

Updated Summary of NIPA Methodologies

December 1, 2023

The U.S. Bureau of Economic Analysis (BEA) recently improved its estimates of current-dollar gross domestic product (GDP), current-dollar gross domestic income (GDI), and real GDP as part of the 2023 comprehensive update of the National Economic Accounts (NEAs), which include the National Income and Product Accounts (NIPAs) and the Industry Economic Accounts.¹ The sources of data and the methodologies that are now used to prepare the NIPA estimates are summarized in this report.²

Current-dollar estimates of GDP and GDI

The major components and subcomponents of GDP and GDI are listed in table 1. In column 1 of the table, the name of the component is shown along with the current-dollar estimate of that component for 2022. Column 2 presents information about the sources of data and the methods used to prepare the estimates for the comprehensive benchmark updates and for the annual updates in nonbenchmark years. Major differences between the data and methods used in the benchmark updates and those used in the annual updates are also noted. For example, for “Furnishings and durable household equipment” in personal consumption expenditures (PCE) (the second item in table 1), the table indicates that one methodology (commodity flow) is used to prepare the estimates for benchmark years, and another methodology (retail control) is used to prepare the estimates for all the other years.

Column 3 presents information about the current quarterly estimates. For most components, information about the advance quarterly estimates, which are prepared about a month after the end of the quarter, is provided because more attention tends to be focused on this “first look” at GDP for a quarter. Major source data that become available for the second or third quarterly estimates for some NIPA components are also noted. Only the source data and methods are listed; the number of months of available source data and information about whether the source data will be revised by the source agency are not included.³

Table 1. Source Data and Methods for Current-Dollar Gross Domestic Product and Current-Dollar Gross Domestic Income

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Gross domestic product of \$25,744.1 billion for 2022		
Personal consumption expenditures (\$17,511.7 billion)		
Goods (\$5,997.0 billion)		
Durable goods (\$2,128.9 billion)		
Motor vehicles and parts (\$730.8 billion)	<p>Benchmark years. For new motor vehicles, physical quantity purchased times average retail price: unit sales, information to allocate sales among consumers and other purchasers, and average transactions prices that reflect all discounts and customer rebates, all from trade sources. For net transactions, commodity-flow method, starting with manufacturers' shipments from Census Bureau quinquennial census, including an adjustment for exports and imports from Census Bureau foreign trade data. For dealers' margins, retail sales from Census Bureau quinquennial census and margin rates from Census Bureau ARTS. For motor vehicle parts and accessories, commodity-flow method, starting with manufacturers' shipments from Census Bureau quinquennial census, including an adjustment for exports and imports from Census Bureau foreign trade data.</p> <p>Other years except the most recent year. For new motor vehicles, same as the benchmark years. For net transactions, change in consumer stock of motor vehicles from trade sources. For dealers' margins, gross margins from Census Bureau ARTS and wholesale margins from Census Bureau AWTS. For motor vehicle parts and accessories, retail-control method, using retail sales from Census Bureau ARTS.</p> <p>Most recent year. For new motor vehicles and for net transactions, same as the annual estimates for other years. For dealers' margins, retail sales of used vehicle dealers from Census Bureau MRTS. For motor vehicles parts and accessories, retail-control method, using retail sales from Census Bureau MRTS.</p>	For new motor vehicles, same as the annual estimates for other years. For net transactions, extrapolated by retail sales of used vehicle dealers from Census Bureau MRTS. For dealers' margins, same as the annual estimates for the most recent year. For motor vehicle parts and accessories, same as the annual estimates for the most recent year.
Furnishings and durable household equipment (\$477.4 billion)	<p>Benchmark years. Commodity-flow method, starting with manufacturers' shipments from Census Bureau quinquennial census, including an adjustment for exports and imports from Census Bureau foreign trade data.</p> <p>Other years except the most recent year. Retail-control method, using retail sales from Census Bureau ARTS.</p> <p>Most recent year. Retail-control method, using Census Bureau MRTS.</p>	Same as the annual estimates for the most recent year.
Recreational goods and vehicles (\$655.5 billion)	<p>Benchmark years. Commodity-flow method, starting with manufacturers' shipments from Census Bureau quinquennial census, including an adjustment for exports and imports from Census Bureau foreign trade data.</p> <p>Other years except the most recent year. For audio discs, tapes, vinyl, and permanent digital downloads, sales of physical media and permanent digital downloads from a trade source. For all others, retail-control method, using retail sales from Census Bureau ARTS. Most recent year. For audio discs, tapes, vinyl, and permanent digital downloads, sales of physical media and permanent digital downloads from a trade source. For all others, retail-control method, using Census Bureau MRTS.</p>	For audio discs, tapes, vinyl, and permanent digital downloads, quantity purchased times consumer price: quantity purchased data from a trade source times the CPI for recorded music and music subscriptions. For all others, same as the annual estimates for the most recent year.

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Other durable goods (\$265.2 billion)	<p>Benchmark years. Commodity-flow method, starting with manufacturers' shipments from Census Bureau quinquennial census, including an adjustment for exports and imports from Census Bureau foreign trade data.</p> <p>Other years except the most recent year. Retail-control method, using retail sales from Census Bureau ARTS.</p> <p>Most recent year. Retail-control method, using Census Bureau MRTS.</p>	Same as the annual estimates for the most recent year.
Nondurable goods (\$3,868.1 billion)		
Food and beverages purchased for off-premises consumption (\$1,393.5 billion)	<p>Benchmark years. Commodity-flow method, starting with manufacturers' shipments from Census Bureau quinquennial census, including an adjustment for exports and imports from Census Bureau foreign trade data. For food produced and consumed on farms, USDA data.</p> <p>Other years except the most recent year. Retail-control method, using retail sales from Census Bureau ARTS. For food produced and consumed on farms, same as for benchmark years.</p> <p>Most recent year. Retail-control method, using Census Bureau MRTS. For food produced and consumed on farms, same as for benchmark years.</p>	For food produced and consumed on farms, judgmental trend. For all others, same as the annual estimates for the most recent year.
Clothing and footwear (\$500.7 billion)	<p>Benchmark years. For standard clothing issued to military personnel, data from OMB's <i>Budget of the U.S. Government</i>. For all others, commodity-flow method, starting with manufacturers' shipments from Census Bureau quinquennial census, including an adjustment for exports and imports from Census Bureau foreign trade data.</p> <p>Other years except the most recent year. For standard clothing issued to military personnel, same as for benchmark years. For all others, retail-control method, using retail sales from Census Bureau ARTS.</p> <p>Most recent year. For standard clothing issued to military personnel, same as for benchmark years. For all others, retail-control method, using Census Bureau MRTS.</p>	For standard clothing issued to military personnel, judgmental trend. For all others, same as the annual estimates for the most recent year.
Gasoline and other energy goods (\$510.1 billion)	<p>Benchmark years. For gasoline and other motor fuels, merchandise line data on receipts of automotive fuels from Census Bureau quinquennial census. For all others, commodity-flow method, starting with manufacturers' shipments from Census Bureau quinquennial census, including an adjustment for exports and imports from Census Bureau foreign trade data.</p> <p>Other years except the most recent year. For nondiesel gasoline, quantity shipments from EIA times average retail price from BLS. For diesel gasoline, data from BLS consumer expenditure survey. For lubricants and fluids, Census Bureau ASM. For fuel oil and other fuels, retail-control method, using Census Bureau ARTS.</p> <p>Most recent year. For nondiesel gasoline, same as other years. For diesel gasoline, quantity shipments from EIA times average retail price from BLS. For lubricants and fluids, quantity shipments from EIA times CPI for motor oil, coolants, and fluids. For fuel oil and other fuels, retail-control method, using Census Bureau MRTS.</p>	Same as the annual estimates for the most recent year.

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Other nondurable goods (\$1,463.8 billion)	<p>Benchmark years. For prescription drugs, Census Bureau quinquennial product-line data on retail sales for prescription drugs. For expenditures abroad by U.S. residents (net), BEA IT. For all others, commodity-flow method, starting with manufacturers' shipments from Census Bureau quinquennial census, including an adjustment for exports and imports from Census Bureau foreign trade data.</p> <p>Other years except the most recent year. For prescription drugs, value of sales to consumers from a trade source. For tobacco, sales to consumers from a trade source. For expenditures abroad by U.S. residents (net), same as for benchmark years. For all others, retail-control method, using retail sales from Census Bureau ARTS.</p> <p>Most recent year. For prescription drugs, for tobacco, and for expenditures abroad by U.S. residents (net), same as other years. For all others, retail-control method, using Census Bureau MRTS.</p>	For expenditures abroad by U.S. residents (net), same as for benchmark years. For all others, same as the annual estimates for the most recent year.
Services (\$11,514.7 billion)		
Household consumption expenditures (for services) (\$10,982.6 billion)		
Housing and utilities (\$3,053.3 billion)	<p>Benchmark years. For rental value of nonfarm and farm dwellings, annual rental value data from Census Bureau ACS and by-unit ACS data on utility costs. For electricity and natural gas, annual EIA data on kilowatt-hour and cubic-foot quantities used and BLS CPIs for electricity and natural gas. For all others, commodity-flow method, starting with receipts from Census Bureau quinquennial census and annual surveys of state and local governments, adjusted to a calendar year basis from a fiscal year basis.</p> <p>Other years except the most recent year. For rental value of nonfarm and farm dwellings and for electricity and gas, same as for benchmark years. For garbage and trash collection, receipts from Census Bureau SAS. For group housing, wages from BLS QCEW. For water supply and sewage maintenance, Census Bureau annual surveys of state and local governments, adjusted to a calendar year basis from a fiscal year basis.</p> <p>Most recent year. For garbage and trash collection, Census Bureau QSS. For water supply and sewage maintenance, judgmental trend. For all others, same as for other years.</p>	For housing, unit stock adjusted using Census Bureau data on housing completions and judgmental trend. For average rent, BLS CPI for rent. For garbage and trash collection, advance estimate, judgmental trend; second and third estimates, receipts from Census Bureau QSS. For electricity and gas, EIA data on kilowatt-hour and cubic-foot quantities used and BLS CPIs for electricity and natural gas. For all others, judgmental trend.
Health care (\$2,776.7 billion)	<p>Benchmark years. Commodity-flow method, starting with receipts from Census Bureau quinquennial census and census of governments.</p> <p>Other years except most recent year. Receipts from Census Bureau SAS, annual surveys of state and local governments, adjusted to a calendar year basis from a fiscal year basis and judgmental trend.</p> <p>Most recent year. Receipts from Census Bureau QSS, and judgmental trend.</p>	For government hospitals, judgmental trend. For dental services, advance and second estimates, judgmental trend and trade source data; third estimate, receipts from Census Bureau QSS. For all others, advance estimate, wages and salaries derived from BLS CES, judgmental trend, and trade source data; second and third estimates, receipts from Census Bureau QSS.
Transportation services (\$562.2 billion)	<p>Benchmark years. Commodity-flow method, starting with receipts from Census Bureau quinquennial census, BLS consumer expenditure survey, and trade sources.</p> <p>Other years except most recent year. Receipts from Census Bureau SAS, ARTS, and trade sources.</p> <p>Most recent year. Receipts from Census Bureau QSS and MRTS, domestic passenger airline revenue from BTS and trade sources from National Automotive Dealers Association, IHS-Polk, Amtrak, and American Public Transportation Association.</p>	For motor vehicle maintenance and repair, for motor vehicle rentals, and for water transportation, advance and second estimates, judgmental trend and high-frequency payment card transactions data; third estimate, receipts from Census Bureau QSS. For taxi cabs, parking fees and tolls and other road transportation, advance and second estimates, state traveler data; third estimate, receipts from Census Bureau QSS. For intercity buses, advance estimate, judgmental trend; second estimate, trade source data; third estimate, receipts from Census Bureau QSS. For intracity mass transit, advance and second estimates, trade source data; third estimate, receipts from Census Bureau QSS. For air transportation, advance and second estimates, company financial reports; and third estimate, domestic passenger airline revenue from BTS. For all others, trade sources and judgmental trend.

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Recreation services (\$654.9 billion)	<p>Benchmark years. Commodity-flow method, starting with receipts from Census Bureau quinquennial census, census of governments, and trade sources.</p> <p>Other years except most recent year. Receipts from Census Bureau SAS, ARTS, annual surveys of state and local governments, adjusted to a calendar year basis from a fiscal year basis, trade source data, and judgmental trend.</p> <p>Most recent year. Receipts from Census Bureau QSS, company financial reports, and judgmental trend.</p>	For membership clubs, sports centers, parks, theaters and museums (except motion picture theaters), for repair of audio-visual equipment, for pari-mutuel net receipts, and for package tours, advance and second estimates, wages and salaries derived from BLS CES, high-frequency payment card transactions data, and judgmental trend; third estimate, receipts from Census Bureau QSS. For cable television, advance estimate, judgmental trend and trade source data; second and third estimates, receipts from Census Bureau QSS. For motion picture theaters and for video streaming and rental, trade source data. For casino gambling, advance and second estimates, various state gaming control commissions; third estimate, receipts from Census Bureau QSS and various state gaming control commissions. For all others, BLS CES, high-frequency payment card transactions data, and judgmental trend.
Food services and accommodations (\$1,237.2 billion)	<p>Benchmark years. Commodity-flow method, starting with receipts from Census Bureau quinquennial census, census of governments, BLS CES, enrollment data from NCES, trade source data, and federal government agency data.</p> <p>Other years except most recent year. Receipts from Census Bureau SAS and ARTS, annual surveys of state and local governments, adjusted to a calendar year basis from a fiscal year basis, BLS CES, enrollment data from NCES, trade sources, and judgmental trend.</p> <p>Most recent year. Receipts from Census Bureau MRTS, BLS CES, data from trade sources, and judgmental trend.</p>	For food services, Census Bureau MRTS. For all others, trade source data and judgmental trend.
Financial services and insurance (\$1,252.5 billion)	<p>Benchmark years. For insurance services, AM Best. For all others, commodity-flow method, starting with receipts from Census Bureau quinquennial census, data from federal and state government administrative agencies, and trade sources.</p> <p>Other years except most recent year. For insurance services, same as benchmark years and judgmental trend based on AM Best. For all others, Census Bureau SAS, federal and state government administrative data, and trade sources.</p> <p>Most recent year. For insurance services, BLS QCEW and judgmental trend based on AM Best. For all others, Census Bureau QSS, federal and state government administrative data, BLS QCEW, and trade sources.</p>	For financial service charges and fees and for trust, fiduciary, and custody activities, advance and second estimates, judgmental trend; third estimate, Federal Deposit Insurance Corporation Call Report data and trade sources. For financial services furnished without payment, advance and second estimates, judgmental trend; third estimate, FRB tabulations of Call Report data. For all others, BLS CES, Census Bureau QSS, trade sources, and judgmental trend.
Other services (\$1,445.8 billion)	<p>Benchmark years. For net foreign travel, estimated as part of the ITAs, see the entry "Exports and imports of services" under "Net exports of goods and services." For passenger fares to U.S. carriers and all others, commodity-flow method, starting with receipts from Census Bureau quinquennial census, census of governments, receipts from NCES, and trade sources.</p> <p>Other years except most recent year. For net foreign travel, same as benchmark years. For passenger fares to U.S. carriers and all others, receipts from Census Bureau SAS and BLS CPS, Giving USA, annual surveys of state and local governments adjusted to a calendar year basis from a fiscal year basis, receipts from NCES, wage data from BLS CES, trade sources, and judgmental trend.</p> <p>Most recent year. For net foreign travel, same as other years. For passenger fares to U.S. carriers, cruise line financial reports and international passenger airline revenue from BTS, less exports. For all others, receipts from Census Bureau QSS, wage data from BLS CES, and trade source data.</p>	For telephone services, for other delivery services, for legal services, for personal care and clothing services, for internet service providers, for child care, for day care and nursery schools, and for household maintenance, advance estimate, BLS CES, high-frequency payment card transactions data, and judgmental trend; second and third estimates, receipts from Census Bureau QSS. For funeral services, advance and second estimates, CDC death data, and judgmental trend; for third estimates, receipts from Census Bureau QSS. For commercial and vocational schools, for nonprofit professional associations services, for individual and family services, for vocational rehabilitation services, for community food and housing/emergency/other relief services, and for social advocacy and civic and social organizations, advance and second estimates, wages and salaries derived from BLS CES and judgmental trend; third estimate, receipts from Census Bureau QSS. For net foreign travel, same as benchmark years. For passenger fares to U.S. carriers, advance and second estimates, company cruise and airline financial reports, less exports, and third estimate, cruise line financial reports and international passenger airline revenue from BTS, less exports. For all others, wages and salaries derived from BLS CES, trade sources, and judgmental trend.
Final consumption expenditures of nonprofit institutions serving households (\$532.1 billion)	<p>Benchmark years. For gross output of nonprofit institutions, operating expenses from Census Bureau quinquennial census for tax-exempt and religious organizations, expenses and receipts from the NCES, and trade source data.</p> <p>Other years except most recent year. For gross output of nonprofit institutions, operating expenses from Census Bureau SAS, wages and salaries, CES from BLS, expenses and receipts from the NCES, and trade source data.</p> <p>Most recent year. Operating expenses from Census Bureau QSS, wages and salaries, CES from BLS, and trade source data.</p>	For gross output of health services, for recreation services, for nonprofit commercial and vocational schools, for nonprofit day care and nursery schools, for nonprofit child care providers, for nonprofit individual and family services, for nonprofit vocational rehabilitation services, for nonprofit community food and housing services, for foundations and grant making, for social advocacy organizations, for civic and social organizations, for professional associations, and for "all other similar organizations," advance and second estimates, wages and salaries derived from BLS CES and judgmental trend; third estimate, operating expenses from Census Bureau QSS. For all others, BLS CES and judgmental trend.

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Fixed investment (\$4,599.3 billion)		
Nonresidential structures (\$700.5 billion)		
Commercial and health care (\$247.0 billion)	Benchmark years. BEA's benchmark input-output accounts. Other years. Census Bureau VPIP.	Same as the annual estimates for other years.
Manufacturing (\$114.2 billion)	Census Bureau VPIP.	Same as the annual estimates.
Power and communication (\$123.9 billion)	Census Bureau VPIP.	Same as the annual estimates.
Mining exploration, shafts, and wells (\$83.0 billion)	Benchmark years. Expenditures from Census Bureau quinquennial census. Other years except the most recent year. For petroleum and natural gas, physical quantity times average price, footage drilled completions from a trade source, composite index of BLS PPIs for oil and gas wells and for oil and gas field services, and cost per footage drilled from Census Bureau annual capital expenditures survey, and footage drilled from a trade source. For other mining, expenditures from Census Bureau annual capital expenditures survey. Most recent year. For petroleum and natural gas, physical quantity times average price, footage drilled from a trade source times composite index of BLS PPIs, cost per footage drilled reflecting BEA data on private investment in mining equipment, footage drilled completions from a trade source, and judgmental trend. For mining, BEA data on private investment in mining equipment.	For petroleum and natural gas, physical quantity times average price, weighted average of footage drilled completions and of rotary rig counts from trade sources times a composite index of BLS PPIs for oil and gas wells and for oil and gas field services, cost per footage drilled reflecting BEA data on private investment in mining equipment, footage drilled completions from a trade source, and judgmental trend. For mining, same as the annual estimates for the most recent year.
Other structures (\$132.4 billion)	Benchmark years. BEA's benchmark input-output accounts. Other years. Census Bureau VPIP.	Same as the annual estimates for other years.
Nonresidential equipment (\$1,327.2 billion)		
Equipment except new autos, new light trucks, and net purchases of used autos and used light trucks (\$1,223.4 billion)	Benchmark years. Commodity-flow method, starting with manufacturers' shipments from Census Bureau quinquennial census, including an adjustment for exports and imports from Census Bureau foreign trade data. Other years except the most recent year. Abbreviated commodity-flow method, starting with manufacturers' shipments from Census Bureau ASM, adjusted for exports and imports. Most recent year. For computers, manufacturers' shipments from Census Bureau Monthly Survey of Manufactures and FRB industrial production index, adjusted for exports and imports. For heavy trucks, physical quantity purchased times average price: unit sales and information to allocate sales among business and other purchasers, from trade sources; for truck trailers, shipments from trade source. For all others, abbreviated commodity-flow method, starting with manufacturers' shipments from Census Bureau Monthly Survey of Manufactures, adjusted for exports and imports.	Same as the annual estimates for the most recent year but with less detail.
New autos, new light trucks, and net purchases of used autos and used light trucks (\$103.8 billion)	See the entry "Motor vehicles and parts" under "Personal consumption expenditures."	See the entry under "Personal consumption expenditures."

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Nonresidential intellectual property products (\$1,405.4 billion)		
Software (\$598.1 billion)	<p>Benchmark years. For purchased software, commodity-flow method, starting with industry receipts from Census Bureau quinquennial census, including an adjustment for exports and imports from Census Bureau foreign trade data. For own-account software, production costs based on BLS occupational employment data and on Census Bureau quinquennial census.</p> <p>Other years except most recent year. For purchased software, commodity-flow method, starting with industry receipts from Census Bureau SAS, including an adjustment for exports and imports from Census Bureau foreign trade data. For own-account software, production costs based on BLS occupational employment data.</p> <p>Most recent year. For purchased software, commodity-flow method, starting with industry receipts from Census Bureau QSS, including an adjustment for exports and imports from Census Bureau foreign trade data. For own-account software, production costs based on BLS occupational employment data.</p>	For purchased software, advance estimate, judgmental trend; second and third estimates, receipts from Census Bureau QSS. For own-account software, BLS CES for select industries.
Research and development (\$703.1 billion)	<p>Benchmark years. NSF data and BEA's benchmark input-output accounts.</p> <p>Other years. NSF data adjusted for imports and exports, and capital consumption adjustment.</p>	For business R&D, advance estimate, judgmental trend; second and third estimates, R&D expenses from publicly traded corporations' financial statements and receipts from Census Bureau QSS. For academic R&D, BLS CES for education industry.
Entertainment, literary, and artistic originals (\$104.1 billion)	<p>Benchmark years. BEA's benchmark input-output accounts.</p> <p>Other years except most recent year. Revenues from Census Bureau SAS, adjusted for nonartwork costs.</p> <p>Most recent year. Revenues from Census Bureau QSS, adjusted for nonartwork costs.</p>	For advance estimate, judgmental trend; for second estimate, revenues from Census Bureau QSS and judgmental trend; for third estimate, revenues from Census Bureau QSS.
Residential investment (\$1,166.4 billion)²		
Permanent-site new single-family structures (\$453.2 billion)	Census Bureau VPIP.	Same as the annual estimates.
Permanent-site new multi-family structures (\$109.9 billion)	Census Bureau VPIP.	Same as the annual estimates.
Manufactured homes (\$22.8 billion)	<p>Benchmark years. See the entry "Equipment except new autos, new light trucks, and net purchases of used autos and used light trucks" under "Nonresidential equipment."</p> <p>Other years. Physical quantity shipped times price: shipments from trade source and average retail price from Census Bureau manufactured housing survey.</p>	Same as the annual estimates for other years.
Improvements (\$350.0 billion)	<p>Benchmark years. Census Bureau VPIP.</p> <p>Other years. Retail sales of building materials and garden supply stores from Census Bureau ARTS, and remodelers payroll data from BLS QCEW, and home improvement product sales data from a trade source.</p>	Composite of retail sales of building materials and garden supply stores from Census Bureau MRTS, home improvement product sales data from a trade source, and remodelers payroll data from BLS CES.

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Brokers' commissions and other ownership transfer costs (\$208.0 billion)	<p>Benchmark years. Commissions and fees data for real estate agents and brokers from Census Bureau quinquennial census.</p> <p>Other years. For brokers' commissions on sale of structures and of land, physical quantity of houses sold times mean sales price. Number of new single-family houses sold and average sales price from Census Bureau VPIP and number of existing houses sold and average sales price from a trade source weighted by a BEA estimate of average commission rates. For stamp taxes, state and local government annual document stamp taxes from Census Bureau annual surveys of state and local governments adjusted to a calendar year basis from a fiscal year basis and judgmental trend. For title insurance, operating revenue and loss-adjusted expense data from a trade source. For all other closing costs, number of new and existing single-family houses sold and their associated average sales price from Census Bureau VPIP and a trade source weighted by a BEA estimate of average commission rates.</p>	Physical quantity of houses sold times mean sales price times BEA estimate of average commission rates for sale of new and existing houses; number of single-family houses sold and mean sales price from Census Bureau VPIP and a trade source.
Equipment (\$21.0 billion)	See the entry "Furnishings and durable household equipment" under "Personal consumption expenditures."	Same as the annual estimates.
Change in private inventories (\$157.3 billion)		
Farm (-\$19.5 billion)	USDA change in inventories adjusted to exclude CCC forfeitures and to include net CCC loans at market value.	For crops, BEA quarterly allocation of USDA annual projections of crop output and cash receipts. For livestock, various USDA livestock and price reports.
Manufacturing and trade (\$167.6 billion)	<p>Benchmark years. Inventories from Census Bureau quinquennial census and annual surveys revalued to current replacement cost. Information on the proportions of inventories reported using different accounting methods, on the commodity composition of goods held in inventory, and on the turnover period, all from Census Bureau quinquennial census and annual surveys, combined with prices, largely based on BLS producer price indexes. (The difference between Census Bureau change in inventories and BEA change in private inventories is the inventory valuation adjustment.)</p> <p>Other years except the most recent year. For auto retail dealers, an average of quantities times average prices from trade sources and of retail inventories from Census Bureau annual surveys minus half of manufacturing and merchant wholesale inventories from Census annual surveys; for all others, inventories from Census Bureau annual surveys, revalued as described above.</p> <p>Most recent year. Inventories from Census Bureau monthly surveys and trade sources, revalued as described above.</p>	Same as the annual estimates for the most recent year.
Mining, utilities, construction, and other nonfarm industries (\$9.2 billion)	<p>Benchmark years. Mining and construction inventories from Census Bureau quinquennial census, publishing inventories from the Census Bureau SAS, revalued to current replacement cost as described above for "Manufacturing and trade."</p> <p>Other years except the most recent year. For publishing inventories, same as the annual estimates for benchmark years. For all others, IRS tabulations of business tax returns, revalued as described above.</p> <p>Most recent year. For mining and publishing inventories, Census Bureau Quarterly Financial Report, revalued as described above. For electric utilities, monthly physical quantities from EIA combined with BLS PPIs. For all others, judgmental trend.</p>	For mining and publishing inventories, advance estimates, judgmental trend; second and third estimates, same as the annual estimates for most recent year. For electric utilities, same as the annual estimate for the most recent year. For all others, judgmental trend.
Net exports of goods and services (-\$971.1 billion)		

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Exports and imports of goods, net (-\$1,199.2 billion)	Estimated as part of BEA's ITAs: export and import documents compiled monthly by the Census Bureau with adjustments by BEA for coverage and valuation to convert the data to a balance-of-payments basis. Balance-of-payments transactions adjusted for coverage of U.S. territories and Puerto Rico using data from the Census Bureau, and for coverage of gold transactions using data from the U.S. Geological Survey and trade sources.	Same as the annual estimates.
Exports and imports of services, net (\$228.0 billion)	Estimated as part of BEA's ITAs: for government transactions, reports by federal agencies on their purchases and sales abroad. For most others including travel, selected transport categories, and charges for the use of intellectual property not elsewhere classified, BEA quarterly or annual surveys. Transactions adjusted for the balance-of-payments coverage of U.S. territories and Puerto Rico using data from the Commonwealth of Puerto Rico and the U.S. Virgin Islands.	For territorial adjustment, judgmental trend. For all others, same as the annual estimates.
Government consumption expenditures and gross investment (\$4,446.8 billion)		
Federal government (\$1,635.5 billion)		
National defense except consumption of general government fixed capital (\$737.5 billion)	Within a control total established by fiscal year analysis: for compensation, military wages from OMB's <i>Budget of the U.S. Government</i> , civilian wages from BLS QCEW, civilian benefits from OPM, and employer contributions for federal employee retirement plans from military and civilian plan actuarial reports; for other than compensation by type, based mainly on data from DOD reports; for R&D, data from NSF and from OMB's <i>Budget of the U.S. Government</i> ; for software, see the entry under "Nonresidential intellectual property products."	For components of compensation, military employment from DOD and civilian employment from BLS and projections from military and civilian pension plan actuarial reports. For other than compensation, same as the annual estimates.
National defense consumption of general government fixed capital (\$190.9 billion)	Perpetual-inventory method, based on gross investment estimates and on investment prices.	Same as the annual estimates.
Nondefense except consumption of general government fixed capital (\$558.2 billion)	Within a control total established by fiscal year analysis: for compensation, civilian wages from BLS QCEW, civilian benefits from OPM, and employer contributions for federal employee retirement plans from civilian actuarial reports; for CCC inventory change, book values of acquisitions and physical quantities of dispositions from agency reports times average market prices from USDA; for petroleum sales, distribution and price data from DOE; for R&D, data from NSF and from OMB's <i>Budget of the U.S. Government</i> ; for construction, Census Bureau VPIP; for software, see the entry under "Nonresidential intellectual property products." For financial services furnished without payment, see the entry "Banks, credit agencies, and investment companies" under "Net interest and miscellaneous payments." For all others, outlays from the Monthly Treasury Statement.	For components of compensation, employment from BLS and projections from civilian pension plan actuarial reports. For all others, same as the annual estimates.
Nondefense consumption of general government fixed capital (\$148.9 billion)	Perpetual-inventory method, based on gross investment estimates and on investment prices.	Same as the annual estimates.
State and local government (\$2,811.3 billion)		

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Consumption expenditures and gross investment except those items listed below (\$553.1 billion)	Total expenditures from Census Bureau quinquennial census of governments and annual surveys of state and local governments, adjusted to a calendar year basis from a fiscal year basis for available periods, selectively replaced with source data that are more appropriate for the NIPAs and adjusted for coverage, for netting and grossing, for other timing differences, to exclude items not directly included in GDP (interest, subsidies, net expenditures of government enterprises, and transfer payments), and to exclude items described below, and judgmental trend. For financial services furnished without payment, see the entry "Financial services and insurance" under "Personal consumption expenditures."	Judgmental trend.
Compensation of general government employees (\$1,553.7 billion)	For wages and salaries, BLS QCEW. For employer contributions for government social insurance, tabulations from the Social Security Administration and other agencies administering social insurance programs. For employer contributions for employee pension plans, actuarial reports from state pension plans. For other insurance plans, data from trade sources, CMS, and Census Bureau quinquennial census of governments and annual survey of public employment and payroll, adjusted to a calendar year basis from a fiscal year basis, and judgmental trend.	For wages and salaries, BLS monthly employment times earnings from BLS employment cost indexes for education and non-education. For other compensation, judgmental trend.
Consumption of general government fixed capital (\$284.8 billion)	Perpetual-inventory method based on gross investment estimates and on investment prices.	Same as the annual estimates.
Structures (\$358.9 billion)	Census Bureau VPIP, benchmarked to quinquennial census of governments and annual surveys of state and local governments.	Census Bureau VPIP.
Intellectual property products (\$60.8 billion)	See the entries for "Software" and for "Research and development" under "Nonresidential intellectual property products."	See the entries for "Software" and for "Research and development" under "Nonresidential intellectual property products."
Gross domestic income of \$25,796.4 billion for 2022		
Compensation of employees, paid (\$13,455.2 billion)		
Wage and salaries (\$11,132.1 billion)		
Private industries (\$9,509.6 billion)	For most industries, BLS QCEW. For others, wages from a variety of sources (such as USDA for farms and the Railroad Retirement Board for railroad transportation), adjusted for understatement of income on tax returns and for coverage differences.	For most industries, wages and salaries derived from BLS CES. For others, judgmental trend.
Federal government (\$404.4 billion)	For civilians, wages from BLS QCEW adjusted for coverage differences; for military personnel, wages from OMB's <i>Budget of the U.S. Government</i> .	For civilians, employment from BLS and judgmental trend. For military personnel, DOD employment and judgmental trend.
State and local government (\$1,218.0 billion)	BLS QCEW adjusted for coverage differences.	Derived from BLS employment times earnings from BLS employment cost indexes for education and non-education.
Employer contributions for employee pension and insurance funds (\$1,559.1 billion) ³		
Private pension plans (\$340.2 billion)	Defined contribution plans. All years except the two most recent years. Tabulations from the U.S. Department of Labor. Two most recent years. Judgmental trend. Defined benefit plans. All years except the most recent year. Tabulations from Pension Benefit Guaranty Corporation and corporate financial reports. Most recent year. Judgmental trend.	Judgmental trend.

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Government employee pension plans (\$286.7 billion)	For federal defined benefit plans, actuarial reports for federal retirement plans, adjusted to a calendar year basis. For federal defined contribution plans, Thrift Savings Plan annual reports. For state and local defined contribution plans, wages and salaries and BLS employer costs for employee compensation survey. For state and local defined benefit plans. All years except the most recent year. Actuarial reports adjusted to a calendar year basis. Most recent year. Judgmental trend.	For federal plans, judgmental trend. For state and local plans, same as most recent year.
Group health insurance (\$839.4 billion)	For federal government, premiums paid by the federal government to the Federal Employee Health Benefit Fund from OMB. All years except the most recent year. For private and for state and local government, employer contributions from AHRQ. Most recent year. For private, AHRQ tabulations. For state and local government, judgmental trend.	For private and for state and local government, judgmental trend. For federal government, employment from BLS.
Group life insurance (\$11.8 billion)	All years except the most recent year. Group premiums and estimates of employer share from AM Best. Most recent year. Judgmental trend.	Same as the most recent year.
Workers' compensation (\$70.9 billion)	All years except the most recent year. Employer contributions from trade sources. Most recent year. Judgmental trend.	Same as the most recent year.
Publicly administered government employee insurance funds (\$9.7 billion)	Employer contributions to the Medicare-Eligible Retiree Health Fund from the Monthly Treasury Statement.	DOD employment.
Supplemental unemployment benefits (\$0.5 billion)	Department of Labor EBSA filings	Judgmental trend
Employer contributions for government social insurance (\$764.0 billion)	Tabulations from the Social Security Administration and other agencies administering social insurance programs.	For federal programs, BEA-derived wages and salaries of employees covered by the programs. For state and local programs, judgmental trend.
Taxes on production and imports (\$1,810.2 billion)		
Federal government (\$194.2 billion)	For excise taxes, collections from the Alcohol and Tobacco Tax and Trade Bureau and from the IRS. For customs duties, receipts from the Monthly Treasury Statement.	For customs duties, same as all years. For most excise taxes, derived from indicators of activity (such as gasoline production for gasoline tax). For others, judgmental trend.
State and local government (\$1,616.0 billion)	Receipts from Census Bureau quinquennial census of governments and annual surveys of state and local governments, adjusted to a calendar year basis from a fiscal year basis, and judgmental trend.	For state general sales taxes, advance and second estimates: state tax collections data supplemented with Urban Institute sales tax data; third estimate: Census Bureau quarterly tax survey. For state excise taxes, advance and second estimates: derived from indicators of activity (such as gasoline sales for gasoline excise tax) and trend estimates; third estimate: Census Bureau quarterly tax survey. For all other state taxes, advance and second estimates: judgmental trend; third estimate: Census Bureau quarterly tax survey. For local property taxes, advance and second estimates: judgmental trend; third estimate: Census Bureau quarterly tax survey. For all other local taxes, same as annual estimates.
Less: Subsidies (\$127.4 billion)		
Federal government (\$126.8 billion)	For agricultural subsidy payments, data from USDA. For all others, data from OMB's <i>Budget of the U.S. Government</i> .	USDA reports and other program administration data, data from the Monthly Treasury Statement, and judgmental trends.
State and local government (\$0.7 billion)	For railroad and electric power, Census Bureau quinquennial census of governments and annual surveys of state and local governments, adjusted to a calendar year basis from a fiscal year basis, and judgmental trend.	Judgmental trend.
Net operating surplus (\$6,358.5 billion)		

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Private enterprises (\$6,354.1 billion)		
Net interest and miscellaneous payments, domestic industries (\$732.3 billion)		
Domestic monetary interest, net (-\$164.6 billion)	For farm interest paid, USDA surveys. For residential mortgage interest paid, mortgage debt from FRB times an interest rate based on Black Knight Financial Services data. For interest paid by FRB, interest expenses from the FRB's combined financial statements. All years except the most recent year. For most other interest paid and received by business, IRS tabulations of business tax returns, adjusted for misreporting on tax returns and for conceptual differences. Most recent year. For other interest, interest receipts and payments from regulatory agencies (such as the Federal Deposit Insurance Corporation), from trade sources, or derived by applying BEA interest rates to interest-bearing assets/liabilities from FRB financial accounts of the United States.	Derived by combining estimates of (1) interest received by persons, (2) government interest paid less received, and (3) interest paid by persons. For (1), judgmental trend. For (2), data from the Monthly Treasury Statement and the Bureau of the Public Debt for federal and judgmental trend for state and local; and for (3), for margin interest, advance estimate: judgmental trend; second or third estimate: data from regulatory agencies. For nonmargin interest, consumer debt from FRB times BEA estimates of interest rates.
Domestic imputed interest, net (\$867.8 billion)		
Banks, credit agencies, and investment companies (\$278.3 billion)		
Depositor services (\$175.2 billion)	For commercial banks and savings institutions, FRB tabulations of FFIEC Call Reports used to calculate the interest rate spread between a risk-free reference rate and the average interest rate paid to depositors times the average balance of deposits. Depositor services allocated to persons, to government, and to the rest of the world on the basis of deposit liabilities from FRB. For credit agencies and investment companies, property income earned on investment of deposits less monetary interest paid to depositors (and for mutual depositories, profits from IRS tabulations of business tax returns) from annual reports of regulatory agencies and FRB. Depositor services allocated to persons, to government, and to the rest of the world on the basis of deposit liabilities from FRB. For credit unions, NCUA tabulations of Call Report Form 5300.	For commercial banks, savings institutions, and credit unions, advance estimate, judgmental trend; for second and third estimates, same as annual estimates. For investment companies, advance estimate, judgmental trend; for second and third estimates, mutual fund data from a trade source. For all others, judgmental trend.
Borrower services (\$103.1 billion)	For commercial banks and savings institutions, data from FRB tabulations of FFIEC Call Reports used to calculate the interest rate spread between the average rate paid by borrowers and the reference rate times the average balance of borrowers. For credit unions, NCUA tabulations of Call Report Form 5300.	For advance estimate, judgmental trend. For second or third estimates, same as annual estimates for commercial banks, savings institutions, and credit unions.
Life insurance carriers (\$277.3 billion)	Property income earned on investment of policyholders' reserves from trade source.	Judgmental trend.
Property and casualty insurance companies (\$2.6 billion)	Expected investment income derived using premiums earned and investment gains from trade source.	Judgmental trend.

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Employee pension plans (\$309.6 billion)	For federal defined benefit pension plans, actuarial reports for federal retirement plans, adjusted to a calendar year basis. All years except the most recent year. For private defined benefit pension plans, tabulations from the Pension Benefit Guaranty Corporation. For state and local government defined benefit pension plans, actuarial reports, adjusted to a calendar year basis. Most recent year. For private defined benefit pension plans, judgmental trend. For state and local government defined benefit pension plans, judgmental trend.	Same as most recent year.
Miscellaneous payments (\$29.2 billion)		
Federal government rents and royalties (\$16.8 billion)	Receipts from land and mineral leasing, U.S. Department of the Treasury.	For offshore leases, projections of receipts from OMB's <i>Budget of the U.S. Government</i> ; for land and onshore mineral leasing, data from the Monthly Treasury Statement.
State and local government rents and royalties (\$12.4 billion)	Census Bureau quinquennial census of governments and annual surveys of state and local governments, adjusted to a calendar year basis from a fiscal year basis, and judgmental trend.	Judgmental trend.
Business current transfer payments (net) (\$216.8 billion)		
To persons (net) (\$99.1 billion)	All years except the most recent year. For all components, information from government agency reports and trade sources. Most recent year. Judgmental trend.	Same as the annual estimates for the most recent year.
To government (net) (\$115.2 billion)	For federal, receipts from OMB's <i>Budget of the U.S. Government</i> and documentation from the Department of Justice about fines recorded on an accrual basis. For state and local, receipts from Census Bureau quinquennial census of governments and annual surveys of state and local governments, adjusted to a calendar year basis from a fiscal year basis, and judgmental trend.	Judgmental trend.
To the rest of the world (net) (\$2.5 billion)	Estimated as part of BEA's International Transactions Accounts.	Same as the annual estimates.
Proprietors' income with inventory valuation and capital consumption adjustments (\$1,790.9 billion)		
Farm proprietors' income with inventory valuation adjustment (\$92.6 billion)	USDA data on net income, obtained by deriving gross income (cash receipts from marketing, inventory change, government payments, other cash income, and nonmoney income) and subtracting production expenses, adjusted to exclude corporate income based on USDA quinquennial census and annual survey data. Excludes some intrastate interfarm sales between farmers of the same geographic state, which is out of scope for USDA ERS source data.	For crops, BEA quarterly allocation of USDA annual projections of crop output. For livestock, USDA quarterly projections of cash receipts and various USDA livestock reports for inventories. Quarterly allocation of USDA annual projections of government subsidy payments and production expenses.
Farm capital consumption adjustment (-\$10.8 billion)	See the entry "Less: capital consumption adjustment" under "Consumption of fixed capital."	See the entry under "Consumption of fixed capital."

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Nonfarm proprietors' income (\$1,343.5 billion)	All years except the most recent year. Income from IRS tabulations of business tax returns, adjusted for understatement of income on tax returns and for conceptual differences. Most recent year. For construction, trade, and services, indicators of activity such as construction spending (value put in place). For others, judgmental trend.	Same as the annual estimates for the most recent year.
Nonfarm inventory valuation adjustment (-\$16.8 billion)	See the entry "Inventory valuation adjustment" under "Corporate profits."	See the entry under "Corporate profits."
Nonfarm capital consumption adjustment (\$382.4 billion)	See the entry "Less: capital consumption adjustment" under "Consumption of fixed capital."	See the entry under "Consumption of fixed capital."
Rental income of persons with capital consumption adjustment (\$878.3 billion)		
Owner-occupied nonfarm housing (\$657.8 billion)	Benchmark years. Derived as imputed rental of nonfarm housing (see the entry "Housing and utilities" under "Personal consumption expenditures") based on ACS data less related expenses, including property insurance from a trade source, mortgage interest (mortgage debt from FRB times a BEA interest rate), and property taxes from Census Bureau annual surveys of state and local government tax collections, adjusted to a calendar year basis from a fiscal year basis. Other years, except most recent year. Same as benchmark years. Most recent year. Judgmental trend.	For imputed rental of owner-occupied housing, same as the annual estimates. For depreciation, interest, financing-related closing costs, and taxes, NIPA estimates of those components. For other expenses, judgmental trend.
Tenant-occupied nonfarm housing (\$109.0 billion)	Benchmark years. Derived as actual value of housing less related expenses (see preceding entry). Other years except most recent year. For mortgage interest, mortgage debt from FRB times a BEA interest rate. For property taxes, Census Bureau annual surveys of state and local tax collections, adjusted to a calendar year basis from a fiscal year basis. For all others, same as benchmark years. Most recent year. For housing rent expense, judgmental trend. For all others, same as in other years.	Same as owner-occupied nonfarm housing.
Owner-occupied farm housing (\$9.5 billion)	Derived as imputed rental of farm housing (see the entry "Housing and utilities" under "Personal consumption expenditures") based on ACS data less related expenses, such as mortgage interest and property taxes, from USDA.	Judgmental trend.
Tenant-occupied farm housing (-\$0.7 billion)	Derived as imputed rental of farm housing (see the entry "Housing and utilities" under "Personal consumption expenditures") based on ACS data less related expenses, such as mortgage interest and property taxes, from USDA.	Judgmental trend.
Nonfarm nonresidential properties (\$0.5 billion)	Benchmark years. Nonfarm nonresidential fixed assets from BEA capital stock series times a rate of return on capital based on IRS tabulations of business tax returns. Other years. BEA capital stock series and judgmental trend.	Judgmental trend.
Royalties (\$92.2 billion)	All years except the most recent year. IRS tabulations of royalties reported on individual income tax returns. Most recent year. Judgmental trend.	Same as the annual estimates for the most recent year.
Corporate profits with inventory valuation and capital consumption adjustments, domestic industries (\$2,735.8 billion)		

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Domestic profits before tax (\$3,050.1 billion)	<p>All years except the most recent year. Receipts less deductions from IRS tabulations of business tax returns, adjusted for understatement of income on tax returns and for conceptual differences.</p> <p>Most recent year. Profits from Census Bureau Quarterly Financial Report, regulatory agency reports, and compilations of publicly available corporate financial statements.</p>	For some industries in transportation and in finance, judgmental trend. For others, same as the annual estimates for the most recent year. (Preliminary profits estimate is released with the second estimate of GDP for the first, second, and third quarters and with the third estimate of GDP for the fourth quarter.)
Inventory valuation adjustment (IVA) (-\$96.2 billion)	The IVA on the income side (for corporations and for nonfarm sole proprietorships and partnerships) and the IVA on the product side (see the entry "Change in private inventories") differ because the source data reflect different proportions of inventories reported using different accounting methods (such as LIFO). The income-side IVA is based on the product-side IVA, adjusted by the relationship between non-LIFO inventories from IRS tabulations of business tax returns and non-LIFO inventories from the Census Bureau.	Same as the annual estimates.
Capital consumption adjustment (-\$218.0 billion)	See the entry "Less: Capital consumption adjustment" under "Consumption of fixed capital."	See the entry under "Consumption of fixed capital."
Current surplus of government enterprises (\$4.4 billion)		
Federal government (\$7.6 billion)	Mainly reports of various agencies, such as the U.S. Postal Service, and CFC estimates derived with perpetual inventory calculations at current cost, based on gross investment estimates and on investment prices.	For CFC estimates, same as the annual estimates. For all others, judgmental trend.
State and local government (-\$3.2 billion)	For current operating receipts, mainly revenue data from Census Bureau quinquennial census of governments and annual surveys of state and local governments, adjusted to a calendar year basis from a fiscal year basis, and judgmental trend. For current operating expenditures, see the entries "Consumption expenditures and gross investment" and "Consumption of general government fixed capital" under "State and local government."	Judgmental trend.
Consumption of fixed capital (\$4,299.9 billion) Government (\$722.3 billion)		
General government (\$624.6 billion)	Perpetual-inventory method, based on gross investment estimates and on investment prices.	Same as the annual estimates.
Government enterprises (\$97.7 billion)	Perpetual-inventory method, based on gross investment estimates and on investment prices.	Same as the annual estimates.
Private (\$3,577.6 billion) Domestic business (\$2,756.6 billion)	Perpetual-inventory method, based on gross investment estimates and on investment prices.	Same as the annual estimates.

Component	Annual estimates: source data and methods used to determine level for benchmark and other years or used to prepare an extrapolator or interpolator	Current quarterly estimates: source data and methods used to prepare an extrapolator ¹
Capital consumption allowances (\$2,874.7 billion)	All years except the most recent year. For depreciation of corporations and of nonfarm sole proprietorships and partnerships, IRS tabulations of business tax returns, adjusted for conceptual differences. For other depreciation (including farm proprietorships and partnerships and other private business), perpetual inventory calculations based on investment at acquisition cost. Most recent year. For depreciation of corporations and of nonfarm sole proprietorships and partnerships, BEA estimates of tax-return-based depreciation. For other depreciation, same as above.	Perpetual inventory calculations based on investment at acquisition cost.
Less: Capital consumption adjustment (\$118.1 billion)	The difference between capital consumption allowances and CFC.	Same as the annual estimates.
Households and institutions (\$821.0 billion)	Perpetual-inventory method, based on gross investment estimates and on investment prices.	Same as the annual estimates.

ACS	American Community Survey	FFIEC	Federal Financial Institutions Examination Council
AHRQ	Agency for Healthcare and Research Quality	FRB	Federal Reserve Board
ARTS	Annual Retail Trade Survey	GDP	Gross domestic product
ASM	Annual Survey of Manufactures	IRS	Internal Revenue Service
AWTS	Annual Wholesale Trade Survey	ITAs	International Transactions Accounts
BEA	U.S. Bureau of Economic Analysis	LIFO	Last in, first out
BLS	U.S. Bureau of Labor Statistics	MRTS	Monthly Retail Trade Survey
BTS	U.S. Bureau of Transportation Statistics	NCES	National Center for Education Statistics
CCC	Commodity Credit Corporation	NCUA	National Credit Union Association
CDC	Centers for Disease Control	NSF	National Science Foundation
CES	Current Employment Statistics	NIPAs	National Income and Product Accounts
CFC	Consumption of fixed capital	OMB	Office of Management and Budget
CMS	Centers for Medicare and Medicaid Services	OPM	Office of Personnel Management
CPI	Consumer price index	QCEW	Quarterly Census of Employment and Wages
CPS	Current Population Survey	QSS	Quarterly Services Survey
DOD	U.S. Department of Defense	R&D	Research and development
EBSA	Employee Benefits Security Administration	SAS	Service Annual Survey
EIA	Energy Information Administration	USDA	U.S. Department of Agriculture
ERS	Economic Research Service	VPIP	Value of new construction put in place

1. For most components, information about the advance quarterly estimates is provided. In addition, major source data that become available during the second or third quarterly estimates for particular NIPA components are also noted.
2. Residential fixed investment includes \$3.5 billion for dormitories and -\$2.0 billion for net purchases of used structures.
3. Employer contributions for employee pension and insurance funds includes \$0.5 billion for supplemental unemployment.

Source data

The source data include a variety of economic measures, such as sales or receipts, wages and salaries, unit sales, housing stock, insurance premiums, expenses, interest rates, mortgage debt, and tax collections.

For most components, the estimates are derived from source data that are “value data”: they encompass both the quantity data and the price data required to prepare the current-dollar estimates. For these components, the value data are adjusted to derive estimates that are consistent with NIPA definitions and coverage.

For the estimates that are not derived from value data, the sources of the quantity and price data that are used to prepare value estimates are indicated, and the major adjustments that are needed to derive estimates that are consistent with NIPA definitions and coverage are specified.

For the current-dollar estimates of GDP, a “physical quantity times price” method is used for several components. For example, the annual estimate of expenditures on new autos in a nonbenchmark year is calculated as unit sales times expenditure per auto (the average transactions price that reflects all discounts and customer rebates).

For the current-dollar estimates of GDI, two general methods are used for several components—an “employment times earnings times hours” method and variations of a “stock of assets/liabilities times an effective interest rate” method.

Some quarterly (or monthly) estimates are derived using source data as indicators to interpolate or extrapolate annual estimates. In other cases, extrapolation and interpolation may be based on trends; in those cases, the use of “judgmental trend” is indicated.

International Transactions Accounts. The source data for the foreign transactions that are reflected in most NIPA components—such as net exports of goods and services, net income receipts, and rest-of-the-world corporate profits—are from the International Transactions Accounts (ITAs) that are prepared by BEA.⁴ As noted in table 1, for some NIPA components, the ITA estimates are adjusted to conform to NIPA concepts and definitions. For the annual estimates of these adjustments and their definitions, see [NIPA table 4.3C](#).

Reconciliation tables. In preparing the annual estimates of several components of GDI, BEA adjusts the source data to conform to NIPA concepts and coverage. For selected components, an annual NIPA table reconciles the value published by the source agency with the NIPA estimate published by BEA, and the adjustments are listed. Reconciliation tables for the following components are available on BEA's website: consumption of fixed capital in [table 7.13](#), nonfarm proprietors' income in [table 7.14](#), net farm income in [table 7.15](#), corporate profits in [table 7.16](#), net monetary interest in [table 7.17](#), and wages and salaries in [table 7.18](#). In addition, reconciliation tables are available for federal government current receipts and expenditures in tables [3.18A](#) and [3.18B](#) and for state and local government current receipts and expenditures in [3.19](#).

Estimation methods

For some components, BEA uses one of four methods: the commodity-flow method, the retail-control method, the perpetual-inventory method, and the fiscal year analysis method.

The commodity-flow method involves estimating values based on various measures of output. For example, the estimates of PCE for “Furnishings and durable household equipment” in benchmark years are based on data on manufacturers' shipments from the U.S. Census Bureau, and BEA adjusts the data for imports and exports. In general, this method is used to derive benchmark estimates of various components of PCE, of equipment investment, and of the commodity detail for state and local government consumption expenditures and gross investment.⁵ An abbreviated form of this method is used to prepare estimates of equipment investment in nonbenchmark years, and an even more abbreviated form is used to prepare the current quarterly estimates of equipment investment.

The retail-control method uses retail sales data, usually compiled by the Census Bureau, to estimate expenditures.⁶ It is used to prepare estimates of many components of PCE for durable and nondurable goods in nonbenchmark years. This method ensures that the growth rate for these components is the same rate as the “retail control” group, a measure derived from the total sales of most kinds of businesses selling goods, based on the Census Bureau's monthly and annual retail trade surveys.

The perpetual-inventory method is used to derive estimates of fixed capital stock, which are used to estimate consumption of fixed capital—the economic depreciation of private and government fixed capital. This method is based on investment flows and a geometric depreciation formula.⁷

The fiscal year analysis method is used to estimate annual and quarterly estimates of consumption expenditures and gross investment by the federal government. The estimates of expenditures are calculated by program, that is, by activity for a single line item or for a group of line items in the *Budget of the U.S. Government*. For most programs, BEA adjusts budget outlays so that they conform to NIPA concepts and definitions and classifies the expenditures in the appropriate NIPA category, such as current transfer payments or interest payments, with nondefense consumption expenditures and gross investment determined residually. When a fiscal year analysis is completed, the detailed array of NIPA expenditures by program and by type of expenditure provides a set of control totals for the quarterly estimates.⁸

Estimates of real GDP

BEA uses three methods to estimate real GDP: the deflation method, the quantity extrapolation method, and the direct valuation method. These methods and the source data that are used for estimation are listed in table 2.

The deflation method is used for most components of GDP. A quantity index is derived by dividing the current-dollar index by an appropriate price index that has the base year—currently 2017—equal to 100. The result is then multiplied by 100.

The quantity extrapolation method uses quantity indexes that are obtained by using a quantity indicator to extrapolate from the base-year value of 100.

The direct valuation method uses quantity indexes that are obtained by multiplying the base-year price by actual quantity data for the index period. The result is then expressed as an index with the base year equal to 100.

The subcomponents in table 2 are the same as those shown in table 1, but the detail differs to highlight the alternative methodologies that are used to calculate the estimates of real GDP.⁹

Table 2. Methodology Used in Preparing Estimates of Real Gross Domestic Product

Component	Deflation, using price based on		Using quantity for extrapolation or direct valuation
	Consumer Price Index (CPI) or Producer Price Index (PPI)	Other index	
Personal consumption expenditures			
Goods			
Durable goods			
Motor vehicles and parts	CPI		
Furnishings and durable household equipment	CPI		
Recreational goods and vehicles	CPI		
Other durable goods	CPI		
Nondurable goods			
Food and beverages purchased for off-premises consumption	CPI	BEA composite index of USDA prices received by farmers.	
Clothing and footwear	CPI PPI, for standard clothing issued to military personnel.		
Gasoline and other energy goods	CPI		
Other nondurable goods	CPI	BEA installation support services price index, for expenditures abroad by U.S. residents.	
Services			
Household consumption expenditures (for services)			
Housing and utilities	CPI		Quantity extrapolation. Chained-dollar net stock of farm housing from BEA capital stock estimates.
Health care	CPI PPI, for physicians' offices, hospitals, proprietary and government nursing homes, home health care services, medical care laboratories, and diagnostic imaging centers.		
Transportation services	CPI PPI, for domestic scheduled air passenger revenue.		
Recreation services	CPI		
Food services and accommodations	CPI		
Financial services and insurance	CPI	BEA composite index of prices, for financial services furnished without payment by other financial institutions, ¹ and life insurance.	Quantity extrapolation. BLS index of total output (less BEA estimates of real bank service charges) times consumer share based on deposits and loans, for banks. BEA transactions derived from volume data from a trade source, for investment companies' charges. BLS banking output index, for trust, fiduciary, and custody activities.

Component	Deflation, using price based on		Using quantity for extrapolation or direct valuation
	Consumer Price Index (CPI) or Producer Price Index (PPI)	Other index	
	PPI, for brokerage services, dealer transactions, other securities related services including margin lending and mutual fund sales, portfolio management and investment advice services; commercial bank trust services; homeowner's insurance; direct health and medical insurance carriers; private passenger auto insurance, and workers' compensation.		
Other services	CPI PPI, for employment agency services and international scheduled passenger revenue.	BEA composite index of prices, for social assistance services, labor organization dues, and for net foreign travel. BLS import price index for air passenger transport, for foreign travel.	
Final consumption expenditures of nonprofit institutions serving households		BEA composite index of input prices, for gross output of nonprofit categories.	
Fixed investment			
Nonresidential structures			
Commercial and health care	PPI, for office buildings, health care buildings, warehouses, and mobile structures.	BEA index based on cost index from trade source and on Census Bureau price index for single-family houses under construction, for certain commercial structures.	
Manufacturing	PPI, for industrial buildings.		
Power and communication	PPI, for steel pipes and tubes	For alternative electric, BEA weighted composite of EIA's average annual costs of construction for wind and solar generators (measured in dollars per kilowatt of installed nameplate, or maximum, capacity); for all other electric, weighted average of trade source cost indexes for electric light and power plants and for utility building; for communication, cost index from trade source.	
Mining exploration, shafts, and wells	PPI, for oil and gas well drilling and oil and gas field services.	For petroleum and natural gas, cost per footage drilled reflecting BEA data on private investment in mining equipment, footage drilled completions from a trade source, and judgmental trend; for mining, BEA index based on cost index from trade source and on Census Bureau price index for single-family houses under construction.	Quantity extrapolation. Footage drilled from a trade source, for petroleum and natural gas.
Other structures	PPI, for nonresidential real estate brokerage and new school construction.	BEA index, for railroads; BEA index based on cost index from trade source and on Census Bureau price index for single-family houses under construction, for other components.	
Nonresidential equipment			
Equipment except those listed below	PPI, for most domestic components and for imported transportation equipment.	BLS import price indexes, for imported components except transportation equipment.	
New autos, new light trucks, and net purchases of used autos and used light trucks	CPI		
Communication equipment	CPI, for smartphones.	FRB price indexes for data networking equipment, voice network equipment, data transport equipment, and wireless networking equipment.	
Photocopying equipment		BEA price index.	
Electro-medical equipment		BEA price indexes for medical imaging equipment and for electronic medical equipment.	
Nonresidential intellectual property products			
Software	PPI, for software publishing, except games.	BEA cost index based primarily on BLS average wage rates for select occupations and on PPI, for own-account and custom software.	

Component	Deflation, using price based on		Using quantity for extrapolation or direct valuation
	Consumer Price Index (CPI) or Producer Price Index (PPI)	Other index	
Research and development		BEA cost index based primarily on BLS data on average wages for selected industries.	
Entertainment, literary, and artistic originals	CPI and PPI		
Residential investment			
Permanent-site new single-family structures		Census Bureau price index for single-family houses under construction.	
Permanent-site new multifamily structures		Census Bureau price index for multi-family houses under construction.	
Manufactured homes	PPI, for mobile homes.		
Improvements		BEA composite index of input prices, for major replacements; BEA index based on Census Bureau price index for single-family houses under construction and BEA index for major replacements, for additions and alterations.	
Brokers' commissions and other ownership transfer costs	PPI, for residential real estate brokerage.		
Equipment	CPI		
Change in private inventories			
Farm		USDA average market prices.	
Nonfarm			
Purchased goods of all industries	PPI	Composite price from the EIA, for crude petroleum; BLS import price indexes, for imported goods purchased by trade industries.	Direct valuation. Quantities and prices of stocks of coal, petroleum, and natural gas from EIA, for utilities.
Work-in-process and finished goods, manufacturing	PPI	BEA indexes of unit labor costs.	
Net exports of goods and services			
Exports and imports of goods	PPI, for gold, semi-conductor exports, selected transportation equipment, selected communications equipment, and selected agricultural products. CPI, for smartphones.	BLS export and import price indexes; FRB price index, for various communications equipment; BEA price indexes for electro-medical equipment and parts exports and imports, and other exports and imports of goods; unit-value indexes based on Census Bureau values and quantities, for electric energy exports and imports.	Direct valuation. Quantities and unit-value indexes from monthly Census Bureau compilations of import data converted to a balance-of-payments basis, for imports of petroleum.
Exports and imports of services	CPI, for medical receipts and payments, travel receipts, and nonresident student expenditures. PPI, for selected transport categories and selected business services categories.	Selected deflators, for military transfers and defense expenditures: see "National defense except consumption of general government fixed capital" below. BEA composite index of foreign CPIs, ² for travel payments, for miscellaneous services, and for U.S. students' expenditures abroad; BLS export and import price indexes, for selected transport categories; BEA implicit price deflators, for selected business services categories.	Quantity extrapolation. BLS index of total bank output (less BEA estimates of real bank service charges), for exports of financial services furnished without payment; ¹ premiums deflated by PPI, for exports and imports of insurance.
Government consumption expenditures and gross investment			
Federal government			
National defense except consumption of general government fixed capital	PPI, for selected goods and services. CPI and PPI, for utilities and communications.	BEA indexes based on DOD prices paid, for some goods and services; BLS employment cost indexes, for some services; cost indexes from trade sources and government agencies, for military and nonmilitary structures; BEA index derived from nondefense compensation, for own-account software; BEA index derived from nondefense indexes and input-cost indexes, for research and development; BEA index derived from nondefense compensation price index and PPI, for custom software.	Quantity extrapolation. Full-time equivalent employment by rank and length of service, for military compensation; full-time equivalent employment by grade, adjusted for change from base year in hours worked, for civilian compensation. Direct valuation. Quantities and prices from DOD reports, for some goods and services; quantities from DOE, for electricity and natural gas.

Component	Deflation, using price based on		Using quantity for extrapolation or direct valuation
	Consumer Price Index (CPI) or Producer Price Index (PPI)	Other index	
National defense consumption of general government fixed capital			Direct valuation. Perpetual inventory calculations based on gross investment.
Nondefense except consumption of general government fixed capital	PPI, for most goods and selected services. CPI, for rent, utilities, and communications.	Cost indexes from trade sources and government agencies, for structures; BLS employment cost indexes, for some services; BEA index derived from nondefense compensation, for own-account software; BEA index derived from nondefense indexes and input-cost indexes, for research and development; BEA index derived from nondefense compensation price index and PPI, for custom software.	Quantity extrapolation. Full-time equivalent employment by grade, adjusted for change from base year in hours worked, for compensation; BLS index of total bank output (less BEA estimates of real bank service charges), for financial services furnished without payment. ¹ Direct valuation. Quantities by crop from agency reports and USDA prices, for net purchases of agricultural commodities by the Commodity Credit Corporation; DOE quantities and prices, for selected petroleum transactions.
Nondefense consumption of general government fixed capital			Direct valuation. Perpetual inventory calculations based on gross investment.
State and local government			
Consumption expenditures and gross investment except those listed below	CPI, for services.	BEA indexes based on federal nondefense prices paid, for transportation, books, and postal services; BEA composite indexes of input prices, for elementary and secondary education, welfare, and libraries; BEA composite price index for state and local construction, for maintenance and repair services.	Quantity extrapolation. See the entry "Financial services and insurance" under "Personal consumption expenditures."
Compensation of general government employees			Quantity extrapolation. Full-time equivalent employment by education and experience, adjusted for change from base year in hours worked, for employees in education; full-time equivalent employment, adjusted for change from base year in hours worked, for other employees.
Consumption of general government fixed capital			Direct valuation. Perpetual inventory calculations based on gross investment.
Structures	PPI, for office buildings, health care buildings, highways, educational buildings, and manufacturing buildings.	Cost indexes from trade sources and government agencies, BLS employment cost index for construction.	
Intellectual property products		See the entries "Software" and "Research and development" under "Nonresidential intellectual property products."	

BEA U.S. Bureau of Economic Analysis
BLS U.S. Bureau of Labor Statistics
CPI Consumer price index
DOD U.S. Department of Defense
DOE U.S. Department of Energy

EIA Energy Information Administration
FRB Federal Reserve Bank
PPI Producer price index
USDA U.S. Department of Agriculture

1. Also referred to as "services furnished without payment by financial intermediaries, except life insurance carriers."
2. The foreign CPIs are adjusted for differences in exchange rates.

Footnotes

1. The concepts and methodologies that underlie the NIPAs are subject to periodic improvements as part of the comprehensive and annual updates of the NEAs, and information about these improvements is available on BEA's website. See also Lisa S. Mataloni, Dorian L. Turner, and Stephanie H. McCulla, "[The 2023 Comprehensive Update of the National Economic Accounts](#)," *Survey of Current Business* (November 9, 2023).
2. For detailed descriptions of the fundamental concepts, definitions, classifications, and accounting framework that underlie the NIPAs and of the general sources and methods that are used to prepare the estimates, see [NIPA Handbook: Concepts and Methods of the U.S. National Income and Product Accounts](#) on BEA's website.
3. For specific information on key monthly source data incorporated in the current quarterly estimates, see "[GDP and the Economy](#)" in the *Survey*.
4. See [U.S. International Economic Accounts: Concepts and Methods](#) on BEA's website. Improvements in methodology are usually introduced as part of annual ITA revisions; see Mai-Chi Hoang, "[Annual Update of the U.S. International Transactions Accounts](#)," *Survey* (July 20, 2023).
5. For additional information on the commodity-flow method, see "[Chapter 4: Estimating Methods](#)" in [NIPA Handbook: Concepts and Methods of the U.S. National Income and Product Accounts](#), page 4–9.
6. For additional information, see "[Estimating Methods](#)," page 4–9, and the FAQ "[What is the retail-control method?](#)".
7. For additional information, see "[Estimating Methods](#)," page 4–12.
8. For details, see "[Chapter 9: Government Consumption Expenditures and Gross Investment](#)."
9. For the estimates of real GDP, the distinction between annual and quarterly methodologies is less important than it is for the current-dollar estimates. For the relatively few cases in which the annual and quarterly source data differ, the major differences are noted.



Subscribe to the SCB

The *Survey of Current Business* is published by the U.S. Bureau of Economic Analysis.
Guidelines for citing BEA information.

Survey of Current Business

bea.gov/scb
scb@bea.gov