This technical note provides background information about the source data and estimating methods used to produce the estimates presented in the GDP news release; a brief summary of "highlights" is available on BEA’s website at www.bea.gov.

Economic Factors and First-Quarter 2022 GDP

Real GDP decreased 1.5 percent at an annual rate (0.4 percent at a quarterly rate) in the first quarter of 2022, following an increase of 6.9 percent at an annual rate (1.7 percent at a quarterly rate) in the fourth quarter of 2021. The decline occurred amid a resurgence of COVID-19 cases from the Omicron variant and decreases in government pandemic assistance payments. Other economic factors including supply-chain challenges, low unemployment, and widespread inflation continued. The full economic effects of the COVID-19 pandemic and other economic factors cannot be quantified in the GDP estimate for the first quarter of 2022 because the impacts are generally embedded in source data and cannot be separately identified. Real GDP for the first quarter of 2022 is 2.8 percent above the level of real GDP for the fourth quarter of 2019.

The decrease in real GDP for the first quarter reflected decreases in private inventory investment, exports, federal government spending, and state and local government spending, while imports, which are a subtraction in the calculation of GDP, increased. Consumer spending, nonresidential fixed investment, and residential fixed investment increased.

Sources of Revision to Real GDP

The decrease in first-quarter real GDP was revised down 0.1 percentage point from the “advance” estimate, primarily reflecting downward revisions to private inventory investment and residential fixed investment that were mostly offset by upward revisions to consumer spending and exports. Imports were revised up.

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1 Percent changes in quarterly seasonally adjusted series are displayed at annual rates, unless otherwise specified. For more information, refer to the FAQ Why does BEA publish percent changes in quarterly series at annual rates?.

2 The fourth quarter of 2019 was the most recent quarter prior to the onset of the COVID-19 pandemic. Calculated as the percent change from the fourth quarter of 2019 to the first quarter of 2022 in news release table 3, line 1.
The revision to private inventory investment was led by downward revisions to manufacturing (notably, nondurable goods) and to “other” industries (notably, information), based primarily on new and revised Census Bureau inventory data.

Within residential fixed investment, the leading contributor to the downward revision was improvements, based primarily on new March employment and earnings data from the Bureau of Labor Statistics (BLS) and revised Census Monthly Retail Trade Survey (MRTS) data for building supply stores.

Within consumer spending, both services and goods were revised up. Within services, revisions were primarily based on new first-quarter Census Quarterly Services Survey data. Upward revisions to services provided by nonprofits (notably, hospital services) and “other” services (led by legal and telecommunications services) were partly offset by a downward revision to healthcare. Within goods, an upward revision to motor vehicles and parts (notably, new and used light trucks), based primarily on updated MRTS data as well as new March registrations data from IHS Markit Polk, was largely offset by a downward revision to food and beverages, based on revised MRTS data.

For both exports and imports, the revisions reflected upward revisions to goods (led by industrial supplies and materials), based primarily on new and revised Census trade in goods data for March.

Real final sales to private domestic purchasers, which measures private demand in the domestic economy and is derived as the sum of consumer spending and private fixed investment, increased 3.9 percent in the first quarter, an upward revision of 0.2 percentage point, reflecting the upward revision to consumer spending.

Prices

BEA’s featured measure of inflation in the U.S. economy, the price index for gross domestic purchases, increased 8.0 percent in the first quarter, an upward revision of 0.2 percentage point from the previous estimate, primarily reflecting new BLS Employment Cost Indexes for state and local government employees. Excluding food and energy, gross domestic purchases prices increased 6.9 percent, an upward revision of 0.2 percentage point from the previous estimate.

The price index for personal consumption expenditures (PCE) increased 7.0 percent in the first quarter, the same as previously estimated. Excluding food and energy, the “core” PCE price index increased 5.1 percent, a downward revision of 0.1 percentage point, primarily reflecting updated BLS price indexes. For a comparison of PCE prices to BLS consumer price indexes, refer to NIPA Table 9.1U. Reconciliation of Percent Change in the CPI with Percent Change in the PCE Price Index.
Gross Domestic Income and Corporate Profits

Real gross domestic income (GDI), which measures output of the economy as the costs incurred and the incomes earned in the production of goods and services (as measured by GDP), increased 2.1 percent at an annual rate (0.5 percent at a quarterly rate) in the first quarter, following an increase of 6.3 percent (revised) at an annual rate (1.5 percent at a quarterly rate) in the fourth quarter. The average of real GDP and real GDI increased 0.3 percent at an annual rate (0.1 percent at a quarterly rate) in the first quarter, following an increase of 6.6 percent at an annual rate (1.6 percent at a quarterly rate) in the fourth quarter.

The increase in current-dollar GDI for the first quarter primarily reflected an increase in compensation. Within compensation, the increase primarily reflected increases to both private and government wages and salaries, based primarily on employment, hours, and earnings data from the BLS Current Employment Statistics.

Subsidies, which are a subtraction in the calculation of GDI, decreased in the first quarter, as several federal pandemic-support programs, including the Paycheck Protection Program, Restaurant Revitalization Fund, and tax credits funding paid sick leave and employee retention, ended. More information on federal subsidy programs and their impacts on income measures is presented in Effects of Selected Federal Pandemic Response Programs on Federal Government Receipts, Expenditures, and Saving on BEA’s website.

Profits from current production decreased $66.4 billion, or 2.3 percent (quarterly rate), in the first quarter. Domestic profits of financial corporations decreased $28.6 billion, domestic profits of nonfinancial corporations decreased $21.1 billion, and rest-of-the-world profits decreased $16.7 billion.

BEA’s profits measure that is conceptually most similar to S&P 500 profits—national after-tax profits without inventory valuation and capital consumption adjustments—increased $39.8 billion in the first quarter. First-quarter national after-tax profits (shown in line 11 of table 9 of the GDP news release) increased 15.7 percent from the same quarter one year ago.

Updates to Disposable Personal Income

Current-dollar disposable personal income (DPI) was revised down $224.1 billion in the first quarter to a level of $18.25 trillion, primarily reflecting an upward revision to personal current taxes, which are a subtraction in the calculation of DPI. Personal current taxes were revised up $204.4 billion, primarily reflecting revisions to declarations and settlements as well as refunds based on new and updated data from the Department of the Treasury that showed a stronger than expected filing season for settlements as well as lower refunds compared to 2021. For detailed estimates on personal current taxes, refer to NIPA table 3.4U.

Updates to Fourth-Quarter Wages and Salaries

In addition to presenting updated estimates for the first quarter, today's release presents revised estimates of fourth-quarter 2021 wages and salaries, personal taxes, and contributions for government social insurance, based on new data from the BLS Quarterly Census of Employment and Wages program. Wages and salaries are now estimated to have increased $341.0 billion in the fourth quarter, an upward
revision of $66.6 billion. Real GDI increased 6.3 percent (annual rate), an upward revision of 1.2 percentage points from the previously published estimate.

**Federal Government Economic Response to the COVID-19 Pandemic**

Since the onset of the COVID-19 pandemic, several legislative acts, including the Coronavirus Aid, Relief, and Economic Security (CARES) Act; the Coronavirus Response and Relief Supplemental Appropriations (CRRSA) Act; and the American Rescue Plan (ARP) Act, were signed into law. The Acts established several temporary programs and provided additional funding for existing federal programs to support individuals, communities, and businesses impacted by the pandemic. Because the effects of the Acts were in the form of transfers to individuals, subsidies to businesses, and grants to state and local governments, their effects on GDP show up indirectly through the components of GDP, such as consumer spending, business investment, and government spending. Thus, BEA cannot separately identify the total effect of the Acts on changes in GDP.

It is possible, however, to identify the impacts of select recovery programs on aggregate federal government spending. Further information on these and other pandemic response programs, including estimates of the effects of these programs on federal government spending is available in *Effects of Selected Federal Pandemic Response Programs on Federal Government Receipts, Expenditures, and Saving*.

**Looking Ahead: 2022 Annual Update of the National Economic Accounts**

BEA will release results from the 2022 annual update of the National Economic Accounts, which includes the National Income and Product Accounts as well as the Industry Economic Accounts, on September 29, 2022. The update will present revised statistics for GDP, GDP by Industry, and gross domestic income that cover the first quarter of 2017 through the first quarter of 2022. For details, refer to *Information on Updates to the National Economic Accounts*.

**More Information**

The complete set of statistics for the first quarter is available on BEA’s website, along with a table presenting the "Key Source Data and Assumptions" that underlie the statistics. In a few weeks, the Survey of Current Business, BEA’s online monthly journal, will present a more detailed analysis of the estimates ("GDP and the Economy").

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