The U.S. Economy in a Snapshot compiles observations of staff members of the Federal Reserve Bank of New York’s Research and Statistics Group. The views presented are solely those of the individual contributors and do not necessarily reflect the position of the Federal Reserve Bank of New York or the Federal Reserve System. The analysis presented herein is based on data released through January 12, 2023.
**OVERVIEW**

- **Output in Q3**
  - GDP rebounded in Q3 after falling in the first half of the year.
  - Net exports and consumption were the biggest contributors to growth.
  - Residential investment spending and inventory investment fell.

- **Activity in Q4**
  - Consumer spending data for October and November suggest consumption growth picked up in Q4.
  - Spending on services trended higher, while there was little growth in purchases of goods over the course of 2022.
  - Real disposable income increased in October and November but was still down down over the year.
  - Manufacturing activity stalled.
  - Housing starts continued to fall.

- **Labor market**
  - Payroll growth slowed to a still solid rate.
  - The unemployment rate fell to a low level.
  - The increase in earnings, measured over the year, continued its slow decline that started in March 2022.

- **Inflation**
  - Core PCE inflation over the year eased in November and CPI data suggest another move lower in December.
  - Prices for used motor vehicles have fallen in recent months, but were still high relative to pre-pandemic levels.
  - Food inflation has come down from the rapid rates registered in the first half of 2022.

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### Q3 output was below its pre-pandemic trend path

- GDP has grown at a 1.6% annual rate since Q4 2019.
  - In the December Summary of Economic Projections (SEP), the median estimate for the longer-run GDP growth rate was 1.8%.
  - The October Blue Chip survey had expected average annual growth over the 2024-28 period at 1.9%.
  - Q3 GDP was about 0.75% below what it would have been if, since Q4 2019, it grew at a rate close to longer-run forecasts.

- The unemployment rate was below its longer-run normal level.
  - The 3.5% unemployment rate in December was below both the Blue Chip consensus forecast of 4.2% for the average unemployment rate over 2024-28 and the median SEP projection of 4.0% for the longer-run unemployment rate.
  - The labor force participation rate in December was about one percentage point below pre-pandemic levels.
The unemployment rate fell

- The unemployment rate declined from 3.6% in November to 3.5% in December.

- The labor force participation rate increased from 62.2% in November to 62.3% in December.
  - The unemployment rate fell as the increase in the Household survey’s measure of employment more than offset the increase in the size of the labor force.
  - The labor force participation rate averaged 62.2% in 2022, down from 63.1% in 2019.
  - The 2022 rate for the 16 to 64 years-old cohort was equal to the 2019 average.

PCE inflation slowed in November

- PCE inflation over the year dropped from 6.0% in October to 5.5% in November.
  - Food prices were up 11% and energy prices were up 14%.

- Core PCE inflation dipped from 5.0% to 4.7%.
  - Durable goods inflation decreased from 4.0% to 2.7%.
  - Core services inflation decreased from 5.2% to 5.0%.

- Core PCE inflation over the month slowed from 3.2% (annualized) to 2.0%.
  - Prices for durable goods fell at a 9% annual rate, pulled down by a large drop in prices for used motor vehicles.
  - Core services inflation declined from 5.6% to 4.8%.
  - Core inflation over three months fell from 5.2% to 3.6%.
**ECONOMIC ACTIVITY**

**GDP Growth**
Quarterly % change, annualized

- GDP rose at a 3.2% annual rate in Q3, after declining at a 1.1% rate in the first half.
  - Output was up 1.9% over the year.
  - Exports rose and imports fell, resulting in the net exports component being the major contributor to the Q3 increase.
  - Final sales to private domestic purchasers (consumption plus private fixed investment) rose moderately in the quarter.

- Real gross domestic income (GDI) increased at a 0.8% annual rate in Q3, after being little changed in the first half.
  - The four-quarter change in real GDI was 1.8%.
  - With the slower growth of GDI in Q3, the gap between GDP and GDI narrowed considerably in the quarter.

**Output rebounded in Q3**

**Manufacturing Index**
Index, 2017=100

- The manufacturing index dropped 7% (annualized) over the month in November.
  - The average of October and November was up 2% over Q3.
  - The index was up 1% over the year.

- Durable goods production was up 3% over the year, while nondurable goods production was unchanged.
  - Positive outliers across industries included aerospace, motor vehicles, and machinery, all up by more than 5%.

- The ISM manufacturing index fell in December, continuing a steady decline over the course of 2022.
  - The prices index and the supplier deliveries index were below pre-pandemic levels.

**Manufacturing activity declined**

Source: Bureau of Economic Analysis via Haver Analytics

Source: Federal Reserve Board via Haver Analytics
**Households**

**Disposable Income and Consumption**

Trillions of 2012 dollars, annualized

- **Real disposable income moved higher**
  - Nominal personal income rose 4% (annualized) over the month in November, while real disposable income increased by 3%.
    - Over the year, nominal income was up 5% and real disposable income was down 2%.
  - Real personal consumption spending was unchanged over the month in November and was up 2% over the year.
    - The personal saving rate fell from 2.4% to 2.3%.

Source: Bureau of Economic Analysis via Haver Analytics

**Consumer Spending**

Trillions of 2012 dollars, annualized

- **Consumer spending on goods retreated**
  - Real spending on goods fell 7% (annualized) over the month in November, a retreat after rising 11% in October.
    - The swing in spending was largely due to volatile motor vehicle sales.
    - Spending on goods was down 1% over the year, with purchases of durable goods up 1%, purchases of food down 5%, and spending on energy goods down 4%.
  - Real spending on services increased by 4% (annualized) over the month and was up 4% over the year.

Source: Bureau of Economic Analysis via Haver Analytics
**Business Sector**

**Business Investment Spending on Equipment**

Billions of 2012 dollars, annualized

![Graph showing business investment spending on equipment]

Source: Bureau of Economic Analysis via Haver Analytics

**Equipment spending rose robustly in Q3**

- After falling in Q2, real business equipment spending increased at an 11% annual rate in Q3.
  - Equipment spending added 0.5 percentage point to the annualized GDP growth rate in the quarter.
  - Spending rose briskly in the information and transportation categories but fell in the industrial and “other” categories.
  - Equipment spending was up 5.2% over the year.

- Orders of capital goods rose slightly in November.
  - Nominal orders were on an uptrend through much of 2022, but they have flattened in recent months.
  - Much of the recent growth of orders is due to rising prices for capital equipment.

**Business Investment in Nonresidential Structures**

Billions of 2012 dollars, annualized

![Graph showing business investment in nonresidential structures]

Source: Bureau of Economic Analysis via Haver Analytics

**Spending on nonresidential structures fell in Q3**

- Real nonresidential structures investment spending decreased at a 4% annual rate in Q3.
  - Structures investment was a 0.1 percentage point drag on annualized GDP growth in the quarter.
  - Spending was down 8% over the year and down 24% since Q4 2019.

- Spending in the energy sector decreased following seven straight quarterly increases.
  - Spending on mining exploration, shafts, and wells was 13% below its Q4 2019 level.
**HOUSING SECTOR**

**Residential Investment**

Billions of 2012 dollars, annualized

- A steep drop in residential investment spending took 1.4 percentage points off annualized Q3 GDP growth.
  - Investment spending was down 27% (annualized) over the quarter and down 13% over the year.

- Investment in single-family housing in Q3 was down 38% (annualized) over the quarter and investment in multi-family structures was down 5%.
  - Single-family construction was down 15% over the year and multi-family construction was down 7%.
  - Declines in commissions and home improvement spending were also drags on residential investment.
  - Housing starts fell again in November.

**Existing Single-Family Home Sales**

Thousands, annualized

- Existing single-family home sales in Q3 were dropped 38% (annualized) over the quarter.
  - Q3 sales were down 20% over the year.
  - November sales were down 28% over the year.

- New single-family home sales fell 7% over the quarter.
  - Q3 sales were down 18% over the year.
  - November sales were down 15% over the year.

- Prices for single-family homes were 2% lower in October relative to June's peak.
**Federal Government Spending**

Federal spending moved higher in Q3

- Federal government spending added 0.2 percentage point to annualized real GDP growth in Q3, following negative contributions in the two prior quarters.
  - Nondefense spending added 0.07 percentage point to growth and defense spending added 0.17 percentage point.

- Real spending was down 1% over the year.
  - Defense spending was down 2% and nondefense spending was unchanged.

**State and Local Government Spending**

State and local government spending increased

- Real state and local government spending added 0.4 percentage point to annualized real GDP growth in Q3.
  - Spending was unchanged over the year.

- S&L government consumption was up 2% (annualized) over the quarter.
  - Consumption was up 1% over the year.

- Investment spending rose 13% (annualized) over the quarter, with a 14% increase in construction, a 12% increase in equipment purchases, and a 9% increase in spending on intellectual property products.
  - Investment spending was down 2% over the year, with construction spending down 4%.
INFLATION

Core CPI Inflation

- Core inflation over the year fell from 6.0% in November to 5.7% in December.
  - Core goods inflation decreased from 3.7% to 2.1%, with a steep drop in the index for used motor vehicles.
  - Core services inflation rose from 6.8% to 7.0%

- The core CPI rose 3.7% (annualized) over the month, up from the 2.4% pace set in November.
  - Core goods inflation went from -6.1% to -4.0%.
  - Core services inflation increased from 5.4% to 6.8%.
  - Core CPI inflation over the previous three months fell from 4.3% to 3.1% and the rate over the previous six months fell from 5.4% to 4.5%.

CPI Inflation: Shelter

- Shelter inflation over the year increased from 7.1% in November to 7.5% in December.
  - The index has grown at a 4.8% (annualized) pace since the start of the pandemic.
  - The index grew at a 3.3% rate in the years before the pandemic.

- Shelter inflation over the month jumped from 8.1% (annualized) to 10.0%.
  - Inflation for the rent of primary residence category rose from 9.6% to 9.9%.

Source: Bureau of Labor Statistics via Haver Analytics
**Payroll Employment**

Index, 2019=100

Source: Bureau of Labor Statistics

**Employment rose at a solid pace**

- Nonfarm payroll employment increased by 233,000 in December.
  - Notable increases were in health and education services, as well as leisure and hospitality.
  - Employment gains in the professional and business services sector slowed considerably in recent months.

- The Household Survey’s employment-to-population ratio increased from 59.9% to 60.1%.
  - The ratio has stayed within a narrow band of around 60% since March.
  - The ratio was 1 percentage point lower than its pre-pandemic level.
  - The rate for the 25-54 years-old cohort was near its pre-pandemic level.

**Average Hourly Earnings and the ECI**

Year-over-year % change

Source: Bureau of Labor Statistics via Haver Analytics

**Earnings growth slowed modestly**

- The growth in average hourly earnings over the month eased from 4.9% (annualized) in November to 3.4% in December.
  - Earnings growth over the year slipped from 4.8% to 4.6%.
  - Over the year increases in earnings have been trending down since March’s reading of 5.6%.

- The employment cost index rose at a 5.1% annual rate from June to September.
  - The index was up 5.1% over the year.
  - For comparison, the index was up 2.7% over the year in Q4 2019.
New York Fed Business Surveys: Current Conditions

Regional Business Activity Contracted in December
- Activity declined in both the manufacturing and service sectors, according to the December regional business surveys.
  - The Empire Survey’s headline index (manufacturing) tumbled 16 points to -11, and the Business Leaders Survey’s headline index (services) fell 6 points to -18, its fifth negative reading in the past six months.
  - Despite the decline in activity, employment increased, though it slowed to a crawl in the service sector.
  - Price increases moderated noticeably in the service sector, while prices were little changed in the manufacturing sector.

Regional Employment Trends

Job Growth Remained Weak in Upstate New York
- Strong job growth persisted through November in downstate New York and in Puerto Rico, but growth remained quite sluggish in upstate New York.
  - Over the prior 12 months, employment increased by 3.5% in downstate New York, 2.3% in Northern New Jersey, 2.8% in Fairfield CT, and just 1.2% in upstate New York, compared to 3.3% nationally.
  - Employment remained 3.4% below pre-pandemic levels in downstate New York, 4.2% below in upstate New York, 1.1% below in Northern New Jersey, and 0.6% below in Fairfield, while it was 0.7% above pre-pandemic levels for the nation as a whole.
  - Employment in Puerto Rico grew 4.6% on a year-over-year basis in November and was 6.6% above pre-pandemic levels.
INTERNATIONAL DEVELOPMENTS

Exports and Imports of Goods and Services

- Exports rose and imports fell in Q3.
  - Higher exports added 1.7 percentage points, while lower imports added 1.2 percentage points.

- Exports moved back to near pre-pandemic levels.
  - Higher exports were led by energy and nondurable industrial supplies.
  - Exports of goods in the first two months of Q4 were down significantly relative to the Q3 average.

- Imports retreated after large increases in Q4 2021 and Q1 2022.
  - Imports of consumer goods fell from a high level.
  - Imports of goods in the first two months of Q4 were modestly below the Q3 average.

Net exports boosted Q3 growth

Crude Oil Prices

- Oil prices (WTI) dropped from $84/barrel in November to $76/barrel in December.
  - Prices stayed near $75/barrel in early January.
  - Prices averaged $68/barrel in 2021 and $95/barrel in 2022.

- The Department of Energy’s December forecast projects that global inventories will decrease in Q1 2023, a retreat after increasing in the second half of 2022.
  - Both consumption and production growth are expected to be minimal in 2023, with a modest increase in inventory levels.

Source: Bureau of Economic Analysis via Haver Analytics

Source: Energy Information Administration via Haver Analytics
### Implied path for the federal funds rate shifted down

- The expected path of the federal funds rate implied by overnight indexed swaps decreased for maturities greater than about 5 months between December 12 and January 9.

- The market-implied federal funds rate at the end of 2024 decreased to about 3.1%, which is below the median value of 4.1% in the FOMC’s Summary of Economic Projections (SEP) from December 2022.

- At the five-year horizon, the market-implied federal funds rate decreased to around 2.7%, which is slightly above the median SEP longer-run federal funds rate of 2.5%.

### Ten-year Treasury yields declined

- The 10-year Treasury yield was at 3.54% on January 9, 7 basis points lower than the yield on December 12.
  - The yield averaged 1.76% in January 2020.
  - The yield averaged 0.89% in 2020, 1.44% in 2021, and 2.95% in 2022.
  - Estimates from the Adrian-Crump-Moench term premium suggest the decrease in the 10-year Treasury yield from December 12 to January 9 was due to a lower expected interest rate path and a decrease in the term premium.
FINANCIAL MARKETS

U.S. Equity Market Index and Volatility

Equity prices fell

- U.S. equity prices, as measured by the S&P 500 index, were down 0.4% on January 9 relative to December 2022.
  - The S&P 500 index was down 2% on January 9 compared to December 12.
  - The S&P 500 index was down 19% over the course of 2022 after rising by 28% in 2021.

- Option-implied stock market volatility, as measured by the CBOE Volatility Index (VIX Index), decreased from 25.0 on December 12 to 22.0 on January 9.
  - The median VIX Index value was 18.2 over the period from the beginning of 2000 through January 9.

The dollar depreciated

- The Federal Reserve’s trade-weighted broad dollar index on January 6 was down 2% relative to December 16.
  - The index fell sharply in Q4, but was still up 8% over the course of 2022.

- The dollar on January 6 was 1% weaker against the euro and 3% weaker against the yen relative to December 16.