U.S. Economy in a Snapshot
Research & Statistics Group
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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, model results, and analysis 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 April 1, 2016.
• Real consumer spending rose moderately in February, following a sharp downward revision to growth in January.
  – While growth in consumer expenditures has been soft so far this year, underlying fundamentals such as labor market conditions and real income growth remain healthy.

• While indicators for business equipment spending were rather weak in February, there were further signs of stabilization in the manufacturing sector.

• The general tone of housing data in February suggests the sector continued on a very gradual uptrend.

• Payroll growth was solid in March. While the unemployment rate increased, this occurred alongside an increase in the labor force participation rate. The employment-population ratio also rose.
  – Despite ongoing improvement in the labor market, wage growth remains relatively moderate.

• While inflation has shown some firming recently, it remained below the FOMC’s longer-term objective.

• The dollar depreciated. Equity prices rose, while implied volatility was low. Long-term Treasury yields and the market-implied path for the federal funds rate have moved downward since the March FOMC meeting.

Real GDP and GDI growth were modest in Q4

• Real GDP growth in 2015Q4 was 1.4% (annual rate), and real gross domestic income (GDI) growth was also subdued at 0.9%.

• The gap between real GDP and the Congressional Budget Office’s (CBO) measure of real potential GDP was 2.0% in 2015Q4.
  – The current unemployment rate (5.0%) is near many estimates of its natural rate, including the CBO’s estimate of 4.85%.
  – Compared to these alternative unemployment gap estimates, the CBO output gap indicates more resource slack.
**OVERVIEW**

**Labor Market Indicators**

The labor market continues to improve

- The unemployment rate ticked up slightly from 4.9% to 5.0% in March.
- The labor force participation rate rose from 62.9% in February to 63.0% in March.
- The employment-population ratio increased from 59.8% to 59.9%.
  - For prime-age workers (25-54 years old), the employment-population ratio increased from 77.8% to 80.0%.

**PCE Deflator**

Inflation steady after recent upward trend

- The total PCE deflator fell 0.1% in February, following a 0.1% increase in January. The core PCE deflator (which excludes food and energy prices) rose 0.1% in February, a little below the January increase.
  - There was a sharp 6.4% decline in energy prices in February compared to the 3% declines in the previous two months.
- On a 12-month change basis, the increase in the total PCE deflator slowed from 1.2% in January to 1.0% in February. The core PCE deflator rose 1.7%, the same as in January.
  - Goods prices have been falling during the past few months, reflecting the continuing impact of lower energy prices and non-energy import prices.
**ECONOMIC ACTIVITY**

**GDP Growth**

% Change – Annual Rate

% Change – Annual Rate


Source: Bureau of Economic Analysis, via Haver Analytics

**Output growth in Q4 revised up**

- According to the third estimate, GDP rose at a 1.4% annual rate during Q4, an upward revision from the second estimate of a 1.0% increase.

- The upward revision to real GDP largely reflected an upward revision in services consumption.

- Real gross domestic income (GDI), which provides an alternative measure of overall economic activity, increased at a 0.9% annual rate in Q4.
  - The four-quarter changes in real GDP and GDI were +2.0% and +1.4%, respectively. The changes in both measures were below their 2014 pace.

**Manufacturing and ISM Manufacturing Index**

12 Month % Change

Index


Source: Institute for Supply Management, Federal Reserve Board, via Haver Analytics

Note: Shading shows NBER recessions.

**Manufacturing sector conditions are improving**

- February production data indicate improving conditions in the manufacturing sector.
  - Total industrial production fell 0.5% in February, with mining production falling 1.4% due to declining oil and gas drilling activity.
  - Manufacturing production rose 0.2% in February, after increasing 0.5% in January.

- Survey data suggests the manufacturing sector expanded in March for the first time since August 2015.
  - The ISM Manufacturing Purchasing Managers Index rose 2.3 percentage points to 51.8 in March.
  - The Employment sub-index was little changed at 48.1. This value has remained below 50 for four consecutive months, suggesting ongoing manufacturing job losses.
February real PCE rebounds moderately
- Real personal consumption expenditures rose 0.2% in February.
  - Goods expenditures declined 0.1%, driven by a decline of 0.3% in nondurable goods expenditures.
  - Spending on services increased 0.3%.
- Growth in consumer expenditures for January was revised down sharply from an initial estimate of +0.4% to no change.
  - Downward revisions were broad-based across spending categories.

Personal saving rate high relative to net worth
- The scatterplot depicts combinations of the personal saving rate and household net worth as a percent of disposable income.
  - The black line represents a pre-recession long-run “savings-wealth” relationship estimated using data from 1983Q1 through 2005Q4 (blue diamonds).
  - Data from 2006Q1 are also included (red diamonds).
- The data indicate the saving rate/wealth ratio has been above its pre-recession level for several quarters.
  - Restrained access to credit, continued high demand for precautionary saving, and increased concentration of wealth at the top of the income distribution may be potential explanations for this recent pattern.
**Equipment Investment and Capacity Utilization**

- Real business investment in equipment fell 2.1% (annual rate) in Q4, following robust growth in Q3.
  - Spending fell for transportation and other equipment, while it rose for information and industrial equipment.
  - The four-quarter change was +2.5% in 2015Q4.

- Historically, the rate of growth of business spending on equipment has been positively correlated with the manufacturing capacity utilization rate.

- The manufacturing capacity utilization rate was 75.6% in February, up from 75.5% in January.
  - The utilization rate has changed little since mid-2014 and remains significantly below its 40-year average.

**Nondefense Capital Goods Excluding Aircraft**

- Monthly data on new orders and shipments of nondefense capital goods excluding aircraft are high frequency indicators of business investment in new equipment.

- The 3-month moving average of shipments and orders of such goods fell again in February.
  - Both series remain well below their peaks in late 2014.

- New orders were generally below shipments over the past year, and barely surpassed shipments in February.
  - Based on historical patterns, this difference between new orders and shipments is consistent with modest growth in equipment spending over the near term.
**Housing Starts**

- **Thousands, 3 MMA**
- **Total Multifamily (Left Axis)**
- **Single Family (Right Axis)**

Source: Census Bureau, via Haver Analytics
Note: Shading shows NBER recessions.

**Trend in home construction has flattened recently**

- The 3-month moving average of total housing starts was about 1.15 million units at a seasonally-adjusted annual rate (SAAR) for February, similar to recent months.
  - Multifamily starts have fallen back to around 470,000 following a mid-2015 surge, but remain slightly above pre-recession levels.
  - The gradual recovery in single family starts continued into 2016, reflecting slowly improving fundamentals.

- Similar patterns are evident for multifamily and single family building permits.

- Even with continued low mortgage interest rates, housing starts per capita remain about 45% below the longer-term average from 1968 to 2003.

**New and Existing Home Sales**

- **Thousands**
- **Existing Single Family Sales (Right Axis)**
- **New Single Family Sales (Left Axis)**

Source: Census and National Association of Realtors, via Haver Analytics
Note: Shading shows NBER recessions.

**Housing market is recovering gradually**

- Single family existing home sales fell 7.2% in February to 4.1 million units. Despite the decline in February, existing home sales are still 2.2% higher from a year ago.
  - While they have surpassed pre-recession levels, single family existing home sales remain markedly below their levels in the mid-2000s.

- Single family new home sales increased 2% in February to 512,000 units.
  - While single family new home sales have generally been on a gradual uptrend since November 2015, they still remain below pre-recession levels.

- Overall, trends in new and existing home sales point to continued gradual recovery in the housing market.
**GOVERNMENT SECTOR**

**Real Government Consumption and Gross Investment**

- **Government sector is expanding modestly**
  - Federal spending was flat for much of 2015, but grew a robust 2.3% (annual rate) in 2015Q4.
    - While January and February data from the Monthly Treasury Statement (MTS) suggest spending may have declined in 2016Q1, spending is expected to increase for 2016 as a whole due to the relaxation of discretionary spending caps.
  - State and local government spending fell 1.2% (annual rate) in 2015Q4, but was up 1.2% in 2015 on a Q4/Q4 basis.
    - Employment data through March and construction data through February suggest solid positive growth in this sector in 2016Q1.
  - The state and local sector represents about 61% of total government consumption and gross investment.

**Real State and Local Consumption and Gross Investment**

- **State and local investment recovery continues**
  - State and local gross investment recovered fairly steadily in 2015.
    - In 2015, real state and local gross investment grew 4.5%.
    - State and local construction put in place (CPI) jumped 3.2% in January, followed by a 1.8% decline in February. On net, CPI is up 10.2% over the twelve months ending in February 2016.
  - State and local consumption spending has continued a slow and steady recovery since mid-2013.
    - Monthly state and local employment numbers were flat throughout 2016Q1.
**International Developments**

**Real Exports and Imports of Goods and Services**

Quarterly % Change

- Exports
- Imports

Source: Bureau of Economic Analysis, via Haver Analytics

Note: Shading shows NBER recessions.

**Export growth slumped in Q4**

- Real exports fell 2.7 percent in 2015Q4 (SAAR), following low growth in Q3.
  - Exports rebounded in February, offsetting the 2.2 percent decline in January.
  - Over the year, real export growth was slightly positive, after four consecutive months of negative growth.

- Real imports fell 0.7 percent in 2015Q4 (SAAR), following sluggish growth in the previous quarter.
  - After showing very weak or negative growth since September 2015, real nonoil imports were up 2.4% in February.

- Net exports subtracted 0.3 percentage point from GDP growth in the second half of 2015.

**Gross Saving and Investment Spending**

Share of GDP, Percent

- Saving
- Domestic Investment

Source: Bureau of Economic Analysis, via Haver Analytics

Note: Shading shows NBER recessions.

**The rate of U.S. borrowing was flat in 2015Q4**

- A country borrows from the rest of the world when its domestic saving does not cover its investment spending.
  - The U.S. borrowed at a annualized pace of $500 billion in 2015Q4, a total equal to 2.8% of GDP.
  - Borrowing was unchanged from the previous quarter.

- Gross investment spending as a share of GDP was down slightly in Q4.
  - Private spending fell, while government spending was stable.

- Saving fell in step with investment spending.
  - A drop in business saving was only partially offset by an improvement in government saving.
LABOR MARKET

**Growth of Payroll Employment and Aggregate Hours**

![Graph showing growth of payroll employment and aggregate hours](image)

- Payroll employment growth remained strong
  - Nonfarm payroll employment increased by 215,000 in March.
    - Payroll employment increased on average by 209,000 per month in the first quarter of the year.
  - Aggregate hours worked rose by 0.2% in March.
    - The 12-month change in aggregate hours was 1.9%.
  - The one month diffusion index (reflecting the balance between industries increasing and decreasing employment) was 58.4 in March, similar to its average in 2015.

**Vacancy and Job-finding Rates**

![Graph showing vacancy and job-finding rates](image)

- Job openings remain at historically high levels
  - According to the January JOLTS report, there were roughly 5.5 million job openings as of the last business day of January 2016.
    - The series remains at historically high levels, with the previous peak of nearly 5.8 million job openings reached in July 2015.
  - The job-finding rate (the monthly transition rate from unemployment to employment) was 23.8% in March.
  - While the job-finding rate improved substantially since the end of the recession, it is still below its pre-recession peak.
**LABOR MARKET**

**Adjusted vs Actual Employment-to-Population Ratio**

- The adjusted employment-to-population (E/P) ratio is an estimate of the cyclically neutral value of the E/P ratio taking into account demographics.

- The gap between the actual and adjusted E/P ratios is a measure of labor market conditions, with positive (negative) values indicating tightness (slack).

- The closing of the E/P gap reflects both increases in the actual E/P ratio and continued declines in the adjusted E/P ratio as baby boomers age.

**Growth of Average Hourly Earnings: All Employees**

- Average hourly earnings rose by 0.3% in March and were up 2.3% over the past 12 months.

- Average weekly earnings also rose by 0.3% in March, from $872.4 to $874.8.
  - This gain in earnings partly reverses the decline observed in February.
  - Year over year, growth in average weekly earnings remains at around 2.25% and has yet to show signs of a pickup.
Core goods inflation back in positive territory

- Core CPI inflation continued its recent rise in February, increasing 2.3% on a 12-month change basis, up from 2.2% the month before and from 1.6% in January 2015.

- Core services inflation continued to strengthen, rising to 3.1% in February from a year ago.

- Core goods prices rose 0.3% in February, the highest monthly increase since August 2011, with the 12-month inflation rate moving into positive territory for the first time since March 2013.

Import price deflation unchanged in February

- Import prices (excluding oil) were down 3% over the year in February.
  - Prices were down 3% in January and 4% in December.

- Consumer goods were unchanged over the year, while auto prices were down 1%.
  - Food prices were down 5% after falling 3% in January.

- Industrial supplies continue to be the main factor behind the drop in the import price index.
  - Prices for these goods were down 11%.
US Equity Market Returns and Volatility

- Broad US equity market indices have retraced all of their losses since the start of the year.
  - The S&P 500 index year-to-date return is slightly positive at 1.69% through April 4.

- Volatility has returned to more normal levels.
  - Recent readings of the VIX option-implied volatility index have moved closer to its historical median value of around 18.
  - The year-to-date average of 20.10, however, is slightly elevated.

International Equity Indices

- Global equity indices have also retraced a substantial part of their losses since the start of the year.
  - The DAX index has rebounded moderately, with its year-to-date return at -8.57% through April 4.
  - The recovery in Asian markets has been more modest, with year-to-date returns on the Shanghai A shares and the Japanese Nikkei stock index at -14.97% and -15.29%, respectively.
**FINANCIAL MARKETS**

### Expected Federal Funds Rate

![Graph showing expected Federal Funds Rate over time.](image)

- **Note:** Estimated using OIS quotes.
- **Source:** NY Fed Calculations

### Shallower implied Federal Funds rate path

- The expected path for the Federal Funds rate implied by rates on overnight indexed swaps (OIS) flattened after the March FOMC meeting.

- This movement is broadly in line with the overall market reaction to the revision to the FOMC’s Summary of Economic Projections (SEP).

### 10-Year Treasury and Term Premium

![Graph showing 10-Year Treasury and Term Premium over time.](image)

- **Source:** NY Fed Calculations, Federal Reserve Board.
- **Note:** 5-day moving average, Zero-coupon yield.

### 10-year Treasury yield still down in 2016

- Mirroring the flattening of the path for OIS rates after the March FOMC meeting, the yield on 10-year Treasury securities moderately decreased from 1.92% on March 8 to 1.85% on April 4.

- Estimates of the Adrian-Crump-Moench term-structure model attribute the yield decline since the start of the year to a combination of lower expected short term interest rates and lower term premium.
  - The term premium on the 10-year Treasury remains in negative territory.
**FINANCIAL MARKETS**

**5-10 Year Forward Decomposition**

- **Inflation expectations remain well anchored**
  - Market-implied TIPS-based measures of long-term inflation expectations (“breakevens”) have retraced some of their declines since the start of the year.
    - The breakeven inflation rate rebounded to around 1.6%, but continues to be at multi-year lows.
  - Variation in the breakeven inflation rate appears to be largely driven by changes in the inflation risk premium, with implied expected inflation (as measured by the Abrahams-Adrian-Crump-Moench model) remaining stable.
    - The inflation risk premium also remains at multi-year lows of around -0.5%.

**On-the-Run CDS Index Basis**

- **Liquidity in the CDS market remains impaired**
  - The spread (or basis) between credit default swap (CDS) index contracts on North American corporates and the replicating basket of single-name bonds has been increasing since late-2015.
Demand and supply lowered oil prices in 2015

- Using a statistical model and a large number of financial variables, weekly oil price changes can be decomposed into demand effects, supply effects and an unexplained part ("residual").
- Oil prices declined by about 40% in 2015.
  - Early in 2015, demand pushed up prices despite anticipated oversupply.
  - Over the summer, prices initially fell due to supply-side pressures and fell further from lower demand when global financial markets retreated.
  - Concerns about excess supply resurfaced throughout Q4, negatively impacting prices.

Oil supply expectations have stabilized recently

- April oil prices are broadly similar to their January 2016 levels, with fairly stable supply expectations.
- Coinciding with another round of global financial turmoil, both perceived demand and the residual largely explained price declines and the subsequent recovery for most of Q1.
- Oil prices have retreated in recent weeks, mostly with supply conditions weighing them down.