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 December 9, 2015.
- Real consumption expenditures rose sluggishly in September and October.
  - The general trend for consumer spending, however, remains fairly solid based on fundamentals such as healthy income growth, improving labor market conditions and fairly upbeat sentiment.

- Indicators from the manufacturing sector and for business equipment spending showed continued softness.

- While housing data were mixed in October, the general tone continues to suggest a very gradual improvement in conditions.

- Payroll growth was solid in November. The unemployment rate and employment-population ratio were flat, and labor force participation rose slightly.
  - There were tentative signs of firmer wage growth.

- Inflation remained well below the FOMC’s longer-term objective.
  - While there are underlying measures that have risen modestly in the past few months, some survey measures of household inflation expectations have moved down recently.

- There are renewed downward price pressures on oil and other commodities from tepid demand and oversupply.

**GDP**

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Potential GDP Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000 - 2005</td>
<td>3.1%</td>
</tr>
<tr>
<td>2005 - 2010</td>
<td>2.1%</td>
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<tr>
<td>2010 - 2015</td>
<td>1.4%</td>
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<tr>
<td>2015 - 2020</td>
<td>2.1%</td>
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</table>

- 2009Q2 to 2015Q3: 2.2% Growth Rate

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

**Output remains below its potential level**

- The second estimate of 2.1% real GDP growth for 2015Q3 was consistent with the pattern of subdued growth in this expansion.
  - Similarly, real GDP and real GDI (gross domestic income) both advanced at a 2.2% rate from 2014Q3.

- The gap between real GDP and the Congressional Budget Office’s (CBO) measure of real potential GDP was about 3% in 2015Q3.
  - The current unemployment rate is near many estimates of its natural rate. Compared to these alternative unemployment gap estimates, the CBO output gap is indicating more resource slack.
**Labor market continues to improve**

- The unemployment rate was unchanged at 5.0% in November.

- The labor force participation rate rose slightly from 62.4% in October to 62.5% in November, which is lower than the range around 62.8% that prevailed from October 2013 to May 2015.

- The employment-population ratio was unchanged at 59.3%.
  - For prime-age workers (25-54 years old), the employment-population ratio increased from 77.2% to 77.4%.

**Inflation remains stable at low levels**

- The total PCE deflator rose 0.1% in October, after declining in the previous two months. The core PCE deflator (which excludes food and energy prices) was unchanged.
  - Energy prices rose 0.2% in October, following large declines in September (5.0%) and August (2.3%).

- On a 12-month change basis, the total PCE deflator increased by 0.2%. The core PCE deflator rose 1.3% from a year earlier, the same pace it has maintained for nine of the past ten months.
  - Both measures remained significantly below the FOMC’s longer-run objective of 2%, held down in part by the effects of declines in energy prices and in prices of non-energy imports.
**ECONOMIC ACTIVITY**

**GDP Growth**

- **Output growth revised up in Q3**
  - According to the second estimate, real GDP rose at a 2.1% annual rate in 2015Q3.
    - The initial estimate reported a 1.5% increase.
  - The upward revision primarily reflected stronger inventory investment, that was partially offset by weaker consumer spending, lower nonresidential fixed investment and a larger drag from net exports.
  - Real gross domestic income, which provides an alternative measure of economic activity, increased at a 3.1% annual rate.

**Manufacturing and ISM Manufacturing Index**

- **Manufacturing activity remains weak**
  - Total industrial production declined by 0.2% in October.
    - The pace of expansion in industrial production has been slowing significantly in the second half of 2015.
  - Manufacturing production rose 0.4% in October.
    - While the increase was broad-based, it mainly offset declines during the previous two months.
    - Excluding motor vehicles, manufacturing output is only 0.7% above what it was in December 2014.
  - The ISM survey index fell to 48.6 in November, indicating a contraction in the manufacturing sector.
    - The current reading, mainly reflecting weakness in the new orders and production indicators, is below 50 for the first time since November 2012.

Source: Bureau of Economic Analysis, via Haver Analytics

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

Note: Shading shows NBER recessions.
**Disposible Income, Consumption, and Wealth**

- **Household Net Worth (Right Axis)**
- **Real Disposable Income (Left Axis)**
- **Real Personal Consumption (Left Axis)**

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

Note: Shading shows NBER recessions.

**Consumer spending lull continued in October**

- Real consumption expenditures grew 0.1% in October, following a similar modest increase in September.
  - Weakness was most notable in services consumption, which was flat, after a 0.2% increase in September.
  - Goods consumption increased 0.2%, reflecting a moderate increase in the durables and nondurables categories.

- Real disposable income rose 0.4% in October, above the September growth rate of 0.3%.
  - Following a slowdown in September, employee compensation grew a solid 0.5% in October.

- With income growing faster than consumption, the personal saving rate rose to 5.6%, the highest level in three years.

**Total Light Vehicle Retail Sales**

- **Millions**

Source: Autodata, via Haver Analytics

Note: Shading shows NBER recessions.

**Light motor vehicle sales stable at high level**

- Sales of light motor vehicles (automobiles and light trucks) in November was 18.2 million units (seasonally-adjusted annual rate), unchanged from October.
  - The pace of these sales has improved steadily since the end of 2009, and is now 9.1% higher than the average pace during the 2002-2007 period.

- Automobile sales were 7.8 million units in November.
  - While automobile sales recovered rapidly from 2009 to 2012, they have fluctuated in a narrow range since then.
  - They are now 1.4% higher than the average pace during the 2002-2007 period.

- Light truck sales were 0.4 million units in November and continue to grow at double digit rates on an annual basis.
**Equipment Investment and Capacity Utilization**

- **Equipment spending rose solidly in Q3**
  - Real business investment in equipment rose 9.5% (annual rate) in 2015Q3, following modest growth in Q1 and Q2.
    - Spending rose strongly in Q3 for information and transportation equipment, but fell for industrial and other 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 76.4% in October, up from 76.2% in September.
    - The utilization rate has changed little over the past year and remains below pre-recession levels.

**Nondefense Capital Goods Excluding Aircraft**

- **Orders and shipments remain fairly subdued**
  - Monthly data on new orders and shipments of nondefense capital goods are high frequency indicators of business investment in new equipment.
  - Shipments fell in October, but new orders increased. The levels of both remain below their respective mid-2014 levels.
  - New orders were modestly above shipments in October after being below shipments for most of this year.
    - Based on historical patterns, the modest difference between orders and shipments is generally consistent with sluggish growth in equipment spending over the near term.
**HOUSING SECTOR**

**Housing Starts**

- While volatile from month-to-month, total housing starts have continued to trend higher, with a three-month moving average just over 1.1 million units (seasonally-adjusted annual rate) as of October.
  - The strongest recovery has been in multifamily starts. A three-month moving average of starts in this sector reached around 400,000 in October, up from under 100,000 in early 2010.
  - The recovery in the single family sector has been more muted, likely reflecting the continued tightness of mortgage underwriting standards.

- Despite these gains and continued low mortgage interest rates, housing starts per capita remain about 50% below the longer-term average from 1968-2003.

**Credit Score at Mortgage Origination**

- Credit standards have loosened only 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

- Total real government consumption and gross investment is now growing modestly on a year-over-year basis after contracting for a 4 year period.
  - Real consumption and gross investment at the federal level declined 1.2% over the four quarters ending in 2015Q3.
    - Nondefense spending is rising modestly, while defense spending continues to decline.
  - Real consumption and gross investment at the state and local level grew 1.9% over the four quarters ending in 2015Q3, the fastest since 2009Q2.
    - The state and local sector represents over 60% of total government consumption and gross investment.

Real State and Local Consumption and Gross Investment

- State and local government investment spending grew at 6.8% over the four quarters ending in 2015Q3.
  - October state and local government construction put in place was up a strong 5.7% from a year ago.
  - While construction spending declined steeply and recovered slowly between 2009 and 2014, it has now reached 94% of its (nominal) 2009Q2 peak.
- Consumption spending, primarily employment, remained relatively stable and grew 0.8% over the four quarters ending in 2015Q3.
  - November state (local) employment was up 0.65% (0.31%) from a year ago, continuing its slow and steady growth since late 2013.
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.

Continued slow growth of exports and imports

- Real export growth in Q3 was only +0.9 percent at a seasonally-adjusted annual rate (SAAR).
  - October data showed a decline of 2.4% in real goods exports.
  - The strong dollar and slow foreign GDP growth continue to keep exports below their post-1990 trend growth rate of 5%.

- Real US imports grew at a sluggish pace for the second consecutive quarter, rising only 2.1% in 2015Q3 (SAAR).
  - The weakness continued in October, with real imports of goods unchanged from September.

- The growth contribution of net exports was -0.2 percentage point in Q3.

Dollar Exchange Rate and Nonoil Import Prices

- 12 Month % Change
- Nonoil Import Prices (Right Axis)
- Dollar (Left Axis)
- Source: Federal Reserve Board, Bureau of Labor Statistics, via Haver Analytics
- Note: Dollar is Board's trade-weighted measure.

Import prices continue to fall

- Import prices (excluding oil) were down 3% over the year in October.
  - Import prices tend to fall when the dollar appreciates, and the dollar was up 10% over the same period.

- Capital goods were down 2%, while prices for autos and consumer goods were down 1%.
  - Prices for these goods are relatively insensitive to the dollar.

- Volatility in import prices comes from industrial supplies, which are commodity-type goods.
  - These prices were down 10%.
LABOR MARKET

Growth of Employment and Aggregate Hours

- Nonfarm payroll employment increased by 211,000 in November.
  - Payroll employment increased on average by 218,000 per month in the last three months.
- With the decline in average weekly hours from 34.6 to 34.5 hours, aggregate hours worked declined by 0.1% in November even though payroll employment rose.
  - The 12-month change in aggregate hours was 1.9%, down from 2.4% in October.
- The one month diffusion index (reflecting the balance between industries increasing and decreasing employment) was 60.5 in November.
  - This index trended down from 62.0 in February to 54.2 in September, but has since risen to 60.5.

Solid employment growth continues

Quits picking up as labor market improves

- The quits rate, which is an indicator of workers’ ability and willingness to change jobs, was at 1.9% in October for the 7th consecutive month.
- The quits rate has remained in a narrow 1.7-2.0% range since mid-2013.
  - During recoveries, quits typically increase and layoffs and discharges decrease. Consequently, a higher proportion of separations come from quits.
- The share of quits among separations has been fluctuating within a narrow 55%-57% range since mid-2014 and ticked up from 55.8% in September to 57.1% in October.
**LABOR MARKET**

### The Beveridge Curve

![The Beveridge Curve](image)

- **Beveridge curve remains shifted out**
  - The Beveridge curve shows the relationship between job openings from the JOLTS data and the unemployment rate from the Current Population Survey (CPS).
  - During the recession, there was a dramatic drop in the job openings rate and an increase in the unemployment rate.
  - Since 2010, the unemployment rate has declined by almost 5 percentage points and the job openings rate has improved substantially.
  - Despite these improvements, the current data points still lie to the right of the pre-recession Beveridge curve.

### Average Hourly Earnings Growth: All Employees

![Average Hourly Earnings Growth](image)

- **Pickup in labor compensation growth**
  - Average hourly earnings in November increased by 0.2% over the month and by 2.3% over the past 12 months.
  - The 12-month change in average hourly earnings was above its value over the past six months, suggesting that labor market improvement may be starting to exert a more substantial influence on wage growth.
  - With the decline in average weekly hours, average weekly earnings in November fell by 0.1% from $872.27 to $871.13.
**CPI Inflation: Core Goods and Core Services**

![Graph showing CPI Inflation: Core Goods and Core Services](image)

**Source:** Bureau of Labor Statistics, via Haver Analytics

**Note:** Shading shows NBER recessions.

**Goods and services prices continue divergent behavior**

- The core CPI for October rose, pushed up by core services inflation which has been trending higher since April.
  - The core CPI rose 0.2% in October, the same as in September. The 12-month change in the core CPI remained at 1.9%.
  - The 12-month change in core services prices was 2.8%, up from 2.7% in September.
- Core goods prices fell in October, as they have for all but one of the last six months.
  - The 12-month change in core goods prices was -0.7%, down from -0.5% in September.

**Mean Probabilities for Core PCE Inflation in 2016**

![Graph showing Mean Probabilities for Core PCE Inflation in 2016](image)

**Source:** US Survey of Professional Forecasters

**Slightly lower forecasts of core PCE inflation in 2016**

- The US Survey of Professional Forecasters provides density (histogram) forecasts that show the probability that inflation will fall into each of 10 ranges.
- Compared to last quarter, survey respondents assign a slightly higher probability that core PCE inflation from 2015Q4 to 2016Q4 will be below 2%.
  - The Q4 survey was fielded from late October through mid-November, with results released on November 13.
- Forecasters assign a 40% probability that core PCE inflation will be between 1.5 and 1.9 percent, and see little likelihood that it will rise above 2.5% or fall below 1%.
US Equity Market Returns and Volatility

- Broad US equity market indices were largely flat and displayed low volatility in November.
  - The S&P 500 index returned 0.05% in November.
  - S&P 500 realized volatility for November was 11.8% (in annualized standard deviations), well below historical levels.
  - The VIX option-implied volatility index averaged 16.2 in November, below its historical median of 18.
- In early December, however, US equity market indices declined slightly and volatility rose modestly.
  - Recent declines in US equity values were led by losses in the energy and commodities sectors.

International Equity Indices

- After a strong gain of 4.9% in November, German equity market valuations declined 6.2% in early December.
  - Broader losses in Euro-area equity values are partly attributed to the announcement of ECB stimulus measures, which were perceived to have fallen short of market expectations.
- Chinese and Japanese equity markets made overall gains in November and early December.
  - The Chinese Shanghai A shares index increased 2.6% since October 30 and the Japanese Nikkei index increased 2.1% over the same period.
  - Modest losses and an uptick in volatility in these markets in early December have been linked with losses and volatility in oil and commodities.
FINANCIAL MARKETS

**Expected Federal Funds Rate**

- The expected path for the Federal Funds rate implied by rates on overnight indexed swaps (OIS) is shallower than the implied path from the first half of November.

- The latest market-implied forecast for December is still below the median forecast suggested by the FOMC’s Summary of Economic Projections (SEP) and the NY Fed Primary Dealer Survey.

**10-Year Treasury and Term Premium**

- Consistent with the shallower path for OIS rates, the yield on 10-year Treasury securities declined from 2.34% on November 10 to 2.23% on December 7.
  - However, the 10-year yield is still elevated relative to recent lows of around 2.00% in October.

- As implied by the term-structure model of Adrian-Crump-Moench, much of the yield increase since October is attributed to an increase in expected short term interest rates rather than term premia.
5-10 Year Forward Decomposition

Inflation expectations remain well anchored
- Market-implied TIPS-based measures of long-term inflation expectations ("breakevens") fell slightly.
  - The breakeven inflation rate ticked down slightly from 1.84% on November 10 to 1.80% on December 7.
  - While the breakeven inflation rate is still higher than the lows of around 1.63% seen in October, it remains at the low end of the range observed in recent years.
- Variation in the breakeven inflation rate appears largely driven by changes in the inflation risk premium, with implied expected inflation (as measured by the Adrian-Crump-Moench model) remaining stable.
  - The inflation risk premium remains near multi-year lows of around -0.3%.

US Dollar Exchange Rates

US Dollar is mixed relative to major currencies
- The US Dollar depreciated from recent highs relative to the Euro, which was likely due to smaller than expected policy divergence.
- The US Dollar appreciated modestly against the RMB and stayed roughly flat against the Yen in November.
SPECIAL TOPIC: AUTO LOAN ORIGINATIONS

Auto loans continue upward trend
- Auto loan origins reached a 10-year high in 2015Q3, with high levels across all types of borrowers, including prime.
- Subprime auto origins have been steadily rising since 2009:
  - Increase from $50 billion in 2009 to $100 billion in 2014.
- Correspondingly auto loan balances have grown at a strong pace since mid-2010, after experiencing a decline during the recession.

Auto finance companies driving subprime loans
- Originations to subprime borrowers by finance companies approached $25 billion in 2015Q3.
- Subprime lending by auto finance companies is approaching its previous high in nominal terms.
SPECIAL TOPIC: AUTO LOAN ORIGINATIONS

90+ delinquency rates by lender type

Higher delinquency rates for auto finance loans

- Delinquency rates for auto finance loans are higher than that of loans made by banks.
  - This is even true for subprime loans.

- There has recently been a modest reversal of the downward trend in delinquency rates seen since 2010 on auto finance company loans; bank loan delinquency rates, however, continue to improve.
  - Higher subprime balances and a larger number of subprime borrowers, who may be more sensitive to developments in the labor market, may pose some risks.
  - However, the volume of subprime mortgages outstanding in 2007 was nearly four times the volume of subprime auto loans outstanding today ($250 billion).

Source: FRBNY Consumer Credit Panel/Equifax  Note: Credit Score is Equifax Riskscore3.0