U.S. Economy in a Snapshot
Research & Statistics Group
March 2016

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 March 4, 2016.
Consumer spending in January was solid.
  - After slowing over the last two quarters of 2015, growth of real consumption expenditures picked up in January from spending on energy services and durable goods.

While indicators for business equipment spending were soft, there were tentative signs that the manufacturing sector may be stabilizing.

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

- Payroll growth was solid in February. While the unemployment rate was unchanged, the employment-population ratio and labor force participation rate increased.

- Inflation picked up recently, but remained below the FOMC’s longer-term objective.
  - Survey measures of household longer-term inflation expectations declined recently, while expectations of professional forecasters remained fairly stable.

- Financial markets steadied and commodity prices increased, while some central banks moved key interest rates further into negative territory.

Q4 real GDP growth was tepid

- The second estimate of real GDP growth in 2015Q4 was 1.0% (annual rate), an upward revision but still a subdued rate.
  - The four-quarter change in real GDP was 1.9%, somewhat below the pace of the past couple of years.

- The gap between real GDP and the Congressional Budget Office’s (CBO) measure of real potential GDP was 2.1% in 2015Q4.
  - The current unemployment rate (4.9%) 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 unemployment rate remained at 4.9% in February, the lowest level since February 2008.

- The labor force participation rate rose from 62.7% in January to 62.9% in February.

- The employment-population ratio increased from 59.6% to 59.8%.
  - For prime-age workers (25-54 years old), the employment-population ratio increased from 77.7% to 77.8%.

**PCE Deflator**

- The total PCE deflator rose 0.1% in January. The core PCE deflator (which excludes food and energy prices) was up 0.3%, the largest increase since January 2012.
  - The rise in the total PCE deflator occurred despite a 2.9% decline in energy prices.

- On a 12-month change basis, the total PCE deflator increased by 1.3% as previous steep price declines fell out of the twelve-month calculation. The core PCE deflator rose 1.7%; this rate has risen in each of the past three months after being stable at 1.3% for much of 2015.
  - The recent upturn in core inflation reflects a slowing in the decline of durable goods prices and a pickup in health care inflation.
ECONOMIC ACTIVITY

GDP Growth

% Change – Annual Rate

% Change – Annual Rate


Output growth in Q4 revised up

- According to the second estimate, GDP rose at a 1.0% annual rate during Q4, an upward revision from the advance estimate of a 0.7% increase.

- The 0.3 percentage point increase to growth reflected an upward revision to inventory investment and a downward revision to imports that were partly offset by downward revisions to state and local government spending and consumer spending.
  - The upward revision to inventory investment reflected an upward revision to the “inventory valuation adjustment”, which is the difference between the historical costs at which businesses value their inventories and the current costs used to measure the contribution of inventories to GDP during the quarter.

Manufacturing and ISM Manufacturing Index

12 Month % Change

Index


Manufacturing sector may be stabilizing

- January production data indicated conditions in the manufacturing sector have not deteriorated further.
  - Total industrial production increased 0.9% in January, after falling 0.7% in December.
  - Manufacturing production rose by 0.5% in January, after falling 0.2% in each of the previous two months.

- While survey data suggests manufacturing continued to contract in February, the pace of contraction has been slower than in previous months.
  - The ISM Manufacturing Purchasing Managers Index rose by 1.3 percentage points to 49.5 in February.
  - This is the fifth consecutive month that the headline index has been below 50, which indicates a contraction in the manufacturing sector.
**HOUSEHOLDS**

**Disposable Income, Consumption, and Wealth**

<table>
<thead>
<tr>
<th>Quarter % Change</th>
<th>% of Disposable Income</th>
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<tbody>
<tr>
<td>Household Net Worth (Right Axis)</td>
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<td>Real Disposable Income (Left Axis)</td>
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<td>Real Personal Consumption (Left Axis)</td>
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Source: Bureau of Economic Analysis, Federal Reserve Board, via Haver Analytics
Note: Shading shows NBER recessions.

**Consumer spending rebounded in January**

- Real personal consumption grew a strong 0.4% in January.
  - Goods expenditures increased 0.7%, bouncing back from a 0.2% decline in December.
  - Services expenditures rose 0.3%, lead by a sharp rebound in spending on energy services.

- Real disposable income also grew a solid 0.4%.
  - Employees compensation grew 0.6%, outpacing the increases of the previous two months.

- The personal saving rate was 5.2%, similar to the values observed during 2015.

**Total Light Vehicle Retail Sales**

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<thead>
<tr>
<th>Millions</th>
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<td>Millions</td>
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Source: Autodata, via Haver Analytics
Note: Shading shows NBER recessions.

**Light vehicle sales stabilize below recent peak**

- Sales of light motor vehicles (automobiles and light trucks) were 17.5 million units at a seasonally-adjusted annual rate (SAAR) in February, slightly below the January level.
  - The pace of sales improved steadily from the end of 2009 to October 2015, but fell in December. They are now 3.8% below the October 2015 peak.

- Automobile sales were 7.4 million units in February, slightly below the January pace.
  - Since 2013, automobile sales have fluctuated between 7.4 and 8.3 million units; they are now at the bottom of this range.

- Light truck sales were 10.2 million units in February, unchanged from January.
**Equipment Investment and Capacity Utilization**

![Graph showing equipment investment and capacity utilization from 1980 to 2015.](image)

- **Manufacturing Capacity Utilization Rate (Right Axis)**
- **Real Business Investment in New Equipment (Left Axis)**

Source: Bureau of Economic Analysis, Federal Reserve Board, via Haver Analytics

Note: Shading shows NBER recessions.

**Equipment spending declined in Q4**

- Real business investment in equipment fell 1.8% (annual rate) in Q4, following robust growth in Q3. The four-quarter change was +2.6% in 2015Q4.
  - Spending fell for transportation and other equipment, while it rose for information and industrial equipment.

- 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 76.1% in January, up from 75.8% in November.
  - The utilization rate has changed little since late 2014 and remains below pre-recession levels.

**Nondefense Capital Goods Excluding Aircraft**

![Graph showing nondefense capital goods excluding aircraft from 2000 to 2016.](image)

- **New Orders**
- **Shipments**

Source: Census Bureau, via Haver Analytics

Note: Shading shows NBER recessions.

**Orders and shipments were soft in early 2016**

- 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 both shipments and orders of such goods fell again in January.
    - The levels of both remained below their respective mid-2014 levels.

  - Although they rebounded in January, new orders generally were below shipments over the past year.
    - Based on historical patterns, this difference between orders and shipments is consistent with sluggish equipment spending over the near term.
HOUSING SECTOR

**Housing Starts**

Thousands, 3 MMA

- Trend in home construction has flattened recently
  - The 3-month moving average of total housing starts was about 1.14 million units (SAAR) for January, little different from that of recent months.
    - Multifamily starts have fallen back from a surge in mid-2015, but remain at or 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 its longer-term average from 1968-2003.

**Credit Score at Mortgage Origination**

- Mortgage underwriting standards remain tight
  - Credit standards have loosened modestly since 2012, after tightening sharply between 2007 and mid-2009.
  - Lending standards also remain tight compared to levels in the early 2000s, which preceded the subprime boom.
  - Nearly 72 million people in the population of adults with credit reports currently have scores below 650; the share of originations to borrowers in this range has fallen from 25% to 10% since the recession.
GOVERNMENT SECTOR

Real Government Consumption and Gross Investment

- Federal spending was flat for much of 2015, but grew a robust 2.2% (annual rate) in 2015Q4.
  - This represents the first positive four-quarter change in real federal spending since 2010.
  - The jump arose largely from defense spending; nondefense spending showed slower growth.

- State and local government spending fell by 1.45% (annual rate) in 2015Q4, but early 2016 data suggest a rebound.
  - State and local government construction put in place increased 4.4% in January, led by highway and street spending; state and local government employment, however, has been flat in 2016.
  - The state and local sector represents about 61% of total government consumption and gross investment.

Federal Debt

- Gross federal debt consists of debt held by private investors (the public, including the Federal Reserve System) and debt held in various federal government trust funds (intergovernmental accounts).

- Latest budget projections of the Congressional Budget Office foresee a steep increase in debt held by the public as a percent of GDP over the next decade, reaching 86.1% by FY2026, which would be the highest since 1947.
  - The projected increase is due to rising annual deficits, from 2.5% of GDP in FY2015 to 4.9% of GDP by FY2026, led by increased outlays for entitlements and net interest.
  - In addition, Social Security is projected to turn cash flow negative in the near future, which will require redemption of bonds in the intergovernmental accounts.
INTERNATIONAL DEVELOPMENTS

Real Exports and Imports of Goods and Services

Export growth slumped in Q4
- Real exports fell 2.7 percent in 2015Q4 (SAAR), following low growth in Q3.
  - Exports continued to decline in January, with real exports of goods falling 2.2% from December.
  - The strong dollar continues to take its toll on exports, with the annual change in exports in 2015 entering negative territory for the first time since 2009.
- Real imports fell 0.6 percent in 2015Q4 (SAAR) following sluggish growth in the previous quarter.
  - Real goods imports declined 0.4% in January, and were up only 1.7% over the year.
- Net exports subtracted 0.3 percentage point from GDP growth in the second half of 2015.

Dollar Exchange Rate and Nonoil Import Prices

Import prices are falling at a slower rate
- Import prices (excluding oil) were down 3% over the year in January.
  - Prices fell 4% in December.
- Auto prices were down 1%, while consumer good prices were unchanged.
  - The pace of decline in the prices of these goods eased.
- Industrial supplies are the major items pulling down the overall import prices index.
  - Industrial supplies prices were again down 12%.
**Labor Market**

### Growth of Payroll Employment and Aggregate Hours

- Nonfarm payroll employment increased by 242,000 in February.
  - Payroll employment increased on average by 228,000 per month in the last three months.

- Aggregate hours worked fell by 0.4% in February.
  - The 12-month change in aggregate hours was 1.6%.

- The one month diffusion index (reflecting the balance between industries increasing and decreasing employment) was 59.4 in February, similar to its average in 2015.

### 1-Month Diffusion Index: All Industries

- Employment in private services-providing industries increased 245,000 in February, well above the average monthly employment gains in 2015 (+205,000).
  - Leisure and hospitality, trade, transportation, and utilities, and education and health services accounted for the majority of the increase in services payroll employment.

- Employment in goods-producing industries declined by 15,000.
  - Employment in the construction sector increased by 19,000, which was offset by declines in manufacturing employment (-16,000) and mining and logging employment (-18,000).
LABOR MARKET

**Employment-to-Population Ratio**

- Employment-to-population ratio increased from 59.6% in January to 59.8% in February.
  - The employment-to-population ratio is at its highest level since April 2009.
- Prime-age male employment-to-population ratio increased from 85.0% in January to 85.1% in February.
  - This ratio bottomed out at 80.4% in December 2009 and has increased by 4.7 percentage points since then.

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

- After firming in January and 2015Q4, compensation measures showed slower growth in February, which may partly reflect calendar effects.
- Average hourly earnings fell by 0.1% in February.
  - The 12-month change in average hourly earnings was 2.2%, above the narrow range around 2% that had prevailed from the beginning of the recovery until 2015Q3.

- The wages and salaries component of the ECI (Employment Cost Index) rose 0.6% in 2015Q4, while the 12-month change was 2.1%, both unchanged from last quarter.
INFLATION

CPI Inflation: Core Goods and Core Services

- **Core goods inflation moving higher**
  - After hovering at or somewhat below 2% since the end of 2012, the 12-month change in the core CPI moved up to 2.2% in January.
  - The pickup in core CPI inflation reflects a continuation of the upward trend in CPI core services inflation that has been notable since mid-2015, as well as a marked slowing in the rate of decline in CPI core goods prices.

Michigan Inflation Expectations 5 to 10 Years

- **Long-term inflation expectations near record low**
  - University of Michigan/Reuters’ February consumer survey shows median long-term (5-10 years) inflation expectations slipping from 2.7% to 2.5% in February, matching its record low.
    - The entire distribution of long-term inflation expectations shifted down slightly compared to January.
  - The median expected rate appears to have started trending down very gradually beginning in mid-2014.
    - The 75th percentile has trended down more noticeably—after fluctuating between 4% and 5% for most of the past 15 years, it has averaged slightly under 4% in recent months.
US Equity Market Returns and Volatility

US equity markets show moderate rebound

- Broad US equity market indices have retraced some of their losses since the start of the year.
  - The S&P 500 index year-to-date return is still in negative territory at -2.7% through March 8.

- Volatility has returned to more normal levels.
  - Recent readings of the VIX option-implied volatility index have moved closer to its historical median of around 18.
  - The year-to-date average of 22.34, however, is still elevated.

International Equity Indices

International equity indices also improve

- Global equity indices have also retraced some of their losses since the start of the year.
  - The DAX index has rebounded moderately, with its year-to-date return at -9.78% through March 8.
  - Gains for Asian markets have been more modest, with the year-to-date return on the Shanghai A shares and the Japanese Nikkei stock index at -18% and -11.8%, respectively.
FINANCIAL MARKETS

### Expected Federal Funds Rate

- The expected path for the Federal Funds rate implied by rates on overnight indexed swaps (OIS) steepened over the month of February, but it is still flatter than the path at the beginning of the year.

- The current market-impied path is still below the median longer run path from the FOMC’s Summary of Economic Projections (SEP) and the NY Fed Primary Dealer Survey.

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

### 10-Year Treasury and Term Premium

- Mirroring the steepening of the path for OIS rates in February, the yield on 10-year Treasury securities moderately increased from 1.75% on February 8 to 1.98% on March 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.

Source: NY Fed Calculations, Federal Reserve Board.
Note: 5-day moving average, Zero-coupon yield.
**5-10 Year Forward Decomposition**

- Market-implied TIPS-based measures of long-term inflation expectations ("breakevens") have declined significantly since the start of the year.
  - The breakeven inflation rate remains at around 1.5% and continues to be at multi-year lows.

- Variation in the breakeven inflation rate appears 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**

- 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.
  - There has been some retracing in the basis for the investment-grade index, but it remains above historical averages.
SPECIAL TOPIC: A CLOSER LOOK AT HOUSEHOLD BORROWING PATTERNS

**Total Debt Balance by Age of Borrower**

Billions of 2015 Dollars

- Debt balances are increasingly held by older borrowers.
- Borrowers in their 30’s saw declines in the real value of outstanding balances since 2003.
  - For 39 year olds, aggregate debt fell by 12%.
- The real value of debt in the hands of Americans aged 50-80 has increased by 59% since 2003.
  - For 67 year olds, aggregate debt grew by 169%.

Source: New York Fed Consumer Credit Panel / Equifax

**Mortgage Balance Change Components**

Billions of Dollars

- Charge-offs from foreclosures (gold) continue to reduce balances, although their effect is gradually lessening.
- Changes in balances from housing transactions (blue) have picked up somewhat, but remain below level seen in early 2000s.
  - This may reflect continued tight mortgage lending standards even as house prices and home sales pick up.
- Net pay-downs of mortgages (red) have increased in magnitude.
  - Cash-out refines and junior lien activity remain muted.
  - Borrowers continue to make regular mortgage payments.

Source: New York Fed Consumer Credit Panel / Equifax
Mortgage Payment Decomposition

<table>
<thead>
<tr>
<th>Year</th>
<th>Principal Reduction</th>
<th>Interest Payment (portion that does not reduce principal)</th>
<th>Quarterly Payment</th>
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Source: New York Fed Consumer Credit Panel / Equifax

Mortgage growth slows as pay-downs accelerate

- The slow growth in mortgage balances is due in part to faster pay-downs of existing mortgages.

- There are two reasons for this:
  - Many borrowers have refinanced into mortgages with shorter terms or lower interest rates.
  - Remaining mortgages are older, with the principal share of payments increasing with fewer remaining payments.

- Pay-down of existing mortgages is $118 billion higher in 2015 than in 2008, when the outstanding balance was the same.