



FEDERAL RESERVE BANK *of* NEW YORK

# U.S. Economy in a Snapshot

Research & Statistics Group

October 2016

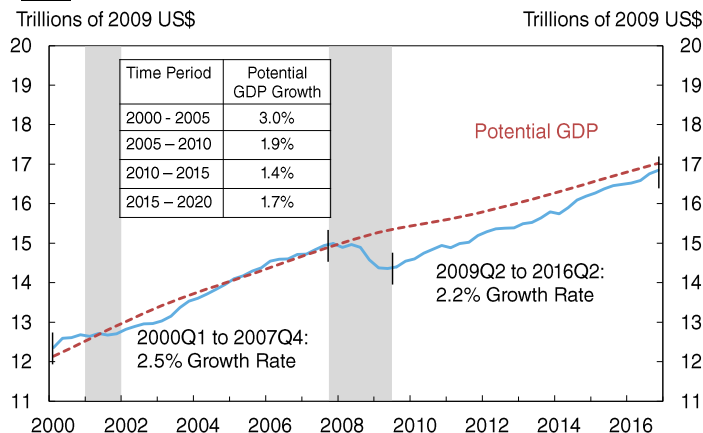
The *U.S. Economy in a Snapshot* compiles observations of staff members of the Federal Reserve Bank of New York's Research and Statistics Group. The views, model results, and analysis presented are solely those of the individual contributors and do not necessarily reflect the position of the Federal Reserve Bank of New York or the Federal Reserve System. The analysis presented herein is based on data released through October 7, 2016.

# OVERVIEW

- Real consumer spending fell slightly in August, but the data so far for the quarter indicate that consumer spending growth in Q3 was solid.
- August data suggested continued sluggishness for business equipment spending in Q3.
- Manufacturing production fell in August, but the manufacturing ISM rebounded moderately in September. August housing data indicated a very gradual uptrend for the sector.
  - Sluggish housing construction continues to raise some question about the extent of any rebound in residential investment after its decline in 2016Q2.**

- Payroll growth remained solid in September, and the unemployment rate rose. The labor force participation rate and the employment-population ratio increased.
  - Labor compensation measures remain subdued.**
- While both headline inflation and core inflation continued to run at levels below the FOMC's longer-term objective, there were signs of some slow progress toward the goal.
- Long-term sovereign yields increased, but remained low. Broad equity indexes were little changed, while oil prices rose. The Bank of Japan modified its framework, including a target of about 0% for the 10-year JGB yield.

## GDP



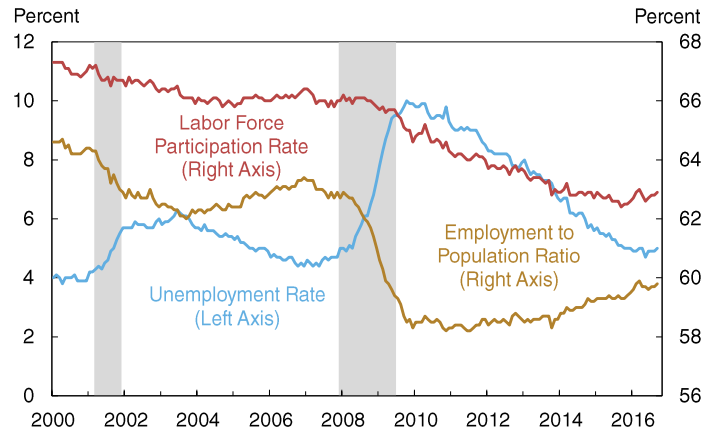
Source: Bureau of Economic Analysis, Congressional Budget Office via Haver Analytics. Note: Shading shows NBER recessions.

## Output is below its potential level

- The gap between real GDP and the Congressional Budget Office's (CBO) measure of real potential GDP was about 1.9% in 2016Q2.
  - The September unemployment rate of 5.0% is near many estimates of its natural rate, including that of the CBO (4.74%).**
  - Compared to these alternative unemployment gap estimates, the CBO output gap indicates more resource slack.**
- Historically, inflation has tended to be restrained when the economy is operating below potential.

# OVERVIEW

## Labor Market Indicators



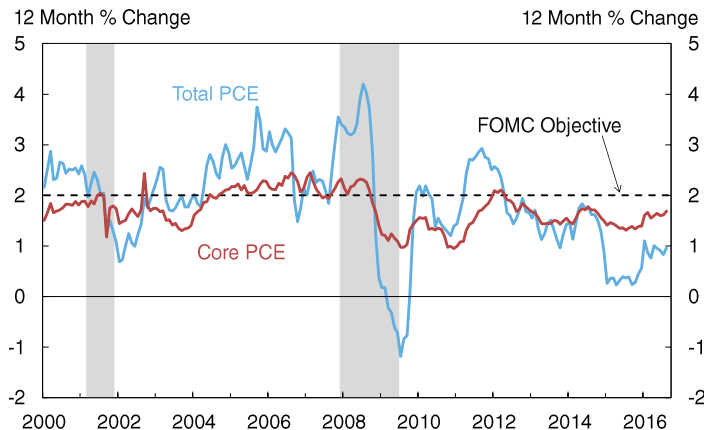
Source: Bureau of Labor Statistics  
via Haver Analytics

Note: Shading shows NBER recessions.

## The labor market continues to improve gradually

- The unemployment rate edged up to 5.0% in September.
  - An alternative measure of unemployment, U6, which includes marginally-attached workers as well as workers who hold part-time jobs but prefer full-time jobs, remained at 9.7%.
- The labor force participation rate rose from 62.8% to 62.9% in September, and the employment-population ratio increased from 59.7% to 59.8%.

## PCE Deflator



Source: Bureau of Economic Analysis  
via Haver Analytics

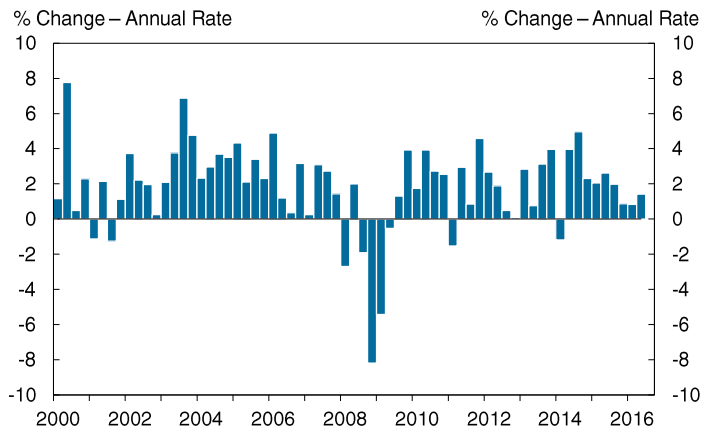
Note: Shading shows NBER recessions.

## Inflation may be firming

- The total PCE deflator rose 0.1% in August, while the core PCE deflator (which excludes food and energy prices) increased 0.2%.
  - Energy prices fell 0.1% in August, and are down 9.9% from a year ago.
  - Food prices fell 0.2% in August, and are down 1.5% from a year ago.
- The 12-month change in the total PCE deflator was 1.0%, up from 0.8% in July. The 12-month change in the core PCE deflator was 1.7%, up from 1.6% in July.
  - The August readings offer some signs that inflation may be moving slowly toward the FOMC's objectives.

# ECONOMIC ACTIVITY

## GDP Growth

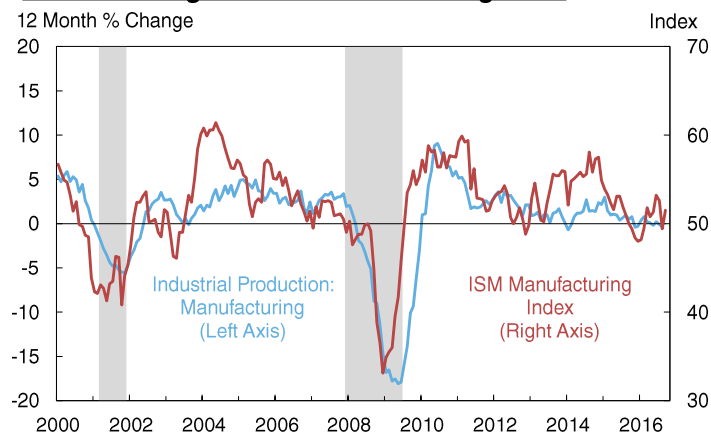


Source: Bureau of Economic Analysis via Haver Analytics

## Output growth in Q2 revised up

- According to the third estimate, real GDP rose at a 1.4% annual rate in Q2, an upward revision from the second estimate of a 1.1% increase.
- The upward revision to real GDP growth primarily reflected stronger nonresidential fixed investment, greater inventory investment, and higher export growth.
- Real gross domestic income (GDI), which provides an alternative measure of economic activity, decreased at a 0.2% annual rate, a downward revision of 0.4 percentage point from the previous estimate.
  - **The four-quarter change in real GDP was 1.3%, slightly above the 1.1% increase for real GDI.**

## Manufacturing and ISM Manufacturing Index



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

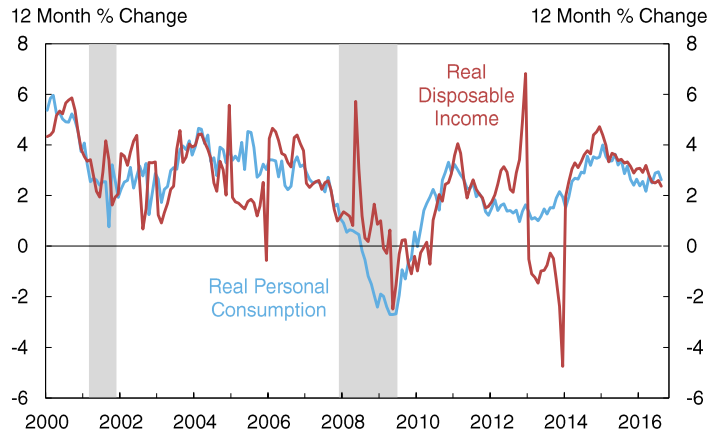
Note: Shading shows NBER recessions.

## Mixed signals from manufacturing sector

- The manufacturing sector contracted 0.4% in August, offsetting gains in July.
  - **Production is 0.4% lower from a year ago, with the decline resulting from sectors outside of motor vehicles and high-tech.**
- The ISM manufacturing index increased to 51.5 in September, after falling to 49.4 in August and below the 50 reading used to indicate expansion in the sector.
  - **The rise in the index principally reflected increases in the new orders and production components.**
- The picture from regional Fed surveys was less clear, with some indicators pointing to ongoing weakness and others suggesting improving conditions.

# HOUSEHOLDS

## Disposable Income and Consumption



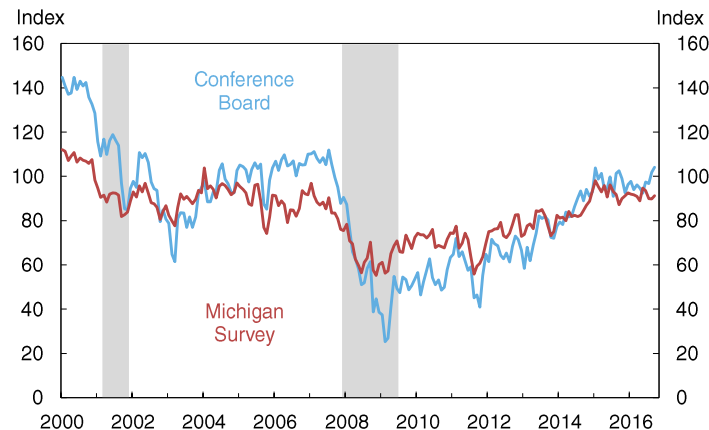
Source: Bureau of Economic Analysis, Federal Reserve Board via Haver Analytics

Note: Shading shows NBER recessions.

## Consumer spending retreats in August

- Real personal consumption expenditures fell 0.1% in August, following growth of 0.3% in July.
  - On a 12-month change basis, real PCE growth was 2.6%, slightly below the second quarter average.
- Goods consumption fell 0.6%, while services consumption grew a modest 0.1%.
  - Spending on durable goods fell 1.3%, while spending on nondurables declined 0.3%.
  - Services consumption was slightly lower than in July.
- Real disposable income increased 0.1% in August, a step-down from the 0.3% rise in July, and the personal saving rate rose to 5.7%.
  - The saving rate has been around 5.7% for the last 5 months.

## Consumer Confidence



Source: Conference Board, University of Michigan

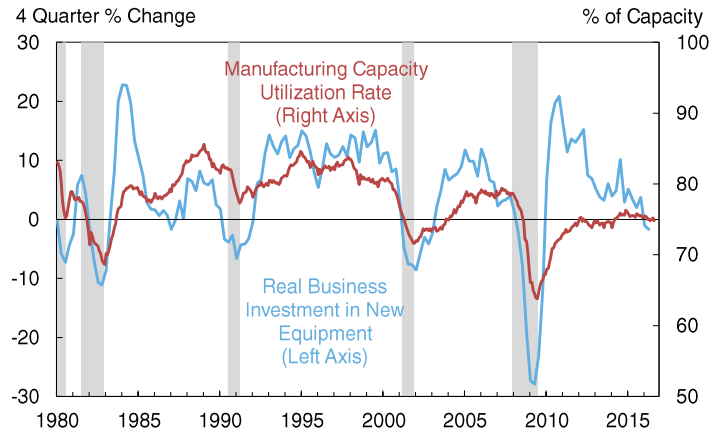
Note: Shading shows NBER recessions.

## Consumer confidence edged up

- The Reuters/Michigan consumer sentiment index rose from 89.8 in August to 91.2 in September.
  - This reading is around the 2016 average of 91.5, but below the 2015 average of 92.9.
- The increase in the index was driven by the Expectations component, which rose to 82.7 from 78.7 in August.
  - The Current Economic Conditions component dropped from 107.0 in August to 104.2, which is its lowest recorded value in 2016.
- Similar to the Michigan Index, the Conference Board Consumer Confidence Index also rose in September.

# BUSINESS SECTOR

## Equipment Investment and Capacity Utilization



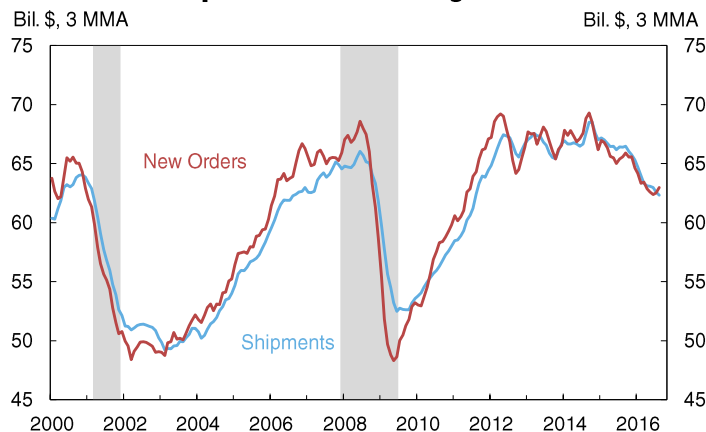
Source: Bureau of Economic Analysis, Federal Reserve Board via Haver Analytics

Note: Shading shows NBER recessions.

## Investment in new equipment remains weak

- Real business equipment spending fell 2.9% (annual rate) in 2016Q2, its third consecutive decline. The four-quarter change was -1.7%.
  - Investment in information processing equipment, transportation equipment, and “other” equipment fell in 2016Q2, while spending on industrial equipment increased.
- A key reason for the weakness in new equipment investment spending is the relatively low level of the manufacturing capacity utilization rate.
  - This rate was 74.8% in August 2016, equal to its low for the year and below its longer-term average of 78.5%.
  - The utilization rate has been fairly flat since the beginning of 2015, even with slow growth in capacity.

## Nondefense Capital Goods Excluding Aircraft



Source: Census Bureau via Haver Analytics

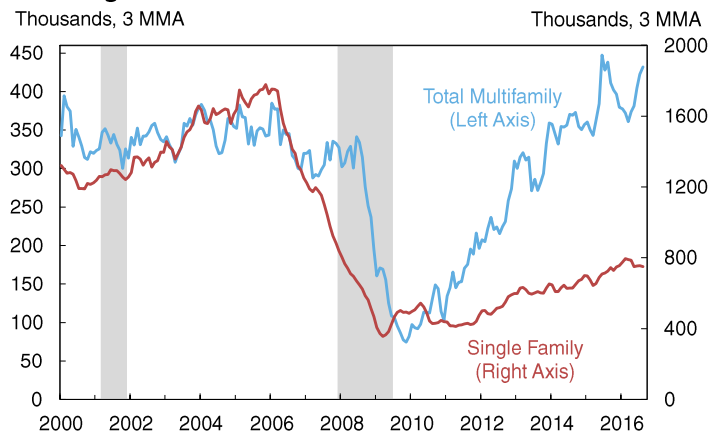
Note: Shading shows NBER recessions.

## Capital goods orders above shipments

- 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 of such goods fell again in August, but that of orders increased.
  - Both series remain well below their peaks in late 2014, indicating continued softness in the third quarter.
- New orders were above shipments in July and August, after being generally below shipments since late 2014.
  - Based on historical patterns, the shift in this difference between new orders and shipments suggests some modest improvement in near-term equipment spending.

# HOUSING SECTOR

## Housing Starts



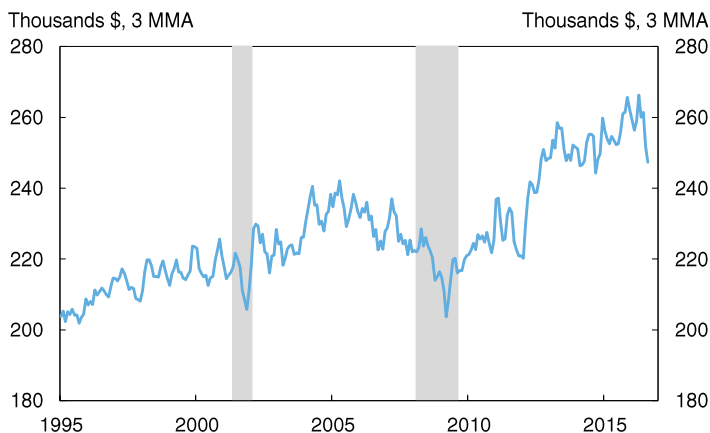
Source: Census Bureau via Haver Analytics

Note: Shading shows NBER recessions.

## Housing starts remain sluggish

- Total housing starts fell in August, but the 3-month moving average rose slightly to 1.183 million units at a seasonally-adjusted annual rate (SAAR), the highest since November 2007.
  - The rise in housing starts this year has been concentrated in the multifamily sector, where the August level of starts was about 19% above that of January.
  - In contrast, the August level of single family starts was about 7% below that of January, even though mortgage interest rates remain very low.
- On a per capita basis, total housing starts remain about 46% below the longer-term average from 1968 to 2003.

## Real Value of New Single Family Houses Sold



Source: Census Bureau via Haver Analytics

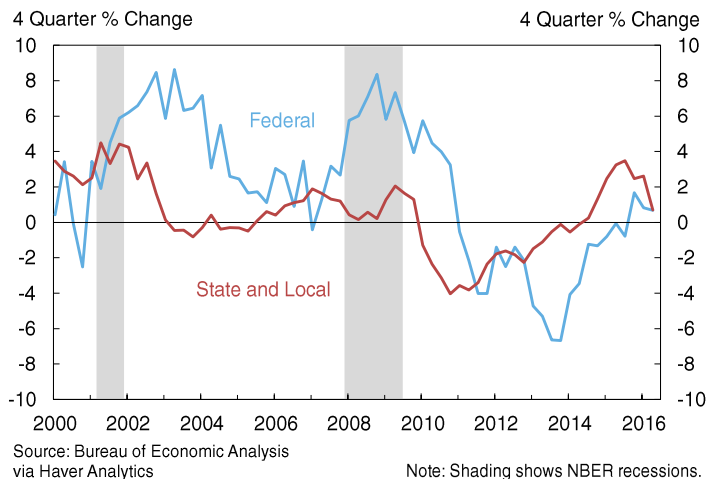
Note: Shading shows NBER recessions.

## Declining real value of new single family homes sold

- Industry sources indicate that the product mix of new homes being built has shifted to smaller units due to a combination of affordability issues and some change in preferences toward smaller units.
- One measure of the real value of new single family homes sold is the median nominal sales price deflated by a new home construction cost index.
  - This measure climbed steadily coming out of the recession, but its rate of increase began to slow around 2013, and the measure has actually been declining since April of this year.
  - This decline in real value per unit under construction was a major factor behind the decline of real residential investment in 2016Q2, which is likely to continue into Q3.

# GOVERNMENT SECTOR

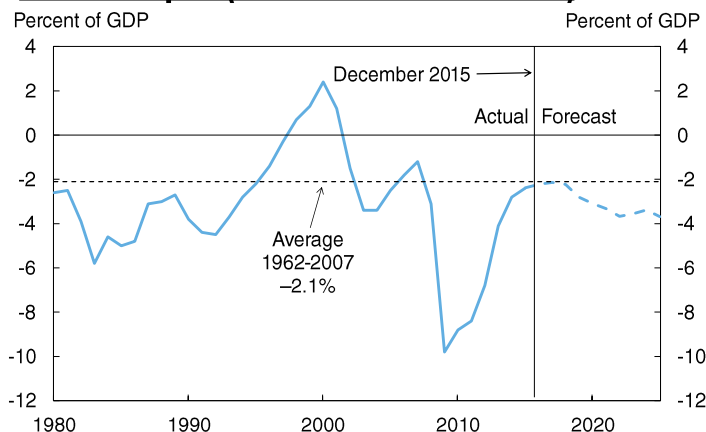
## Real Government Consumption and Gross Investment



## Government sector is expanding modestly

- On a year-over-year basis, real government consumption and gross investment was up 0.7% as of 2016Q2, a slowing from the recent high of 2.2% as of 2015Q4.
- At the federal level, real consumption and gross investment is up 0.7% over the four quarters ending in 2016Q2 compared to an increase of 1.7% as of 2015Q4.
  - Nondefense spending (about 40% of the total) rose 2.9% as of 2016Q2, while defense spending was down 0.8%.**
- At the state and local government level, which represents about 60% of total government spending (excluding entitlement spending), the four-quarter change of real consumption and gross investment slowed to 0.7% in 2016Q2 from a recent peak of 3.5% in 2015Q3.

## Federal Surplus (CBO Current Law Baseline)



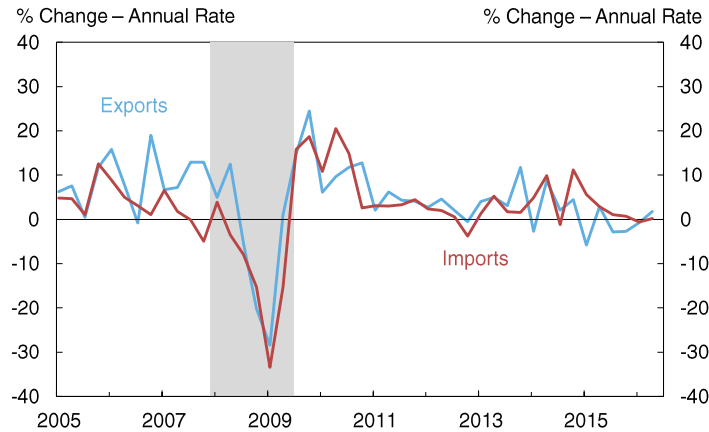
## Federal budget deficits to rise over next decade

- In August, the Congressional Budget Office (CBO) released an update of its “current law” budget projections for the next ten years.
- After declining from 9.8% of GDP in Fiscal Year 2009, the deficit declined to 2.5% of GDP by Fiscal Year 2015.
  - Revenues rose briskly as the economy recovered, while spending growth was largely restrained by the scaling back of overseas military operations.**
- Over the next decade the deficit is expected to gradually rise to 4.6% of GDP by Fiscal Year 2026.
  - Revenues are expected to continue to rise as a share of GDP, but outlays are expected to rise even faster from rapid growth of individuals receiving Social Security and Medicare benefits.**



# INTERNATIONAL DEVELOPMENTS

## Real Exports and Imports of Goods and Services



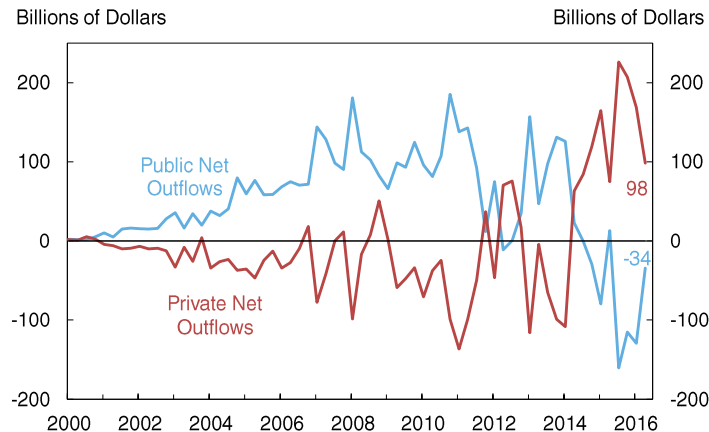
Source: Bureau of Economic Analysis via Haver Analytics

Note: Shading shows NBER recessions.

## Exports show signs of improvement

- Real exports rose 1.8% in 2016Q2 (SAAR), the first increase in the quarterly series since 2015Q2.
  - Real goods exports were up 1.9% from July to August, following a 3.0% rise in the previous month.
  - The 12-month change was 3.4%, the largest increase since December 2014.
- Real imports grew slightly in 2016Q2, rising 0.2% (SAAR).
  - The sluggish performance continued in August, with real nonoil imports growing only 0.5% from July.
  - Over the year they are down 0.7%.
- Overall, net exports contributed 0.2 percentage point to real GDP growth in 2016Q2.

## Net Financial Outflows from China



Source: State Administration of Foreign Exchange via Haver Analytics

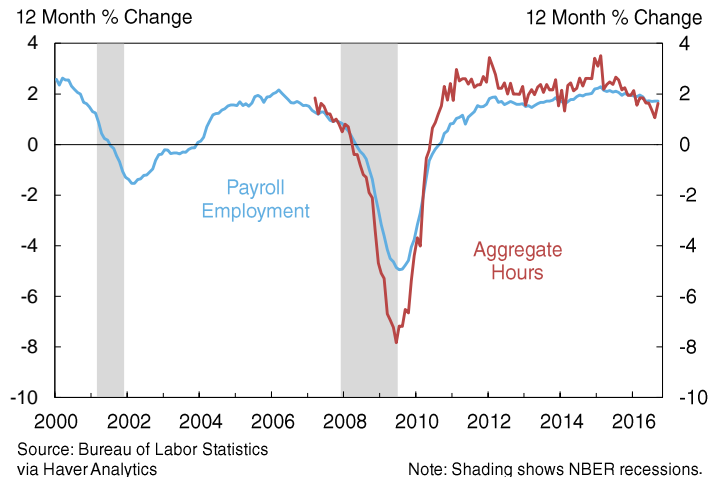
Note: Public outflow measured by central bank FX reserves. Private outflow = current account – reserves.

## Private financial outflows from China remain high

- Almost \$100 billion in private-sector capital, on net, moved out of China in Q2.
  - This is, however, a substantial slowdown from private outflows in the second half of last year and Q1 of this year.
- The central bank sold \$34 billion of its foreign assets.
  - The sales meant that there was a partial offsetting inflow of capital to the public sector.
- Considered together, the data indicate that total capital outflows, on net, rose to \$64 billion in Q1.
  - Outflows in the first half of 2016 are down substantially from year-ago levels.

# LABOR MARKET

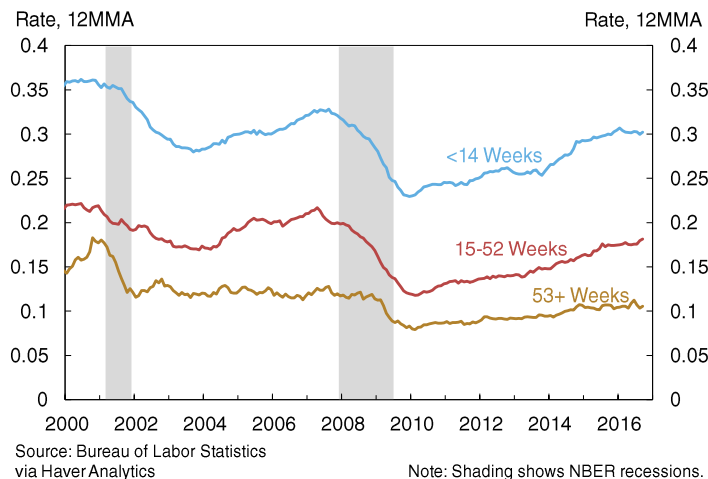
## Payroll Employment and Aggregate Hours



## Some slowdown in payroll employment growth

- September nonfarm payroll employment rose by 156,000, slightly below the revised gains of 167,000 in August.
  - Viewed over the last three months, average monthly gains were 192,000 in Q3 and are still above the average monthly gains of 171,000 in the first half of 2016.
- Aggregate hours increased 0.4% in September.
  - The 12-month change moved up to 1.6%, but remains below its recent peak of 2.66% in July 2015.
  - Average weekly hours increased from 34.3 to 34.4.
- Payroll gains remain broad-based, with the one-month diffusion index of 57.8% close to its average of 57.0% over the first three quarters of 2016.

## Job-Finding Rates by Duration of Unemployment

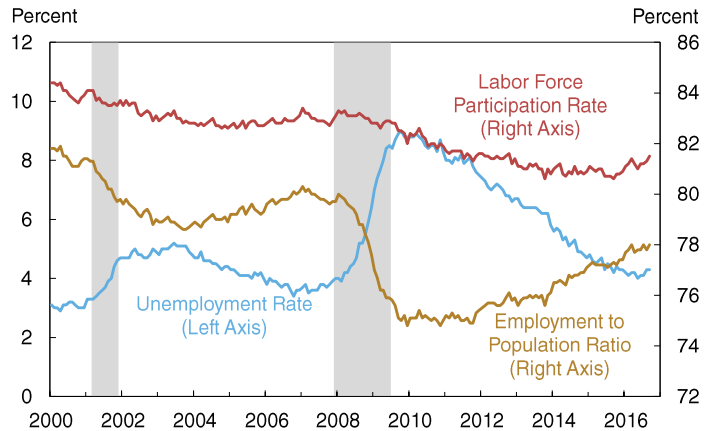


## Job-finding rates continue to improve

- Job-finding rates improved in September for both short-term and long-term unemployed workers.
  - The percentage of long-term unemployed workers (those unemployed for 27 weeks or more) fell to 24.9%, its lowest level since March 2009.
- The improved job-finding rates were not enough to offset a slight increase in unemployment inflows, resulting in a slight increase in the unemployment rate from 4.9% to 5.0%.

# LABOR MARKET

## Household Survey Indicators, Prime-age Workers



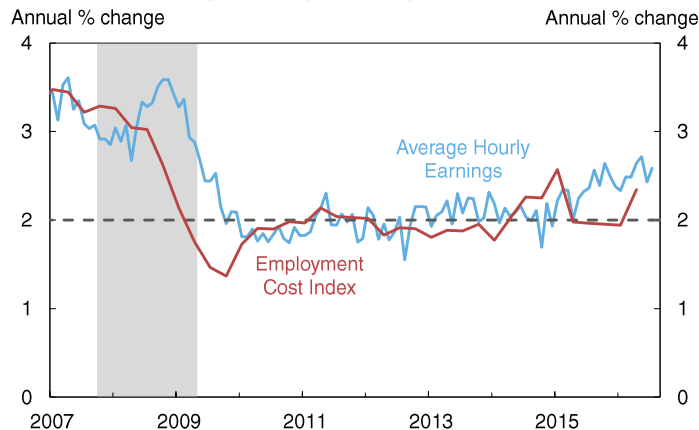
Source: Bureau of Labor Statistics via Haver Analytics

Note: Shading shows NBER recessions.

## Higher participation rate of prime-age workers

- Labor force participation of prime-age workers (25-54) reached 81.5% in September, its highest level since October 2012.
- Increases in prime-age worker participation in the first three quarters of 2016 were concentrated in increases in female prime-age participation.
  - Female prime-age participation increased from 74.0% in January to 74.7% in September.

## Growth of Average Hourly Earnings and ECI



Source: Bureau of Labor Statistics via Haver Analytics

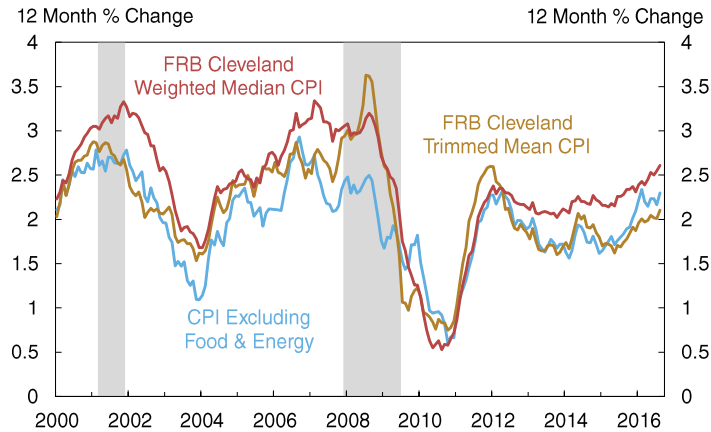
Note: Shading shows NBER recessions.

## Compensation growth remains subdued

- Average hourly earnings increased 0.2% in September and rose 2.6% over the past 12 months.
  - The 12-month growth rate in average hourly earnings remains slightly above the narrow range near 2% that prevailed from January 2010 through August 2015.
- Average weekly earnings increased 0.5% from \$882.54 to \$887.17.
- The employment cost index rose 2.3% for the 12 months ending in June 2016.
  - The employment cost index for September will be released on October 28.

# INFLATION

## Measures of Core CPI Inflation



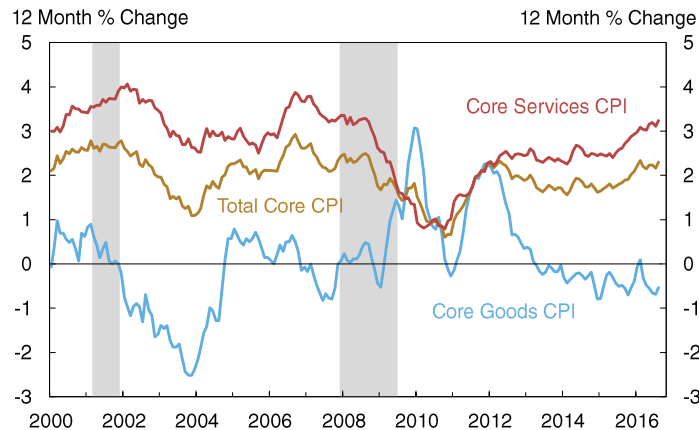
Source: Bureau of Labor Statistics and Federal Reserve Bank of Cleveland via Haver Analytics

Note: Shading shows NBER recessions.

## Core CPI inflation measures generally moving up

- Core inflation measures are designed to remove transitory movements in inflation and capture its underlying trend.
  - The ex-food and energy measure associates transitory movements with price changes of those items, while the weighted median and trimmed mean associate transitory movements with items having “small” and “large” price changes.
- Core CPI inflation has been recovering from low levels since 2015.
  - This upward movement in core inflation appears to have stalled in 2016 based on the CPI ex food and energy measure.
  - Alternative measures of core inflation, such as the median and trimmed mean CPI, show continued upward momentum through 2016.

## CPI Inflation: Core Goods and Core Services



Source: Bureau of Labor Statistics via Haver Analytics

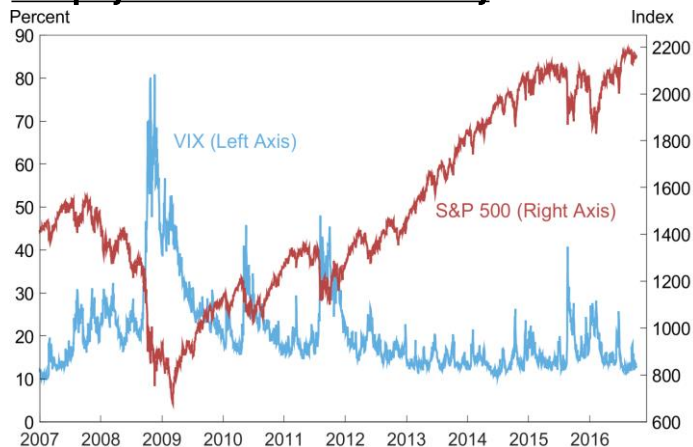
Note: Shading shows NBER recessions.

## Core CPI goods prices rise in August

- The core CPI (excluding food and energy prices) rose 0.25% in August, and increased 2.3% from a year ago.
- Core CPI services inflation has stabilized over the past few months, after rising steadily over the course of 2015.
- While core CPI goods inflation remains negative on a 12-month change basis, it was positive in August for the first time since February.

# FINANCIAL MARKETS

## US Equity Market Returns and Volatility

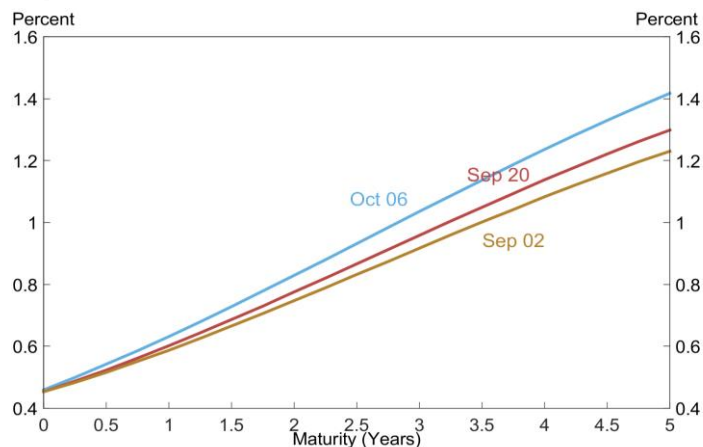


Source: Bloomberg Finance L.P.

## US equity markets remain near highs

- U.S. equity markets experienced a slight increase in volatility and declined somewhat in the first half of September, although broad indices have mostly recovered and remain near all-time highs.
  - Valuations are supported by the low level of interest rates and economic news broadly in line with market expectations.
  - As of October 6, the S&P 500 index is up 7% for the year.
- Option-implied stock market volatility as measured by the VIX index increased modestly, but remains at low levels.
  - The VIX index averaged about 14.2 over the course of September, with a maximum of about 18 (which in turn is close to the historical median value of the index).

## Expected Federal Funds Rate



Source: NY Fed Calculations

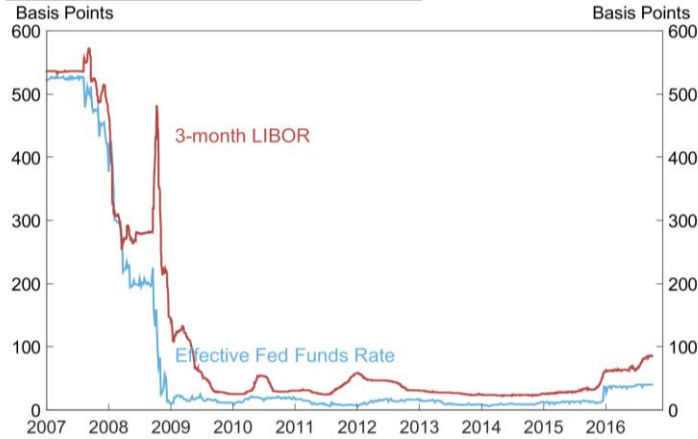
Note: Estimated using OIS quotes.

## Expected Federal Funds rate path steepens modestly

- The expected path for the Federal Funds rate (FFR) implied by rates on overnight indexed swaps (OIS) inched upward over the past month.
  - The steepening occurred primarily in early October, following positive economic data that included the ISM manufacturing and non-manufacturing indices.
- The current market-implied path remains well below the median longer run path from the FOMC's Summary of Economic Projections (SEP) and the NY Fed Primary Dealer Survey.

# FINANCIAL MARKETS

## **Fed Funds Rate vs. 3-month LIBOR**

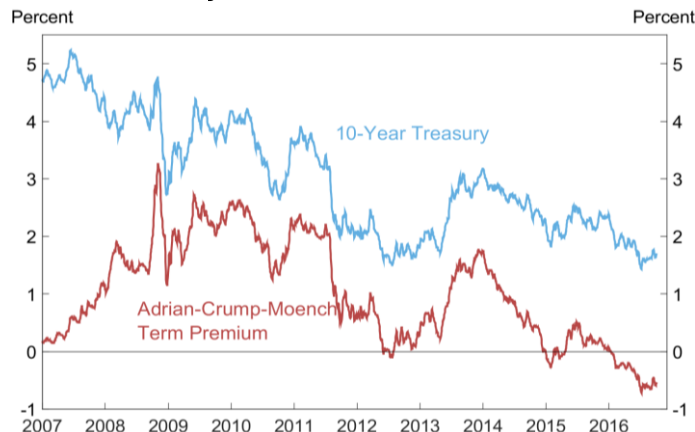


Sources: Federal Reserve Board, ICE Benchmark Admin. Limited

## **LIBOR higher relative to Fed Funds rate**

- Since early July, short-term U.S. dollar borrowing rates as measured by the London Interbank Offered Rate (LIBOR) have increased relative to the Effective Federal Funds Rate (FFR).
  - The 3-month LIBOR increased from 65 basis points on July 1 to 85 basis points on September 30, while the FFR remained at 40 basis points over the same period.
  - The LIBOR, however, remains near the low end of its historical range.
- This increase is ascribed to U.S. money market fund reform, which will come into effect in mid-October.
  - The reform has driven a decline in the assets of “prime” money market funds, which are large-scale investors in short-term debt and deposits of banks.

## **10-Year Treasury and Term Premium**



Source: NY Fed Calculations, Federal Reserve Board.

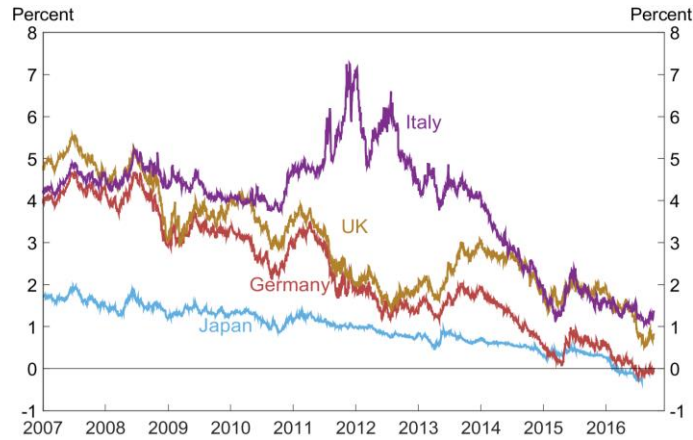
Note: 5-day moving average, Zero-coupon yield.

## **Longer-term Treasury yields stable at low levels**

- U.S. long-term Treasury yields inched higher prior to the September FOMC meeting, subsequently retraced, and then increased again following positive economic news and developments in Europe.
  - At 1.7 percent, the 10-year yield has returned to the level recorded just prior to the June UK referendum, but remains 67 basis points lower than at the beginning of the year.
- Estimates of the Adrian-Crump-Moench term-structure model attribute the yield decline since the start of the year to a lower term premium rather than to a lower expected path for the short-term rate.
  - Estimates of the term premium on the 10-year Treasury yield increased slightly over the course of September, but remain in substantially negative territory.

# FINANCIAL MARKETS

## Long Term Yields in Advanced Economies

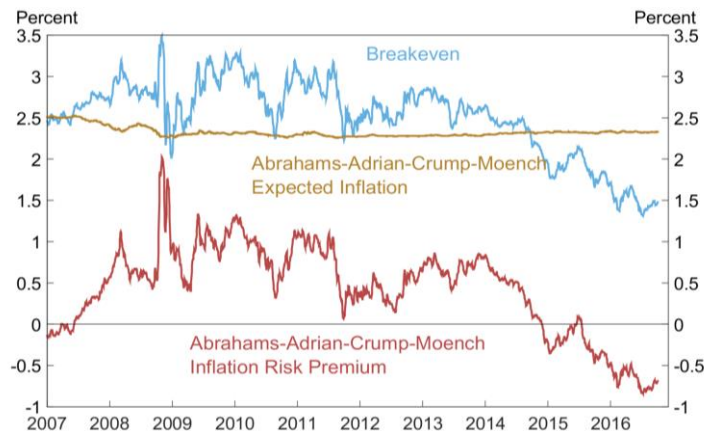


Source: Bloomberg Finance L.P. Note: 10 year par yield for benchmark issues.

## Global sovereign bond yields remain low

- Long-term government bond yields in foreign advanced economies are at historically low levels.
  - 10-year government debt yields are at or below zero in Germany and Japan.
  - The Bank of Japan announced a new monetary policy framework that targets the yield on 10-year Japanese government debt at “around zero percent.”
- The yield on 10-year UK sovereign bonds rebounded in recent weeks, but remains well below its level prior to the EU referendum vote.
- Bond yield spreads of peripheral European countries such as Italy and Spain widened slightly over the past month.

## 5-10 Year Forward Decomposition



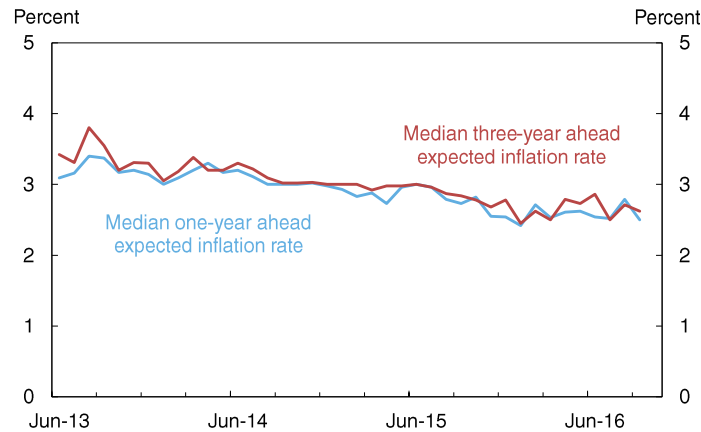
Source: NY Fed Calculations, Federal Reserve Board. Note: 5-day moving average, Zero-coupon yield.

## Inflation expectations remain well anchored

- Market-implied TIPS-based measures of long-term inflation expectations (“breakevens”) increased modestly over the course of September, but remain near historical lows.
  - The five-to-ten year breakeven inflation rate stands around 1.5%, which is 0.2 percentage point below its level at the beginning of the year.
  - Recent increases were mostly linked to higher oil prices.
- According to the Abrahams-Adrian-Crump-Moench model, variation in the breakeven inflation rate is largely driven by changes in the inflation risk premium, while implied expected inflation has remained stable.
  - The estimated five-to-ten year inflation risk premium increased by about 10 basis points over the course of September.

# SPECIAL TOPIC - SURVEY OF CONSUMER EXPECTATIONS

## Inflation Expectations

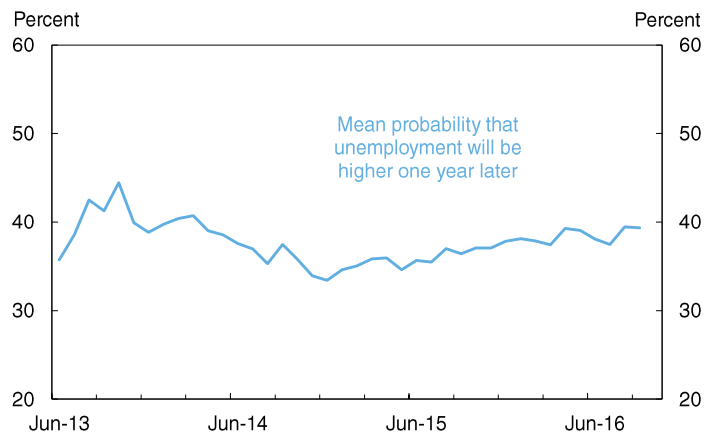


Source: Survey of Consumer Expectations,  
Federal Reserve Bank of New York

## Inflation expectations remain low

- The FRBNY Survey of Consumer Expectations provides monthly updates on household expectations.
  - The survey is nationally representative, involves a rotating panel of about 1,300 household heads, and covers a broad range of topics.
- Inflation expectations have declined slightly at both the one-year and the three-year horizon since May 2016.
  - Both measures are close to their 2016 averages and remain above their series' lows set in January 2016.

## Unemployment Expectations



Source: Survey of Consumer Expectations,  
Federal Reserve Bank of New York

## Unemployment expectations are rising

- The mean probability that the U.S. unemployment rate will be higher one year from now reached 39.4% in September.
- This series has been on a gradually increasing trend since the series' low of 33.4% recorded in December 2014.
- The increase is consistent with consumers placing a lower probability on further declines in the unemployment rate over the next 12 months.