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 January 6, 2017.
- Real consumer spending rose slightly in November and matched the pace of growth in October.
  - December motor vehicle sales, however, were very strong and reached their highest level since July 2005.

- November data suggested that the near-term momentum for business equipment spending has improved moderately in Q4 following the declines in equipment spending in the previous four quarters.

- Manufacturing activity remained flat. Real residential investment appeared to have rebounded modestly in Q4 after falling for two consecutive quarters.

- Payroll growth remained solid in December. The unemployment rate and labor force participation rate rose slightly, and the employment-population ratio was steady.
  - Growth of average hourly earnings picked up modestly over the course of 2016.

- Headline and core inflation continued to run below the FOMC’s longer-term objective; core inflation has been fairly stable over the past several months.

- U.S. equity indexes increased slightly, while nominal long-term Treasury yields fell modestly. Oil prices and longer-term inflation compensation were relatively stable.

### 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 1.4% in 2016Q3.
  - The December unemployment rate of 4.7% is near or somewhat below 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 real potential GDP.
**Labor Market Indicators**

- **Labor market continues to improve**
  - The unemployment rate edged up to 4.7% in December.
    - 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, fell from 9.3% to 9.2%.
  - The labor force participation rate rose from 62.6% in November to 62.7% in December and the employment-to-population ratio remained at 59.7%.
  - Overall, these indicators have shown little change in the last twelve months.

**PCE Deflator**

- **A pause in inflation’s recent progress toward 2%**
  - The total PCE deflator and the core PCE deflator (which excludes food and energy prices) were both unchanged in November.
    - Energy prices rose 1.3% in November; they were up 0.8% from a year ago, as the 12-month change in these prices was positive for the first time in more than two years.
    - Food prices declined 0.2% in November, and they are down 1.7% from a year ago.
  - The 12-month change in the total PCE deflator was 1.4%, the same as in October. The 12-month change in the core PCE deflator was 1.6%, a slight decline from its reading during the past three months.
ECONOMIC ACTIVITY

**GDP Growth**

% Change – Annual Rate

-10  -8  -6  -4  -2  0  2  4  6  8  10


Source: Bureau of Economic Analysis via Haver Analytics

**Output growth revised up in Q3**

- According to the third estimate, real GDP rose at a 3.5% annual rate in Q3, an upward revision from the second estimate of a 3.2% increase.

- The upward revision to real GDP growth primarily reflected greater nonresidential fixed investment, stronger consumer expenditures, and higher state and local government spending.

- Real gross domestic income (GDI), which provides an alternative measure of economic activity, increased at a 4.8% annual rate, a downward revision of 0.4 percentage point from the previous estimate.
  - The four-quarter change in real GDI was 1.9%, slightly above the 1.7% increase for real GDP.

**Manufacturing and ISM Manufacturing Index**

12 Month % Change

-20 -15 -10 -5 0 5 10 15 20

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

Note: Shading shows NBER recessions.

**Manufacturing sector likely to pick up**

- Manufacturing activity fell 0.1% in November, after rising 0.3% in October.
  - Factory production has remained essentially flat for more than a year.

- The ISM manufacturing index climbed for the 4th straight month in December, reaching a two-year high of 54.7.
  - December’s rise was driven largely by the new orders and production components; new export orders also rose.

- Federal Reserve manufacturing surveys in December also signaled a pickup.
  - Dallas, Kansas City and Philadelphia surveys sent very strong signals, while New York and Richmond surveys indicated more moderate improvement.
**Income and consumption were soft in November**

- Real disposable income was flat in November and the October reading was revised down from a gain of 0.4% to 0.2%.
  - Employee compensation declined 0.1% after showing solid gains in the previous two months.

- Real personal consumption expenditures grew 0.14% in November, slightly below the average of the two previous quarters.
  - Nondurable goods spending and services spending both rose 0.2%, while durable goods spending declined 0.1%.

- The personal saving rate was 5.5% in November.
  - This reading is slightly below the average for the first three quarters of 2016.

**Consumer confidence continues to improve**

- The Reuters/Michigan consumer sentiment index continued its recent rise, reaching 98.2 in December.
  - The index last recorded a reading above 98 in January 2015.
  - The increase was driven by both components of the index, with the Current Conditions component rising to 111.9 and the Expectations component increasing to 89.5.

- The Conference Board’s Consumer Confidence Index also rose significantly in December to 113.7, the highest level of the index since August 2001.
  - The increase was driven primarily by the Expectations component.
**Business Sector**

**Equipment Investment and Capacity Utilization**

- **Real business equipment spending fell 4.5% (annual rate) in 2016Q3, its fourth consecutive quarterly decline; the four-quarter change was -4.9%.**
  - Over the past year, investment in transportation equipment and “other” equipment fell sharply, while investment in information equipment rose slightly and investment in industrial equipment rose moderately.
  - A key reason for weak equipment investment is the low level of the manufacturing capacity utilization rate.
    - This rate was 74.8% in November, well 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**

- 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 increased slightly in November, while that of orders stayed flat.
    - Both series remain well below their peaks in late 2014.
  - New orders have surpassed shipments over the past several months.
    - Based on historical patterns, this difference between new orders and shipments is consistent with higher growth in equipment spending over the near term.
HOUSING SECTOR

Housing starts still showing gradual uptrend

- Total housing starts fell 18.7% in November following a 27.4% increase in October.
  - Multifamily starts have been very volatile lately, falling by 45% (monthly rate) in November after rising by 76% in October.
  - Single family starts also fell in November, declining by 4% following sizeable increases in the previous two months.
- The three-month moving average of single family starts suggests the resumption of a very gradual uptrend, while multifamily starts may have peaked.
  - It is not clear, however, how durable this uptrend in single family starts will be given recent increases in mortgage interest rates.

Housing market is recovering gradually

- Single family existing home sales fell 0.4% in November to 4.95 million units at a seasonally adjusted annual rate (SAAR).
  - Despite the decline in November, single family existing home sales are 16.2% higher from a year ago.
- Single family new home sales increased 5.2% (SAAR) in November to 592,000 units.
  - While single family new home sales have generally been on a gradual uptrend since November 2015, they still remain below pre-recession levels.
- Although it is possible that sales are already being affected by recent increases in mortgage interest rates, it is likely too soon to see much of a response.
**Government Sector**

**Real Government Consumption and Gross Investment**

On a year-over-year basis, real government consumption and gross investment was up 0.4% as of 2016Q3, a marked slowing from the recent high of 2.2% as of 2015Q4.

- At the federal level, real consumption and gross investment was up 1.1% over the four quarters ending in 2016Q3, compared to an increase of 1.7% as of 2015Q4.
  - Nondefense spending (about 40% of the total) rose 2.6% as of 2016Q3, while defense spending was unchanged after having declined for most of the preceding five years.
- At the state and local government level, which represents about 60% of total government spending (excluding entitlement spending), real consumption and gross investment in 2016Q3 showed little change from a year ago.

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

Sharp pullback in state & local investment spending

- Real state and local government gross investment fell 3.9% over the four quarters ending in 2016Q3.
  - While investment displayed strong growth from late 2014 through early 2016, sharp declines during Q2 and Q3 have left it 6.2% below its 2016Q1 peak.
  - Recent data suggest some improvement for Q4, with state and local government construction spending increasing in both October and November.
- Real consumption expenditures grew 0.9% over the four quarters ending in 2016Q3.
  - Compared to the first three quarters of 2015, quarterly growth in state and local government consumption expenditures has slowed.
**International Developments**

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

- Real exports of goods fell 0.9% (monthly rate) in November, after declining 3.0% in October.
  - The 12-month change was 1.4%, down slightly from 1.5% in October.

- Real imports of nonoil goods increased 0.9% (monthly rate) in November, following a 1.5% increase in October.
  - Real nonoil imports are up 2.0% over the year, the strongest pace since February 2016.

- Net exports contributed 0.9 percentage point to real GDP growth in 2016Q3.

**Dollar Exchange Rate and Nonoil Import Prices**

- Foreign firms tend to lower their prices in the U.S. market when the dollar strengthens.
  - They can both lower dollar prices and widen profit margins as their production costs drop in dollar terms.

- The recent rise in the dollar has not affected nonoil import prices.
  - Import prices in November were unchanged over the year, while the dollar index was up 4%.

- Most of the decline in the index when the dollar strengthened in 2014 and 2015 was due to commodity prices.
  - Commodity prices have so far remained stable.
**Payroll Employment and Aggregate Hours**

- **Payroll employment growth remained solid**
  - December nonfarm payroll employment rose by 156,000, which was below revised gains of 204,000 in November.
    - Over the last three months, average monthly gains were 165,000, which is somewhat below the average gains of 185,000 during the first three quarters of 2016.
  - Aggregate hours increased 0.2% in December, reversing a similar-sized decline in November.
    - The 12-month change fell to 1.1% and remains below its recent peak of 2.7% in July 2015.
    - Average weekly hours were little changed at 34.3.
  - Payroll gains were broad-based, with the one-month diffusion index at 57.1% which is slightly above its average of 56.9% for the first three quarters of 2016.

**Vacancies/Unemployment and Quits Rate**

- **Little change in labor market tightness**
  - The number of job openings per unemployed worker (vacancy-to-unemployment ratio), which is the standard measure of labor market tightness, was 0.75 in November.
    - This ratio has leveled off somewhat in 2016.
  - The quits rate, another indicator of labor market tightness and a worker’s ability and willingness to change jobs, was 2.1% in November.
    - This ratio has not changed since June 2016.
**LABOR MARKET**

**Beveridge Curve**

- The Beveridge curve is the relationship between the job openings rate from the JOLTS data and the unemployment rate.
  - The Beveridge curve remains slightly above the curve estimated from December 2000 to November 2007.
  - The Beveridge curve estimated over the earlier period associates the currently low levels of unemployment with a lower vacancy rate.

- There has been relatively little movement in vacancies since unemployment first reached 5.1% in August 2015.
  - Over this period, the vacancy rate has averaged 3.7% and mostly remained within 0.1 percentage point of this average.

*Source: Bureau of Labor Statistics*

**Growth of Average Hourly Earnings and ECI**

- Average hourly earnings rose 0.4% in December and rose 2.9% over the past 12 months.
  - The 12-month change in average hourly earnings for December 2016 was the highest it has been in this expansion, indicating some firming in wage growth.

- Average weekly earnings also increased 0.4% from $888.37 to $891.80.

- The employment cost index rose 2.25% for the 12 months ending September 2016.

*Source: Bureau of Labor Statistics via Haver Analytics*

*Note: Shading shows NBER recessions.*
**INFLATION**

**CPI Inflation: Core Goods and Core Services**

- **Core CPI inflation keeps moving sideways**
  - Core CPI inflation has been moving sideways since the beginning of the year.
  - The 12-month change in the core CPI index was 2.1% in November, which is roughly the same change observed since the start of 2016.
  - The components of core CPI inflation continue to show divergent behavior, with core CPI services inflation remaining strong and core CPI goods prices continuing to decline.
    - The 12-month change in core services prices was 3.0% in November.
    - The 12-month change in core goods prices was -0.7% in November, which followed a 0.5% decline in October.

**Measures of Core CPI Inflation**

- **Core CPI inflation measures generally stable**
  - 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 displaying “small” and “large” price changes.
  - Alternative measures of core CPI inflation, such as the weighted median and trimmed mean, have shown more upward momentum than the ex-food and energy measure through 2016.
    - The trimmed mean CPI and weighted median CPI grew 2% and 2.5%, respectively, in November from a year ago.
US Equity Market Returns and Volatility

US equity markets remain near all-time highs
- U.S. equity markets continued to rally since early December and have reached new all-time highs.
  - As of January 9th, the S&P 500 index is up 3.1% since the start of December.

- Option-implied stock market volatility, as measured by the VIX index, decreased slightly to start the new year.
  - The VIX index has declined from 13.3 to 11.5 between November 30th and January 9th, remaining at the lower end of its historical distribution.
  - By comparison, longer dated option-implied stock market volatility, as measured by a one-year variance swap rate, is higher and reached 18.7 as of January 9th.

Expected Federal Funds Rate

Implied path for the Federal Funds rate steepens
- The expected path for the Federal Funds rate (FFR) implied by rates on overnight index swaps (OIS) increased and steepened over the past month.
  - The largest increases in implied rates were observed in medium term tenors following the December FOMC meeting.

- The current market-implied path, while higher, remains well below the median longer run path from the FOMC’s Summary of Economic Projections (SEP) and the NY Fed Primary Dealer Survey.
US bank stocks continue recent gains

- U.S. bank equities, as measured by the KBW index, were up 5.1% in December compared to a 1.8% increase for the S&P 500 index.
  - For U.S. bank stocks, these moves extended earlier gains from November that followed third quarter earnings which beat expectations.

- European bank stocks, as measured by the EuroStoxx Bank Index, gained 12.1% in December but remain well below levels seen at the onset of the Great Recession.

Oil prices stay near recent highs

- Oil prices, as measured by the front month contract for WTI Crude Oil, were at $52 per barrel as of January 9th, remaining near the high of $54 per barrel in 2016.
  - Option-implied oil volatility, as measured by the OVX index, has declined from its level in the mid 50s at the end of November to 33.7 on January 9th, moving closer to its historical average.
**FINANCIAL MARKETS**

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**10-Year Treasury and Term Premium**

- **Longer-term Treasury yields increase slightly**
  - U.S. long-term Treasury yields remain at moderate levels despite a large increase in November.
    - The 10-year yield on January 9th was 2.5 percent and has risen 6 basis points since the end of November.
  - Estimates of the Adrian-Crump-Moench term structure model attribute the recent yield increase to a higher term premium and a higher expected path for the short-term rate.
    - In December, the term premium increased 3.2 basis points and the expected path of the short-rate increased 2.8 basis points.
    - This rise contrasts with the increase in November that was primarily driven by the term premium.

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**5-10 Year Forward Decomposition**

- **Inflation expectations remain anchored**
  - Market-implied TIPS-based measures of long-term inflation expectations ("breakevens") have declined modestly since late December.
    - The five-to-ten year breakeven inflation rate stands at around 1.87 percent, which is about 0.2 percent point below the recent high in December.
  - According to the Abrahams-Adrian-Crump-Moench model, variation in the breakeven inflation rate was largely driven by changes in the inflation risk premium, while expected inflation has remained stable.
    - The estimated five-to-ten year inflation risk premium has also declined by about 0.2 percent point since its high in December.