vacancy Survey	2018–2021 (revised) 2022 (new)
Office of Management and Budget	Federal budget	Fiscal year 2022 (revised) Fiscal year 2023 (new)
Internal Revenue Service	Tabulations of tax returns for corporations	2020 (revised) 2021 (new)
	Tabulations of tax returns for sole proprietorships and for partnerships	2020 (revised) 2021 (new)
Bureau of Labor Statistics	Quarterly Census of Employment and Wages	2018–2022 (revised)
	Occupational Employment Statistics program	2022 (new)
Department of Agriculture	Farm statistics	2018–2022 (revised)
Bureau of Economic Analysis	International Transactions Accounts	2017–2022 (revised)

Notable source data updates and their impacts include the following:

- New Census Service Annual Survey (SAS) data for 2021 and revised SAS data for 2018 through 2020 replaced previously incorporated SAS data. SAS data impacted estimates of consumer spending for services and estimates of private fixed investment in intellectual property products as well as gross output for private services-producing industries.
- Revised IRS tabulations of tax returns for corporations and for sole proprietorships for 2020 and new IRS tabulations of tax returns data for 2021 for corporations, sole proprietorships, and partnerships affected estimates of corporate profits, proprietors' income, and net interest.
- New Census Annual Survey of Manufactures (ASM) data for 2021 replaced data from the Monthly Survey of Manufacturers' Shipments, Inventories, and Orders (M3) data. These data, as well as revised ASM data for 2020 and revised monthly M3 shipments and inventories data for 2018–2022, impacted estimates of private investment in equipment and inventories, as well as gross output for manufacturing industries.
- New Census Annual Retail Trade Survey (ARTS) data for 2021 replaced Census Monthly Retail Trade Survey data; these data and revised ARTS data for 2018–2020 impacted estimates of consumer spending for goods, private inventory investment, and gross output for the retail trade industry.
- Revised BLS QCEW data for 2018–2022 impacted estimates of private and government compensation.
- Revised USDA farm statistics for 2018–2022 impacted estimates of farm output, private inventory investment, and proprietors' income.
- Revised BEA International Transactions Accounts data for 2017–2022 impacted estimates of exports and imports of goods and services and income flows with the rest of the world.
- Revised Census Annual Survey of State and Local Government Finances data for fiscal years 2018–2020 and newly available data for 2021 impacted estimates of state and local government spending.

Additional information on the NIPA components affected by the incorporation of these data is provided in the table [“NIPA Revisions: Components Detail and Major Source Data and Conceptual Changes Incorporated, 2017–2022.”](#)

## Changes in Methodology

BEA implemented several changes in methodologies and classifications and introduced other improvements, including those listed below; for additional detail, see the June *Survey of Current Business* article “[Preview of the 2023 Comprehensive Update of the National Economic Accounts](#).”

***Improved classification and measures of real estate investment trusts (REITs).*** Beginning with 2002, dividends paid to shareholders by REITs were adjusted to exclude capital gains, based on IRS Statistics of Income (SOI) data, in keeping with *System of National Accounts 2008 (SNA 2008)* recommendations and the treatment of capital gains elsewhere in the NIPAs.<sup>6</sup>

Additionally, equity REITs are now reclassified from the funds, trusts, and other financial vehicles industry to the real estate industry, while mortgage REITs remain classified as funds, trusts, and other financial vehicles. This change is in accordance with the latest NAICS classifications, which recognize the different production processes of these different types of REITs.<sup>7</sup>

***Improved measures of regulated investment companies (RICs).*** RICs are financial intermediaries that include mutual funds, money market mutual funds, exchange-traded funds, and closed-end funds. They are, in effect, pass-through institutions and their profits should reflect this. The previous NIPA treatment classified RIC output as imputed interest paid to RIC shareholders, with a corresponding decrease in RIC profits, resulting in consistently negative profits and undistributed profits, or savings.

Because RICs do not explicitly charge for their services, their gross output is measured as the sum of their expenses in the NIPAs. Under the new treatment, the output of RICs is not recorded as imputed interest paid but instead as an imputed charge to shareholders. Beginning with 1979, BEA's measures of RIC receipts and payments of monetary interest and dividends are now based on SOI data without adjusting these measures to deduct RIC expenses, which is more consistent with the NIPA treatment of defined contribution pension plans. As a result, imputed interest paid equals imputed interest received, and the net measure is zero. Likewise, monetary interest and monetary dividends are equal to receipts, and the net measure is zero.<sup>8</sup>

***New measures of monetary interest paid by the Federal Reserve Board (FRB).*** Measures of the FRB's payments of monetary interest are now recorded in the NIPAs beginning with 2008, the year it began paying interest on reserves and term deposits. The measure is based on data on interest expenses from the FRB's combined financial statements, and it is recorded on line 4 in [NIPA table 7.17](#), “Relation of Monetary Interest Paid and Received in the National Income and Product Accounts to Corresponding Measures as Published by the Internal Revenue Service.”

Additionally, beginning with 2013, BEA improved its measures of the intermediation services provided by Federal Reserve banks, for which there is no explicit charge, by using an input-cost approach. Specifically, the output of Federal Reserve banks is now measured as the sum of its total operating expenses, also based on data from the FRB's combined financial statements.

***Improved measures of the use by industries of financial intermediation services furnished without payment.*** BEA improved its allocation of industries' intermediate use of implicit financial intermediation services beginning with 1997 and including the 2017 benchmark SUTs, using data from the Census Quarterly Financial Report (QFR) and the IRS SOI. This change further harmonizes the IEAs with the NIPAs, which already use QFR data for by-industry measures of these services.

**Improved measures of housing services.** BEA improved the measures of housing services by using detailed American Community Survey (ACS) data to more precisely distinguish between rental value and utility costs, building on the use of ACS microdata introduced in the 2021 annual update.<sup>9</sup> Beginning with 2013, by-unit ACS data on utility costs are used to derive estimates of rent excluding utilities for rental housing that includes utilities and for owner-occupied housing units; these estimates form the basis of the estimates PCE for housing. The new approach excludes only the utilities that are used for any given unit.

Previously, ACS data for units with separate charges for rent and utilities were used to derive estimates of utility costs as a share of the total cost. The share was applied to the total housing costs that include utilities to derive rental charges excluding utilities. The shares were not adjusted to reflect the specific utilities that were included in the total for individual units.

**Improved measures of investment in own-account software.** In response to research on the changing landscape of software-related employment across industries, beginning with 2013, investment in own-account software now reflects a more expansive list of occupations that produce software. Additionally, research on measuring the U.S. data economy using online job postings has led to improved measures to estimate new occupation-based time-use factors for own-account software development.<sup>10</sup>

**Improved price measures.** BEA introduced new price measures for cloud computing services and investment in wind and solar energy structures. To measure prices for cloud computing services more accurately, BEA now uses a new composite price index to deflate cloud computing output beginning with the first quarter of 2016. The new composite price indicators equally weight BLS price data for NAICS industry 5182—data processing, hosting, and related services—and quality-adjusted cloud computing price data from 451 Research (a division of S&P Global Market Intelligence). For investment in wind and solar energy structures, BEA introduced a new price index based on data from the U.S. Energy Information Administration's average annual costs of construction for wind and solar energy generators. The previously used Handy Whitman's electric power and building construction cost indexes did not include alternative energy structures.

**Improved measures of intermediate expenses.** BEA improved its measures of intermediate expenses for meals and entertainment to more accurately reflect changes implemented with the 2017 Tax Cuts and Jobs Act and the 2021 Consolidated Appropriations Act and to recognize additional entertainment expenses, such as performing arts, as intermediate expenses.

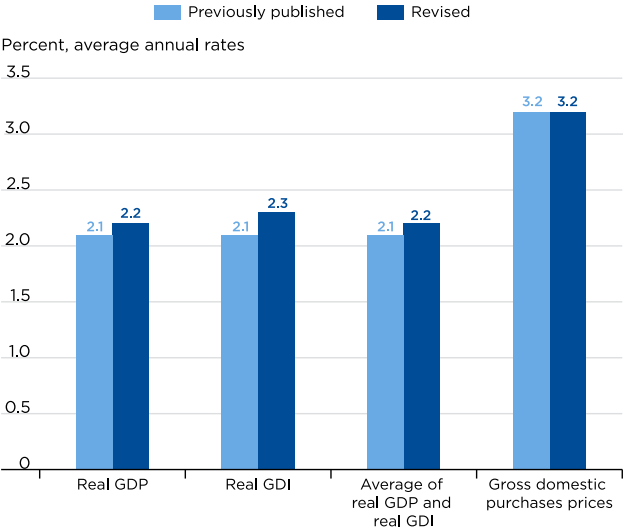
**Improved measures of National Flood Insurance Program services.** Beginning with 2004, BEA modified the method for measuring the services of the National Flood Insurance Program so that expected losses include only losses that are covered directly by premium collections.

**Improved measures of brokers' commissions.** Beginning with 2013, BEA improved its estimates of residential and nonresidential brokers' commissions by using Economic Census data on total commissions and fees from real estate agents and brokers to allocate the total domestic supply of dealers' commissions to residential and nonresidential private fixed investment categories. Additionally, BEA improved its estimates of brokers' commissions on the sale of existing homes by bringing the assumed commission rate in line with industry standards and allowing the rate to vary as real estate market conditions change.

# Updates to Annual NIPA Measures

In general, the picture of the economy shown by the updated estimates is similar to the picture previously published (table 2). Over the recent period, from 2017 to 2022, the average annual growth rate is 2.2 percent, 0.1 percentage point higher than in previously published estimates (chart 1).

**Chart 1. Real GDP and Related Aggregates:  
Percent Change Over the Period 2017–2022**



GDI Gross domestic income  
GDP Gross domestic product  
U.S. Bureau of Economic Analysis

Table 2. Revisions to Real GDP and GDI, 1930–2022

Year	GDP			GDI <sup>1</sup>			Average of GDP and GDI <sup>2</sup>			Difference GDP-GDI		
	Percent change from preceding period									Percentage points		
	Previously published	Revised	Revision	Previously published	Revised	Revision	Previously published	Revised	Revision	Previously published	Revised	Revision
1930	-8.5	-8.5	0.0	-7.4	-7.4	0.0	-8.0	-8.0	0.0	-1.1	-1.1	0.0
1931	-6.4	-6.4	0.0	-7.7	-7.7	0.0	-7.1	-7.1	0.0	1.3	1.3	0.0
1932	-12.9	-12.9	0.0	-12.5	-12.5	0.0	-12.7	-12.7	0.0	-0.4	-0.4	0.0
1933	-1.2	-1.2	0.0	-1.7	-1.7	0.0	-1.5	-1.5	0.0	0.5	0.5	0.0
1934	10.8	10.8	0.0	11.2	11.2	0.0	11.0	11.0	0.0	-0.4	-0.4	0.0
1935	8.9	8.9	0.0	9.9	9.9	0.0	9.4	9.4	0.0	-1.0	-1.0	0.0
1936	12.9	12.9	0.0	11.0	11.0	0.0	11.9	11.9	0.0	1.9	1.9	0.0
1937	5.1	5.1	0.0	6.7	6.7	0.0	5.9	5.9	0.0	-1.6	-1.6	0.0
1938	-3.3	-3.3	0.0	-4.1	-4.1	0.0	-3.7	-3.7	0.0	0.8	0.8	0.0
1939	8.0	8.0	0.0	7.4	7.4	0.0	7.7	7.7	0.0	0.6	0.6	0.0
1940	8.8	8.8	0.0	9.2	9.2	0.0	9.0	9.0	0.0	-0.4	-0.4	0.0
1941	17.7	17.7	0.0	18.7	18.7	0.0	18.2	18.2	0.0	-1.0	-1.0	0.0
1942	18.9	18.9	0.0	19.8	19.8	0.0	19.4	19.4	0.0	-0.9	-0.9	0.0
1943	17.0	17.0	0.0	17.4	17.4	0.0	17.2	17.2	0.0	-0.4	-0.4	0.0
1944	8.0	7.9	-0.1	5.8	5.8	0.0	6.9	6.9	0.0	2.2	2.1	-0.1
1945	-1.0	-1.0	0.0	-1.5	-1.5	0.0	-1.3	-1.3	0.0	0.5	0.5	0.0
1946	-11.6	-11.6	0.0	-10.6	-10.6	0.0	-11.1	-11.1	0.0	-1.0	-1.0	0.0
1947	-1.1	-1.1	0.0	-1.7	-1.7	0.0	-1.4	-1.4	0.0	0.6	0.6	0.0
1948	4.1	4.1	0.0	5.4	5.4	0.0	4.8	4.8	0.0	-1.3	-1.3	0.0
1949	-0.6	-0.6	0.0	-1.3	-1.3	0.0	-0.9	-0.9	0.0	0.7	0.7	0.0
1950	8.7	8.7	0.0	8.9	8.9	0.0	8.8	8.8	0.0	-0.2	-0.2	0.0
1951	8.0	8.0	0.0	7.4	7.4	0.0	7.7	7.7	0.0	0.6	0.6	0.0
1952	4.1	4.1	0.0	4.4	4.4	0.0	4.2	4.2	0.0	-0.3	-0.3	0.0
1953	4.7	4.7	0.0	4.4	4.4	0.0	4.5	4.5	0.0	0.3	0.3	0.0
1954	-0.6	-0.6	0.0	-0.3	-0.3	0.0	-0.5	-0.5	0.0	-0.3	-0.3	0.0
1955	7.1	7.1	0.0	7.4	7.4	0.0	7.3	7.3	0.0	-0.3	-0.3	0.0
1956	2.1	2.1	0.0	3.1	3.1	0.0	2.6	2.6	0.0	-1.0	-1.0	0.0
1957	2.1	2.1	0.0	1.7	1.7	0.0	1.9	1.9	0.0	0.4	0.4	0.0
1958	-0.7	-0.7	0.0	-0.9	-0.9	0.0	-0.8	-0.8	0.0	0.2	0.2	0.0
1959	6.9	6.9	0.0	7.0	7.0	0.0	7.0	7.0	0.0	-0.1	-0.1	0.0
1960	2.6	2.6	0.0	2.9	2.9	0.0	2.7	2.7	0.0	-0.3	-0.3	0.0
1961	2.6	2.6	0.0	2.5	2.5	0.0	2.5	2.5	0.0	0.1	0.1	0.0
1962	6.1	6.1	0.0	6.0	6.0	0.0	6.0	6.0	0.0	0.1	0.1	0.0
1963	4.4	4.4	0.0	4.6	4.6	0.0	4.5	4.5	0.0	-0.2	-0.2	0.0
1964	5.8	5.8	0.0	5.5	5.5	0.0	5.6	5.6	0.0	0.3	0.3	0.0
1965	6.5	6.5	0.0	6.4	6.4	0.0	6.4	6.4	0.0	0.1	0.1	0.0
1966	6.6	6.6	0.0	6.0	6.0	0.0	6.3	6.3	0.0	0.6	0.6	0.0
1967	2.7	2.7	0.0	3.0	3.0	0.0	2.9	2.9	0.0	-0.3	-0.3	0.0
1968	4.9	4.9	0.0	5.0	5.0	0.0	4.9	4.9	0.0	-0.1	-0.1	0.0
1969	3.1	3.1	0.0	3.3	3.3	0.0	3.2	3.2	0.0	-0.2	-0.2	0.0
1970	0.2	0.2	0.0	-0.2	-0.2	0.0	0.0	0.0	0.0	0.4	0.4	0.0
1971	3.3	3.3	0.0	3.0	3.0	0.0	3.1	3.1	0.0	0.3	0.3	0.0
1972	5.3	5.3	0.0	5.5	5.5	0.0	5.4	5.4	0.0	-0.2	-0.2	0.0
1973	5.6	5.6	0.0	5.8	5.8	0.0	5.7	5.7	0.0	-0.2	-0.2	0.0
1974	-0.5	-0.5	0.0	-0.6	-0.6	0.0	-0.6	-0.6	0.0	0.1	0.1	0.0
1975	-0.2	-0.2	0.0	-0.5	-0.5	0.0	-0.4	-0.4	0.0	0.3	0.3	0.0
1976	5.4	5.4	0.0	5.1	5.1	0.0	5.2	5.2	0.0	0.3	0.3	0.0
1977	4.6	4.6	0.0	4.8	4.8	0.0	4.7	4.7	0.0	-0.2	-0.2	0.0
1978	5.5	5.5	0.0	5.5	5.5	0.0	5.5	5.5	0.0	0.0	0.0	0.0
1979	3.2	3.2	0.0	2.4	2.4	0.0	2.8	2.8	0.0	0.8	0.8	0.0
1980	-0.3	-0.3	0.0	-0.1	-0.1	0.0	-0.2	-0.2	0.0	-0.2	-0.2	0.0
1981	2.5	2.5	0.0	2.9	2.9	0.0	2.7	2.7	0.0	-0.4	-0.4	0.0
1982	-1.8	-1.8	0.0	-0.9	-0.9	0.0	-1.3	-1.4	-0.1	-0.9	-0.9	0.0
1983	4.6	4.6	0.0	3.2	3.2	0.0	3.9	3.9	0.0	1.4	1.4	0.0
1984	7.2	7.2	0.0	7.8	7.8	0.0	7.5	7.5	0.0	-0.6	-0.6	0.0
1985	4.2	4.2	0.0	3.9	3.9	0.0	4.1	4.1	0.0	0.3	0.3	0.0
1986	3.5	3.5	0.0	2.9	2.9	0.0	3.2	3.2	0.0	0.6	0.6	0.0
1987	3.5	3.5	0.0	4.3	4.3	0.0	3.9	3.9	0.0	-0.8	-0.8	0.0
1988	4.2	4.2	0.0	5.1	5.1	0.0	4.6	4.6	0.0	-0.9	-0.9	0.0
1989	3.7	3.7	0.0	2.5	2.5	0.0	3.1	3.1	0.0	1.2	1.2	0.0
1990	1.9	1.9	0.0	1.5	1.5	0.0	1.7	1.7	0.0	0.4	0.4	0.0
1991	-0.1	-0.1	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	-0.1	-0.1	0.0
1992	3.5	3.5	0.0	3.2	3.2	0.0	3.4	3.4	0.0	0.3	0.3	0.0
1993	2.8	2.7	-0.1	2.2	2.2	0.0	2.5	2.5	0.0	0.6	0.5	-0.1
1994	4.0	4.0	0.0	4.4	4.4	0.0	4.2	4.2	0.0	-0.4	-0.4	0.0
1995	2.7	2.7	0.0	3.4	3.4	0.0	3.0	3.0	0.0	-0.7	-0.7	0.0
1996	3.8	3.8	0.0	4.3	4.3	0.0	4.0	4.0	0.0	-0.5	-0.5	0.0
1997	4.4	4.4	0.0	5.1	5.1	0.0	4.8	4.8	0.0	-0.7	-0.7	0.0
1998	4.5	4.5	0.0	5.3	5.3	0.0	4.9	4.9	0.0	-0.8	-0.8	0.0
1999	4.8	4.8	0.0	4.5	4.5	0.0	4.6	4.6	0.0	0.3	0.3	0.0
2000	4.1	4.1	0.0	4.7	4.7	0.0	4.4	4.4	0.0	-0.6	-0.6	0.0
2001	1.0	1.0	0.0	1.1	1.1	0.0	1.0	1.0	0.0	-0.1	-0.1	0.0
2002	1.7	1.7	0.0	1.3	1.3	0.0	1.5	1.5	0.0	0.4	0.4	0.0
2003	2.8	2.8	0.0	2.3	2.2	-0.1	2.5	2.5	0.0	0.5	0.6	0.1
2004	3.9	3.8	-0.1	3.9	3.9	0.0	3.9	3.9	0.0	0.0	-0.1	-0.1
2005	3.5	3.5	0.0	3.7	3.7	0.0	3.6	3.6	0.0	-0.2	-0.2	0.0
2006	2.8	2.8	0.0	3.9	3.9	0.0	3.3	3.3	0.0	-1.1	-1.1	0.0
2007	2.0	2.0	0.0	0.4	0.4	0.0	1.2	1.2	0.0	1.6	1.6	0.0
2008	0.1	0.1	0.0	-1.1	-1.1	0.0	-0.5	-0.5	0.0	1.2	1.2	0.0
2009	-2.6	-2.6	0.0	-2.7	-2.6	0.1	-2.6	-2.6	0.0	0.1	0.0	-0.1
2010	2.7	2.7	0.0	3.6	3.6	0.0	3.1	3.1	0.0	-0.9	-0.9	0.0
2011	1.5	1.6	0.1	2.2	2.2	0.0	1.9	1.9	0.0	-0.7	-0.6	0.1
2012	2.3	2.3	0.0	3.4	3.1	-0.3	2.8	2.7	-0.1	-1.1	-0.8	0.3
2013	1.8	2.1	0.3	1.4	1.3	-0.1	1.6	1.7	0.1	0.4	0.8	0.4
2014	2.3	2.5	0.2	3.1	3.2	0.1	2.7	2.8	0.1	-0.8	-0.7	0.1
2015	2.7	2.9	0.2	2.5	2.6	0.1	2.6	2.8	0.2	0.2	0.3	0.1
2016	1.7	1.8	0.1	0.9	1.0	0.1	1.3	1.4	0.1	0.8	0.8	0.0
2017	2.2	2.5	0.3	2.3	2.4	0.1	2.3	2.4	0.1	-0.1	0.1	0.2
2018	2.9	3.0	0.1	2.9	3.0	0.1	2.9	3.0	0.1	0.0	0.0	0.0
2019	2.3	2.5	0.2	2.2	2.6	0.4	2.3	2.5	0.2	0.1	-0.1	-0.2
2020	-2.8	-2.2	0.6	-2.3	-2.3	0.0	-2.5	-2.3	0.2	-0.5	0.1	0.6
2021	5.9	5.8	-0.1	5.5	6.1	0.6	5.7	6.0	0.3	0.4	-0.3	-0.7
2022	2.1	1.9	-0.2	2.1	2.1	0.0	2.1	2.0	-0.1	0.0	-0.2	-0.2

Note. Percent changes are from NIPA table 1.17.1.

1. Gross domestic income deflated by the implicit price deflator for gross domestic product.
2. A supplemental measure of U.S. economic activity that equally weights GDP and GDI.

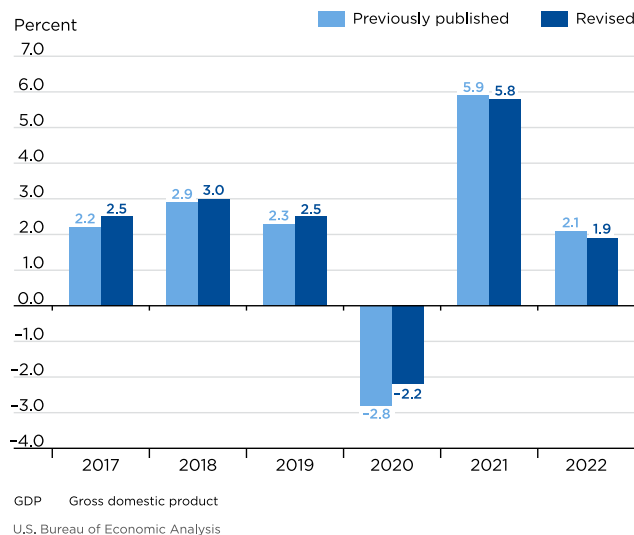


## GDP and Expenditure Components

Revisions to the percent change in real GDP over the recent period are presented in table 3A, and the contributions to those revisions are presented in table 3B. Details on revisions and contributions to revisions for each expenditure component of real GDP are presented in appendix A (tables A1–A12).

The percent change in real GDP was revised up for 2017, 2018, 2019, and 2020, and was revised down for 2021 and 2022 (chart 2).

**Chart 2. Real GDP: Percent Change From Preceding Period, 2017–2022**



- For 2017, the increase in real GDP was revised up 0.3 percentage point, from 2.2 percent to 2.5 percent. The revision primarily reflects upward revisions to PCE for both services and goods, as well as nonresidential fixed investment. These upward revisions were partly offset by an upward revision to imports, which is a subtraction in the calculation of GDP.
- For 2018, the increase in real GDP was revised up 0.1 percentage point, from 2.9 percent to 3.0 percent. The revision primarily reflects upward revisions to nonresidential fixed investment and to federal government spending that were partly offset by downward revisions to PCE and to private inventory investment. Imports were revised down.
- For 2019, the increase in real GDP was revised up 0.2 percentage point, from 2.3 percent to 2.5 percent, primarily reflecting upward revisions to state and local government spending, nonresidential fixed investment, and private inventory investment that were partly offset by an upward revision to imports.
- For 2020, the percent change in real GDP was revised up 0.6 percentage point, from a decrease of 2.8 percent to a decrease of 2.2 percent, primarily reflecting upward revisions to PCE services, state and local government spending, and private inventory investment.
- For 2021, the percent change in real GDP was revised down 0.1 percentage point, from 5.9 percent to 5.8 percent, primarily reflecting downward revisions to state and local government spending, federal government spending, and nonresidential fixed investment that were partly offset by an upward revision to PCE.

- For 2022, the percent change in real GDP was revised down 0.2 percentage point, from 2.1 percent to 1.9 percent, primarily reflecting downward revisions to PCE, private inventory investment, state and local government spending, and exports that were partly offset by upward revisions to nonresidential fixed investment and residential fixed investment. Imports were revised up.

**Table 3A. Real GDP: Percent Change From Preceding Period, 2017–2022**

Line number	Series	Share of current-dollar GDP	Change from preceding period						Revision in percent change					
			Percent						Percentage points					
			2022	2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021
1	<b>Gross domestic product</b>	<b>100.0</b>	2.5	3.0	2.5	-2.2	5.8	1.9	0.3	0.1	0.2	0.6	-0.1	-0.2
2	<b>Personal consumption expenditures</b>	<b>68.0</b>	2.6	2.7	2.0	-2.5	8.4	2.5	0.2	-0.2	0.0	0.5	0.1	-0.2
3	Goods	23.3	4.1	4.0	3.0	4.9	11.3	0.3	0.2	0.1	-0.1	-0.3	-0.9	0.8
4	Durable goods	8.3	6.8	6.6	3.3	8.0	16.7	-0.3	0.4	-0.2	-0.5	-2.0	-1.8	0.1
5	Nondurable goods	15.0	2.8	2.6	2.9	3.3	8.5	0.6	0.2	0.1	0.1	0.6	-0.3	1.1
6	Services	44.7	1.9	2.2	1.5	-5.9	6.9	3.7	0.2	-0.2	0.0	0.7	0.6	-0.8
7	<b>Gross private domestic investment</b>	<b>18.5</b>	4.4	5.8	3.1	-4.7	8.7	4.8	0.3	0.1	0.3	0.6	-0.3	0.8
8	Fixed investment	17.9	4.5	5.1	2.7	-2.1	7.1	1.3	0.4	0.2	0.2	0.2	-0.3	1.5
9	Nonresidential	13.3	4.6	6.9	3.7	-4.7	5.9	5.2	0.5	0.4	0.1	0.2	-0.5	1.3
10	Structures	2.7	2.6	5.8	2.5	-9.5	-3.2	-2.1	-1.8	1.7	0.2	0.6	3.2	4.5
11	Equipment	5.2	3.8	5.9	1.1	-10.1	6.4	5.2	1.0	-0.7	-0.2	0.4	-3.9	0.9
12	Intellectual property products	5.5	6.9	8.9	7.8	4.5	10.4	9.1	1.3	0.8	0.5	-0.3	0.7	0.3
13	Residential	4.5	4.3	-0.7	-0.9	7.2	10.7	-9.0	0.3	-0.1	0.1	0.0	0.0	1.6
14	Change in private inventories	0.6	---	---	---	---	---	---	---	---	---	---	---	---
15	<b>Net exports of goods and services</b>	<b>-3.8</b>	---	---	---	---	---	---	---	---	---	---	---	---
16	Exports	11.6	4.1	2.9	0.5	-13.1	6.3	7.0	-0.2	0.1	0.0	0.1	0.2	-0.1
17	Goods	8.0	4.1	4.2	0.2	-10.0	7.6	5.8	0.0	0.0	0.1	0.1	0.2	-0.5
18	Services	3.6	4.1	0.3	1.2	-18.7	3.8	9.6	-0.4	0.1	0.0	0.1	0.5	0.9
19	Imports	15.4	4.7	4.0	1.2	-9.0	14.5	8.6	0.2	-0.2	0.1	0.0	0.4	0.5
20	Goods	12.7	4.5	5.1	0.6	-5.9	14.6	6.8	0.0	0.0	0.1	-0.1	0.1	-0.1
21	Services	2.7	5.7	-0.6	4.0	-21.9	13.9	17.5	1.1	-1.1	0.0	0.1	1.6	3.3
22	<b>Government consumption expenditures and gross investment</b>	<b>17.3</b>	0.6	2.0	3.9	3.2	-0.3	-0.9	0.2	0.3	0.6	0.6	-0.9	-0.3
23	Federal	6.4	0.5	3.5	3.8	6.1	1.4	-2.8	0.1	0.5	-0.1	-0.1	-0.9	-0.3
24	National defense	3.6	1.0	3.5	5.3	2.8	-1.9	-2.8	0.1	0.2	0.0	-0.1	-0.7	0.0
25	Nondefense	2.7	-0.2	3.4	1.7	10.9	5.9	-2.9	0.1	0.9	-0.2	-0.3	-1.4	-0.7
26	State and local	10.9	0.6	1.1	4.0	1.4	-1.3	0.2	0.2	0.2	1.0	1.0	-0.8	-0.5

**GDP** Gross domestic product

Note. Percent changes are from NIPA table 1.1.1 and shares are from NIPA table 1.1.10.

**Table 3B. Contributions to Percent Change in Real GDP, 2017–2022**

Line number	Series	Contributions to percent change						Revision in contributions to percent change					
		Percent						Percentage points					
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
	<b>Percent change at annual rate:</b>												
1	<b>Gross domestic product</b>	2.5	3.0	2.5	-2.2	5.8	1.9	0.3	0.1	0.2	0.6	-0.1	-0.2
	<b>Percentage points at annual rates:</b>												
2	<b>Personal consumption expenditures</b>	1.79	1.86	1.35	-1.69	5.59	1.72	0.17	-0.09	0.01	0.32	0.05	-0.13
3	Goods	0.88	0.84	0.63	1.02	2.51	0.07	0.06	0.01	-0.03	-0.05	-0.21	0.18
4	Durable goods	0.48	0.47	0.23	0.56	1.28	-0.02	0.03	-0.01	-0.04	-0.14	-0.18	0.02
5	Nondurable goods	0.40	0.37	0.40	0.46	1.22	0.09	0.03	0.02	0.01	0.09	-0.04	0.17
6	Services	0.90	1.01	0.71	-2.70	3.08	1.65	0.10	-0.11	0.02	0.38	0.25	-0.31
7	<b>Gross private domestic investment</b>	0.77	1.02	0.55	-0.85	1.52	0.86	0.07	0.03	0.06	0.10	-0.03	0.14
8	Fixed investment	0.77	0.90	0.48	-0.37	1.25	0.24	0.08	0.06	0.04	0.03	-0.05	0.27
9	Nonresidential	0.61	0.93	0.51	-0.66	0.78	0.68	0.07	0.07	0.03	0.01	-0.05	0.18
10	Structures	0.08	0.17	0.08	-0.30	-0.09	-0.06	-0.05	0.04	0.01	0.02	0.10	0.11
11	Equipment	0.22	0.35	0.06	-0.58	0.33	0.26	0.06	-0.02	-0.01	0.01	-0.19	0.04
12	Intellectual property products	0.31	0.41	0.37	0.22	0.54	0.48	0.06	0.05	0.03	-0.01	0.04	0.02
13	Residential	0.16	-0.03	-0.04	0.28	0.47	-0.44	0.01	-0.01	0.00	0.00	0.00	0.09
14	Change in private inventories	0.00	0.12	0.08	-0.48	0.26	0.62	0.00	-0.03	0.03	0.07	0.02	-0.12
15	<b>Net exports of goods and services</b>	-0.20	-0.26	-0.12	-0.24	-1.25	-0.48	-0.05	0.03	-0.01	0.02	0.00	-0.08
16	Exports	0.49	0.35	0.06	-1.52	0.66	0.76	-0.02	0.00	0.00	0.02	0.02	-0.03
17	Goods	0.32	0.34	0.01	-0.75	0.53	0.44	0.00	0.00	0.00	0.01	0.01	-0.05
18	Services	0.17	0.01	0.05	-0.77	0.13	0.33	-0.02	0.00	0.00	0.01	0.01	0.03
19	Imports	-0.69	-0.60	-0.18	1.28	-1.91	-1.24	-0.03	0.03	-0.01	0.00	-0.02	-0.05
20	Goods	-0.53	-0.62	-0.07	0.67	-1.60	-0.82	0.00	0.00	-0.01	0.00	0.01	0.03
21	Services	-0.16	0.02	-0.11	0.61	-0.31	-0.42	-0.03	0.03	0.00	0.00	-0.03	-0.08
22	<b>Government consumption expenditures and gross investment</b>	0.10	0.35	0.68	0.56	-0.05	-0.16	0.02	0.06	0.10	0.11	-0.16	-0.06
23	Federal	0.03	0.22	0.25	0.40	0.10	-0.19	0.00	0.03	0.00	-0.01	-0.07	-0.02
24	National defense	0.04	0.13	0.21	0.11	-0.08	-0.11	0.00	0.00	0.01	-0.01	-0.03	0.00
25	Nondefense	-0.01	0.09	0.04	0.29	0.17	-0.08	0.00	0.02	-0.01	-0.01	-0.05	-0.01
26	State and local	0.07	0.12	0.43	0.16	-0.15	0.03	0.02	0.02	0.11	0.12	-0.09	-0.04

Note. Contributions are from NIPA table 1.1.2.

## Prices

Revisions to BEA's price measures over the recent period, such as gross domestic purchases, GDP, and PCE, were small and reflect revised and newly available source data, improved price measures as described earlier, and, for the most recent year (2022), the regular incorporation of annual weights. Over the recent period, from 2017 to 2022, the average annual growth rate in prices for gross domestic purchases—a measure of the prices paid by consumers, businesses, and governments—is 3.2 percent, the same as previously published (chart 1). The revisions to the percent change in prices and price contributions are presented in tables 4A and 4B, respectively.

- The percent change in the gross domestic purchases price index was revised down for 2017 and 2018 and was unrevised for 2019–2022.
- The percent change in GDP price index was revised down for 2017–2019, unrevised for 2020, and revised up for 2021 and 2022.
- The percent change in PCE price index was revised down for 2017–2019, unrevised for 2020, and revised up for 2021 and 2022.

**Table 4A. Prices for Gross Domestic Purchases: Percent Change from Preceding Period, 2017–2022**

Line number	Series	Change from preceding period						Revision in percent change					
		Percent						Percentage points					
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
1	<b>Gross domestic purchases</b>	1.8	2.2	1.5	1.3	4.2	6.8	-0.1	-0.1	0.0	0.0	0.0	0.0
2	<b>Personal consumption expenditures</b>	1.7	2.0	1.4	1.1	4.2	6.5	-0.1	-0.1	-0.1	0.0	0.2	0.2
3	Goods	0.3	0.8	-0.4	-0.8	4.9	8.6	0.0	0.0	0.0	-0.1	0.0	0.0
4	Durable goods	-2.3	-1.4	-1.0	-0.9	5.5	6.4	0.0	0.1	0.0	0.0	-0.1	-0.1
5	Nondurable goods	1.6	1.9	-0.1	-0.7	4.6	9.8	0.0	0.0	0.0	0.0	0.1	-0.1
6	Services	2.4	2.6	2.3	2.0	3.8	5.4	-0.1	-0.2	-0.1	0.0	0.2	0.4
7	<b>Gross private domestic investment</b>	1.5	1.5	1.4	1.2	3.4	7.7	-0.2	-0.4	-0.2	-0.1	-0.2	-0.5
8	Fixed investment	1.5	1.6	1.4	1.2	3.7	7.9	-0.2	-0.3	-0.2	-0.2	-0.3	-0.5
9	Nonresidential	0.6	0.4	1.0	0.6	1.3	6.0	-0.3	-0.4	-0.3	-0.2	-0.4	-0.5
10	Structures	2.4	1.2	4.0	1.5	3.4	14.7	-0.1	-0.3	-0.1	0.2	-0.7	-1.7
11	Equipment	-0.2	-0.1	0.1	-0.5	0.6	6.2	-0.2	-0.2	0.0	0.0	0.2	0.0
12	Intellectual property products	0.6	0.6	0.3	1.3	1.0	1.7	-0.3	-0.6	-0.6	-0.5	-0.6	-0.7
13	Residential	4.5	5.6	2.9	3.3	11.0	13.8	0.0	0.0	0.0	0.0	-0.1	-0.1
14	Change in private inventories	---	---	---	---	---	---	---	---	---	---	---	---
15	<b>Government consumption expenditures and gross investment</b>	2.3	3.6	1.6	2.2	5.3	7.0	0.0	-0.1	-0.1	0.3	0.0	-0.5
16	Federal	1.8	2.8	1.7	1.0	3.2	5.6	0.0	-0.1	-0.1	-0.1	-0.2	0.6
17	National defense	1.6	2.6	1.6	1.1	3.5	6.3	0.0	-0.2	0.0	0.0	-0.2	1.1
18	Nondefense	2.1	3.0	1.9	0.8	2.9	4.7	-0.1	-0.1	-0.2	-0.3	-0.1	0.1
19	State and local	2.6	4.1	1.5	2.9	6.5	7.9	0.0	0.0	-0.1	0.5	0.0	-1.2
<b>Addenda:</b>													
20	<b>Gross domestic purchases:</b>												
21	Food	-0.1	0.5	1.0	3.4	3.0	10.1	0.0	0.0	0.0	0.0	0.0	-0.3
22	Energy goods and services	8.7	8.2	-2.2	-8.7	20.5	25.2	0.0	0.1	0.0	-0.1	0.1	-1.1
23	Excluding food and energy	1.7	2.1	1.6	1.5	3.9	6.1	-0.1	-0.2	-0.1	0.1	0.0	0.0
24	<b>Personal consumption expenditures:</b>												
25	PCE excluding food and energy	1.6	1.9	1.6	1.3	3.6	5.2	-0.1	-0.1	-0.1	0.0	0.1	0.2
26	PCE excluding food, energy, and housing <sup>1</sup>	1.2	1.6	1.3	1.0	3.9	5.1	---	---	---	---	---	---
27	Energy goods and services	8.7	8.1	-2.1	-8.5	20.8	25.7	0.0	0.1	0.0	0.0	0.0	-0.5
28	PCE services excluding energy and housing <sup>1</sup>	2.1	2.5	2.0	1.8	4.1	4.9	---	---	---	---	---	---
29	Housing <sup>1</sup>	3.4	3.4	3.4	2.8	2.5	5.8	---	---	---	---	---	---
30	<b>Gross domestic product (GDP)</b>	1.8	2.3	1.7	1.3	4.6	7.1	-0.1	-0.1	-0.1	0.0	0.1	0.1
31	<b>Exports of goods and services</b>	2.6	3.3	-0.5	-2.5	11.5	9.8	0.0	-0.1	0.0	-0.1	0.0	0.4
32	<b>Imports of goods and services</b>	2.2	2.7	-1.6	-2.1	7.2	7.2	0.0	0.0	0.0	0.1	-0.2	-0.3

1. Not previously published.

Note. Percent changes are from NIPA table 1.6.7, 2.3.7, and 1.1.7.

**Table 4B. Contributions to Percent Change in Prices for Gross Domestic Purchases, 2017–2022**

Line number	Series	Contributions to percent change						Revision in contributions to percent change					
		Percent						Percentage points					
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
	<b>Percent change at annual rate:</b>												
1	<b>Gross domestic purchases</b>	1.8	2.2	1.5	1.3	4.2	6.8	-0.1	-0.1	0.0	0.0	0.0	0.0
	<b>Percentage points at annual rates:</b>												
2	<b>Personal consumption expenditures</b>	1.15	1.35	0.94	0.70	2.72	4.24	-0.06	-0.06	-0.04	-0.02	0.08	0.11
3	Goods	0.06	0.17	-0.08	-0.16	1.08	1.91	0.00	0.01	0.00	0.00	0.01	-0.02
4	Durable goods	-0.16	-0.10	-0.07	-0.07	0.43	0.52	0.00	0.01	0.00	0.00	-0.01	-0.03
5	Nondurable goods	0.22	0.27	-0.01	-0.10	0.66	1.40	-0.01	0.00	0.00	-0.01	0.03	0.02
6	Services	1.09	1.18	1.02	0.87	1.64	2.33	-0.06	-0.07	-0.04	-0.01	0.08	0.13
7	<b>Gross private domestic investment</b>	0.25	0.27	0.25	0.21	0.59	1.35	-0.03	-0.05	-0.03	-0.01	-0.02	-0.06
8	Fixed investment	0.25	0.27	0.25	0.21	0.64	1.36	-0.03	-0.05	-0.03	-0.02	-0.04	-0.06
9	Nonresidential	0.08	0.06	0.14	0.08	0.17	0.76	-0.03	-0.05	-0.03	-0.02	-0.04	-0.05
10	Structures	0.07	0.04	0.12	0.04	0.09	0.37	0.00	-0.01	0.00	0.00	-0.02	-0.02
11	Equipment	-0.01	0.00	0.00	-0.03	0.03	0.30	-0.01	-0.01	-0.01	0.00	0.01	0.00
12	Intellectual property products	0.02	0.03	0.01	0.07	0.05	0.09	-0.02	-0.02	-0.03	-0.02	-0.03	-0.04
13	Residential	0.17	0.21	0.11	0.13	0.47	0.60	0.00	0.00	0.00	0.00	0.00	-0.01
14	Change in private inventories	0.00	0.00	0.00	-0.01	-0.05	-0.01	0.00	0.00	0.00	0.00	0.02	0.00
15	<b>Government consumption expenditures and gross investment</b>	0.39	0.61	0.27	0.38	0.93	1.19	-0.01	-0.01	-0.02	0.05	0.00	-0.07
16	Federal	0.12	0.17	0.11	0.07	0.22	0.36	0.00	-0.01	-0.01	-0.01	-0.01	0.04
17	National defense	0.06	0.10	0.06	0.04	0.14	0.23	0.00	0.00	0.00	-0.01	-0.01	0.04
18	Nondefense	0.06	0.08	0.05	0.02	0.08	0.13	0.00	0.00	0.00	-0.01	-0.01	0.00
19	State and local	0.27	0.43	0.15	0.31	0.71	0.83	-0.01	-0.01	-0.02	0.05	0.01	-0.11
	<b>Addenda:</b>												
20	<b>Gross domestic purchases:</b>												
21	Food	-0.01	0.02	0.05	0.17	0.16	0.52	0.00	0.00	0.00	0.00	0.01	0.03
22	Energy goods and services	0.23	0.22	-0.06	-0.23	0.46	0.66	0.01	0.01	0.00	-0.01	0.00	-0.02
23	Excluding food and energy	1.57	1.98	1.46	1.35	3.61	5.61	-0.10	-0.13	-0.10	0.02	0.04	-0.02
24	<b>Personal consumption expenditures:</b>												
25	PCE excluding food and energy	1.41	1.67	1.45	1.16	3.19	4.62	---	---	---	---	---	---
26	PCE excluding food, energy, and housing <sup>1</sup>	0.89	1.16	0.94	0.72	2.78	3.74	---	---	---	---	---	---
27	Energy goods and services	0.34	0.33	-0.09	-0.34	0.73	1.03	---	---	---	---	---	---
28	PCE services excluding energy and housing <sup>1</sup>	1.07	1.27	1.05	0.88	1.99	2.41	---	---	---	---	---	---
29	Housing <sup>1</sup>	0.52	0.51	0.51	0.44	0.41	0.88	---	---	---	---	---	---

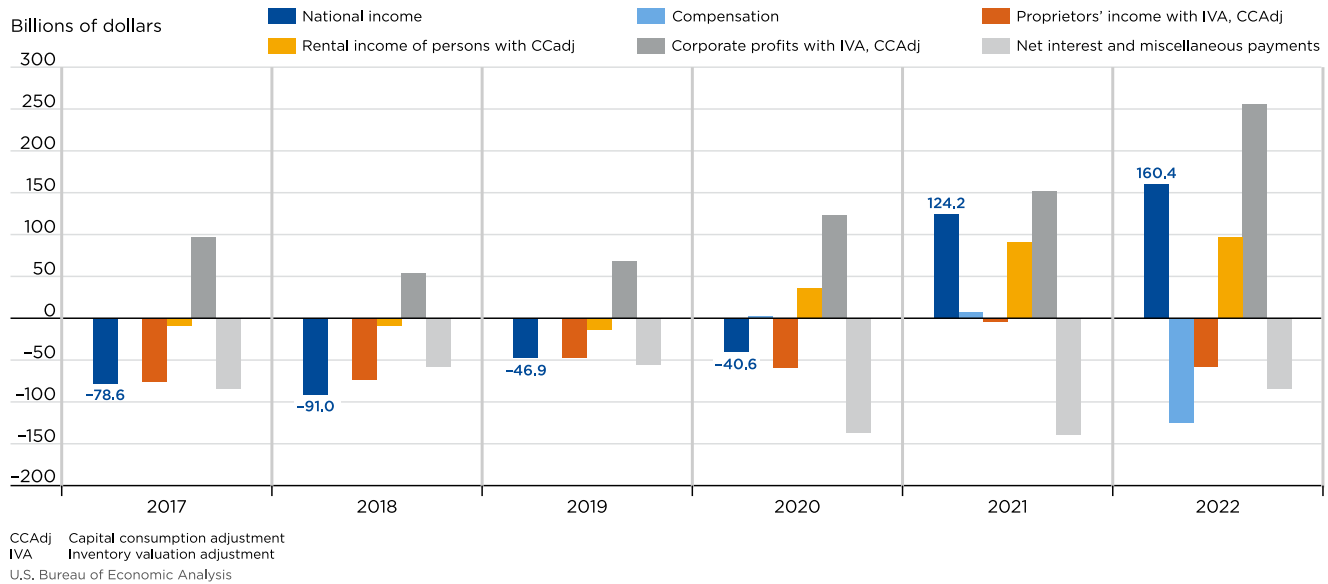
1. Contributions not previously published.

Note. Contributions are from NIPA tables 1.6.8 and 2.3.8.

## Income and Saving

Revisions to the components of national income and GDI over the recent period are presented in tables 5 and 6 and chart 3.

**Chart 3. National Income, 2017–2022**



- The downward revisions to national income for 2017–2019 primarily reflect downward revisions to nonfarm proprietors' income and to net interest and miscellaneous payments that were partly offset by upward revisions to corporate profits. The revisions to nonfarm proprietors' income reflect revised and newly available IRS audit data; the revisions to corporate profits and net interest primarily reflect the new treatment of RICs.
- The downward revision to national income for 2020 primarily reflects downward revisions to net interest and miscellaneous receipts and nonfarm proprietors' income that were partly offset by upward revisions to corporate profits and rental income of persons. The revisions to net interest and corporate profits primarily reflect the new treatment of RICs. The revision to nonfarm proprietors' income reflects revised and newly available IRS audit data. The revision to rental income of persons is primarily due to the incorporation of detailed housing statistics from the ACS.
- The upward revision to national income for 2021 primarily reflects upward revisions to corporate profits and to rental income of persons that were partly offset by a downward revision to net interest and miscellaneous receipts. The revisions to corporate profits and net interest primarily reflect newly available SOI data and the new treatment of RICs. The revision to rental income of persons is primarily due to the incorporation of detailed housing statistics from the ACS.

- The upward revision to national income for 2022 primarily reflects upward revisions to corporate profits and rental income of persons that were partly offset by downward revisions to compensation, net interest and miscellaneous receipts, and nonfarm proprietors' income. The revision to corporate profits reflects revised Census QFR data as well as newly available compilations of annual corporate financial statements from publicly available companies. The revision to rental income of persons is primarily due to the incorporation of detailed housing statistics from the ACS. The revision to compensation primarily reflects revised QCEW data, new Census data on wages paid to tipped employees, and new BLS data on wages not covered by the QCEW program. The revision to net interest and miscellaneous receipts primarily reflects newly available SOI data for 2021 and revised indicator data. The revision to nonfarm proprietors' income reflects new IRS tax data and updated business meals and entertainment expense data from BEA.



**Table 5. National Income by Type of Income, 2017–2022**

[Billions of dollars]

Line number	Series	Level						Revision in level						Revision in change					
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
1	<b>National income</b>	<b>16,688.2</b>	<b>17,570.8</b>	<b>18,281.0</b>	<b>17,854.0</b>	<b>19,909.7</b>	<b>21,678.4</b>	<b>-78.6</b>	<b>-91.0</b>	<b>-46.9</b>	<b>-40.6</b>	<b>124.2</b>	<b>160.4</b>	<b>-20.5</b>	<b>-12.3</b>	<b>44.0</b>	<b>6.4</b>	<b>164.7</b>	<b>36.2</b>
2	<b>Compensation of employees</b>	<b>10,424.4</b>	<b>10,957.4</b>	<b>11,447.9</b>	<b>11,594.7</b>	<b>12,545.9</b>	<b>13,439.2</b>	<b>0.0</b>	<b>-0.5</b>	<b>-0.2</b>	<b>1.9</b>	<b>7.4</b>	<b>-125.3</b>	<b>0.0</b>	<b>-0.5</b>	<b>0.3</b>	<b>2.1</b>	<b>5.5</b>	<b>-132.7</b>
3	Wages and salaries	8,474.4	8,899.8	9,325.0	9,464.6	10,312.6	11,116.0	0.0	-0.2	0.4	7.3	22.5	-73.6	0.0	-0.2	0.6	6.9	15.3	-96.1
4	Government	1,348.2	1,401.9	1,450.7	1,494.3	1,546.3	1,622.5	0.0	-0.1	0.2	-0.1	2.1	8.7	0.0	-0.1	0.3	-0.3	2.3	6.6
5	Other	7,126.2	7,498.0	7,874.3	7,970.3	8,766.4	9,493.6	0.0	-0.1	0.2	7.4	20.4	-82.3	0.0	-0.1	0.3	7.2	13.0	-102.7
6	Supplements to wages and salaries	1,950.0	2,057.6	2,123.0	2,130.0	2,233.2	2,323.2	0.0	-0.3	-0.6	-5.3	-15.1	-51.7	0.0	-0.3	-0.3	-4.8	-9.8	-36.6
7	Employer contributions for employee pension and insurance funds	1,345.3	1,432.8	1,472.4	1,471.5	1,526.8	1,559.1	0.0	-0.3	-0.5	-4.7	-23.4	-53.4	0.0	-0.3	-0.2	-4.3	-18.7	-30.0
8	Employer contributions for government social insurance	604.7	624.8	650.6	658.6	706.4	764.0	0.0	0.0	-0.1	-0.6	8.3	1.7	0.0	0.0	-0.1	-0.5	8.9	-6.6
9	<b>Proprietors' income with IVA and CCAdj</b>	<b>1,428.6</b>	<b>1,495.3</b>	<b>1,554.1</b>	<b>1,583.8</b>	<b>1,749.1</b>	<b>1,790.9</b>	<b>-76.0</b>	<b>-73.4</b>	<b>-47.3</b>	<b>-59.3</b>	<b>-4.5</b>	<b>-57.4</b>	<b>-1.9</b>	<b>2.6</b>	<b>26.1</b>	<b>-12.0</b>	<b>54.8</b>	<b>-52.9</b>
10	Farm	41.0	32.1	32.1	44.4	72.2	81.7	1.9	2.9	2.9	-0.8	20.9	-10.0	0.0	1.0	0.0	-3.7	21.7	-30.9
11	Nonfarm	1,387.6	1,463.2	1,522.1	1,539.4	1,676.8	1,709.1	-77.9	-76.3	-50.2	-58.5	-25.4	-47.4	-1.9	1.6	26.1	-8.3	33.1	-22.0
12	<b>Rental income of persons with CCAdj</b>	<b>642.0</b>	<b>671.5</b>	<b>684.5</b>	<b>756.1</b>	<b>814.2</b>	<b>878.3</b>	<b>-8.6</b>	<b>-8.5</b>	<b>-13.7</b>	<b>36.3</b>	<b>90.4</b>	<b>96.4</b>	<b>-0.6</b>	<b>0.1</b>	<b>-5.3</b>	<b>50.0</b>	<b>54.1</b>	<b>6.0</b>
13	<b>Corporate profits with IVA and CCAdj</b>	<b>2,225.2</b>	<b>2,365.2</b>	<b>2,470.3</b>	<b>2,383.3</b>	<b>2,922.8</b>	<b>3,208.7</b>	<b>96.7</b>	<b>53.2</b>	<b>68.2</b>	<b>123.2</b>	<b>151.7</b>	<b>256.1</b>	<b>-9.9</b>	<b>-43.5</b>	<b>14.9</b>	<b>55.0</b>	<b>28.5</b>	<b>104.4</b>
14	Taxes on corporate income	297.2	297.4	297.4	307.5	404.6	542.4	-0.2	-0.3	0.0	18.6	16.4	68.6	-0.1	-0.1	0.3	18.6	-2.2	52.2
15	Profits after tax with IVA and CCAdj	1,928.1	2,067.7	2,172.9	2,075.8	2,518.1	2,666.3	96.9	53.5	68.2	104.6	135.3	187.5	-9.9	-43.4	14.7	36.5	30.7	52.2
16	Net dividends	1,253.9	1,319.9	1,416.8	1,496.7	1,814.7	1,887.3	-10.3	-18.5	-114.4	-44.6	155.5	181.8	39.7	-8.2	-95.9	69.8	200.1	26.4
17	Undistributed profits with IVA and CCAdj	674.2	747.8	756.1	579.1	703.4	779.0	107.1	72.0	182.6	149.2	-20.2	5.6	-49.6	-35.2	110.6	-33.3	-169.4	25.8
18	<b>Net interest and miscellaneous payments</b>	<b>525.2</b>	<b>536.4</b>	<b>515.2</b>	<b>529.3</b>	<b>504.6</b>	<b>457.4</b>	<b>-83.8</b>	<b>-57.7</b>	<b>-56.0</b>	<b>-136.5</b>	<b>-139.5</b>	<b>-84.8</b>	<b>-5.7</b>	<b>26.1</b>	<b>1.7</b>	<b>-80.5</b>	<b>-2.9</b>	<b>54.7</b>
19	<b>Taxes on production and imports</b>	<b>1,364.0</b>	<b>1,457.1</b>	<b>1,533.1</b>	<b>1,520.5</b>	<b>1,671.9</b>	<b>1,810.2</b>	<b>-3.5</b>	<b>-4.3</b>	<b>3.1</b>	<b>-5.8</b>	<b>8.5</b>	<b>37.8</b>	<b>-1.0</b>	<b>-0.9</b>	<b>7.4</b>	<b>-8.9</b>	<b>14.3</b>	<b>29.3</b>
20	<b>Less: Subsidies</b>	<b>59.9</b>	<b>63.3</b>	<b>73.0</b>	<b>656.9</b>	<b>482.7</b>	<b>127.4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.4</b>	<b>0.8</b>	<b>3.8</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.4</b>	<b>1.2</b>	<b>3.0</b>
21	<b>Business current transfer payments (net)</b>	<b>142.9</b>	<b>155.8</b>	<b>160.8</b>	<b>145.0</b>	<b>189.0</b>	<b>216.8</b>	<b>-5.8</b>	<b>-3.1</b>	<b>-3.2</b>	<b>0.9</b>	<b>18.0</b>	<b>33.5</b>	<b>-1.4</b>	<b>2.7</b>	<b>0.0</b>	<b>4.1</b>	<b>17.0</b>	<b>15.5</b>
22	To persons (net)	48.3	50.3	55.8	47.2	87.7	99.1	0.0	0.2	0.7	3.1	16.8	28.0	0.0	0.2	0.5	2.4	13.6	11.3
23	To government (net)	93.9	101.5	93.6	96.9	102.4	115.2	-5.8	-3.3	-3.8	-0.6	4.9	11.8	-1.4	2.4	-0.5	3.2	5.6	6.9
24	To the rest of the world (net)	0.7	4.1	11.4	0.9	-1.1	2.5	0.0	0.0	0.0	-1.6	-3.7	-6.3	0.0	0.0	0.0	-1.6	-2.2	-2.6
25	<b>Current surplus of government enterprises</b>	<b>-4.3</b>	<b>-4.6</b>	<b>-12.0</b>	<b>-1.8</b>	<b>-5.0</b>	<b>4.4</b>	<b>2.3</b>	<b>3.3</b>	<b>2.2</b>	<b>-1.7</b>	<b>-7.0</b>	<b>7.9</b>	<b>0.0</b>	<b>1.0</b>	<b>-1.1</b>	<b>-3.9</b>	<b>-5.3</b>	<b>14.9</b>

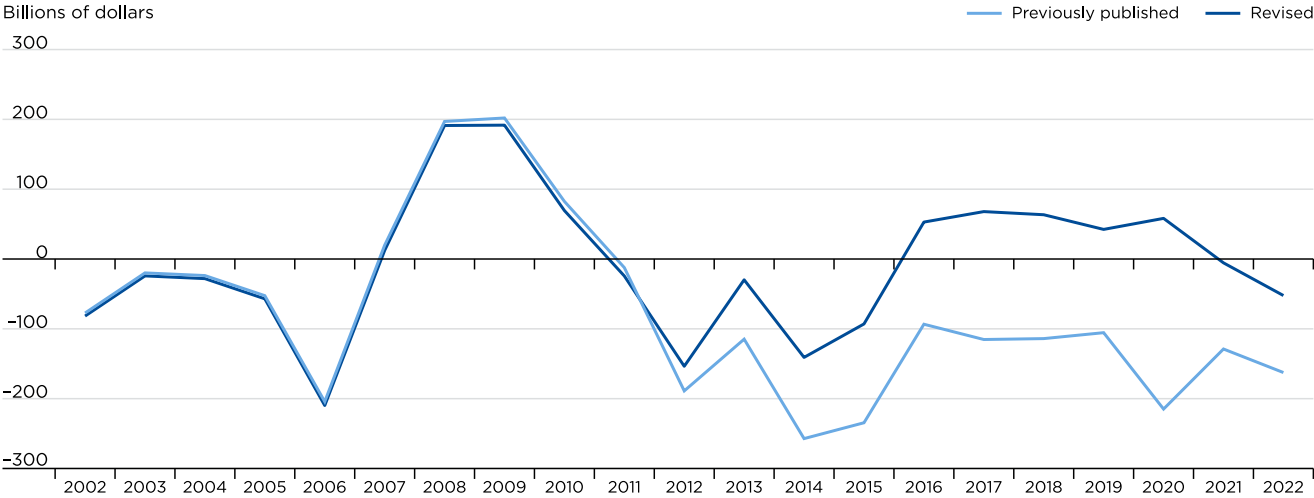
CCAdj Capital consumption adjustment

IVA Inventory valuation adjustment

Note. Dollar levels are from NIPA table 1.12.

The update had a notable impact on the statistical discrepancy (chart 4 and table 6). In theory, GDI should equal GDP, but in practice, they differ because their components are estimated using largely independent source data. For 2021, the level of the discrepancy (measured as GDP minus GDI) was revised from  $-\$128.9$  billion to  $-\$5.5$  billion. For 2022, the discrepancy was revised from  $-\$162.6$  billion to  $-\$52.3$  billion. For both years, the upward revision to current-dollar GDP was larger than the upward revision to current-dollar GDI. With the revision, the statistical discrepancy as a percent of GDP is 0.3 percent or less for 2017 forward; the average without regard to sign over the last 20 years is 0.5 percent.

**Chart 4. Statistical Discrepancy, 2002–2022**



U.S. Bureau of Economic Analysis

**Table 6. Relation of Gross Domestic Product, Gross Domestic Income, Gross National Income, National Income, and Personal Income, 2017–2022**

[Billions of dollars]

Line number	Series	Level						Revision in level						Revision in change					
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
1	<b>Gross domestic product</b>	19,612.1	20,656.5	21,521.4	21,323.0	23,594.0	25,744.1	134.8	123.5	140.4	262.5	279.0	281.4	25.0	-11.3	17.0	122.1	16.5	2.4
2	Less: Statistical discrepancy	67.9	63.4	42.4	58.2	-5.5	-52.3	183.2	177.4	148.0	273.1	123.5	110.3	36.8	-5.7	-29.5	125.2	-149.7	-13.1
3	<b>Equals: Gross domestic income</b>	19,544.2	20,593.1	21,479.0	21,264.7	23,599.5	25,796.4	-48.4	-54.0	-7.5	-10.7	155.5	171.0	-11.9	-5.6	46.4	-3.1	166.1	15.6
4	Plus: Income receipts from the rest of the world	1,031.1	1,138.7	1,174.7	993.0	1,112.1	1,252.6	0.0	0.0	2.5	21.7	25.1	-3.6	0.6	0.0	2.5	19.1	3.5	-28.8
5	Less: Income payments to the rest of the world	738.2	848.4	892.8	778.1	928.6	1,070.7	0.0	0.0	-1.3	3.8	14.7	-8.1	0.0	0.0	-1.3	5.1	10.9	-22.8
6	<b>Equals: Gross national income</b>	19,837.2	20,883.4	21,760.8	21,479.6	23,783.0	25,978.3	-48.4	-54.0	-3.7	7.2	165.9	175.5	-11.3	-5.6	50.3	10.9	158.7	9.6
7	Less: Consumption of fixed capital	3,149.0	3,312.6	3,479.8	3,625.5	3,873.3	4,299.9	30.2	37.0	43.2	47.8	41.8	15.2	9.2	6.8	6.2	4.5	-6.0	-26.6
8	<b>Equals: National income</b>	16,688.2	17,570.8	18,281.0	17,854.0	19,909.7	21,678.4	-78.6	-91.0	-46.9	-40.6	124.2	160.4	-20.5	-12.3	44.0	6.4	164.7	36.2
9	Less:							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Corporate profits with IVA and CCAdj	2,225.2	2,365.2	2,470.3	2,383.3	2,922.8	3,208.7	96.7	53.2	68.2	123.2	151.7	256.1	-9.9	-43.5	14.9	55.0	28.5	104.4
11	Taxes on production and imports less subsidies	1,304.1	1,393.8	1,460.2	863.7	1,189.2	1,682.8	-3.5	-4.3	3.1	-5.4	7.7	34.0	-1.0	-0.9	7.4	-8.5	13.1	26.3
12	Contributions for government social insurance, domestic	1,298.9	1,361.7	1,424.6	1,449.3	1,558.0	1,701.7	0.0	0.1	0.0	-0.7	17.2	29.6	0.0	0.1	-0.1	-0.7	17.9	12.4
13	Net interest and miscellaneous payments on assets	525.2	536.4	515.2	529.3	504.6	457.4	-83.8	-57.7	-56.0	-136.5	-139.5	-84.8	-5.7	26.1	1.7	-80.5	-2.9	54.7
14	Business current transfer payments (net)	142.9	155.8	160.8	145.0	189.0	216.8	-5.8	-3.1	-3.2	0.9	18.0	33.5	-1.4	2.7	0.0	4.1	17.0	15.5
15	Current surplus of government enterprises	-4.3	-4.6	-12.0	-1.8	-5.0	4.4	2.3	3.3	2.2	-1.7	-7.0	7.9	0.0	1.0	-1.1	-3.9	-5.3	14.9
16	Plus: Personal income receipts on assets	2,611.0	2,789.4	2,949.9	2,913.7	3,214.7	3,432.0	-92.6	-72.9	-169.1	-181.7	12.2	88.1	34.7	19.7	-96.2	-12.7	194.0	75.8
17	Plus: Personal current transfer receipts	2,855.7	2,976.3	3,144.3	4,229.9	4,641.9	4,002.1	0.0	-0.3	-0.5	-1.2	24.5	91.4	0.0	-0.3	-0.2	-0.8	25.8	66.8
18	<b>Equals: Personal income</b>	16,662.8	17,528.2	18,356.2	19,629.0	21,407.7	21,840.8	-177.1	-155.6	-230.7	-203.3	112.8	63.6	32.2	21.5	-75.1	27.5	316.1	-49.3
<b>Addenda:</b>																			
19	Average of GDP and GDI <sup>1</sup>	19,578.2	20,624.8	21,500.2	21,293.8	23,596.8	25,770.3	43.2	34.7	66.4	125.9	217.2	226.2	6.5	-8.4	31.7	59.5	91.3	9.0
20	Statistical discrepancy as a percentage of GDP	0.3	0.3	0.2	0.3	0.0	-0.2	0.9	0.9	0.7	1.3	0.6	0.4	---	---	---	---	---	---

**CCAdj** Capital consumption adjustment

**IVA** Inventory valuation adjustment

1. The arithmetic average of gross domestic product and of gross domestic income.

Note. Dollar levels are from NIPA table 1.7.5.

Measures of personal income were impacted by newly available and revised source data, as well as improved methodologies (table 7):

- For 2017, 2018, and 2020 downward revisions to personal income were led by downward revisions to personal interest income (reflecting the new treatment of RICs), nonfarm proprietors' income (reflecting revised and newly available IRS audit data), and personal dividend income (reflecting the new treatment of REITs).
- For 2019, personal income was revised down, primarily reflecting downward revisions to personal dividend income, personal interest income, and nonfarm proprietors' income. The revision to personal dividend income primarily reflects the new treatment of REITs; the revision to personal interest income reflects the new treatment of RICs; and the revision to nonfarm proprietors' income reflects revised and newly available IRS audit data.
- For 2021, the upward revision to personal income primarily reflects upward revisions to personal dividend income and rental income of persons that were partly offset by a downward revision to personal interest income. The revision to personal dividend income reflects newly available SOI data for 2021 that were partly offset by the new treatment of REITs, the revision to rental income of persons is primarily due to the incorporation of detailed housing statistics from the ACS, and the revision to personal interest income reflects the new treatment of RICs.
- For 2022, the upward revision to personal income primarily reflects upward revisions to personal dividend income (primarily reflecting newly available SOI data for 2021 and revised indicator data that were partly offset by the new treatment for REITs), rental income of persons (primarily reflecting improved measures of housing), and personal current transfer receipts (mainly reflecting government social benefits to persons based on new and revised Office of Management and Budget fiscal year budget data). These revisions were partly offset by downward revisions to compensation (both to private wages and salaries reflecting revised QCEW data and to supplements based on new U.S. Department of Health and Human Services Medical Expenditures Panel Survey data for private employers), personal interest income (reflecting the new treatment of RICs), and nonfarm proprietors' income (reflecting newly available SOI data for 2021 and revised indicator data).

The personal saving rate (personal saving as a percentage of disposable personal income) was revised down from 7.3 percent to 5.8 percent for 2017, revised down from 7.6 percent to 6.4 percent for 2018, revised down from 8.8 percent to 7.4 percent for 2019, revised down from 17.0 percent to 15.4 percent for 2020, revised down from 12.0 percent to 11.4 percent for 2021, and revised down from 3.5 percent to 3.3 percent for 2022.

**Table 7. Personal Income and Its Disposition, 2017–2022**

[Billions of dollars]

Line number	Series	Level						Revision in level						Revision in change					
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
1	<b>Personal income</b>	16,662.8	17,528.2	18,356.2	19,629.0	21,407.7	21,840.8	-177.1	-155.6	-230.7	-203.3	112.8	63.6	32.2	21.5	-75.1	27.5	316.1	-49.3
2	<b>Compensation of employees</b>	10,424.4	10,957.4	11,447.9	11,594.7	12,545.9	13,439.2	0.0	-0.5	-0.2	1.9	7.4	-125.3	0.0	-0.5	0.3	2.1	5.5	-132.7
3	Wages and salaries	8,474.4	8,899.8	9,325.0	9,464.6	10,312.6	11,116.0	0.0	-0.2	0.4	7.3	22.5	-73.6	0.0	-0.2	0.6	6.9	15.3	-96.1
4	Private industries	7,126.2	7,498.0	7,874.3	7,970.3	8,766.4	9,493.6	0.0	-0.1	0.2	7.4	20.4	-82.3	0.0	-0.1	0.3	7.2	13.0	-102.7
5	Government	1,348.2	1,401.9	1,450.7	1,494.3	1,546.3	1,622.5	0.0	-0.1	0.2	-0.1	2.1	8.7	0.0	-0.1	0.3	-0.3	2.3	6.6
6	Supplements to wages and salaries	1,950.0	2,057.6	2,123.0	2,130.0	2,233.2	2,323.2	0.0	-0.3	-0.6	-5.3	-15.1	-51.7	0.0	-0.3	-0.3	-4.8	-9.8	-36.6
7	<b>Proprietors' income with IVA and CCAAdj</b>	1,428.6	1,495.3	1,554.1	1,583.8	1,749.1	1,790.9	-76.0	-73.4	-47.3	-59.3	-4.5	-57.4	-1.9	2.6	26.1	-12.0	54.8	-52.9
8	Farm	41.0	32.1	32.1	44.4	72.2	81.7	1.9	2.9	2.9	-0.8	20.9	-10.0	0.0	1.0	0.0	-3.7	21.7	-30.9
9	Nonfarm	1,387.6	1,463.2	1,522.1	1,539.4	1,676.8	1,709.1	-77.9	-76.3	-50.2	-58.5	-25.4	-47.4	-1.9	1.6	26.1	-8.3	33.1	-22.0
10	<b>Rental income of persons with CCAAdj</b>	642.0	671.5	684.5	756.1	814.2	878.3	-8.6	-8.5	-13.7	36.3	90.4	96.4	-0.6	0.1	-5.3	50.0	54.1	6.0
11	<b>Personal income receipts on assets</b>	2,611.0	2,789.4	2,949.9	2,913.7	3,214.7	3,432.0	-92.6	-72.9	-169.1	-181.7	12.2	88.1	34.7	19.7	-96.2	-12.7	194.0	75.8
12	Personal interest income	1,466.7	1,554.5	1,603.4	1,510.3	1,515.5	1,627.5	-82.3	-54.4	-54.7	-137.1	-143.1	-99.2	-5.1	27.9	-0.3	-82.4	-6.0	43.9
13	Personal dividend income	1,144.3	1,234.9	1,346.5	1,403.5	1,699.2	1,804.5	-10.3	-18.5	-114.4	-44.7	155.3	187.2	39.7	-8.2	-95.9	69.7	200.0	31.9
14	<b>Personal current transfer receipts</b>	2,855.7	2,976.3	3,144.3	4,229.9	4,641.9	4,002.1	0.0	-0.3	-0.5	-1.2	24.5	91.4	0.0	-0.3	-0.2	-0.8	25.8	66.8
15	Government social benefits to persons	2,807.4	2,926.0	3,088.5	4,182.7	4,554.1	3,903.0	0.0	-0.5	-1.2	-4.4	7.8	63.3	0.0	-0.5	-0.6	-3.2	12.1	55.6
16	Other current transfer receipts, from business (net)	48.3	50.3	55.8	47.2	87.7	99.1	0.0	0.2	0.7	3.1	16.8	28.0	0.0	0.2	0.5	2.4	13.6	11.3
17	<b>Less: Contributions for government social insurance</b>	1,298.9	1,361.7	1,424.6	1,449.3	1,558.0	1,701.7	0.0	0.1	0.0	-0.7	17.2	29.6	0.0	0.1	-0.1	-0.7	17.9	12.4
18	<b>Less: Personal current taxes</b>	2,048.8	2,074.2	2,199.3	2,256.5	2,743.3	3,138.3	0.2	-0.8	0.9	20.1	81.6	-58.3	-0.3	-1.0	1.7	19.2	61.5	-139.9
19	<b>Equals: Disposable personal income (DPI)</b>	14,613.9	15,454.0	16,157.0	17,372.5	18,664.4	18,702.5	-177.3	-154.8	-231.6	-223.4	31.3	121.9	32.5	22.4	-76.8	8.2	254.7	90.6
20	<b>Less: Personal outlays</b>	13,772.3	14,457.4	14,966.1	14,694.0	16,543.9	18,079.7	54.8	28.8	24.1	90.4	154.1	157.2	23.0	-26.0	-4.7	66.3	63.8	3.1
21	<b>Equals: Personal saving</b>	841.6	996.7	1,190.9	2,678.6	2,120.5	622.8	-232.1	-183.6	-255.8	-313.8	-122.8	-35.3	9.5	48.5	-72.1	-58.0	190.9	87.5
22	<b>Personal saving as a percentage of DPI (percent)</b>	5.8	6.4	7.4	15.4	11.4	3.3	-1.5	-1.2	-1.4	-1.6	-0.6	-0.2	---	---	---	---	---	---

CCAAdj Capital consumption adjustment

IVA Inventory valuation adjustment

Note. Dollar levels are from NIPA table 2.1.

The update had a notable impact on the measures of national saving by sector, presented in table 8. For most years for 1979 to 2022, personal saving was revised down and corporate saving was revised up, reflecting the new treatment of RICs output. For 2002 forward, downward revisions to personal saving and upward revisions to corporate saving reflect the new treatment of REITs.

**Table 8. Revisions to National Saving, Corporate Saving, Personal Saving, and Government Saving, 1979–2022**

[Billions of dollars]

	National saving			Corporate saving <sup>1</sup>			Personal saving			Government saving		
	Previously published	Revised	Revision	Previously published	Revised	Revision	Previously published	Revised	Revision	Previously published	Revised	Revision
1979	239.6	239.7	0.1	101.4	101.5	0.1	186.8	186.8	0.0	-48.6	-48.6	0.0
1980	201.7	201.9	0.2	72.3	71.6	-0.7	224.1	224.9	0.8	-94.7	-94.7	0.0
1981	256.6	257.0	0.4	89.4	91.7	2.3	265.5	263.6	-1.9	-98.2	-98.2	0.0
1982	188.9	189.1	0.2	85.6	88.0	2.4	293.3	291.2	-2.1	-190.1	-190.1	0.0
1983	154.1	154.2	0.1	115.7	115.1	-0.6	264.0	264.7	0.7	-225.6	-225.6	0.0
1984	283.2	283.4	0.2	149.5	153.8	4.3	330.3	326.3	-4.0	-196.7	-196.7	0.0
1985	240.8	241.0	0.2	157.5	159.7	2.2	284.9	282.9	-2.0	-201.7	-201.7	0.0
1986	179.2	179.4	0.2	108.5	110.6	2.1	290.6	288.7	-1.9	-219.9	-219.9	0.0
1987	218.5	218.7	0.2	123.2	138.2	15.0	275.4	260.6	-14.8	-180.1	-180.1	0.0
1988	292.1	292.3	0.2	142.9	146.5	3.6	320.5	317.1	-3.4	-171.3	-171.3	0.0
1989	271.5	271.7	0.2	110.3	115.0	4.7	340.0	335.4	-4.6	-178.7	-178.7	0.0
1990	224.8	225.0	0.2	103.2	104.0	0.8	361.1	360.6	-0.5	-239.5	-239.5	0.0
1991	221.0	221.2	0.2	133.5	128.8	-4.7	396.0	401.0	5.0	-308.5	-308.5	0.0
1992	187.4	187.8	0.4	139.0	142.9	3.9	453.9	450.5	-3.4	-405.5	-405.6	-0.1
1993	159.9	160.4	0.5	148.2	154.0	5.8	397.7	392.6	-5.1	-386.0	-386.2	-0.2
1994	239.5	240.2	0.7	195.7	202.9	7.2	363.4	357.2	-6.2	-319.6	-319.9	-0.3
1995	303.9	304.8	0.9	229.4	238.7	9.3	387.1	379.0	-8.1	-312.5	-312.9	-0.4
1996	403.6	404.7	1.1	254.5	268.3	13.8	382.3	369.9	-12.4	-233.2	-233.6	-0.4
1997	541.2	542.5	1.3	284.9	305.2	20.3	390.3	371.8	-18.5	-133.9	-134.4	-0.5
1998	620.8	622.0	1.2	203.0	226.7	23.7	446.5	424.6	-21.9	-28.7	-29.3	-0.6
1999	608.3	609.3	1.0	234.0	264.0	30.0	344.0	315.8	-28.2	30.2	29.5	-0.7
2000	613.4	614.9	1.5	142.9	179.9	37.0	351.4	316.8	-34.6	119.0	118.2	-0.8
2001	469.6	472.5	2.9	190.7	214.1	23.4	382.8	363.2	-19.6	-104.0	-104.7	-0.7
2002	338.0	342.3	4.3	326.2	342.2	16.0	462.5	451.6	-10.9	-450.7	-451.4	-0.7
2003	264.5	268.7	4.2	386.5	408.3	21.8	456.7	439.9	-16.8	-578.7	-579.4	-0.7
2004	331.6	336.0	4.4	428.6	462.2	33.6	445.4	417.0	-28.4	-542.5	-543.3	-0.8
2005	378.3	382.8	4.5	506.9	571.0	64.1	268.0	209.2	-58.8	-396.6	-397.4	-0.8
2006	512.8	518.2	5.4	461.1	550.1	89.0	358.7	276.0	-82.7	-307.0	-307.9	-0.9
2007	251.6	259.1	7.5	287.9	385.7	97.8	352.7	263.4	-89.3	-389.0	-390.0	-1.0
2008	-152.8	-147.2	5.6	189.6	248.3	58.7	503.4	451.5	-51.9	-845.8	-847.0	-1.2
2009	-384.1	-373.5	10.6	560.8	587.0	26.2	639.7	624.9	-14.8	-1,584.5	-1,585.5	-1.0
2010	-103.3	-89.6	13.7	813.3	866.2	52.9	709.3	671.4	-37.9	-1,625.8	-1,627.3	-1.5
2011	46.7	58.8	12.1	749.9	793.7	43.8	806.0	776.3	-29.7	-1,509.2	-1,511.2	-2.0
2012	431.7	396.9	-34.8	714.1	777.8	63.7	1,073.1	976.5	-96.6	-1,355.5	-1,357.5	-2.0
2013	507.9	437.2	-70.7	639.1	721.4	82.3	766.0	615.7	-150.3	-897.1	-899.9	-2.8
2014	712.7	626.5	-86.2	617.1	746.0	128.9	930.9	712.0	-218.9	-835.3	-831.6	3.7
2015	758.2	664.9	-93.3	499.3	648.3	149.0	1,034.9	790.6	-244.3	-776.0	-774.0	2.0
2016	547.7	465.6	-82.1	472.1	628.9	156.8	987.8	746.2	-241.6	-912.3	-909.5	2.8
2017	679.0	554.2	-124.8	567.1	674.2	107.1	1,073.8	841.6	-232.2	-961.8	-961.6	0.2
2018	751.4	638.2	-113.2	675.9	747.8	71.9	1,180.3	996.7	-183.6	-1,104.7	-1,106.2	-1.5
2019	774.5	696.7	-77.8	573.5	756.1	182.6	1,446.6	1,190.9	-255.7	-1,245.6	-1,250.3	-4.7
2020	478.1	311.3	-166.8	429.9	579.1	149.2	2,992.3	2,678.6	-313.7	-2,944.1	-2,946.3	-2.2
2021	356.5	327.4	-29.1	723.6	703.4	-20.2	2,243.4	2,120.5	-122.9	-2,610.5	-2,496.6	113.9
2022	372.7	400.0	27.3	773.4	779.0	5.6	658.1	622.8	-35.3	-1,058.8	-1,001.9	56.9

1. Undistributed corporate profits with inventory valuation adjustment and capital consumption adjustment.

Note. Data are net of the consumption of fixed capital. Levels are from NIPA table 5.1.

## Updates to Quarterly NIPA Measures

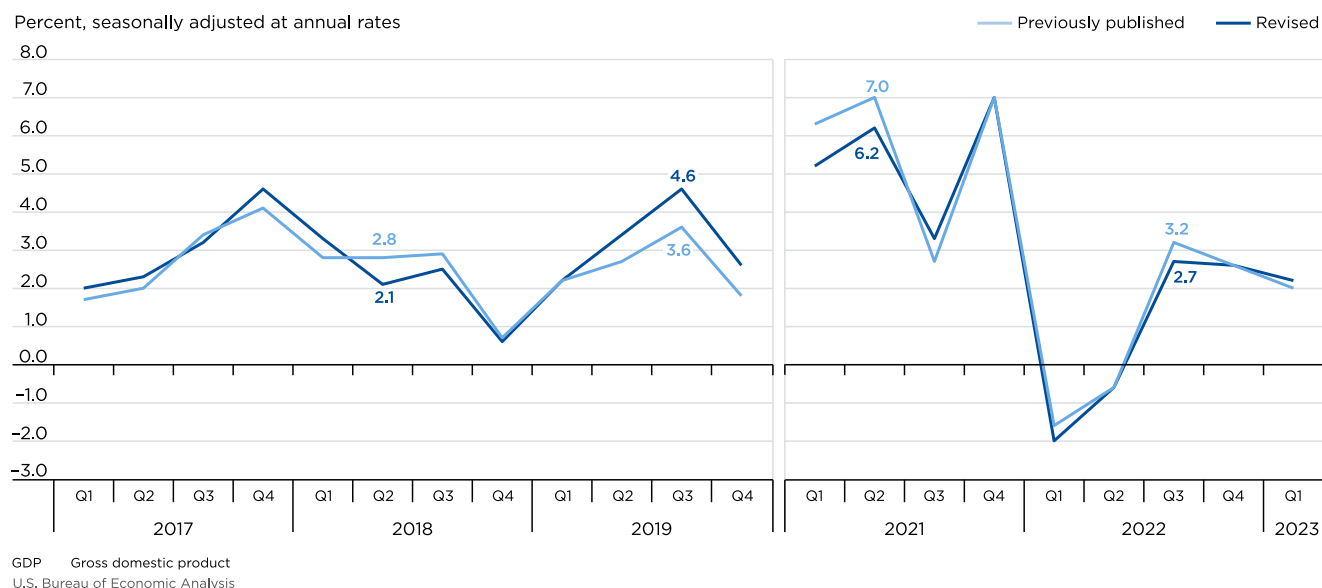
The revisions to the quarterly (and monthly) NIPA estimates reflect updates to the annual estimates, the incorporation of new and revised quarterly and monthly source data (including updated seasonal factors), and the introduction of changes in methodology.

### GDP and GDI

Chart 5 shows revised and previously published percent changes for real GDP from the first quarter of 2017 through the first quarter of 2023; the chart excludes 2020 because the magnitude of the pandemic-related changes in GDP in that year obscures the changes in other years. With the updated estimates, the overall pattern of economic growth over this period remains unchanged. In 2020, real GDP decreased 5.3 percent in the first quarter of 2020 (revised down 0.7 percentage point), decreased 28.0 percent in the second quarter (revised up 1.9 percentage points), increased 34.8 percent in the third quarter (revised down 0.5 percentage point) and increased 4.2 percent in the fourth quarter (revised up 0.3 percentage point).

Major sources of revisions to GDP include updated estimates of consumer spending (PCE), private inventory investment, state and local government spending, and federal government spending. Revisions to PCE reflect updated Census data from the Quarterly Services Survey, benchmarked to newly available 2021 SAS data, and the Monthly Retail Trade Survey, benchmarked to newly available 2021 ARTS data. Revisions to private inventory investment reflect revised Census data on inventory book values (benchmarking to the 2021 ASM). Revisions to state and local government spending reflect new and revised data from the Census Annual Survey of State and Local Government Finances, and revisions to federal government spending reflect new and revised Office of Management and Budget fiscal year budget data.

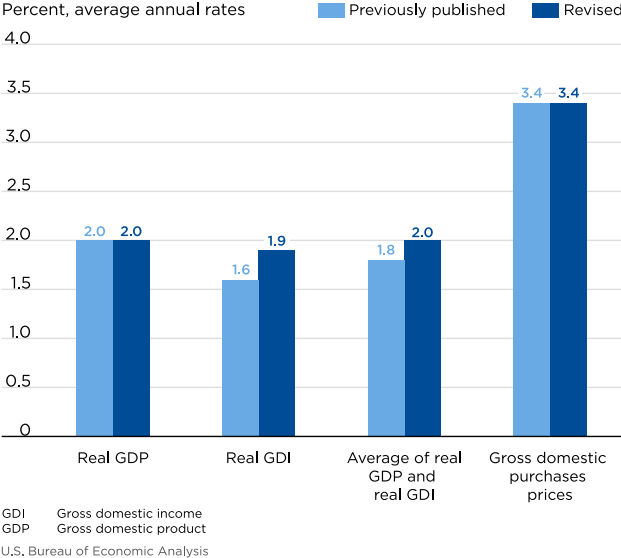
**Chart 5. Real GDP: Percent Change From Preceding Period, 2017:Q1–2023:Q1**





Over the period from the fourth quarter of 2017 through the first quarter of 2023, the average annual growth rate in real GDP is 2.0 percent, the same as previously published (chart 6). The average annual growth rate in real GDI over the period is 1.9 percent, revised up 0.3 percentage point from the previously published estimates.

**Chart 6. Real GDP and Related Aggregates:  
Percent Change Over the Period,  
2017:Q4–2023:Q1**

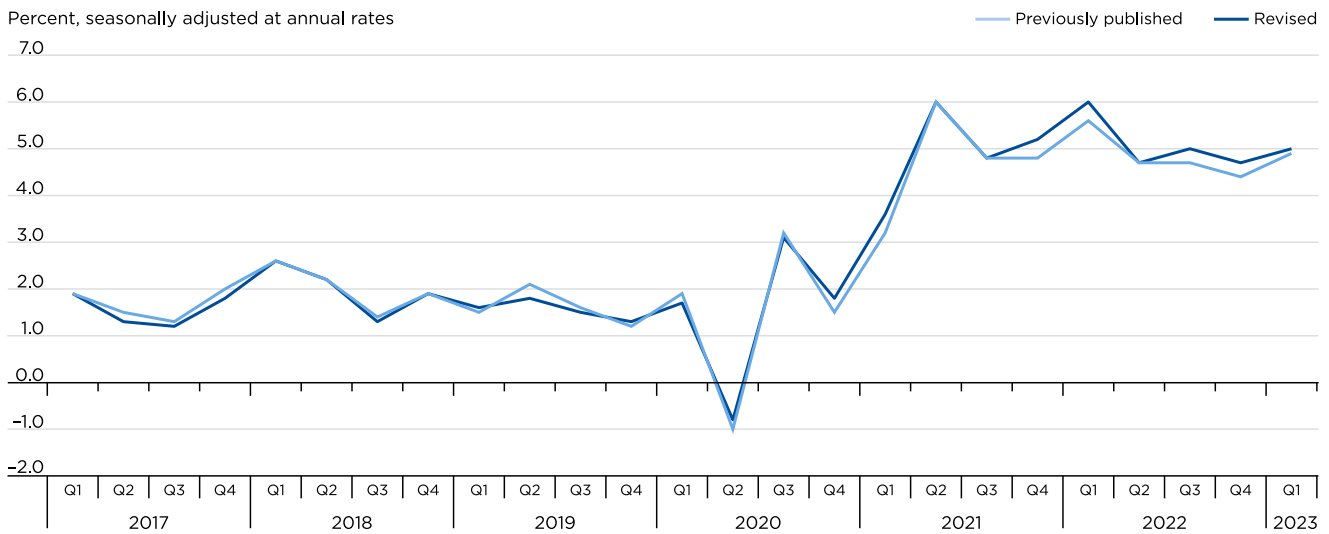


## Prices

With the update, revisions to quarterly NIPA price measures were small. From the fourth quarter of 2017 to the first quarter of 2023, the average annual rate of change in the price index for gross domestic purchases is 3.4 percent, the same as previously published (chart 6). Quarterly revisions for recent quarters primarily reflect updated BLS consumer price indexes as well as BEA's improved price measures.

Quarterly changes to the “core” PCE price index, which excludes food and energy, were little changed from the previously published estimates (chart 7). From the fourth quarter of 2017 to the first quarter of 2023, the average annual rate of change in the price index for PCE excluding food and energy is 3.1 percent, an upward revision of 0.1 percentage point.

**Chart 7. Price Index for PCE Excluding Food and Energy: Percent Change From Preceding Period, 2017:Q1–2023:Q1**



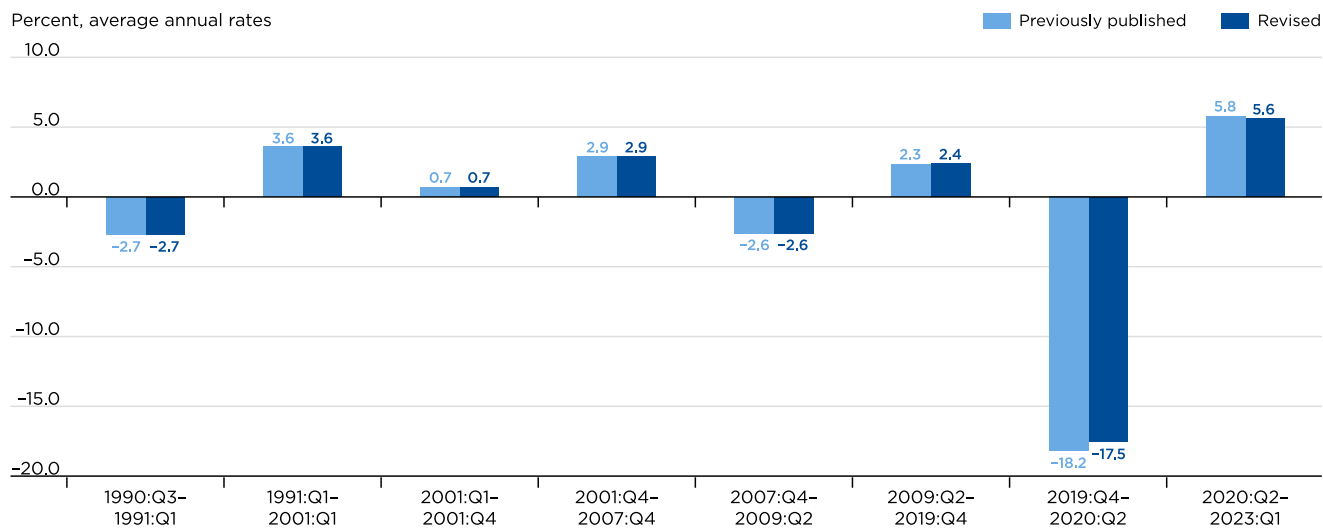
PCE Personal consumption expenditures  
U.S. Bureau of Economic Analysis

## Business Cycles

In general, the update had little effect on business cycles (chart 8 and table 9). The average annual rate of change in real GDP for the expansion from the second quarter of 2009 through the fourth quarter of 2019 was revised up from 2.3 percent to 2.4 percent. For the contraction from the fourth quarter of 2019 through the second quarter of 2020 (during the onset of the COVID-19 pandemic), the change was revised up from a decrease of 18.2 percent to a decrease of 17.5 percent. For the expansion from the second quarter of 2020 through the first quarter of 2023, growth is revised down from 5.8 percent to 5.6 percent.

Growth in real GDP since the fourth quarter of 2019 (the last quarter before the onset of the COVID-19 pandemic) through the first quarter of 2023 is 5.5 percent (not annual rate), a downward revision of 0.1 percentage point.

**Chart 8. Real GDP: Percent Change Over Business Cycles**



GDP Gross domestic product

Note. Periods of contraction and expansion reflect official business cycle dates as determined by the National Bureau of Economic Research. Refer to [www.NBER.org](http://www.NBER.org).

U.S. Bureau of Economic Analysis

**Table 9. Revisions to Cyclical Fluctuations in Real GDP**

	Average annual rate of change (percent)			Percent change (not annual rate)		
	Previously published	Revised	Revision	Previously published	Revised	Revision
<b>Contractions</b>						
1948:IV-1949:IV	-1.5	-1.5	0.0	-1.5	-1.5	0.0
1953:II-1954:II	-2.4	-2.4	0.0	-2.4	-2.4	0.0
1957:III-1958:II	-3.9	-3.9	0.0	-3.0	-3.0	0.0
1960:II-1961:I	-0.2	-0.2	0.0	-0.1	-0.1	0.0
1969:IV-1970:IV	-0.2	-0.2	0.0	-0.2	-0.2	0.0
1973:IV-1975:I	-2.5	-2.5	0.0	-3.1	-3.1	0.0
1980:I-1980:III	-4.3	-4.3	0.0	-2.2	-2.2	0.0
1981:III-1982:IV	-2.0	-2.0	0.0	-2.5	-2.5	0.0
1990:III-1991:I	-2.7	-2.7	0.0	-1.4	-1.4	0.0
2001:I-2001:IV	0.7	0.7	0.0	0.5	0.5	0.0
2007:IV-2009:II	-2.6	-2.6	0.0	-3.8	-3.8	0.0
2019:IV-2020:II	-18.2	-17.5	0.7	-9.6	-9.1	0.5
<b>Expansions</b>						
1949:IV-1953:II	7.6	7.6	0.0	29.3	29.3	0.0
1954:II-1957:III	4.0	4.0	0.0	13.7	13.7	0.0
1958:II-1960:II	5.5	5.5	0.0	11.4	11.4	0.0
1961:I-1969:IV	4.9	4.9	0.0	51.9	51.9	0.0
1970:IV-1973:IV	5.1	5.1	0.0	16.1	16.0	-0.1
1975:I-1980:I	4.3	4.3	0.0	23.2	23.2	0.0
1980:III-1981:III	4.3	4.3	0.0	4.3	4.3	0.0
1982:IV-1990:III	4.3	4.3	0.0	38.2	38.2	0.0
1991:I-2001:I	3.6	3.6	0.0	42.5	42.5	0.0
2001:IV-2007:IV	2.9	2.9	0.0	18.7	18.7	0.0
2009:II-2019:IV	2.3	2.4	0.1	26.7	28.8	2.1
2020:II-2023:I	5.8	5.6	-0.2	16.7	16.2	-0.5

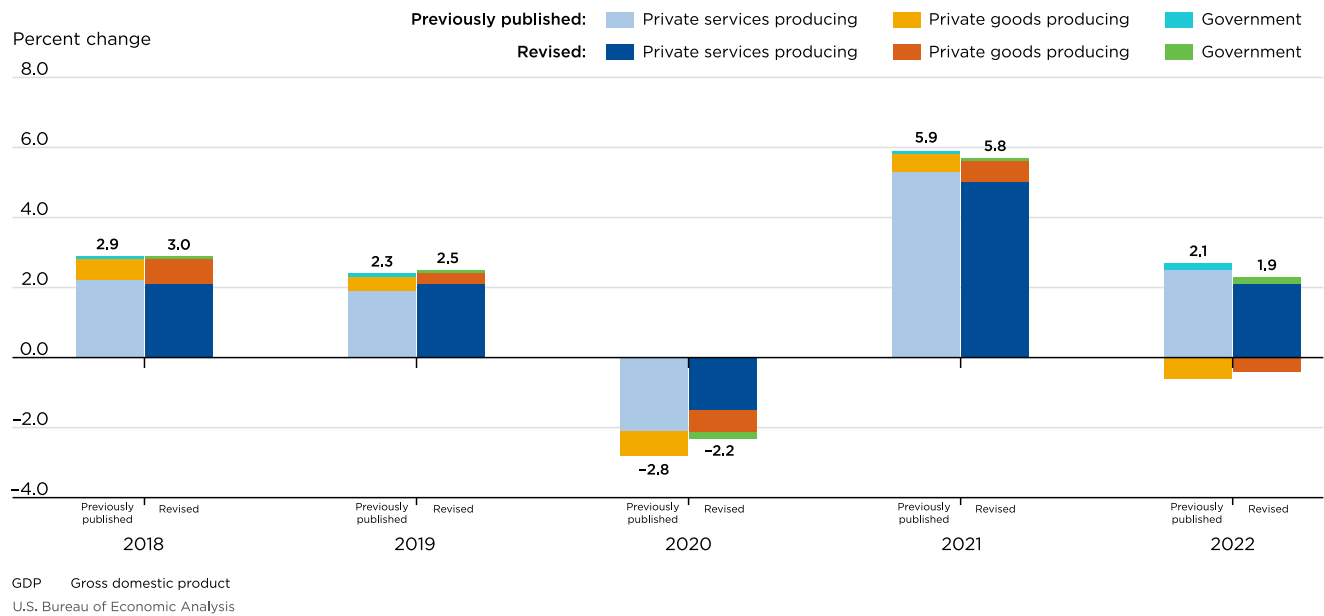
Note. Periods of contraction and expansion reflect official business cycle dates as determined by the National Bureau of Economic Research. Refer to [www.NBER.org](http://www.NBER.org).

## Updates to Annual GDP by Industry Measures

GDP by industry, or value added, is a measure of an industry's contribution to GDP. As with the NIPA estimates of GDP, GDP by industry is little changed from the previously published estimates.

Revisions to annual percent changes in real GDP by industry from 2018 to 2022 are discussed below and presented in table 10 and chart 9. Revisions to industry contributions to the percent change in real GDP are presented in table 11. The major source data underlying the GDP by industry estimates are presented in appendix C (tables C1–C3).

**Chart 9. Real GDP by Industry: Percent Change From Preceding Period, 2018–2022**



**Table 10. Real GDP by Industry Group: Percent Change from Preceding Period, 2018–2022**

Line number		Share of current-dollar GDP	Change from preceding period					Revision in percent change				
			Percent					Percentage points				
			2022	2018	2019	2020	2021	2022	2018	2019	2020	2021
1	<b>Gross domestic product</b>	<b>100.0</b>	<b>3.0</b>	<b>2.5</b>	<b>-2.2</b>	<b>5.8</b>	<b>1.9</b>	<b>0.1</b>	<b>0.2</b>	<b>0.6</b>	<b>-0.1</b>	<b>-0.2</b>
2	<b>Private industries</b>	<b>88.6</b>	<b>3.2</b>	<b>2.7</b>	<b>-2.4</b>	<b>6.5</b>	<b>2.0</b>	<b>0.0</b>	<b>0.2</b>	<b>0.7</b>	<b>-0.2</b>	<b>-0.2</b>
3	Agriculture, forestry, fishing, and hunting	1.1	4.1	-7.0	1.5	5.8	-7.4	1.3	-1.1	-1.3	14.3	-4.2
4	Mining	1.8	3.6	13.6	-2.9	-11.8	-9.0	2.4	1.0	-1.8	4.5	-2.5
5	Utilities	1.7	-1.4	1.2	6.2	-4.7	0.6	-1.1	0.8	2.6	-0.6	2.8
6	Construction	4.2	2.8	2.1	-2.9	3.7	-6.8	0.6	0.7	0.9	1.2	3.6
7	Manufacturing	10.3	4.9	0.5	-4.3	5.7	1.3	0.7	-1.1	0.2	-1.0	1.1
8	Durable goods	5.5	4.2	1.1	-5.6	6.6	3.8	-0.6	0.3	-1.1	-3.1	1.6
9	Nondurable goods	4.8	5.8	-0.3	-2.7	4.6	-1.4	2.3	-3.0	1.8	1.6	0.7
10	Wholesale trade	6.0	0.8	0.5	0.7	-0.6	-3.9	-0.2	1.0	0.7	-6.1	-4.2
11	Retail trade	6.3	3.5	2.7	-1.5	0.5	-4.7	0.4	0.6	1.4	-2.1	-0.9
12	Transportation and warehousing	3.6	3.5	0.1	-8.3	13.5	2.0	-0.3	-0.9	3.7	6.0	-0.3
13	Information	5.4	5.5	10.4	3.8	14.7	7.5	-2.5	4.5	-0.1	0.8	-0.1
14	Finance, insurance, real estate, rental, and leasing	20.7	1.5	2.0	1.0	5.5	2.3	-0.2	-0.6	1.1	0.7	0.1
15	Finance and insurance	7.5	-2.4	3.3	1.4	4.8	-1.6	-2.3	0.0	-1.3	-2.4	-2.1
16	Real estate and rental and leasing	13.2	3.9	1.2	0.8	5.9	4.5	1.1	-0.9	2.6	2.7	1.2
17	Professional and business services	12.9	6.2	4.9	-0.6	11.3	7.5	0.5	0.6	0.6	-0.4	0.0
18	Professional, scientific, and technical services	7.8	6.7	5.4	0.6	11.8	6.8	0.7	1.1	0.7	0.7	-0.1
19	Management of companies and enterprises	1.9	6.7	6.8	2.2	10.3	10.3	-0.4	-0.4	0.5	-0.6	3.1
20	Administrative and waste management services	3.2	4.8	2.5	-5.0	10.8	7.4	0.6	-0.1	0.6	-2.8	-2.0
21	Educational services, health care, and social assistance	8.4	2.8	3.2	-2.9	4.8	3.8	0.0	0.3	0.0	0.2	-0.1
22	Educational services	1.1	2.2	2.5	-8.0	3.4	5.7	-0.3	0.0	1.9	0.1	1.2
23	Health care and social assistance	7.2	2.9	3.3	-2.1	5.0	3.6	0.1	0.3	-0.4	0.2	-0.2
24	Arts, entertainment, recreation, accommodation, and food services	4.2	1.9	2.1	-26.5	25.4	10.8	0.2	0.2	1.1	-2.9	2.0
25	Arts, entertainment, and recreation	1.1	4.0	1.7	-31.1	26.0	22.4	0.1	0.8	4.9	-9.2	1.5
26	Accommodation and food services	3.1	1.2	2.3	-24.8	25.3	7.3	0.4	0.1	-0.2	-0.9	2.2
27	Other services, except government	2.1	3.2	0.4	-9.3	3.4	3.2	0.5	0.1	0.6	-2.0	-0.8
28	<b>Government</b>	<b>11.4</b>	<b>1.1</b>	<b>0.6</b>	<b>-1.4</b>	<b>0.8</b>	<b>1.6</b>	<b>0.2</b>	<b>0.0</b>	<b>-1.0</b>	<b>0.3</b>	<b>0.3</b>
29	Federal	3.6	0.8	0.6	3.3	0.7	-0.7	0.2	-0.1	0.2	-0.3	-0.5
30	State and local	7.8	1.3	0.7	-3.5	0.9	2.7	0.4	0.2	-1.6	0.6	0.8
<b>Addenda:</b>												
31	Private goods-producing industries <sup>1</sup>	17.4	4.2	1.6	-3.6	3.9	-2.2	0.8	-0.5	0.2	0.8	0.6
32	Private services-producing industries <sup>2</sup>	71.2	3.0	3.0	-2.1	7.1	3.0	-0.1	0.3	0.9	-0.5	-0.4
33	Information-communications-technology-producing industries <sup>3</sup>	7.2	8.9	10.7	6.4	14.6	7.7	-1.2	4.0	0.9	2.0	.....

1. Consists of agriculture, forestry, fishing, and hunting; mining; construction; and manufacturing.
2. Consists of utilities; wholesale trade; retail trade; transportation and warehousing; information; finance, insurance, real estate, rental, and leasing; professional and business services; educational services, health care, and social assistance; arts, entertainment, recreation, accommodation, and food services; and other services, except government.
3. Consists of computer and electronic product manufacturing (excluding navigational, measuring, electromedical, and control instruments manufacturing); software publishers; broadcasting and telecommunications; data processing, hosting and related services; internet publishing and broadcasting and web search portals; and computer systems design and related services. For 2022, revision unavailable (...); the annual update is the first estimate for the latest year.

Note. For data, refer to the industry tables in BEA's [Interactive Data Application](#).

## Revisions

The percent change in real GDP by industry was revised up for 2018, 2019, and 2020, and was revised down for 2021 and 2022 (table 10).

For 2018, the increase in real GDP was revised up 0.1 percentage point, from 2.9 percent to 3.0 percent. Upward revisions to private goods-producing industries and government were partly offset by a downward revision to private services-producing industries. The direction of change was unrevised for all 22 major industry groups.

- The main driver of the upward revision to private goods-producing industries was nondurable goods manufacturing, which was revised up 2.3 percentage points, from 3.5 percent to 5.8 percent. This mainly reflects an upward revision to chemical products.
- The leading contributors to the downward revision to private services-producing industries were the finance and insurance and information industries. Finance and insurance was revised down 2.3 percentage points, from a decrease of 0.1 percent to a decrease of 2.4 percent, mainly reflecting downward revisions to insurance carriers and related activities as well as funds, trusts, and other financial vehicles. Information was revised down 2.5 percentage points, from 8.0 percent to 5.5 percent, reflecting downward revisions to publishing, except internet (including software) as well as data processing, internet publishing, and other information services.

For 2019, the increase in real GDP was revised up 0.2 percentage point, from 2.3 percent to 2.5 percent. Upward revisions to private services-producing industries and to government were partly offset by a downward revision to private goods-producing industries. The direction of change was unrevised for 20 of 22 major industry groups.

- The leading contributor to the upward revision to private services-producing industries was information, which was revised up 4.5 percentage points, from 5.9 percent to 10.4 percent. This was mainly driven by upward revisions to data processing, internet publishing, and other information services as well as broadcasting and telecommunications.
- The main driver of the downward revision to private goods-producing industries was nondurable goods manufacturing, which was revised down 3.0 percentage points, from an increase of 2.7 percent to a decrease of 0.3 percent. This mainly reflects downward revisions to chemical products as well as food and beverage and tobacco products.

For 2020, the percent change in real GDP was revised up 0.6 percentage point, from a decrease of 2.8 percent to a decrease of 2.2 percent. Upward revisions to private services-producing industries and private goods-producing industries were partly offset by a downward revision to government. The direction of change was unrevised for 19 of 22 major industry groups.

- The main driver of the upward revision to private services-producing industries was real estate and rental and leasing, which was revised up 2.6 percentage points, from a decrease of 1.8 percent to an increase of 0.8 percent. This was driven by upward revisions to rental and leasing services and lessors of intangible assets; other real estate; and housing.
- The primary driver of the upward revision to private goods-producing industries was nondurable goods manufacturing, which was revised up 1.8 percentage points, from a decrease of 4.5 percent to a decrease of 2.7 percent. This was mainly driven by an upward revision to chemical products.

- The leading contributor to the downward revision to government was state and local government, which was revised down 1.6 percentage points, from a decrease of 1.9 percent to a decrease of 3.5 percent.

For 2021, the increase in real GDP was revised down 0.1 percentage point, from 5.9 percent to 5.8 percent. A downward revision to private services-producing industries was partly offset by upward revisions to private goods-producing industries and to government. The direction of change was unrevised for 20 of 22 major industry groups.

- The leading contributors to the downward revision to private services-producing industries were wholesale trade and finance and insurance. Wholesale trade was revised down 6.1 percentage points, from an increase of 5.5 percent to a decrease of 0.6 percent. Finance and insurance was revised down 2.4 percentage points, from 7.2 percent to 4.8 percent, mainly reflecting a downward revision to Federal Reserve banks, credit intermediation, and related activities.
- The main driver of the upward revision to private goods-producing industries was agriculture, forestry, fishing, and hunting, which was revised up 14.3 percentage points, from a decrease of 8.5 percent to an increase of 5.8 percent. This reflected an upward revision to farms.

For 2022, the increase in real GDP was revised down 0.2 percentage point, from 2.1 percent to 1.9 percent. A downward revision to private services-producing industries was partly offset by upward revisions to private goods-producing industries and to government. The direction of change was unrevised for 19 of 22 major industry groups.

- The drivers of the downward revision to private services-producing industries were wholesale trade and finance and insurance. Wholesale trade was revised down 4.2 percentage points, from an increase of 0.3 percent to a decrease of 3.9 percent. Finance and insurance was revised down 2.1 percentage points, from an increase of 0.5 percent to a decrease of 1.6 percent, mainly reflecting a downward revision to Federal Reserve banks, credit intermediation, and related activities.
- The leading contributor to the upward revision to private goods-producing industries was construction, which was revised up 3.6 percentage points, from a decrease of 10.4 percent to a decrease of 6.8 percent.



**Table 11. Contributions to the Percent Change in Real GDP by Industry Group, 2018–2022**

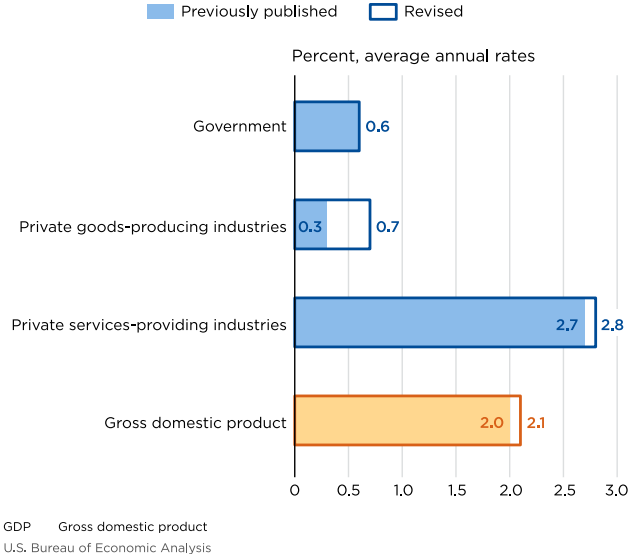
Line number		Contributions to percent change					Revision in contributions to percent change				
		Percent (annual rate)					Percentage points				
		2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
	<b>Percent change at annual rate:</b>										
<b>1</b>	<b>Gross domestic product</b>	<b>3.0</b>	<b>2.5</b>	<b>-2.2</b>	<b>5.8</b>	<b>1.9</b>	<b>0.1</b>	<b>0.2</b>	<b>0.6</b>	<b>-0.1</b>	<b>-0.2</b>
	<b>Percentage points at annual rates:</b>										
<b>2</b>	<b>Private industries</b>	<b>2.83</b>	<b>2.39</b>	<b>-2.09</b>	<b>5.65</b>	<b>1.75</b>	<b>0.04</b>	<b>0.16</b>	<b>0.67</b>	<b>-0.18</b>	<b>-0.14</b>
3	Agriculture, forestry, fishing, and hunting	0.04	-0.06	0.01	0.05	-0.08	0.02	-0.01	-0.01	0.13	-0.05
4	Mining	0.05	0.19	-0.03	-0.14	-0.14	0.03	0.01	-0.01	0.07	0.04
5	Utilities	-0.02	0.02	0.09	-0.08	0.01	-0.01	0.01	0.03	-0.01	0.05
6	Construction	0.12	0.09	-0.13	0.16	-0.30	0.03	0.03	0.03	0.06	0.13
7	Manufacturing	0.53	0.05	-0.45	0.57	0.13	0.06	-0.13	0.05	-0.14	0.09
8	Durable goods	0.25	0.07	-0.33	0.36	0.20	-0.05	0.02	-0.05	-0.21	0.05
9	Nondurable goods	0.28	-0.02	-0.12	0.21	-0.07	0.11	-0.15	0.10	0.07	0.04
10	Wholesale trade	0.05	0.03	0.04	-0.04	-0.24	-0.01	0.06	0.04	-0.38	-0.26
11	Retail trade	0.21	0.16	-0.09	0.03	-0.32	0.04	0.04	0.07	-0.12	-0.10
12	Transportation and warehousing	0.11	0.00	-0.27	0.41	0.07	-0.01	-0.03	0.11	0.20	0.00
13	Information	0.28	0.52	0.20	0.78	0.40	-0.13	0.22	-0.01	0.03	-0.03
14	Finance, insurance, real estate, rental, and leasing	0.31	0.41	0.21	1.17	0.47	-0.05	-0.13	0.22	0.15	-0.01
15	Finance and insurance	-0.19	0.25	0.11	0.39	-0.12	-0.19	-0.01	-0.11	-0.22	-0.18
16	Real estate and rental and leasing	0.50	0.16	0.10	0.79	0.59	0.14	-0.12	0.33	0.37	0.17
17	Professional and business services	0.76	0.61	-0.07	1.42	0.93	0.05	0.07	0.08	-0.05	-0.06
18	Professional, scientific, and technical services	0.49	0.40	0.04	0.90	0.52	0.05	0.08	0.05	0.05	-0.03
19	Management of companies and enterprises	0.12	0.12	0.04	0.19	0.18	-0.01	-0.01	0.01	-0.02	0.04
20	Administrative and waste management services	0.15	0.08	-0.16	0.33	0.23	0.02	0.00	0.02	-0.08	-0.07
21	Educational services, health care, and social assistance	0.24	0.27	-0.26	0.42	0.32	0.00	0.02	-0.01	0.02	-0.02
22	Educational services	0.03	0.03	-0.10	0.04	0.06	0.00	0.00	0.03	0.00	0.01
23	Health care and social assistance	0.22	0.24	-0.16	0.38	0.26	0.01	0.02	-0.03	0.02	-0.03
24	Arts, entertainment, recreation, accommodation, and food services	0.08	0.09	-1.14	0.82	0.42	0.01	0.01	0.05	-0.09	0.07
25	Arts, entertainment, and recreation	0.04	0.02	-0.35	0.20	0.20	0.00	0.01	0.06	-0.06	0.00
26	Accommodation and food services	0.04	0.07	-0.79	0.62	0.21	0.01	0.00	-0.01	-0.03	0.05
27	Other services, except government	0.07	0.01	-0.21	0.07	0.07	0.01	0.00	0.00	-0.04	-0.01
<b>28</b>	<b>Government</b>	<b>0.14</b>	<b>0.08</b>	<b>-0.17</b>	<b>0.10</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>	<b>-0.13</b>	<b>0.03</b>	<b>0.03</b>
29	Federal	0.03	0.02	0.13	0.03	-0.03	0.00	-0.01	0.01	-0.01	-0.03
30	State and local	0.11	0.06	-0.30	0.08	0.22	0.03	0.01	-0.14	0.05	0.06
	<b>Addenda:</b>										
31	Private goods-producing industries <sup>1</sup>	0.73	0.27	-0.60	0.64	-0.39	0.12	-0.10	0.06	0.11	0.22
32	Private services-producing industries <sup>2</sup>	2.10	2.12	-1.49	5.00	2.13	-0.08	0.27	0.61	-0.30	-0.37
33	Information-communications-technology-producing industries <sup>3</sup>	0.58	0.70	0.44	1.04	0.55	-0.09	0.24	0.05	0.11	...

1. Consists of agriculture, forestry, fishing, and hunting; mining; construction; and manufacturing.
2. Consists of utilities; wholesale trade; retail trade; transportation and warehousing; information; finance, insurance, real estate, rental, and leasing; professional and business services; educational services, health care, and social assistance; arts, entertainment, recreation, accommodation, and food services; and other services, except government.
3. Consists of computer and electronic product manufacturing (excluding navigational, measuring, electromedical, and control instruments manufacturing); software publishers; broadcasting and telecommunications; data processing, hosting and related services; internet publishing and broadcasting and web search portals; and computer systems design and related services. For 2022, revision unavailable (...); the annual update is the first estimate for the latest year.

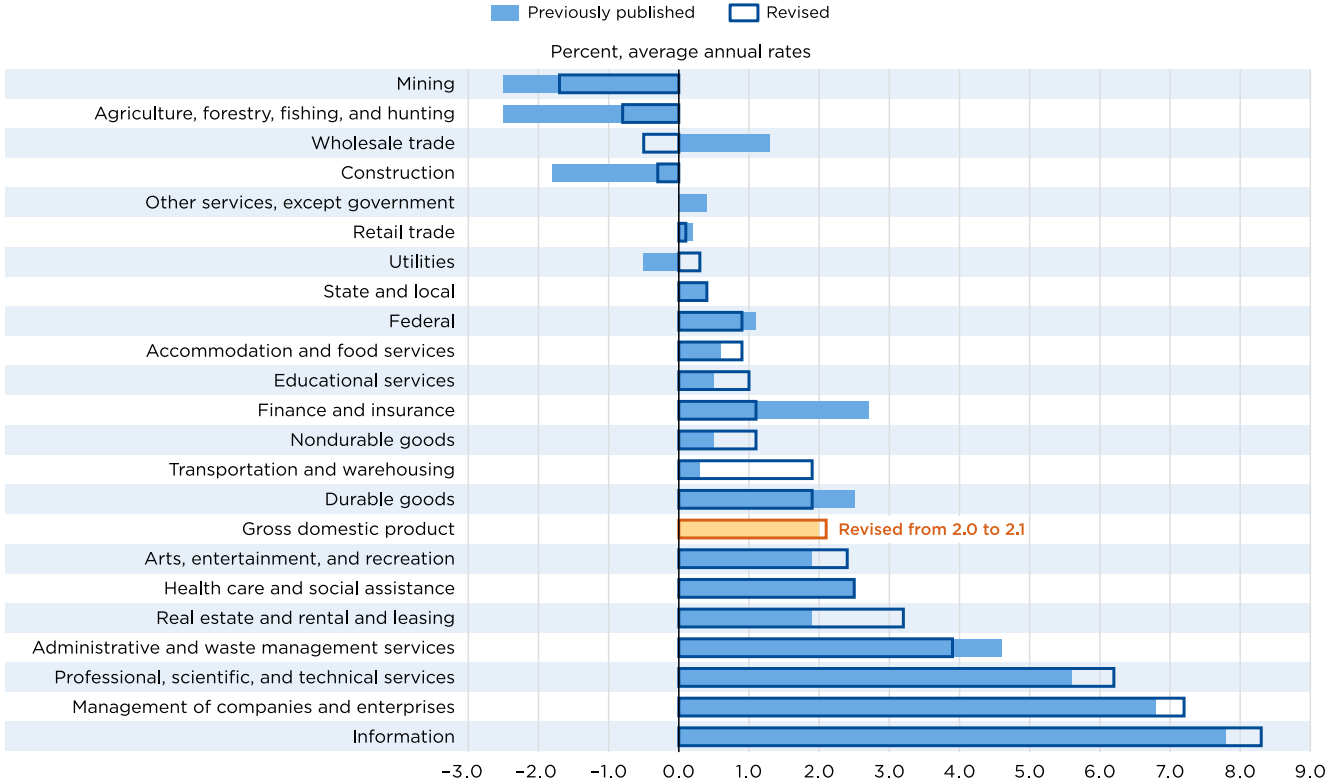
Note. For data, refer to the industry tables in BEA's [Interactive Data Application](#).

For 2017 to 2022, the average annual change in real GDP was revised up 0.1 percentage point, from 2.0 to 2.1 percent (chart 10). Private goods-producing industries and private services-producing industries increased more than previously estimated over the period, while government was unchanged. The direction of change over the period was unrevised for 20 of 22 major industry groups (chart 11). The updated estimates show an increase over the period, rather than a decrease, for utilities (from a decrease of 0.5 percent to an increase of 0.3 percent), and a decrease rather than an increase for wholesale trade (from an increase of 1.3 percent to a decrease of 0.5 percent). The largest upward revisions over the period were to agriculture, forestry, fishing, and hunting; transportation and warehousing; construction; and real estate and rental and leasing. The largest downward revisions were to wholesale trade and finance and insurance.

**Chart 10. Real GDP by Industry: Percent Change Over the Period 2017–2022**



**Chart 11. Real GDP by Industry Group: Percent Change Over the Period 2017-2022**



GDP Gross domestic product  
U.S. Bureau of Economic Analysis

## Gross Output

Gross output is principally a measure of an industry's sales or receipts, which includes sales to final users in the economy (GDP) and sales to other industries (intermediate inputs). The percent change in real gross output was revised up 0.1 percentage point to 2.9 percent for 2018; unrevised at 1.9 percent for 2019; revised up 0.3 percentage point to a decrease of 3.3 percent for 2020; revised up 0.3 percentage point to 6.5 percent for 2021; and revised down 0.5 percentage point to 2.3 percent for 2022 (table 12).

**Table 12. Real Gross Output by Industry Group: Percent Change from Preceding Period, 2018–2022**

Line number		Change from preceding period					Revisions in percent change				
		Percent									
		2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
<b>1</b>	<b>Gross domestic product</b>	<b>2.9</b>	<b>1.9</b>	<b>-3.3</b>	<b>6.5</b>	<b>2.3</b>	<b>0.1</b>	<b>0.0</b>	<b>0.3</b>	<b>0.3</b>	<b>-0.5</b>
<b>2</b>	<b>Private industries</b>	<b>3.0</b>	<b>1.7</b>	<b>-3.8</b>	<b>7.2</b>	<b>2.5</b>	<b>0.0</b>	<b>-0.1</b>	<b>0.2</b>	<b>0.4</b>	<b>-0.6</b>
3	Agriculture, forestry, fishing, and hunting	-0.4	-1.6	3.3	0.1	-4.4	0.1	0.8	-1.2	2.8	-2.4
4	Mining	15.9	6.0	-17.0	6.3	6.0	2.0	1.1	-2.5	8.6	0.3
5	Utilities	4.7	-0.7	-2.3	2.3	3.0	-0.2	0.2	0.4	0.1	1.4
6	Construction	1.5	0.8	1.8	1.6	-6.3	0.8	-0.2	0.0	0.6	1.9
7	Manufacturing	1.9	-1.1	-6.8	3.1	0.8	-0.3	-0.8	0.3	1.1	-0.4
8	Durable goods	3.2	-2.0	-7.9	4.6	2.8	-0.3	-1.0	0.7	-1.5	-1.7
9	Nondurable goods	0.7	-0.2	-5.6	1.6	-1.1	-0.1	-0.6	0.0	3.6	0.8
10	Wholesale trade	3.0	-1.3	-4.9	10.9	-0.2	0.6	-0.2	-0.8	-0.3	-4.3
11	Retail trade	3.7	0.9	0.0	8.2	0.1	-0.2	0.0	-1.1	1.7	0.6
12	Transportation and warehousing	4.7	1.5	-12.4	11.0	7.3	0.2	0.5	0.7	-3.4	-0.3
13	Information	7.0	4.3	3.4	11.7	7.4	0.6	0.3	1.8	-1.7	-0.4
14	Finance, insurance, real estate, rental, and leasing	1.1	2.5	0.9	4.3	0.4	-0.4	-0.2	0.9	0.0	-1.5
15	Finance and insurance	-0.6	0.6	1.9	2.3	-2.6	-1.0	-0.3	-0.8	-2.4	-3.3
16	Real estate and rental and leasing	2.4	4.0	0.2	5.7	2.6	0.1	-0.2	2.3	1.7	-0.3
17	Professional and business services	5.6	4.8	-0.6	10.8	7.5	0.5	-0.2	-0.3	-0.5	0.4
18	Professional, scientific, and technical services	5.2	4.8	1.2	10.7	7.3	0.7	-0.1	-0.4	0.6	-0.1
19	Management of companies and enterprises	5.8	5.7	2.0	7.9	8.7	0.3	-0.6	0.1	0.0	4.3
20	Administrative and waste management services	6.4	4.4	-5.3	12.5	7.1	0.3	-0.1	0.3	-3.5	-0.9
21	Educational services, health care, and social assistance	2.0	2.6	-5.2	6.3	3.4	-0.4	0.0	-0.4	1.6	0.6
22	Educational services	1.0	0.6	-9.3	2.3	6.3	0.3	0.1	-1.7	-1.8	1.1
23	Health care and social assistance	2.1	2.9	-4.6	6.8	3.0	-0.5	0.0	-0.3	2.0	0.6
24	Arts, entertainment, recreation, accommodation, and food services	2.8	2.3	-24.9	26.9	11.1	-0.2	0.3	2.4	-5.0	-1.2
25	Arts, entertainment, and recreation	3.9	3.3	-32.7	30.8	21.3	-0.1	1.0	5.4	-4.7	-1.5
26	Accommodation and food services	2.5	2.0	-22.3	25.8	8.2	-0.2	0.1	1.6	-5.2	-1.4
27	Other services, except government	2.2	1.8	-10.4	7.5	2.9	0.5	0.7	-1.6	5.9	0.6
<b>28</b>	<b>Government</b>	<b>1.6</b>	<b>3.1</b>	<b>0.8</b>	<b>1.4</b>	<b>0.6</b>	<b>0.2</b>	<b>0.6</b>	<b>1.1</b>	<b>-0.2</b>	<b>-0.4</b>
29	Federal	2.3	2.9	5.3	2.2	-3.0	0.3	-0.1	0.2	-0.6	-1.7
30	State and local	1.3	3.2	-1.1	1.1	2.1	0.1	0.9	1.5	0.1	0.0
	<b>Addenda:</b>										
31	Private goods-producing industries <sup>1</sup>	2.5	-0.3	-5.1	2.7	-0.6	0.0	-0.5	0.1	1.4	0.0
32	Private services-producing industries <sup>2</sup>	3.2	2.4	-3.3	8.7	3.6	0.0	-0.1	0.3	-0.1	-0.7
33	Information-communications-technology-producing industries <sup>3</sup>	8.4	4.4	5.3	11.7	8.0	0.7	0.4	1.4	-0.3	...

1. Consists of agriculture, forestry, fishing, and hunting; mining; construction; and manufacturing.
2. Consists of utilities; wholesale trade; retail trade; transportation and warehousing; information; finance, insurance, real estate, rental, and leasing; professional and business services; educational services, health care, and social assistance; arts, entertainment, recreation, accommodation, and food services; and other services, except government.
3. Consists of computer and electronic product manufacturing (excluding navigational, measuring, electromedical, and control instruments manufacturing); software publishers; broadcasting and telecommunications; data processing, hosting and related services; internet publishing and broadcasting and web search portals; and computer systems design and related services. For 2022, revision unavailable (...); the annual update is the first estimate for the latest year.

## Data Availability

Annual NIPA estimates for 1929 forward and quarterly estimates for 1947 forward are available on BEA's website in more than 350 interactive data tables that are arranged in roughly the same order as the 7 summary accounts presented in appendix B. The tables can be downloaded in a variety of formats, customized by date and by frequency, and displayed in charts.<sup>1</sup>

Annual data on industry value added, gross output, and intermediate inputs, as well as SUTs for 2017–2022, are available in the industry interactive tables.

This fall, BEA will release quarterly GDP by Industry statistics through the second quarter of 2023 and additional industry products; data prior to 2017 will be forthcoming.

The integrated macroeconomic accounts published jointly by BEA and the FRB, which relate production, income and spending, capital formation, financial transactions, and asset revaluations to changes in net worth for the major sectors of the U.S. economy, will also be released later this year.

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1. For a detailed description of the NIPA table numbering system, see the FAQ "[How are the NIPA tables organized?](#)" on BEA's website.

## Appendix A: Impacts of the Comprehensive Update on GDP Expenditure Components

**Table A1. Real Personal Consumption Expenditures: Percent Change from Preceding Period, 2017–2022**

Line number	Series	Change from preceding period						Revision in percent change					
		Percent (annual rate)						Percentage points					
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
1	<b>Personal consumption expenditures (PCE)</b>	2.6	2.7	2.0	-2.5	8.4	2.5	0.2	-0.2	0.0	0.5	0.1	-0.2
2	<b>Goods</b>	4.1	4.0	3.0	4.9	11.3	0.3	0.2	0.1	-0.1	-0.3	-0.9	0.8
3	Durable goods	6.8	6.6	3.3	8.0	16.7	-0.3	0.4	-0.2	-0.5	-2.0	-1.8	0.1
4	Motor vehicles and parts	6.3	3.9	-1.7	-1.3	15.0	-6.7	1.4	0.2	-0.2	-2.9	-0.8	-0.3
5	Furnishings and durable household equipment	7.3	6.3	2.3	8.3	12.9	-2.7	-0.3	-2.1	-1.1	-5.1	-1.3	0.3
6	Recreational goods and vehicles	10.0	11.5	10.2	23.8	17.9	7.5	0.7	1.1	-1.0	-0.5	-2.2	1.1
7	Other durable goods	1.5	5.1	4.9	-0.3	26.6	4.2	-1.5	-0.5	1.0	2.0	-4.5	-0.2
8	Nondurable goods	2.8	2.6	2.9	3.3	8.5	0.6	0.2	0.1	0.1	0.6	-0.3	1.1
9	Food and beverages purchased for off-premises consumption	4.3	2.8	2.6	7.0	4.4	-1.9	0.7	0.6	0.5	1.3	0.7	2.1
10	Clothing and footwear	2.9	1.9	2.5	-6.8	25.1	1.7	1.0	-0.8	-0.6	-1.8	-1.0	0.5
11	Gasoline and other energy goods	0.1	-0.3	-0.4	-13.7	12.1	0.0	0.6	0.2	-0.1	-0.5	0.5	-0.6
12	Other nondurable goods	2.1	3.7	4.3	8.1	6.7	2.9	-0.9	0.2	0.0	1.3	-1.1	1.0
13	<b>Services</b>	1.9	2.2	1.5	-5.9	6.9	3.7	0.2	-0.2	0.0	0.7	0.6	-0.8
14	Household consumption expenditures (for services)	2.1	2.1	1.8	-6.8	8.0	3.7	0.3	-0.2	0.1	0.7	0.5	-0.9
15	Housing and utilities	0.1	1.5	0.8	2.1	2.7	1.1	-0.1	0.0	-0.1	1.2	1.6	-0.1
16	Health care	2.2	2.5	3.5	-7.0	8.6	3.1	0.1	-0.1	0.0	0.4	1.3	0.0
17	Transportation services	3.2	4.1	3.2	-24.5	22.4	9.8	-0.7	-0.1	-0.1	0.4	6.5	-0.6
18	Recreation services	2.2	1.5	1.7	-23.2	18.6	8.7	0.7	-0.3	0.2	2.9	2.0	-2.3
19	Food services and accommodations	2.8	2.8	1.9	-19.7	21.0	9.1	0.1	-0.1	0.0	1.3	-2.5	-0.7
20	Financial services and insurance	2.6	0.0	-2.3	0.2	-0.1	-1.7	1.0	-1.4	0.8	-1.4	-4.0	-3.8
21	Other services	4.3	3.3	3.7	-5.8	9.0	6.7	0.7	-0.3	-0.2	1.5	0.0	-1.7
22	Final consumption expenditures of nonprofit institutions serving households <sup>1</sup>	-0.4	4.8	-3.3	15.0	-12.3	4.6	0.2	0.6	0.1	2.1	2.3	2.4
23	Gross output of nonprofit institutions <sup>2</sup>	1.1	2.8	1.5	-1.2	2.2	2.0	0.4	0.2	0.1	0.5	1.3	0.2
24	Less: Receipts from sales of goods and services by nonprofit institutions <sup>3</sup>	1.6	2.1	3.3	-6.7	8.3	1.0	0.4	0.0	0.0	0.2	0.6	-0.6
<b>Addenda:</b>													
25	PCE excluding food and energy <sup>4</sup>	2.6	2.7	2.1	-3.1	8.9	3.0	0.2	-0.2	0.0	0.4	0.1	-0.4
26	PCE excluding food, energy, and housing <sup>4,7</sup>	3.2	3.1	2.3	-4.3	10.1	3.5	---	---	---	---	---	---
27	Energy goods and services <sup>5</sup>	-0.4	3.0	-0.9	-7.9	6.9	1.6	0.6	0.1	-0.1	-0.3	0.4	1.0
28	PCE services excluding energy and housing <sup>7</sup>	2.6	2.4	1.8	-8.6	8.4	4.7	---	---	---	---	---	---
29	Housing <sup>7</sup>	0.1	0.8	1.1	2.6	3.2	0.7	---	---	---	---	---	---
30	Market-based PCE <sup>6</sup>	2.6	2.7	2.6	-3.0	9.8	2.7	0.2	-0.1	0.0	0.7	0.5	0.0
31	Market-based PCE excluding food and energy <sup>6</sup>	2.6	2.7	2.7	-3.8	10.5	3.3	0.1	-0.1	-0.1	0.6	0.5	-0.2

- Net expenses of NPISHs, defined as their gross operating expenses less primary sales to households.
- Gross output is net of unrelated sales, secondary sales, and sales to business, to government, and to the rest of the world; excludes own-account investment (construction and software).
- Excludes unrelated sales, secondary sales, and sales to business, to government, and to the rest of the world; includes membership dues and fees.
- Food consists of food and beverages purchased for off-premises consumption; food services, which include purchased meals and beverages, are not classified as food.
- Consists of gasoline and other energy goods and of electricity and gas services.
- Market-based PCE is a supplemental measure that is based on household expenditures for which there are observable price measures. It excludes most imputed transactions (for example, financial services furnished without payment) and the final consumption expenditures of nonprofit institutions serving households.
- New series; not previously published.

Note. Percent changes are from NIPA table 2.3.1.

**Table A2. Contributions to the Percent Change in Real Personal Consumption Expenditures, 2017–2022**

Line number	Series	Contributions to percent change						Revision in contribution to percent change					
		Percentage points											
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
<b>1</b>	<b>Percent change at annual rate:</b>												
	<b>Personal consumption expenditures (PCE)</b>	<b>2.6</b>	<b>2.7</b>	<b>2.0</b>	<b>-2.5</b>	<b>8.4</b>	<b>2.5</b>	<b>0.2</b>	<b>-0.2</b>	<b>0.0</b>	<b>0.5</b>	<b>0.1</b>	<b>-0.2</b>
	<b>Percentage points at annual rates:</b>												
<b>2</b>	<b>Goods</b>	<b>1.30</b>	<b>1.25</b>	<b>0.94</b>	<b>1.52</b>	<b>3.77</b>	<b>0.10</b>	<b>0.09</b>	<b>0.02</b>	<b>-0.03</b>	<b>-0.08</b>	<b>-0.29</b>	<b>0.26</b>
3	Durable goods	0.71	0.69	0.35	0.83	1.93	-0.03	0.05	-0.02	-0.04	-0.21	-0.25	0.02
4	Motor vehicles and parts	0.25	0.15	-0.07	-0.05	0.60	-0.30	0.07	0.01	-0.01	-0.11	-0.02	-0.02
5	Furnishings and durable household equipment	0.17	0.15	0.06	0.20	0.34	-0.08	-0.01	-0.05	-0.02	-0.14	-0.08	0.01
6	Recreational goods and vehicles	0.27	0.32	0.29	0.69	0.63	0.28	0.02	0.04	-0.02	0.01	-0.07	0.04
7	Other durable goods	0.02	0.07	0.07	0.00	0.36	0.06	-0.03	-0.02	0.01	0.03	-0.09	-0.02
8	Nondurable goods	0.59	0.55	0.59	0.68	1.84	0.13	0.04	0.03	0.01	0.13	-0.05	0.24
9	Food and beverages purchased for off-premises consumption	0.33	0.21	0.19	0.53	0.37	-0.16	0.07	0.05	0.04	0.12	0.07	0.15
10	Clothing and footwear	0.09	0.06	0.07	-0.19	0.64	0.05	0.04	-0.02	-0.01	-0.05	-0.02	0.01
11	Gasoline and other energy goods	0.00	-0.01	-0.01	-0.31	0.25	0.00	0.01	0.00	0.00	-0.03	0.02	0.00
12	Other nondurable goods	0.17	0.29	0.34	0.65	0.58	0.24	-0.07	0.00	-0.01	0.09	-0.12	0.07
<b>13</b>	<b>Services</b>	<b>1.34</b>	<b>1.50</b>	<b>1.06</b>	<b>-4.04</b>	<b>4.63</b>	<b>2.43</b>	<b>0.17</b>	<b>-0.15</b>	<b>0.05</b>	<b>0.55</b>	<b>0.40</b>	<b>-0.47</b>
14	Household consumption expenditures (for services)	1.35	1.35	1.16	-4.47	5.06	2.30	0.16	-0.17	0.04	0.51	0.30	-0.53
15	Housing and utilities	0.02	0.26	0.15	0.37	0.51	0.19	-0.01	0.00	-0.02	0.20	0.30	-0.01
16	Health care	0.38	0.42	0.59	-1.20	1.41	0.50	0.02	-0.01	0.00	0.07	0.20	0.01
17	Transportation services	0.10	0.13	0.11	-0.80	0.57	0.29	-0.03	-0.01	0.00	0.04	0.15	0.00
18	Recreation services	0.09	0.06	0.07	-0.97	0.61	0.31	0.03	-0.02	0.01	0.09	0.10	-0.05
19	Food services and accommodations	0.19	0.19	0.13	-1.38	1.23	0.60	0.00	-0.01	0.00	0.10	-0.14	-0.05
20	Financial services and insurance	0.20	0.00	-0.19	0.01	-0.01	-0.13	0.08	-0.11	0.07	-0.11	-0.33	-0.30
21	Other services	0.36	0.27	0.31	-0.50	0.74	0.54	0.06	-0.02	-0.01	0.12	0.02	-0.13
22	Final consumption expenditures of nonprofit institutions serving households <sup>1</sup>	-0.01	0.14	-0.10	0.43	-0.43	0.13	0.01	0.01	0.01	0.04	0.10	0.06
23	Gross output of nonprofit institutions <sup>2</sup>	0.12	0.32	0.17	-0.14	0.26	0.22	0.04	0.02	0.01	0.05	0.16	0.02
24	Less: Receipts from sales of goods and services by nonprofit institutions <sup>3</sup>	0.14	0.18	0.27	-0.57	0.68	0.08	0.04	0.01	0.00	0.02	0.05	-0.05
	<b>Addenda:</b>												
25	PCE excluding food and energy <sup>4</sup>	2.33	2.40	1.85	-2.74	7.78	2.62	0.17	-0.19	-0.02	0.37	0.03	-0.41
26	PCE excluding food, energy, and housing <sup>4,7</sup>	2.31	2.28	1.68	-3.14	7.27	2.51	---	---	---	---	---	---
27	Energy goods and services <sup>5</sup>	-0.02	0.13	-0.04	-0.31	0.26	0.07	0.02	0.01	-0.01	-0.02	0.02	0.05
28	PCE services excluding energy and housing <sup>7</sup>	1.33	1.24	0.92	-4.43	4.11	2.25	---	---	---	---	---	---
29	Housing <sup>7</sup>	0.02	0.12	0.17	0.39	0.51	0.11	---	---	---	---	---	---
30	Market-based PCE <sup>6</sup>	2.25	2.35	2.21	-2.64	8.44	2.38	0.11	-0.06	-0.03	0.55	0.45	0.05
31	Market-based PCE excluding food and energy <sup>6</sup>	1.94	2.01	2.06	-2.86	7.81	2.47	0.03	-0.11	-0.06	0.45	0.36	-0.16

1. Net expenses of NPISHs, defined as their gross operating expenses less primary sales to households.
2. Gross output is net of unrelated sales, secondary sales, and sales to business, to government, and to the rest of the world; excludes own-account investment (construction and software).
3. Excludes unrelated sales, secondary sales, and sales to business, to government, and to the rest of the world; includes membership dues and fees.
4. Food consists of food and beverages purchased for off-premises consumption; food services, which include purchased meals and beverages, are not classified as food.
5. Consists of gasoline and other energy goods and of electricity and gas services.
6. Market-based PCE is a supplemental measure that is based on household expenditures for which there are observable price measures. It excludes most imputed transactions (for example, financial services furnished without payment) and the final consumption expenditures of nonprofit institutions serving households.
7. New series; not previously published.

Note. Percent changes are from NIPA table 2.3.2.

**Table A3. Real Private Fixed Investment: Percent Change from Preceding Period, 2017–2022**

Line number	Series	Change from preceding period						Revision in percent change					
		Percent (annual rate)						Percentage points					
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
<b>1</b>	<b>Private fixed investment</b>	<b>4.5</b>	<b>5.1</b>	<b>2.7</b>	<b>-2.1</b>	<b>7.1</b>	<b>1.3</b>	<b>0.4</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>-0.3</b>	<b>1.5</b>
<b>2</b>	<b>Nonresidential</b>	<b>4.6</b>	<b>6.9</b>	<b>3.7</b>	<b>-4.7</b>	<b>5.9</b>	<b>5.2</b>	<b>0.5</b>	<b>0.4</b>	<b>0.1</b>	<b>0.2</b>	<b>-0.5</b>	<b>1.3</b>
<b>3</b>	<b>Structures</b>	<b>2.6</b>	<b>5.8</b>	<b>2.5</b>	<b>-9.5</b>	<b>-3.2</b>	<b>-2.1</b>	<b>-1.8</b>	<b>1.7</b>	<b>0.2</b>	<b>0.6</b>	<b>3.2</b>	<b>4.5</b>
4	Commercial and health care	3.2	1.4	1.5	3.2	-3.7	-8.7	0.0	0.1	0.0	0.0	3.9	3.2
5	Manufacturing	-12.9	-1.7	5.6	-9.5	3.2	14.2	0.6	0.1	0.0	0.0	3.9	8.8
6	Power and communication	-10.4	5.5	8	-1.5	-4.9	-14.6	-5.8	11.2	0.6	0.2	3.5	4.7
7	Mining exploration, shafts, and wells <sup>1</sup>	37	27	-0.2	-38.4	16.8	19.8	-3.4	-0.8	0.1	0.0	2.8	5.3
8	Other structures <sup>2</sup>	5.4	1.2	-0.3	-12.3	-13.9	0.6	1.5	-0.2	0.3	0.6	3.9	4.6
<b>9</b>	<b>Equipment</b>	<b>3.8</b>	<b>5.9</b>	<b>1.1</b>	<b>-10.1</b>	<b>6.4</b>	<b>5.2</b>	<b>1.0</b>	<b>-0.7</b>	<b>-0.2</b>	<b>0.4</b>	<b>-3.9</b>	<b>0.9</b>
10	Information processing equipment	8.4	8	3	0.7	9.6	7.6	1.3	0.2	0.4	-0.6	-0.2	2.4
11	Computers and peripheral equipment	6.1	13.1	1.4	8.9	11.4	6.3	-0.6	-0.5	-0.4	-2.7	3.7	4.0
12	Other <sup>3</sup>	9.2	6	3.6	-2.7	8.8	8.3	1.9	0.6	0.6	0.5	-2.0	1.6
13	Industrial equipment	5.5	4.8	1.8	-8.9	6.6	3.6	1.0	-1.1	-1.6	-0.7	-5.3	-1.9
14	Transportation equipment	-0.9	6.1	-4.3	-27.8	2.6	1.1	0.5	1.0	-1.1	2.8	-13.1	-3.7
15	Other equipment <sup>4</sup>	1.1	3.5	4.1	-7.3	4.3	6.2	1.0	-3.6	1.5	-0.3	-1.2	5.4
<b>16</b>	<b>Intellectual property products</b>	<b>6.9</b>	<b>8.9</b>	<b>7.8</b>	<b>4.5</b>	<b>10.4</b>	<b>9.1</b>	<b>1.3</b>	<b>0.8</b>	<b>0.5</b>	<b>-0.3</b>	<b>0.7</b>	<b>0.3</b>
17	Software <sup>5</sup>	12.5	13.3	7.5	9.3	14.1	13.5	1.7	1.7	0.5	0.6	1.3	1.4
18	Research and development <sup>6</sup>	3.1	6.1	9.3	2	9.3	5.7	1.2	-0.1	0.6	-1.4	0.6	0.3
19	Entertainment, literary, and artistic originals	3.2	3.4	1.3	-4.1	-1.7	8.7	-0.1	0.0	0.0	1.5	-1.6	-6.0
<b>20</b>	<b>Residential</b>	<b>4.3</b>	<b>-0.7</b>	<b>-0.9</b>	<b>7.2</b>	<b>10.7</b>	<b>-9</b>	<b>0.3</b>	<b>-0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>1.6</b>
<b>21</b>	<b>Structures</b>	<b>4.2</b>	<b>-0.7</b>	<b>-1</b>	<b>7.3</b>	<b>10.8</b>	<b>-9.1</b>	<b>0.2</b>	<b>-0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>1.6</b>
22	Permanent site	4.9	1.7	-4.1	7.1	20.1	-7.3	0.5	-0.1	0.3	0.0	0.7	1.5
23	Single family	6.7	2.8	-6.3	6.2	22.5	-8.2	0.0	0.0	0.0	0.0	0.1	1.6
24	Multifamily	-1.3	-2	4.3	10.5	11.8	-3.9	3.1	0.0	0.0	-0.1	4.9	-0.7
25	Other structures <sup>7</sup>	3.6	-2.7	1.7	7.4	3.3	-10.7	0.0	-0.1	0.0	0.1	-0.7	1.7
<b>26</b>	<b>Equipment</b>	<b>10.3</b>	<b>1</b>	<b>-0.3</b>	<b>4.6</b>	<b>8.7</b>	<b>-2.2</b>	<b>3.7</b>	<b>-0.7</b>	<b>-1.1</b>	<b>-2.5</b>	<b>-0.4</b>	<b>-0.3</b>

1. Includes petroleum and mineral exploration.
2. Consists primarily of religious, educational, vocational, lodging, railroads, farm, and amusement and recreational structures, net purchases of used structures, and brokers' commissions on the sale of structures.
3. Includes communication equipment, nonmedical instruments, medical equipment and instruments, photocopy and related equipment, and office and accounting equipment.
4. Consists primarily of furniture and fixtures, agricultural machinery, construction machinery, mining and oilfield machinery, service industry machinery, and electrical equipment not elsewhere classified.
5. Excludes software embedded, or bundled, in computers and other equipment.
6. Includes research and development expenditures for software.
7. Consists primarily of manufactured homes, improvements, dormitories, net purchases of used structures, and brokers' commissions on the sale of residential structures and adjoining land, and other ownership transfer costs.

Note. Percent changes are from NIPA table 5.3.1.



**Table A4. Contributions to Percent Change in Real Private Fixed Investment, 2017–2022**

Line number	Series	Contributions to percent change						Revision in contribution to percent change					
		Percentage points											
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
	<b>Percent change at annual rate:</b>												
1	<b>Private fixed investment</b>	4.5	5.1	2.7	-2.1	7.1	1.3	0.4	0.2	0.2	0.2	-0.3	1.5
	<b>Percentage points at annual rates:</b>												
2	<b>Nonresidential</b>	3.55	5.30	2.89	-3.69	4.40	3.81	0.36	0.29	0.13	0.16	-0.35	0.99
3	<b>Structures</b>	0.46	1.00	0.44	-1.69	-0.53	-0.32	-0.32	0.27	0.03	0.14	0.54	0.66
4	Commercial and health care	0.17	0.07	0.08	0.17	-0.21	-0.49	0.00	0.00	0.00	-0.01	0.23	0.15
5	Manufacturing	-0.31	-0.03	0.11	-0.20	0.06	0.29	0.02	0.01	0.00	0.00	0.07	0.18
6	Power and communication	-0.40	0.18	0.26	-0.05	-0.17	-0.46	-0.22	0.39	0.01	0.01	0.14	0.17
7	Mining exploration, shafts, and wells <sup>1</sup>	0.80	0.73	-0.01	-1.14	0.28	0.32	-0.17	-0.13	0.00	0.14	0.01	0.05
8	Other structures <sup>2</sup>	0.20	0.05	-0.01	-0.47	-0.49	0.02	0.06	0.00	0.01	-0.01	0.08	0.12
9	<b>Equipment</b>	1.30	1.98	0.35	-3.26	1.84	1.46	0.34	-0.19	-0.07	0.10	-1.12	0.21
10	Information processing equipment	0.93	0.88	0.32	0.07	1.00	0.77	0.15	0.04	0.04	-0.06	-0.01	0.23
11	Computers and peripheral equipment	0.19	0.40	0.05	0.27	0.38	0.21	-0.02	-0.02	-0.01	-0.09	0.12	0.13
12	Other <sup>3</sup>	0.74	0.48	0.28	-0.20	0.62	0.56	0.17	0.06	0.06	0.03	-0.12	0.10
13	Industrial equipment	0.38	0.33	0.13	-0.61	0.42	0.23	0.08	-0.07	-0.10	-0.05	-0.34	-0.14
14	Transportation equipment	-0.08	0.53	-0.37	-2.22	0.14	0.06	0.05	0.09	-0.09	0.23	-0.69	-0.23
15	Other equipment <sup>4</sup>	0.08	0.24	0.28	-0.50	0.28	0.40	0.07	-0.25	0.10	-0.01	-0.08	0.35
16	<b>Intellectual property products</b>	1.79	2.32	2.10	1.25	3.08	2.67	0.33	0.21	0.16	-0.08	0.22	0.12
17	Software <sup>5</sup>	1.32	1.45	0.85	1.07	1.74	1.63	0.20	0.21	0.08	0.08	0.19	0.20
18	Research and development <sup>6</sup>	0.39	0.79	1.22	0.28	1.39	0.85	0.14	0.01	0.09	-0.20	0.08	0.04
19	Entertainment, literary, and artistic originals	0.08	0.08	0.03	-0.10	-0.04	0.19	0.00	-0.01	0.00	0.04	-0.04	-0.13
20	<b>Residential</b>	0.95	-0.16	-0.21	1.58	2.69	-2.47	0.05	-0.03	0.01	0.00	0.00	0.50
21	<b>Structures</b>	0.91	-0.16	-0.21	1.56	2.65	-2.46	0.04	-0.02	0.02	0.00	-0.01	0.50
22	Permanent site	0.48	0.18	-0.41	0.68	2.20	-0.95	0.05	-0.01	0.03	0.01	0.11	0.20
23	Single family	0.51	0.22	-0.50	0.46	1.91	-0.85	-0.01	0.00	0.01	-0.01	-0.04	0.24
24	Multifamily	-0.03	-0.04	0.09	0.23	0.29	-0.10	0.06	0.00	0.01	0.03	0.15	-0.04
25	Other structures <sup>7</sup>	0.43	-0.34	0.20	0.88	0.45	-1.50	-0.01	-0.02	-0.01	-0.01	-0.12	0.31
26	<b>Equipment</b>	0.04	0.00	0.00	0.02	0.04	-0.01	0.02	-0.01	0.00	-0.01	0.00	0.00

1. Includes petroleum and mineral exploration.
2. Consists primarily of religious, educational, vocational, lodging, railroads, farm, and amusement and recreational structures, net purchases of used structures, and brokers' commissions on the sale of structures.
3. Includes communication equipment, nonmedical instruments, medical equipment and instruments, photocopy and related equipment, and office and accounting equipment.
4. Consists primarily of furniture and fixtures, agricultural machinery, construction machinery, mining and oilfield machinery, service industry machinery, and electrical equipment not elsewhere classified.
5. Excludes software embedded, or bundled, in computers and other equipment.
6. Includes research and development expenditures for software.
7. Consists primarily of manufactured homes, improvements, dormitories, net purchases of used structures, and brokers' commissions on the sale of residential structures and adjoining land, and other ownership transfer costs.

Note. Percent changes are from NIPA table 5.3.2.

**Table A5. Real Private Inventory Investment by Industry, 2017–2022**

[Billions of chained (2017) dollars]

Line number	Series	Level						Revision in level					
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
1	<b>Change in private inventories</b>	<b>32.7</b>	<b>54.3</b>	<b>71.3</b>	<b>-29.9</b>	<b>12.5</b>	<b>128.1</b>	<b>-3.6</b>	<b>-11.8</b>	<b>-1.8</b>	<b>24.7</b>	<b>31.9</b>	<b>3.1</b>
2	Farm	-5.7	-8.0	-16.0	-12.1	-2.3	-15.2	1.3	2.1	2.7	-3.7	1.7	3.2
3	Mining, utilities, and construction	-14.3	-12.5	15.1	3.6	-19.2	6.5	-0.6	-1.3	0.5	3.0	-9.7	6.8
4	Manufacturing	0.8	13.9	41.9	-0.4	-16.7	24.7	-4.2	-4.6	-4.6	28.2	29.3	3.7
5	Durable-goods industries	-2.9	9.7	27.6	-0.8	-8.3	14.1	-1.9	-2.4	-1.2	10.0	20.1	-6.3
6	Nondurable-goods industries	3.8	4.2	14.1	0.4	-8.5	10.7	-2.8	-2.0	-3.1	19.1	9.0	10.0
7	Wholesale trade	30.3	30.7	19.6	-20.3	39.4	69.0	0.2	-2.5	-2.0	4.1	13.2	-9.7
8	Durable-goods industries	20.6	31.8	11.7	-30.8	33.3	59.8	0.4	-1.5	0.5	-2.5	1.5	-5.6
9	Nondurable-goods industries	9.7	-0.9	7.9	10.1	6.4	10.7	-0.1	-0.2	-2.5	5.7	12.3	-4.0
10	Retail trade	17.9	26.7	6.3	-13.5	3.3	44.3	2.0	1.4	-3.1	-6.3	15.7	5.6
11	Motor vehicle and parts dealers	14.2	17.8	4.4	-15.5	-38.0	17.4	1.5	-0.5	-0.8	1.5	7.3	2.9
12	Food and beverage stores	2.1	1.6	0.9	1.0	-0.3	2.3	0.1	0.1	0.3	0.0	0.0	-0.3
13	General merchandise stores	-3.3	3.4	-2.2	-4.0	9.5	9.6	-0.2	1.3	-0.4	-4.6	-0.7	4.6
14	Other retail stores	5.0	4.1	3.1	4.7	33.5	15.2	0.3	0.2	-2.3	-2.7	11.1	-1.8
15	Other industries	3.5	3.5	3.4	11.6	9.4	-0.1	0.4	-3.3	4.7	0.5	-16.4	-3.9
16	Residual	0.0	-0.3	1.2	1.9	-3.1	-2.8	---	---	---	---	---	---

Note. Levels are from NIPA table 5.7.6B. The chained-dollar series are calculated as the period-to-period change in end-of-period inventories. Because the formula for the chain-type quantity indexes uses weights of more than one period, chained-dollar estimates are usually not additive.

**Table A6. Real Private Inventory Investment by Industry: Change from Preceding Period, 2017–2022**  
 [Billions of chained (2017) dollars]

Line Number	Series	Change from preceding period						Revision in Change					
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
1	<b>Change in private inventories</b>	-0.7	21.6	17.0	-101.2	42.4	115.5	-1.2	-8.2	10.0	26.5	7.2	-28.8
2	Farm	-0.3	-2.3	-8.0	3.9	9.9	-12.9	0.0	0.8	0.7	-6.4	5.4	1.5
3	Mining, utilities, and construction	-22.6	1.8	27.6	-11.5	-22.8	25.7	-0.7	-0.8	1.9	2.4	-12.7	16.5
4	Manufacturing	1.5	13.1	27.9	-42.3	-16.3	41.5	-1.6	-0.5	0.0	32.8	1.1	-25.6
5	Durable-goods industries	9.9	12.7	17.9	-28.5	-7.4	22.3	-3.4	-0.5	1.3	11.1	10.1	-26.3
6	Nondurable-goods industries	-8.7	0.4	9.9	-13.7	-8.9	19.2	3.4	0.8	-1.2	22.2	-10.2	1.0
7	Wholesale trade	17.0	0.4	-11.1	-39.9	59.7	29.6	1.6	-2.6	0.5	6.0	9.1	-22.9
8	Durable-goods industries	16.8	11.2	-20.1	-42.5	64.1	26.5	0.3	-1.9	2.0	-3.0	3.9	-7.1
9	Nondurable-goods industries	0.1	-10.6	8.8	2.1	-3.6	4.2	1.7	-0.2	-2.2	8.2	6.6	-16.3
10	Retail trade	-8.7	8.8	-20.5	-19.7	16.7	41.0	0.0	-0.6	-4.5	-3.2	22.1	-10.2
11	Motor vehicle and parts dealers	-5.1	3.6	-13.4	-19.9	-22.5	55.4	0.0	-2.0	-0.3	2.3	5.8	-4.5
12	Food and beverage stores	0.4	-0.4	-0.7	0.1	-1.3	2.5	0.0	0.0	0.3	-0.3	0.0	-0.3
13	General merchandise stores	-2.4	6.6	-5.5	-1.8	13.4	0.1	-0.2	1.5	-1.7	-4.2	3.9	5.3
14	Other retail stores	-1.5	-0.9	-1.0	1.5	28.9	-18.4	0.2	-0.1	-2.5	-0.4	13.8	-12.9
15	Other industries	12.2	-0.1	-0.1	8.2	-2.2	-9.5	0.5	-3.7	8.0	-4.2	-16.9	12.5

Note. Levels are from NIPA table 5.7.6B. The chained-dollar series are calculated as the period-to-period change in end-of-period inventories. Because the formula for the chain-type quantity indexes uses weights of more than one period, chained-dollar estimates are usually not additive.

**Table A7. Real Exports of Goods and Services: Percent Change from Preceding Period, 2017–2022**

Line number	Series	Change from preceding period						Revision in percent change					
		Percent (annual rate)						Percentage points					
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
1	<b>Exports of goods and services</b>	4.1	2.9	0.5	-13.1	6.3	7.0	-0.2	0.1	0.0	0.1	0.2	-0.1
2	<b>Exports of goods</b>	4.1	4.2	0.2	-10.0	7.6	5.8	0.0	0.0	0.1	0.1	0.2	-0.5
3	Foods, feeds, and beverages	0.4	-0.1	-1.3	4.8	-4.8	-2.8	0.0	0.0	0.0	-0.1	-0.1	-0.4
4	Industrial supplies and materials	8.7	6.7	3.4	-2.9	2.0	6.7	0.0	0.0	0.0	0.0	0.1	-0.1
5	Capital goods, except automotive	2.5	4.7	-2.4	-16.1	11.0	5.7	0.0	0.0	0.2	0.1	0.1	0.1
6	Automotive vehicles, engines, and parts	4.7	-0.2	2.3	-20.5	11.9	4.9	0.0	0.0	0.0	0.3	1.3	-1.1
7	Consumer goods, except food and automotive	3.5	3.3	-0.5	-15.2	26.4	8.0	0.1	0.1	0.1	0.1	0.0	-0.4
8	Other <sup>1</sup>	-2.8	4.5	-3.1	-1.8	-0.1	12.3	-0.1	-0.2	0.0	0.0	0.9	-3.3
9	<b>Exports of services</b>	4.1	0.3	1.2	-18.7	3.8	9.6	-0.4	0.1	0.0	0.1	0.5	0.9
10	Transport	3.7	6.7	-2.2	-36.2	6.6	24.1	0.0	0.1	0.0	0.3	-0.1	5.2
11	Travel (for all purposes including education)	-0.1	-0.1	-3.1	-63.2	-3.9	77.9	0.0	0.0	-0.4	0.1	2.4	3.9
12	Charges for the use of intellectual property n.e.c.	2.6	-4.9	5.2	-6.6	6.5	-6.9	0.0	0.1	0.1	0.3	2.9	-2.3
13	Other business services <sup>2</sup>	6.9	0.5	3.0	0.0	4.0	1.9	-0.7	0.1	0.1	0.0	-0.3	0.3
14	Government goods and services n.e.c.	4.0	8.0	0.3	-4.0	-0.3	18.3	-5.4	0.1	0.0	-0.1	-1.9	12.0
15	Other	-11.9	-23.3	-23.5	-18.2	26.3	4.3	0.7	0.8	0.3	0.0	-2.4	-1.0

**n.e.c.** Not elsewhere classified

1. Includes net exports of goods under merchanting, beginning in 1999, reclassified from services to goods.
2. Includes maintenance and repair services, insurance services, financial services, telecommunication, computer and information services, personal, cultural, and recreational services, construction services, and other other business services.

Note. Percent changes are from NIPA table 4.2.1.

**Table A8. Contributions to Percent Change in Real Exports of Goods and Services, 2017–2022**

Line number	Series	Contributions to percent change						Revision in contribution to percent change					
		Percentage points											
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
	<b>Percent change at annual rate:</b>												
1	<b>Exports of goods and services</b>	4.1	2.9	0.5	-13.1	6.3	7.0	-0.2	0.1	0.0	0.1	0.2	-0.1
	<b>Percentage points at annual rates:</b>												
2	<b>Exports of goods</b>	2.68	2.74	0.11	-6.47	5.09	3.98	0.00	0.01	0.04	0.06	0.13	-0.43
3	Foods, feeds, and beverages	0.02	0.00	-0.07	0.25	-0.33	-0.18	0.00	0.01	0.00	-0.01	-0.01	0.01
4	Industrial supplies and materials	1.55	1.32	0.71	-0.57	0.46	1.72	0.00	0.00	0.00	0.00	0.03	-0.22
5	Capital goods, except automotive	0.58	1.05	-0.54	-3.53	2.25	1.13	0.00	0.02	0.04	0.03	0.00	0.00
6	Automotive vehicles, engines, and parts	0.31	-0.01	0.14	-1.33	0.68	0.27	0.00	0.00	0.00	0.02	0.08	-0.05
7	Consumer goods, except food and automotive	0.30	0.27	-0.04	-1.24	2.03	0.67	0.01	0.01	0.01	0.02	0.00	-0.06
8	Other <sup>1</sup>	-0.08	0.12	-0.09	-0.05	0.00	0.36	0.00	-0.01	0.00	0.00	0.03	-0.11
9	<b>Exports of services</b>	1.44	0.11	0.40	-6.66	1.25	2.98	-0.15	0.04	0.00	0.05	0.15	0.30
10	Transport	0.13	0.24	-0.08	-1.30	0.17	0.63	-0.01	0.00	0.00	0.01	0.00	0.13
11	Travel (for all purposes including education)	0.00	-0.01	-0.25	-4.98	-0.13	2.15	0.00	0.00	-0.03	0.02	0.07	0.14
12	Charges for the use of intellectual property n.e.c.	0.13	-0.24	0.24	-0.32	0.34	-0.34	0.00	0.01	0.01	0.02	0.15	-0.12
13	Other business services <sup>2</sup>	1.16	0.09	0.52	0.00	0.84	0.37	-0.12	0.03	0.02	0.00	-0.06	0.06
14	Government goods and services n.e.c.	0.03	0.07	0.00	-0.04	0.00	0.16	-0.05	0.00	0.00	-0.01	-0.02	0.10
15	Other	-0.02	-0.04	-0.03	-0.02	0.03	0.00	0.01	0.00	0.00	0.00	0.00	-0.01

**n.e.c.** Not elsewhere classified

1. Includes net exports of goods under merchanting, beginning in 1999, reclassified from services to goods.
2. Includes maintenance and repair services, insurance services, financial services, telecommunication, computer and information services, personal, cultural, and recreational services, construction services, and other other business services.

Note. Percent changes are from NIPA table 4.2.2.

**Table A9. Real Imports of Goods and Services: Percent Change from Preceding Period, 2017–2022**

Line number	Series	Change from preceding period						Revision in percent change					
		Percent (annual rate)						Percentage points					
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
1	<b>Imports of goods and services</b>	4.7	4.0	1.2	-9.0	14.5	8.6	0.2	-0.2	0.1	0.0	0.4	0.5
2	<b>Imports of goods</b>	4.5	5.1	0.6	-5.9	14.6	6.8	0.0	0.0	0.1	-0.1	0.1	-0.1
3	Foods, feeds, and beverages	2.3	7.7	2.8	3.2	9.3	5.2	0.0	0.0	0.0	0.0	0.0	-0.2
4	Industrial supplies and materials	1.4	0.2	-5.2	-9.0	10.7	1.9	0.0	0.0	0.0	-0.6	0.7	-0.7
5	Capital goods, except automotive	9.4	8.5	-0.4	-4.0	16.5	10.3	0.0	0.2	0.2	0.0	-0.1	0.1
6	Automotive vehicles, engines, and parts	2.8	3.6	1.6	-18.1	10.0	11.6	0.0	0.0	0.0	0.0	-0.5	0.4
7	Consumer goods, except food and automotive	4.5	7.7	3.3	-0.4	20.7	9.1	0.0	0.1	-0.1	0.1	0.0	0.0
8	Other	-0.7	-1.3	11.5	-6.5	7.4	-8.7	0.0	0.0	0.0	0.0	-0.2	-0.3
9	<b>Imports of services</b>	5.7	-0.6	4.0	-21.9	13.9	17.5	1.1	-1.1	0.0	0.1	1.6	3.3
10	Transport	9.6	1.8	2.3	-34.6	31.1	28.4	7.1	-6.9	0.0	0.0	1.6	3.7
11	Travel (for all purposes including education)	6.6	7.4	4.7	-74.6	69.3	103.7	-0.6	0.0	-0.3	-0.3	1.8	11.8
12	Charges for the use of intellectual property n.e.c.	3.8	-5.8	-2.5	5.2	-1.7	8.6	0.0	0.1	0.1	-6.1	11.0	2.3
13	Other business services <sup>1</sup>	5.3	-4.0	5.5	1.9	7.1	2.0	-0.2	0.1	0.1	1.1	0.3	2.3
14	Government goods and services n.e.c.	-2.0	-1.7	4.6	0.0	-5.3	-0.6	0.0	-0.1	-0.1	0.0	0.1	-1.3
15	Other	-8.7	-1.9	1.7	-30.6	25.4	1.2	0.3	0.3	0.0	0.1	-0.2	-0.1

**n.e.c.** Not elsewhere classified

1. Includes maintenance and repair services, insurance services, financial services, telecommunication, computer and information services, personal, cultural, and recreational services, construction services, and other other business services.

Note. Percent changes are from NIPA table 4.2.1.

**Table A10. Contributions to Percent Change in Real Imports of Goods and Services, 2017–2022**

Line number	Series	Contributions to percent change						Revision in contribution to percent change					
		Percentage points											
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
	<b>Percent change at annual rate:</b>												
1	<b>Imports of goods and services</b>	4.7	4	1.2	-9	14.5	8.6	0.2	-0.2	0.1	0.0	0.4	0.5
	<b>Percentage points at annual rates:</b>												
2	<b>Imports of goods</b>	3.63	4.15	0.45	-4.73	12.13	5.7	0.00	0.04	0.05	-0.06	0.05	-0.10
3	Foods, feeds, and beverages	0.11	0.36	0.13	0.16	0.52	0.28	0.00	0.00	0.00	0.00	0.00	-0.02
4	Industrial supplies and materials	0.24	0.03	-0.93	-1.43	1.85	0.38	0.00	-0.01	0.00	-0.10	0.13	-0.07
5	Capital goods, except automotive	2.01	1.82	-0.08	-0.88	3.73	2.26	0.00	0.03	0.05	0.01	-0.03	0.01
6	Automotive vehicles, engines, and parts	0.35	0.43	0.19	-2.21	1.09	1.16	0.00	0.00	0.00	0.00	-0.04	0.06
7	Consumer goods, except food and automotive	0.95	1.56	0.69	-0.08	4.59	1.98	-0.01	0.02	0.00	0.03	0.00	-0.07
8	Other	-0.03	-0.06	0.45	-0.29	0.34	-0.36	0.00	0.00	0.00	0.00	0.00	-0.01
9	<b>Imports of services</b>	1.08	-0.11	0.75	-4.28	2.34	2.89	0.20	-0.21	0.00	0.01	0.28	0.61
10	Transport	0.32	0.06	0.08	-1.25	0.83	0.92	0.24	-0.23	0.00	0.00	0.04	0.18
11	Travel (for all purposes including education)	0.26	0.29	0.19	-3.20	0.81	1.66	-0.02	-0.01	-0.01	0.00	0.01	0.20
12	Charges for the use of intellectual property n.e.c.	0.06	-0.09	-0.03	0.07	-0.03	0.12	0.00	0.00	0.01	-0.09	0.19	0.04
13	Other business services <sup>1</sup>	0.48	-0.37	0.47	0.17	0.73	0.19	-0.02	0.01	0.01	0.09	0.04	0.21
14	Government goods and services n.e.c.	-0.02	-0.01	0.03	0.00	-0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Other	-0.02	0.00	0.00	-0.07	0.05	0.00	0.00	0.01	0.00	0.00	0.00	0.00

**n.e.c.** Not elsewhere classified

1. Includes maintenance and repair services, insurance services, financial services, telecommunication, computer and information services, personal, cultural, and recreational services, construction services, and other other business services.

Note. Percent changes are from NIPA table 4.2.2.

**Table A11. Real Government Consumption Expenditures and Gross Investment: Percent Change from Preceding Period, 2017–2022**

Line number	Series	Change from preceding period						Revision in percent change					
		Percent (annual rate)						Percentage points					
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
<b>1</b>	<b>Government consumption expenditures and gross investment</b>	<b>0.6</b>	<b>2.0</b>	<b>3.9</b>	<b>3.2</b>	<b>-0.3</b>	<b>-0.9</b>	<b>0.2</b>	<b>0.3</b>	<b>0.6</b>	<b>0.6</b>	<b>-0.9</b>	<b>-0.3</b>
2	Consumption expenditures <sup>1</sup>	-0.1	1.4	3.9	2.9	0.3	-0.9	0.0	0.2	0.5	0.7	-1.0	-0.7
3	Gross investment <sup>2</sup>	3.1	4.4	3.9	4.3	-2.8	-1.1	0.5	0.9	0.8	0.4	-0.5	1.0
<b>4</b>	<b>Federal</b>	<b>0.5</b>	<b>3.5</b>	<b>3.8</b>	<b>6.1</b>	<b>1.4</b>	<b>-2.8</b>	<b>0.1</b>	<b>0.5</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.9</b>	<b>-0.3</b>
<b>5</b>	<b>National defense</b>	<b>1.0</b>	<b>3.5</b>	<b>5.3</b>	<b>2.8</b>	<b>-1.9</b>	<b>-2.8</b>	<b>0.1</b>	<b>0.2</b>	<b>0.0</b>	<b>-0.1</b>	<b>-0.7</b>	<b>0.0</b>
6	Consumption expenditures	0.4	2.7	4.9	1.9	-2.1	-4.1	0.0	-0.1	0.1	-0.1	0.2	-1.6
7	Gross investment	3.3	7.0	7.0	6.3	-1.0	2.1	0.1	1.3	-0.2	-0.2	-4.0	6.1
<b>8</b>	<b>Nondefense</b>	<b>-0.2</b>	<b>3.4</b>	<b>1.7</b>	<b>10.9</b>	<b>5.9</b>	<b>-2.9</b>	<b>0.1</b>	<b>0.9</b>	<b>-0.2</b>	<b>-0.3</b>	<b>-1.4</b>	<b>-0.7</b>
9	Consumption expenditures	-1.5	2.3	0.9	10.7	6.4	-5.5	-0.2	0.6	-0.4	-0.8	-4.0	-1.7
10	Gross investment	3.6	6.5	3.8	11.6	4.4	4.1	0.8	1.8	0.2	1.4	5.9	1.3
<b>11</b>	<b>State and local</b>	<b>0.6</b>	<b>1.1</b>	<b>4.0</b>	<b>1.4</b>	<b>-1.3</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>1.0</b>	<b>1.0</b>	<b>-0.8</b>	<b>-0.5</b>
12	Consumption expenditures	0.1	0.8	4.3	1.6	-0.2	1.3	0.1	0.2	1.0	1.3	-0.6	-0.2
13	Gross investment	2.9	2.7	2.7	0.8	-6.2	-4.6	0.6	0.4	1.3	0.1	-1.4	-1.4

1. Government consumption expenditures are services (such as education and national defense) produced by government that are valued at their cost of production. Excludes government sales to other sectors and government own-account investment (construction, software, and research and development).
2. Gross government investment consists of general government and government enterprise expenditures for fixed assets; inventory investment is included in government consumption expenditures.

Note. Percent changes are from NIPA table 3.9.1.



**Table A12. Contributions to Percent Change in Real Government Consumption Expenditures and Gross Investment, 2017–2022**

Line number	Series	Contributions to percent change						Revision in contribution to percent change					
		Percentage points											
		2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022
	<b>Percent change at annual rate:</b>												
<b>1</b>	<b>Government consumption expenditures and gross investment</b>	<b>0.6</b>	<b>2</b>	<b>3.9</b>	<b>3.2</b>	<b>-0.3</b>	<b>-0.9</b>	<b>0.2</b>	<b>0.3</b>	<b>0.6</b>	<b>0.6</b>	<b>-0.9</b>	<b>-0.3</b>
	<b>Percentage points at annual rates:</b>												
2	Consumption expenditures <sup>1</sup>	-0.06	1.11	3.14	2.30	0.27	-0.70	0.01	0.12	0.45	0.52	-0.78	-0.53
3	Gross investment <sup>2</sup>	0.61	0.88	0.79	0.87	-0.56	-0.22	0.11	0.19	0.17	0.09	-0.09	0.19
<b>4</b>	<b>Federal</b>	<b>0.18</b>	<b>1.29</b>	<b>1.44</b>	<b>2.26</b>	<b>0.52</b>	<b>-1.07</b>	<b>0.02</b>	<b>0.18</b>	<b>-0.02</b>	<b>-0.07</b>	<b>-0.37</b>	<b>-0.09</b>
<b>5</b>	<b>National defense</b>	<b>0.21</b>	<b>0.77</b>	<b>1.18</b>	<b>0.63</b>	<b>-0.41</b>	<b>-0.59</b>	<b>0.01</b>	<b>0.04</b>	<b>0.01</b>	<b>-0.02</b>	<b>-0.14</b>	<b>0.01</b>
6	Consumption expenditures	0.07	0.47	0.87	0.34	-0.37	-0.69	0.00	-0.02	0.01	-0.02	0.04	-0.27
7	Gross investment	0.14	0.30	0.31	0.29	-0.05	0.10	0.01	0.06	0.00	0.00	-0.19	0.28
<b>8</b>	<b>Nondefense</b>	<b>-0.03</b>	<b>0.52</b>	<b>0.26</b>	<b>1.63</b>	<b>0.93</b>	<b>-0.48</b>	<b>0.01</b>	<b>0.14</b>	<b>-0.03</b>	<b>-0.05</b>	<b>-0.24</b>	<b>-0.10</b>
9	Consumption expenditures	-0.17	0.25	0.10	1.16	0.74	-0.66	-0.02	0.06	-0.04	-0.11	-0.49	-0.17
10	Gross investment	0.14	0.26	0.16	0.48	0.19	0.18	0.03	0.07	0.01	0.07	0.25	0.07
<b>11</b>	<b>State and local</b>	<b>0.37</b>	<b>0.71</b>	<b>2.50</b>	<b>0.91</b>	<b>-0.81</b>	<b>0.15</b>	<b>0.10</b>	<b>0.14</b>	<b>0.65</b>	<b>0.69</b>	<b>-0.49</b>	<b>-0.26</b>
12	Consumption expenditures	0.05	0.39	2.18	0.81	-0.10	0.65	0.04	0.08	0.49	0.67	-0.32	-0.10
13	Gross investment	0.33	0.32	0.32	0.10	-0.71	-0.50	0.07	0.06	0.16	0.02	-0.17	-0.16

1. Government consumption expenditures are services (such as education and national defense) produced by government that are valued at their cost of production. Excludes government sales to other sectors and government own-account investment (construction, software, and research and development).
2. Gross government investment consists of general government and government enterprise expenditures for fixed assets; inventory investment is included in government consumption expenditures.

Note. Percent changes are from NIPA table 3.9.2.

## Appendix B: Summary National Income and Product Accounts

**Table B1. Summary National Income and Product Accounts, 2022**

[Billions of dollars]

Account 1. Domestic Income and Product Account					
Line	Series	2022	Line	Series	2022
1	Compensation of employees, paid	13,455.2	15	Personal consumption expenditures (3-3)	17,511.7
2	Wages and salaries	11,132.1	16	Goods	5,997.0
3	Domestic (3-12)	11,108.6	17	Durable goods	2,128.9
4	Rest of the world (5-15)	23.5	18	Nondurable goods	3,868.1
5	Supplements to wages and salaries (3-14)	2,323.2	19	Services	11,514.7
6	Taxes on production and imports (4-15)	1,810.2	20	Gross private domestic investment	4,756.6
7	Less: Subsidies (4-8)	127.4	21	Fixed investment (6-2)	4,599.3
8	Net operating surplus	6,358.5	22	Nonresidential	3,433.0
9	Private enterprises (2-19)	6,354.1	23	Structures	700.5
10	Current surplus of government enterprises (4-28)	4.4	24	Equipment	1,327.2
11	Consumption of fixed capital (6-14)	4,299.9	25	Intellectual property products	1,405.4
			26	Residential	1,166.4
12	Gross domestic income	25,796.4	27	Change in private inventories (6-4)	157.3
			28	Net exports of goods and services	-971.1
13	Less: Statistical discrepancy (6-20)	-52.3	29	Exports (5-1)	2,995.0
			30	Imports (5-13)	3,966.2
			31	Government consumption expenditures and gross investment (4-1 plus 6-3)	4,446.8
			32	Federal	1,635.5
			33	National defense	928.4
			34	Nondefense	707.1
			35	State and local	2,811.3
14	Gross domestic product	24,744.1	36	Gross domestic product	25,744.1

Account 2. Private Enterprise Income Account					
Line	Series	2022	Line	Series	2022
1	Income payments on assets	3,334.4	19	Net operating surplus, private enterprises (1-9)	6,354.1
2	Interest and miscellaneous payments (2-21 and 3-20 and 4-22 and 5-17)	2,842.6	20	Income receipts on assets	3,075.0
3	Dividend payments to the rest of the world (5-18)	268.1	21	Interest (2-2 and 3-4 and 4-7 and 5-5)	2,110.3
4	Reinvested earnings on foreign direct investment in the United States (5-19)	223.7	22	Dividend receipts from the rest of the world (5-6)	602.8
5	Business current transfer payments (net)	216.8	23	Reinvested earnings on U.S. direct investment abroad (5-7)	361.9
6	To persons (net) (3-24)	99.1			
7	To government (net) (4-25)	115.2			
8	To the rest of the world (net) (5-23 less 5-11 less 2-14)	2.5			
9	Proprietors' income with IVA and CCAdj (3-17)	1,790.9			
10	Rental income of persons with IVA and CCAdj (3-18)	878.3			
11	Corporate profits with IVA and CCAdj	3,208.7			
12	Taxes on corporate income	542.4			
13	To government (4-16)	527.5			
14	To the rest of the world (5-23)	14.9			
15	Profits after tax with IVA and CCAdj	2,666.3			
16	Net dividends (3-21 plus 4-23)	1,887.3			
17	Undistributed corporate profits with IVA and CCAdj (6-12)	779.0			
18	Uses of private enterprise income	9,429.1	24	Sources of private enterprise income	9,429.1

Account 3. Personal Income and Outlay Account					
Line	Series	2022	Line	Series	2022
1	Personal current taxes (4-14)	3,138.3	10	Compensation of employees	13,439.2
2	Personal outlays	18,079.7	11	Wages and salaries	11,116.0
3	Personal consumption expenditures (1-15)	17,511.7	12	Domestic (1-3)	11,108.6
4	Personal interest payments (2-21 and 3-20 and 4-22 and 5-17)	326.1	13	Rest of the world (5-3)	7.4
5	Personal current transfer payments	241.8	14	Supplements to wages and salaries (1-5)	2,323.2
6	To government (4-26)	127.7	15	Employer contributions for employee pension and insurance funds	1,559.1
7	To the rest of the world (net) (5-21 less 5-9)	114.1	16	Employer contributions for government social insurance	764.0
8	Personal saving (6-11)	622.8	17	Proprietors' income with IVA and CCAAdj (2-9)	1,790.9
			18	Rental income of persons with CCAAdj (2-10)	878.3
			19	Personal income receipts on assets	3,432.0
			20	Personal interest income (2-2 plus 3-4 plus 4-7 plus 5-5 less 2-21 less 4-22 less 5-17)	1,627.5
			21	Personal dividend income (2-16 less 4-23)	1,804.5
			22	Personal current transfer receipts	4,002.1
			23	Government social benefits (4-4)	3,903.0
			24	From business (net) (2-6)	99.1
			25	Less: Contributions for government social insurance, domestic (4-19)	1,701.7
9	Personal taxes, outlays, and saving	21,840.8	26	Personal income	21,840.8

Account 4. Government Receipts and Expenditures Account					
Line	Series	2022	Line	Series	2022
1	Consumption expenditures (1-31)	3,570.1	13	Current tax receipts	5,509.8
2	Current transfer payments	4,020.5	14	Personal current taxes (3-1)	3,138.3
3	Government social benefits	3,931.7	15	Taxes on production and imports (1-6)	1,810.2
4	To persons (3-23)	3,903.0	16	Taxes on corporate income (2-13)	527.5
5	To the rest of the world (5-22)	28.8	17	Taxes from the rest of the world (5-10)	33.8
6	Other current transfer payments to the rest of the world (5-22)	88.7	18	Contributions for government social insurance	1,707.4
7	Interest payments (2-21 and 3-20 and 4-22 and 5-17)	973.7	19	From persons (3-25)	1,701.7
8	Subsidies (1-7)	127.4	20	From the rest of the world (5-10)	5.8
9	Net government saving (6-13)	-1,001.9	21	Income receipts on assets	212.4
10	Federal	-1,062.2	22	Interest and miscellaneous receipts (2-2 and 3-4 and 4-7 and 5-5)	129.7
11	State and local	60.4	23	Dividends (2-16 less 3-21)	82.7
			24	Current transfer receipts	255.7
			25	From business (net) (2-7)	115.2
			26	From persons (3-6)	127.7
			27	From the rest of the world (5-10)	12.9
			28	Current surplus of government enterprises (1-10)	4.4
12	Government current expenditures and net saving	7,689.8	29	Government current receipts	7,689.8

**Account 5. Foreign Transactions Current Account**

Line	Series	2022	Line	Series	2022
1	Exports of goods and services (1-29)	2,995.0	13	Imports of goods and services (1-30)	3,966.2
2	Income receipts from the rest of the world	1,252.6	14	Income payments to the rest of the world	1,070.7
3	Wage and salary receipts (3-13)	7.4	15	Wage and salary payments (1-4)	23.5
4	Income receipts on assets	1,245.2	16	Income payments on assets	1,047.3
5	Interest (2-21 and 3-20 and 4-22)	280.5	17	Interest (2-2 and 3-4 and 4-7)	555.4
6	Dividends (2-22)	602.8	18	Dividends (2-3)	268.1
7	Reinvested earnings on U.S. direct investment abroad (2-23)	361.9	19	Reinvested earnings on foreign direct investment in the United States (2-4)	223.7
8	Current taxes, contributions for government social insurance, and transfer receipts from the rest of the world	194.0	20	Current taxes and transfer payments to the rest of the world	390.6
9	To persons (5-21 less 3-7)	7.4	21	From persons (3-7)	121.5
10	To government (4-17 plus 4-20 plus 4-27)	52.4	22	From government (4-5 plus 4-6)	117.5
11	To business (2-8)	134.2	23	From business (2-8 and 2-14)	151.6
			24	Balance on current account, national income and product accounts (7-1)	-985.8
12	Current receipts from the rest of the world	4,441.7	25	Current payments to the rest of the world and balance on current account, NIPAs	4,441.7

Account 6. Domestic Capital Account					
Line	Series	2022	Line	Series	2022
1	Gross domestic investment	5,633.4	10	Net saving	400.0
2	Private fixed investment (1-21)	4,599.3	11	Personal saving (3-8)	622.8
3	Government fixed investment (1-31)	876.8	12	Undistributed corporate profits with IVA and CCAj (2-17)	779.0
4	Change in private inventories (1-27)	157.3	13	Net government saving (4-9)	-1,001.9
5	Capital account transactions (net) (7-2)	5.3	14	Plus: Consumption of fixed capital (1-11)	4,299.9
6	Transfer payments for catastrophic losses (net) (7-3)	5.1	15	Private	3,577.6
7	Other capital account transactions (7-4)	0.2	16	Government	722.3
8	Net lending or net borrowing (-), national income and product accounts (7-5)	-991.1	17	General government	624.6
			18	Government enterprises	97.7
			19	Equals: Gross saving	4,699.9
			20	Statistical discrepancy (1-13)	-52.3
9	Gross domestic investment, capital account transactions (net), and net lending, NIPAs	4,647.6	21	Gross saving and statistical discrepancy	4,647.6

Account 7. Foreign Transactions Capital Account					
Line	Series	2022	Line	Series	2022
			2	Capital account transactions (net) (6-5)	5.3
			3	Transfer payments for catastrophic losses (net) (6-6)	5.1
			4	Other capital account transactions (6-7)	0.2
			5	Net lending or net borrowing (-), national income and product accounts (6-8)	-991.1
1	Balance on current account, NIPAs (5-24)	-985.8	6	Capital account transactions (net) and net lending, NIPAs (6-5)	-985.8

**CCAj**Capital consumption adjustment

**IVA** Inventory valuation adjustment

**NIPAs**National Income and Product Accounts

Note. The seven summary accounts constitute a double-entry accounting system in which each of the entries in a summary account appears again in that account or in one of the other summary accounts. The numbers in parentheses indicate these "counter entries." In some cases, an entry may be equal to another entry in the summary accounts. For example, supplements to wages and salaries appears in account 1, line 5 and in account 3, line 14. In other cases, an entry may be equal to a combination of other entries (or of parts of other entries). For example, for private enterprise interest payments (account 2, line 2), the counter entry includes parts of private enterprise interest receipts (account 2, line 21), of personal interest income (account 3, line 20), of government interest receipts (account 4, line 22), and of interest payments to the rest of the world (account 5, line 17).

## Appendix C: Industry Source Data Tables

**Table C1. Principal Data Sources for Industry and Commodity Output and Prices**

Industry and commodity	2017 benchmark-year sources	Nonbenchmark-year sources	Source for price indexes
<b>Agriculture, forestry, fishing and hunting</b>			
Farms	USDA ERS data for cash receipts by commodity, BEA NIPA statistics based on USDA ERS data	Farm output from BEA NIPAs based on USDA ERS data	NIPA prices based on USDA price indexes received by farmers
Forestry, fishing, and related activities	For logging and support activities, Census Bureau SUSB data and 2017 Economic Census; for forestry and hunting, BEA NIPA farm output and ERS cash receipts; for commercial fishing, landings data from NOAA	For forestry and hunting, BEA NIPA farm output; for trapping, ERS cash receipts; for fishing, commercial landings data from NOAA and Census Bureau M3 data; for logging, Census Bureau ASM data and M3 data	BLS PPI, NIPA PCE prices, USDA/National Agricultural Statistics Service unit prices
<b>Mining</b>			
Oil and gas extraction	Census Bureau 2017 Economic Census, NAICS Sector 21, Mining	EIA production quantities and commodity prices	BLS PPI and EIA
Mining, except oil and gas	Census Bureau 2017 Economic Census, NAICS Sector 21, Mining	For coal mining, <i>EIA U.S. Coal Supply and Demand in Review &amp; MSHA Mine Employment and Coal Production</i> ; for uranium, <i>EIA Uranium Marketing Annual Report</i> ; for all other, USGS Mineral Commodity Summaries and Mineral Industry Survey	EIA, USGS, and BLS PPI
Support activities for mining	Census Bureau 2017 Economic Census, NAICS Sector 21, Mining	For mining exploration, trade source data on drilling costs and footage drilled; all other support activities, USGS <i>Mineral Commodity Summaries</i>	EIA, USGS, BLS PPI, and trade sources
<b>Utilities</b>			
Utilities	For electric power generation, transmission, and distribution; natural gas distribution; and water, sewage, and other systems, Census Bureau 2017 Economic Census	For electric power generation transmission and distribution, EIA forms 861 and 861M; for natural gas distribution, EIA form 176 and <i>Natural Gas Monthly</i> ; for water, sewage, and other systems, Census Bureau SAS	BLS CPI and BLS PPI
<b>Construction</b>			
Residential	Census Bureau VIP survey	Census Bureau VIP survey	Census Bureau price deflator for multi-family home construction, composite price of new single-family houses under construction and the Turner Cost Index, and BEA prices
Nonresidential	Census Bureau VIP survey	Census Bureau VIP survey, DOD expenditures, USDA expenditures, and BLS occupational employment statistics	BLS PPI and BEA composite prices based on EIA and trade source data and on the Census Bureau price deflator for single-family houses under construction
<b>Manufacturing</b>			
Manufacturing	Census Bureau 2017 Economic Census, NAICS Sector 31–33, Manufacturing	Census Bureau ASM data, M3 shipments and inventories data, nonemployer survey data, EIA production data, FRB data, and BLS PPI; for auto and light truck manufacturing, Wards Intelligence unit production data and J.D. Power average net cost of new vehicles	BLS PPI and NIPA prices based on DOD prices paid for military equipment, and NIPA hedonic prices
<b>Wholesale trade</b>			
Wholesale trade	Census Bureau 2017 Economic Census, NAICS Sector 42, Wholesale Trade; Census Bureau 2021 Annual Wholesale Trade Survey	Census Bureau Monthly Wholesale Trade Survey and Annual Wholesale Trade Survey	BLS PPI and NIPA sales deflators
<b>Retail trade</b>			
Retail trade	Census Bureau 2017 Economic Census, NAICS Sector 44–45, Retail Trade; Census Bureau 2021 Annual Retail Trade Survey	Census Bureau Monthly Retail Trade Survey and Annual Retail Trade Survey	BLS PPI and NIPA sales deflators
<b>Transportation and warehousing</b>			
Air transportation	Census Bureau, 2017 Economic Census, NAICS Sector 48–49, Transportation and Warehousing; DOT BTS	Census Bureau SAS data; DOT BTS Air Carrier Financial Statistics (ACFS) and U.S. Air Carrier Traffic Statistics (ACTS); for 2022 only Census Bureau QSS data	BLS PPI
Rail transportation	For rail passenger, Amtrak Annual Report; for rail freight, DOT STB selected earning data	For rail passenger, Amtrak Annual Report; for rail freight, DOT STB selected earning data	BLS PPI
Water transportation	Census Bureau, 2017 Economic Census, NAICS Sector 48–49, Transportation and Warehousing	Census Bureau SAS data; for 2022 only Census Bureau QSS data	For freight, BLS PPI; for passenger, BLS CPI
Truck transportation	Census Bureau, 2017 Economic Census, NAICS Sector 48–49, Transportation and Warehousing	Census Bureau SAS data; for 2022 only Census Bureau QSS data	BLS PPI
Transit and ground passenger transportation	Census Bureau, 2017 Economic Census, NAICS Sector 48–49, Transportation and Warehousing	Census Bureau SAS data; for 2022 only Census Bureau QSS data	NIPA PCE prices
Pipeline transportation	Census Bureau, 2017 Economic Census, NAICS Sector 48–49, Transportation and Warehousing	Census Bureau SAS data; for 2022 only Census Bureau QSS data	BLS PPI
Other transportation and support activities	Census Bureau, 2017 Economic Census, NAICS Sector 48–49, Transportation and Warehousing	Census Bureau SAS data; for 2022 only Census Bureau QSS data	BLS PPI and NIPA PCE prices
Warehousing and storage	Census Bureau, 2017 Economic Census, NAICS Sector 48–49, Transportation and Warehousing	Census Bureau SAS data; for 2022 only Census Bureau QSS data	BLS PPI
<b>Information</b>			
Publishing industries, except internet (includes software)	Census Bureau 2017 Economic Census, NAICS Sector 51, Information	Census Bureau SAS data; for 2022 only, Census Bureau QSS data	BLS PPI and BEA price indexes for software
Motion picture and sound recording industries	Census Bureau 2017 Economic Census, NAICS Sector 51, Information	Census Bureau SAS data; for 2022 only, Census Bureau QSS data	BLS PPI and NIPA PCE prices
Broadcasting and telecommunications	Census Bureau 2017 Economic Census, NAICS Sector 51, Information	Census Bureau SAS data; for 2022 only, Census Bureau QSS data	BLS PPI
Data processing, internet publishing, and other information services	Census Bureau 2017 Economic Census, NAICS Sector 51, Information	Census Bureau SAS data; for 2022 only, Census Bureau QSS data	BLS PPI, NIPA PCE prices, and trade source data
<b>Finance and insurance</b>			
Federal Reserve banks, credit intermediation, and related activities	Census Bureau 2017 Economic Census, NAICS Sector 52, Finance and Insurance; IRS Statistics of Income; FRB 2017 Annual Report; and FDIC, 2017 Statistics on Banking; NIPA imputed service charges for depository institutions	Census Bureau SAS data; NIPA imputed service charges for depository institutions; FDIC Statistics on Banking; for 2022 only, Census Bureau QSS data	FRB-priced services and NIPA PCE prices
Securities, commodity contracts, and investments	Census Bureau 2017 Economic Census, NAICS Sector 52, Finance and Insurance; and IRS Statistics of Income	Census Bureau SAS data; for 2022 only Census Bureau QSS data; SEC FOCUS data; NIPA PCE, and NIPA R&D data	BLS PPI and NIPA PCE prices
Insurance carriers and related activities	AM Best Company statistics; Census Bureau 2017 Economic Census, NAICS Sector 52, Finance and Insurance; American Council of Life Insurers Handbook; BEA NIPA statistics on medical and hospital insurance premiums	For property and casualty insurance, life insurance, and reinsurance, A M Best Company statistics and Census Bureau SAS (for 2022 only, Census Bureau QSS data); for medical and hospitalization insurance, private trade source data and BEA NIPA statistics on medical and hospital insurance premiums	BLS PPI and NIPA PCE prices
Funds, trusts, and other financial vehicles	IRS Statistics of Income; and NIPA imputed service charges for other financial institutions	IRS Statistics of Income; and NIPA imputed service charges for other financial institutions	NIPA PCE prices
<b>Real estate and rental and leasing</b>			
Real estate	Census Bureau 2017 Economic Census, NAICS Sector 53, Real Estate and Rental and Leasing; For residential dwellings, NIPA housing data; for nonresidential structures, IRS tabulations of business tax returns, NIPA rental value of buildings owned by nonprofit institutions serving households, and NIPA foreign trade statistics	For residential dwellings, NIPA housing data; for nonresidential structures, IRS tabulations of business tax returns, NIPA rental value of buildings owned by nonprofit institutions serving households, and NIPA foreign trade statistics	For residential dwellings, NIPA PCE prices and NIPA implicit price deflators for farm rents paid; for nonresidential structures, BLS PPI; for real estate managers and agents, BLS PPI and trade source data
Rental and leasing services and lessors of intangible assets	Census Bureau 2017 Economic Census, NAICS Sector 53, Real Estate and Rental and Leasing; for royalties, IRS tabulations of business tax returns	For rental and leasing services, Census Bureau SAS data; for royalties, IRS tabulations of business tax returns	BLS PPI, BTS and construction index, mining, crude oil receipts, and trade source data



Industry and commodity	2017 benchmark-year sources	Nonbenchmark-year sources	Source for price indexes
<b>Professional, scientific, and technical services</b>			
Legal services	Census Bureau 2017 Economic Census, NAICS Sector 54, Professional, Scientific, and Technical Services	Census Bureau SAS data; for 2022 only Census Bureau QSS data, BLS QCEW data	BLS PPI and NIPA PCE prices
Computer systems design and related services	Census Bureau 2017 Economic Census, NAICS Sector 54, Professional, Scientific, and Technical Services	Census Bureau SAS data; for 2022 only Census Bureau QSS data	BEA price indexes for software
Miscellaneous professional, scientific, and technical services	Census Bureau 2017 Economic Census, NAICS Sector 54, Professional, Scientific, and Technical Services	Census Bureau SAS data; for 2022 only Census Bureau QSS data; NIPA PCE, BLS QCEW data, and NIPA R&D data	BLS PPI, NIPA PCE prices, and BEA price indexes for R&D
<b>Management of companies and enterprises</b>			
Management of companies and enterprises	Census Bureau 2017 Economic Census, NAICS Sector 55, Management of Companies and Enterprises	BLS QCEW data	BLS PPI
<b>Administrative and waste management services</b>			
Administrative and waste management services	Census Bureau 2017 Economic Census, NAICS Sector 56, Administrative and Support and Waste Management and Remediation Services	Census Bureau SAS data; for 2022 only Census Bureau QSS data; BLS QCEW for auxiliary industries	BLS PPI and NIPA PCE prices
<b>Educational Services</b>			
Educational Services	Census Bureau 2017 Economic Census, NAICS Sector 61, Educational Services; Department of Education, National Center for Education Statistics, 2020 Digest of Education Statistics	PCE data for education services based on data from the Department of Education and data from BLS consumer expenditure survey	NIPA PCE prices
<b>Health care and social assistance</b>			
Health care and social assistance	Census Bureau 2017 Economic Census, NAICS Sector 62, Health Care and Social Assistance	Census Bureau SAS data; for 2022 only Census Bureau QSS data	BLS PPI and NIPA PCE prices
<b>Arts, entertainment, and recreation</b>			
Arts, entertainment, and recreation	Census Bureau 2017 Economic Census, NAICS Sector 71, Arts, Entertainment, and Recreation	Census Bureau SAS data; for 2022 only Census Bureau QSS data	BLS PPI and NIPA PCE prices
<b>Accommodation and food services</b>			
Accommodation	Census Bureau 2017 Economic Census, NAICS Sector 72, Accommodation and Food Services	For hotels and motels, PCE; for all other traveler accommodations and bed and breakfasts, BLS QCEW data	BLS PPI and NIPA PCE prices
Food services and drinking places	Census Bureau 2017 Economic Census, NAICS Sector 72, Accommodation and Food Services	Census Bureau SAS data	NIPA PCE prices
<b>Other services, except government</b>			
Other services, except government	For religious, grant making, civic, and other nonprofit services; personal services and dry cleaning services; and repair and maintenance: 2017 Economic Census taxable revenue and tax-exempt expenses, NIPA PCE, NIPA WS; for private household services, PCE	For religious, grant making, civic, and other nonprofit services, personal services, and dry cleaning services, Census Bureau SAS data, for 2022 only Census Bureau QSS data, PCE, and data from the National Center for Charitable Statistics and Giving USA; for repair and maintenance, BLS QCEW; for private household services, PCE	BLS PPI and NIPA PCE prices
<b>Federal</b>			
General government	Federal budget data; Center for Medicare and Medicaid Services; BLS Current Employment Statistics	NIPA government expenditure statistics; for federal structures, DOD investment expenditures	NIPA prices based on BLS PPI and CPI; for military facilities, DOD data on employment, prices for military construction, and construction cost indexes from trade source data
Government enterprises	U.S. Postal Service receipts; EIA data for electric utilities; FHA data; federal government agency reports for specific federal enterprises	U.S. Postal Service receipts; EIA data for electric utilities; FHA data; government agency data for specific federal enterprises	BLS PPI
<b>State and local</b>			
General government	Census Bureau 2017 Census of Governments; Census Bureau 2017 Government Finances; Census Bureau 2017 Public Employment	NIPA government expenditure statistics	BLS PPI and NIPA PCE prices
Government enterprises	Census Bureau 2017 Census of Governments; Census Bureau 2017 Government Finances; Census Bureau 2017 Public Employment; Alaska Railroad Administration data for Alaskan ferries, watersports, and airports; for electric utilities, EIA data; for state and local government structures, Census Bureau VIP survey	NIPA statistics on government enterprises based on the Census Bureau annual survey of government finances; for Alaskan ferries, watersports, and airports, Alaska Railroad Administration; for electric utilities, EIA data; for state and local government structures, Census Bureau VIP survey	BLS PPI and NIPA PCE prices

<b>ARTS</b>	Annual Retail Trade Survey
<b>ASM</b>	Annual Survey of Manufactures
<b>BEA</b>	Bureau of Economic Analysis
<b>BLS</b>	Bureau of Labor Statistics
<b>BTS</b>	Bureau of Transportation Statistics
<b>CPI</b>	Consumer Price Index
<b>DOD</b>	Department of Defense
<b>DOE</b>	Department of Energy
<b>DOT</b>	Department of Transportation
<b>EIA</b>	Energy Information Administration
<b>ERS</b>	Economic Research Service
<b>FDIC</b>	Federal Deposit Insurance Corporation
<b>FHA</b>	Federal Housing Administration
<b>FRB</b>	Federal Reserve Board
<b>IRS</b>	Internal Revenue Service
<b>ITAs</b>	International Transactions Accounts
<b>M3</b>	Manufacturers' Shipments, Inventories, and Orders

<b>NAICS</b>	North American Industry Classification System
<b>NIPA</b>	National Income and Product Accounts
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>PCE</b>	Personal Consumption Expenditures
<b>PPI</b>	Producer Price Index
<b>QCEW</b>	Quarterly Census of Employment and Wages
<b>R&amp;D</b>	Research and development
<b>SAS</b>	Service Annual Survey
<b>SEC</b>	Securities and Exchange Commission
<b>SOI</b>	Statistics of Income
<b>STB</b>	Surface Transportation Board
<b>USDA</b>	United States Department of Agriculture
<b>USGS</b>	United States Geological Survey
<b>VIP</b>	Value of Construction Put in Place Survey

**Table C2. Principal Data Sources and Methods for Estimating Intermediate Inputs and Value Added**

Intermediate inputs <sup>1</sup>	
<b>Agriculture, forestry, fishing, and hunting</b>	Inputs to the agriculture, forestry, fishing, and hunting industries were estimated from BEA NIPA estimates based on USDA ERS statistics for farm income, EIA data, and 2017 Economic Census data
<b>Mining</b>	Inputs to the mining industries were estimated primarily from 2017 Economic Census mining sector reports. Detailed expense data used to estimate intermediate inputs included accounting, auditing, and bookkeeping services; advertising and promotional expenses; communication services; legal services; purchased electricity; purchased fuels consumed; rental payments for buildings and other structures; rental payments for machinery and equipment; supplies used and minerals received; and all other operating expenses.
<b>Construction</b>	Inputs to the construction industries were estimated primarily from 2017 Economic Census construction data.
<b>Manufacturing</b>	Inputs to the manufacturing industries were estimated primarily from 2017 Economic Census manufacturing sector reports. Detailed expense data used to estimate intermediate inputs included accounting, auditing, and bookkeeping services; advertising and promotional services; communication services; legal services; management consulting and administrative services; materials, parts, containers, packaging, etc, used; purchased computer services; purchased electricity; purchased fuels; refuse removal services; rental payments for buildings and other structures; rental payments for machinery and equipment; repair and maintenance services of buildings and/or machinery; and all other operating expenses. Inputs were also interpolated using the 2007 benchmark I-O estimates and ASM data.
<b>Wholesale trade, retail trade, and accommodation and food services</b>	Inputs to the wholesale trade, retail trade, and accommodation and food services industries were estimated primarily from the Census Bureau 2017 AWTS and ARTS quinquennial Business Expenses Supplement. Detailed expense data used to estimate intermediate inputs included packaging materials and containers; data processing and other purchased computer services; communication services; repairs and maintenance to machinery and equipment; repairs and maintenance to buildings, structures, and offices; rental payments for machinery and equipment; rental payments for buildings, offices, and stores; purchased electricity; purchased fuels (except motor fuels); water, sewer, refuse removal, and other utility payments; purchased transportation, shipping, and warehousing services; purchased advertising and promotional services; and purchased professional and technical services. Inputs were also interpolated using the 2012 benchmark I-O estimates.
<b>Services, transportation and warehousing, and utilities</b>	For selected Census-covered industries, information from the 2017 SAS on operating expenses was used. Detailed expense data used to estimate intermediate inputs included materials, parts, and supplies (not for resale); purchased electricity; purchased fuels (except motor fuels); rental payments for machinery, equipment, and other tangible items; rental payments for buildings, structures, and land; repairs and maintenance to machinery and equipment; repairs and maintenance to buildings, structures, and offices; advertising and promotional services; printing services; data processing and other purchased computer services; communication services; water, sewer, refuse removal, and other utilities; professional and technical services; and all other operating expenses. For industries not covered by Census, inputs were estimated from a variety of sources, including data from the 2017 SAS on operating expenses, and data from Amtrak, Department of Transportation Surface Transportation Board, Alaska Rail, Department of Energy, and Federal Reserve Board.
Value added	
<b>Compensation of employees</b>	Tabulations of wages and salaries from the Bureau of Labor Statistics QCEW program, and estimates of supplements to wages and salaries from the NIPAs were used; data were adjusted for misreporting and I-O industry definitions. For industries not covered by the QCEW, payroll data from the 2017 Economic Census were used; data were adjusted for misreporting and I-O industry definitions. Benefits data were based on the relationship between the Economic Census, SAS, and Business Expenses Supplement reported benefits and payroll data, applied to the 2017 QCEW wage and salary data. For the remaining industries, benefits were estimated using indirect techniques. All estimates were adjusted to sum to total compensation by industry in the NIPAs.
<b>Taxes on production and imports less subsidies</b>	The estimates by industry were prepared in two parts: For excise and general sales taxes, the values were estimated either as part of each industry's output or directly assigned; for other taxes, assessments and license fees, the estimates were distributed on the basis of a variety of source data, including state government tax collections statistics, the ASM, ARTS, AWTS, and SAS. For all other tax liabilities, estimates were distributed to industries using indirect techniques. Subsidies are directly assigned to specific industries based on which industry is collecting the subsidy. All estimates were adjusted to balance to total taxes on production and imports less subsidies, by industry in the national income and product accounts.
<b>Gross operating surplus</b>	For most industries, gross operating surplus reflects a quality-weighted average of a residual estimate (total industry output less total intermediate inputs, compensation of employees, and taxes on production and imports less subsidies) and a direct estimate based on summing up the components of gross operating surplus from the NIPAs, adjusted to an establishment basis. NIPA estimates of gross operating surplus are primarily based on IRS Statistics of Income data. <sup>2</sup>

<b>ARTS</b>	Annual Retail Survey
<b>ASM</b>	Annual Survey of Manufactures
<b>AWTS</b>	Annual Wholesale Trade Survey
<b>I-O</b>	Input-Output
<b>NIPAs</b>	National Income and Product Accounts
<b>QCEW</b>	Quarterly Census of Employment and Wages
<b>SAS</b>	Service Annual Survey

1. Estimates for intermediate inputs were adjusted during the process of balancing commodity purchases across industries with commodity output totals.
2. See Dylan G. Rassier, Thomas F. Howells III, Edward T. Morgan, Nicholas R. Empey, and Conrad E. Roesch, "[Integrating the 2002 Benchmark Input-Output Accounts with the 2002 Annual Industry Accounts](#)," *Survey of Current Business* 87 (December 2007): 14–22.

**Table C3. Principal Data Sources for Quarterly Industry and Commodity Output and Prices**

Industry and commodity	Source data for current-dollar statistics	Source for price indexes
<b>Agriculture, forestry, fishing, and hunting</b>		
Farms	Farm output from the BEA NIPAs based on USDA ERS data	NIPA prices based on USDA price indexes received by farmers
Forestry, fishing, and related activities	For forestry, FRB IPI and BLS PPI; for fishing, commercial fishery landings data from NOAA, and Census M3 data	BLS PPI
<b>Mining</b>		
Oil and gas extraction	FRB IPI and BLS PPI	BLS PPI
Mining, except oil and gas	FRB IPI and BLS PPI	BLS PPI
Support activities for mining	FRB IPI, BLS PPI, and NIPA fixed investment in mining exploration based on trade source data	BLS PPI and NIPA prices based on trade source data
<b>Utilities</b>		
Utilities	For electric power generation, transmission, and distribution, EIA form 861M; for natural gas distribution, EIA <i>Natural Gas Monthly</i> ; for water, sewage, and other systems, Census Bureau QSS	BLS CPI and BLS PPI
<b>Construction</b>		
Residential	NIPA fixed investment in structures based primarily on Census Bureau VIP survey	Census Bureau price deflator for multi-family home construction, composite price of new single-family houses under construction and the Turner Cost Index, and BEA prices
Nonresidential	NIPA fixed investment in structures based primarily on Census Bureau VIP survey	BEA composite prices based on EIA and trade source data and on data from the Bureau of Reclamation and BLS PPI
<b>Manufacturing</b>		
Manufacturing	Census Bureau M3 and NIPA electronic computer shipments; for auto and light truck manufacturing, Wards Intelligence unit production data and J.D. Power average net cost of new vehicles; for petroleum products, EIA production data and BLS PPI	BLS PPI and NIPA price indexes based on DOD prices paid for military equipment and NIPA hedonic prices
<b>Wholesale trade</b>		
Wholesale trade	Census Bureau Monthly Wholesale Trade Survey data	BLS PPI and NIPA sales deflators
<b>Retail trade</b>		
Retail trade	Census Bureau Monthly Retail Trade Survey data	BLS PPI and NIPA sales deflators
<b>Transportation and warehousing</b>		
Transportation and warehousing	For air transportation, NIPA PCE and Census Bureau QSS data; for rail transportation, Surface Transportation Board freight earnings data; for water, truck, transit and ground passenger, pipeline transportation, and warehousing, Census Bureau QSS data	For air transportation, BLS PPI; for rail, BLS PPI for rail passenger transportation and BLS PPI for freight; water transportation, BLS PPI, BLS CPI, and trade source data; for truck transportation, BLS PPI; for transit and ground passenger transportation, NIPA PCE prices; for pipeline transportation, BLS PPI; for warehousing, BLS PPI; for other transportation and support activities, NIPA PCE prices and BLS PPI
<b>Information</b>		
Information	Census Bureau QSS data, BLS QCEW, and box office revenues from trade source data	For publishing industries (including software), BEA prices for software and BLS PPI; for information and data processing, NIPA PCE prices, BLS PPI and trade source data
<b>Finance and insurance</b>		
Federal Reserve banks, credit intermediation, and related activities	Census Bureau QSS data, Federal Deposit Insurance Corporation commercial bank call report data, FBR data, National Credit Union Administration data, and NIPA measures of financial services indirectly measured	NIPA PCE prices
Securities, commodity contracts, and investments	Census Bureau QSS data and Securities and Exchange Commission <i>Financial and Operational Combined Uniform Single Reports</i>	BLS PPI and NIPA PCE prices
Insurance carriers and related activities	NIPA PCE, Census Bureau QSS data, and trade source data	BLS PPI and NIPA PCE prices
Funds, trusts, and other financial vehicles	NIPA PCE and NIPA imputed service charges for other financial institutions	NIPA PCE prices
<b>Real estate and rental and leasing</b>		
Real estate	For residential dwellings, NIPA PCE, and NIPA housing data; for nonresidential structures, NIPA government receipts, NIPA private fixed investment, NIPA brokers' commissions, BEA foreign expenditures from the international transactions accounts, and BLS QCEW data	For residential dwellings, NIPA PCE prices and NIPA implicit price deflators for farm rents paid; for nonresidential structures, BLS PPI and NIPA implicit price deflators for nonprofit imputed rents
Rental and leasing services and lessors of intangible assets	For rental and leasing services, Census Bureau QSS data, NIPA royalty income, and NIPA PCE rental income	BLS PPI and NIPA prices
Professional, scientific, and technical services	Census Bureau QSS data, NIPA PCE data, BLS QCEW data, and NIPA R&D data	For legal services, BLS PPI and NIPA PCE prices; for computer systems design and related services, BEA price indexes for software; for miscellaneous services, BLS PPI, NIPA PCE prices, and BEA price index for R&D
<b>Management of companies and enterprises</b>		
Management of companies and enterprises	BLS QCEW data	BLS PPI
<b>Administrative and waste management services</b>		
Administrative and waste management services	Census Bureau QSS data and BLS QCEW data	BLS PPI and NIPA PCE prices
<b>Educational Services</b>		
Educational Services	Census Bureau QSS data and NIPA PCE data	NIPA PCE prices based on trade source data for input costs
Health care and social assistance	Census Bureau QSS data	For ambulatory health care services, NIPA PCE prices based on BLS CPI and BLS PPI; for hospitals and nursing and residential care facilities, NIPA PCE prices based on BLS CPI and Center for Medicare and Medicaid Services; for social assistance, NIPA PCE prices based on trade source data
<b>Arts, entertainment, and recreation</b>		
Arts, entertainment, and recreation	Census Bureau QSS data	BLS PPI and NIPA PCE prices
<b>Accommodation and food services</b>		
Accommodation and food services	Census Bureau QSS data and Monthly Retail Trade Survey data	For accommodation, BLS PPI and NIPA PCE prices; for food services, NIPA PCE prices
<b>Other services, except government</b>		
Other services, except government	For repair and maintenance, personal services, and grantmaking, civic, professional, and similar organizations, Census Bureau QSS data; for religious, labor, and political organizations, NIPA PCE data; for private households, NIPA compensation	BLS PPI and NIPA PCE prices
<b>Federal</b>		
General government	NIPA government expenditures statistics	NIPA prices based on BLS PPI, BLS CPI, DOD data on employment prices, BLS employment cost indexes, and construction cost indexes from trade source data
Government enterprises	U.S. Postal Service quarterly reports, EIA monthly data for electric utility sales and revenue data for publicly owned utilities, and NIPA PCE data for broader aggregates for other components	BLS PPI and NIPA PCE prices
<b>State and local</b>		
General government	NIPA government expenditures statistics	NIPA PCE prices
Government enterprises	NIPA statistics on government enterprises based on the Census Bureau Annual Survey of Government Finances; for Alaskan ferries, water ports, and airports, Alaska Railroad Administration; for electric utilities, EIA data; for state and local government structures, Census Bureau VIP Survey	BLS PPI and NIPA PCE prices

**BEA** Bureau of Economic Analysis  
**BLS** Bureau of Labor Statistics  
**CPI** Consumer Price Index  
**DOD** Department of Defense  
**EIA** Energy Information Administration  
**ERS** Economic Research Service  
**FRB** Federal Reserve Board  
**IPI** Industrial production index  
**M3** Manufacturers' Shipments, Inventories, and Orders  
**NAICS** North American Industry Classification System

**NIPA** National Income and Product Accounts  
**NOAA** National Oceanic and Atmospheric Administration  
**PCE** Personal Consumption Expenditures  
**PPI** Producer Price Index  
**QCEW** Quarterly Census of Employment and Wages  
**QSS** Quarterly Services Survey  
**R&D** Research and development  
**USDA** United States Department of Agriculture  
**VIP** Value of Construction Put in Place Survey

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## Footnotes

1. Initial comprehensive update results for the REAs were released on September 29. For background information, refer to [“Benchmark Updates of GDP and More Starting Sept. 28.”](#)
2. Since the January 2000 release of the annual I-O Accounts for 1996, BEA has worked to accelerate their release. The annual I-O Accounts were integrated with the GDP by industry accounts as part of the 2004 comprehensive update of the IEAs; for more information, see Brian C. Moyer, Mark A. Planting, Mahnaz Fahim-Nader, and Sherlene K.S. Lum, [“Preview of the Comprehensive Revision of the Annual Industry Accounts: Integrating the Annual Input-Output Accounts and Gross-Domestic-Product-by-Industry Accounts,”](#) *Survey of Current Business* 84 (March 2004). From 2005 to 2020, annual I-O Accounts for each year have been released by the end of the following year. In 2014, BEA began regularly releasing current quarterly GDP by industry estimates; until September 2020, the estimates were released a month after BEA's third release of GDP for a given quarter.
3. For details on data availability and background materials, refer to [“Information on 2023 Comprehensive Updates to the National Economic Accounts.”](#)
4. See J. Steven Landefeld and Robert P. Parker, [“Preview of the Comprehensive Revision of the National Income and Product Accounts: BEA's New Featured Measures of Output and Prices,”](#) *Survey of Current Business* 75 (July 1995).
5. For a mapping of IEA to NAICS industries, refer to the table [“Industry Codes and Aggregations in the Industry Economic Accounts.”](#)
6. The *SNA 2008* and the NIPAs exclude capital gains and losses from measures of income associated with current production because the gains or losses result from the revaluation of existing assets rather than from current production. See the section “Income and saving” in [“Chapter 2: Fundamental Concepts”](#) of the *NIPA Handbook*, and European Commission, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, and World Bank, *System of National Accounts 2008*.
7. For more information, refer to Robert J. Kornfeld, [“Improved Measures of Regulated Investment Companies and Real Estate Investment Trusts for the U.S. National Economic Accounts,”](#) *Survey of Current Business* (May 12, 2023).
8. For more information, refer to Kornfeld, May 12, 2023.
9. See Dylan G. Rassier, Bettina H. Aten, Eric B. Figueroa, Solomon Kublashvili, Brian J. Smith, and Jack York, [“Improved Measures of Housing Services the U.S. Economic Accounts,”](#) *Survey of Current Business* 101 (May 2021).
10. For more information, see José Bayoán Santiago Calderón and Dylan G. Rassier, [“Valuing the U.S. Data Economy Using Machine Learning and Online Job Postings,”](#) working paper WP2022–13 (Washington, DC: BEA, October 2022).



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