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 September 2, 2016.
After displaying robust growth in 2016Q2, consumer spending increased at a solid rate in July.
- The pace of August auto sales, however, slowed sharply.

After falling for three consecutive quarters, the July data suggested some modest improvement in the outlook for business equipment spending.

Manufacturing production rose in July; but the August manufacturing ISM was soft. The July housing data indicated a very gradual uptrend for the sector.
- Weakness in new housing construction continues to raise some question about the extent of any rebound in residential investment after its decline in 2016Q2.

Payroll growth in August was below that of June and July. The unemployment rate, employment-population ratio, and labor force participation rate were unchanged.
- August's payroll increase, however, matched the average gain of the first five months of the year.

Both headline inflation and core inflation continued to run at levels below the FOMC's longer-term objective.

Financial market conditions changed little. Realized and implied volatility were subdued over the past month. Long-term sovereign yields remained low in the major economies. Credit spreads decreased modestly.

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 August unemployment rate of 4.9% is near many estimates of its natural rate, including the CBO's estimate of 4.74%.
  - Compared to these alternative unemployment gap estimates, the CBO output gap indicates more resource slack.
  - The CBO revised its estimates of potential GDP and of the natural rate of unemployment to be modestly lower.

- Historically, inflation has tended to be restrained when the economy is operating below potential.
### Labor Market Indicators

- **Labor market improvement slows down**
  - The unemployment rate remained at 4.9% in August.
    - An alternative measure of unemployment, U6, which includes marginally attached workers and workers who hold part-time jobs but prefer full-time jobs, was also unchanged at 9.7%.
  - The labor force participation rate and the employment-population ratio were both steady at 62.8% and 59.7%, respectively.

### PCE Deflator

- **Inflation remains below FOMC’s objective**
  - The total PCE deflator was unchanged in July, while the core PCE deflator (which excludes food and energy prices) increased 0.1%.
    - Energy prices fell 1.8% in July and they are down 11.7% from a year ago.
    - Food prices fell 0.1% in July and they are down 1.2% from a year ago.
  - On a 12-month change basis, the increases in the total PCE deflator and core PCE deflator were 0.8% and 1.6%, respectively.
    - Core inflation has been stable since the beginning of the year, while total inflation has been slowing since April.
**GDP Growth**

- Output growth in Q2 revised down slightly
  - According to the second estimate, real GDP rose at a 1.1% annual rate, a small downward revision from the advance estimate of a 1.2% increase.
  - Revisions to the major expenditure categories of real GDP were generally fairly small.
  - Real gross domestic income (GDI), which provides an alternative measure of economic activity, increased at a 0.2% annual rate in Q2.
    - The four-quarter change in real GDI was 1.2%, essentially the same as that for real GDP.

**Manufacturing and ISM Manufacturing Index**

- Some unease about manufacturing sector outlook
  - Similar to June, the manufacturing sector expanded in July.
    - Manufacturing output increased 0.5% in July, after growing 0.3% in June.
    - Relative to a year ago, production is up 0.2%, mostly due to auto production and high tech sectors.
  - Both the ISM manufacturing survey and regional Fed surveys, however, raised concerns about recent stabilization in the sector.
    - The ISM headline index decreased from 52.6 in July to 49.4 in August, the first time the index has fallen below 50 (indicating contraction in the manufacturing sector) since February 2016.
    - In general, regional manufacturing surveys from Federal Reserve Banks also suggest activity declined in August.

Source: Bureau of Economic Analysis via Haver Analytics

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

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

**Disposable Income and Consumption**
- Real personal consumption expenditures rose 0.3% in July, boosted by an increase of 0.6% in goods consumption.
  - On a 12-month change basis, consumer spending grew 3.0% in July compared to a 2.9% rise in June.
- The pattern of spending varied across components.
  - Durable goods consumption grew at the very robust pace of 1.9% in July, while nondurable goods consumption fell 0.1%.
  - Services consumption slowed to 0.2% growth in July, after a gain of 0.4% in June.
- The personal saving rate increased to 5.7% in July from 5.5% in June, but remains slightly below the average of the first half of the year.

**Total Light Vehicle Retail Sales**
- Sales of light motor vehicles (automobiles and light trucks) fell 5.0% to 17.0 million units at a seasonally-adjusted annual rate (SAAR) in August, after a strong rise in July.
  - The pace of these sales had picked up from the end of 2009 to October 2015, but since then has been generally lower. In August, it was 6.4% below the October 2015 peak.
- Automobile sales were 6.8 million units in August, 4.5% below the July pace, and 14.8% below the October 2015 pace.
- Light truck sales were 10.2 million units in August.
Investment in new equipment remains weak

- Real business equipment spending fell 3.7% (annual rate) in 2016Q2, its third consecutive decline. The four-quarter change was -1.9%.
  - 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 75.4% in July 2016, moderately higher than the utilization rate over the second quarter.
  - Still, the utilization rate has been fairly flat since the beginning of 2015.

Capital goods orders rise modestly

- 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 orders of such goods increased modestly in July, while that of shipments fell.
  - Both series remain well below their peaks in late 2014.

- New orders were above shipments in July, 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 equipment spending over the near term.
**HOUSING SECTOR**

**Total housing starts remain sluggish**
- Total housing starts rose in July and August, bringing the 3-month moving average up to 1.175 million units (SAAR), the highest since November 2007.
  - The recent increase in total housing starts has been led by the multifamily sector, where the July level of starts was 25% above that of January of this year.
  - In contrast, the July level of single family starts was actually slightly below that of January, as this sector has lost upward momentum despite historically low mortgage interest rates.
- Looked at on a per capita basis, total housing starts remain 47% below the longer-term average from 1968 to 2003.

**Mortgage underwriting standards slightly looser**
- 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 below this level has fallen from 25% to 10% since the recession.
**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 0.8% in 2016Q2 from a recent peak of 3.5% in 2015Q3.

**Gross government debt to stabilize at high level**

- The CBO has released updated projections of its “current law” baseline for the federal budget.

- The projections are broadly similar to those released last January, with gross federal debt stabilizing at just over 100% of GDP over the next decade.
  - Debt held by the public, however, is projected to rise to just over 85% of GDP by the middle of next decade as the various government trust funds are run down.
  - The last time debt held by the public exceeded 85% of GDP was in 1947.
  - Relative to last January, the August projections of gross debt and debt held by the public are slightly lower mainly due to the assumption that interest rates will be lower over the projection horizon than previously assumed.
**INTERNATIONAL DEVELOPMENTS**

### Real Exports and Imports of Goods and Services

- **Exports began to strengthen**
  - Real exports rose 1.2% in 2016Q2 (SAAR), the first increase in the series since 2015Q2.
    - Real goods exports jumped 3.0% from June to July.
    - The 12-month change entered positive territory for the first time in 5 months, although the reading of 0.3% is weak.
  - Real imports grew slightly in 2016Q2, rising 0.2% (SAAR).
    - Real nonoil imports remained weak in July, falling 1.4% from June.
    - Over the year they were up only 0.9%.
  - Overall, net exports contributed 0.1 percentage point to real GDP growth in 2016Q2.

### Oil Prices

- **Recovery in oil prices has stalled**
  - Prices rose from a very low level in the first half of the year, but have been stable in recent months.
    - Higher oil output and large inventories are restraining oil prices.
  - OPEC output is set to increase again this year, more than offsetting a decline in U.S. production.
    - U.S. production is expected to stabilize next year.
  - Global demand growth largely stems from the United States and Asia.
    - Demand growth is slowing in China and increasing in India.

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Source: Bureau of Economic Analysis via Haver Analytics
Note: Shading shows NBER recessions.

Source: Energy Information Administration
**LABOR MARKET**

### Growth of Payroll Employment and Aggregate Hours

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

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

**Note:** Shading shows NBER recessions.

#### Some slowdown in payroll employment growth
- Nonfarm payroll employment increased by 151,000 in August, a slower pace than the previous two months.
  - Viewed over the last three months, however, payroll gains are still above levels prevailing earlier this year.

- Aggregate hours worked declined 0.2% in August.
  - The 12-month change in aggregate hours was only 1.1%, with this change having declined considerably since its reading of 2.7% in July 2015.

- The one-month diffusion index was 58.0 in August, very close to its average in the twelve months prior to August (57.6).

### Unemployment Inflow and Outflow Rates

![Graph showing unemployment inflow and outflow rates](image)

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

**Note:** Shading shows NBER recessions.

#### Little change in the unemployment rate in 2016
- The unemployment rate has remained within a range of 4.7-5% in 2016.
  - It has stayed at 4.9% for the last three months.

- The three-month average of the inflow rate into unemployment was 2.1%, the lowest in the post-war period, while the three-month average of the outflow rate from unemployment was 39.8% in August.

- While the unemployment outflow rate has improved substantially relative to its post-recession trough of 23.1%, there has not been any improvement recently, causing the unemployment rate to stabilize around 4.9%.
LABOR MARKET

Beveridge Curve

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 around 5 percentage points and the job-openings rate has improved substantially.
- While recent data points still lie to the right of the pre-recession Beveridge curve, they are closer to it.

Compensation growth remains moderate

- Average hourly earnings rose 0.1% in August and have increased by 2.4% over the past 12 months.
  - The 12-month change in average hourly earnings has been consistently above the narrow range near 2% that prevailed from January 2010 through August 2015.
- Average weekly earnings declined 0.2% in August, from $884.08 to $882.54.
- The employment cost index rose 0.6% in 2016Q2.
  - The 12-month change in the ECI (which is not seasonally-adjusted) for the period ending June 2016 was 2.3%, above the 2.0% increase for the same period ending in June 2015.
**INFLATION**

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

- Core CPI inflation was softer in July compared to recent months, with core services prices rising at a more moderate pace than earlier in the year and core goods prices still falling.
  - The 12-month change in the index moved down to 2.2% in July from 2.3% in June.

- The 12-month change in core services prices was 3.1% in July, down from 3.2% in June.

- Core goods prices fell again in July, with the 12-month change showing a 0.6% decline.

**Michigan Inflation Expectations 5 to 10 Years**

- The median of long-term inflation expectations (5 to 10 years ahead) declined 0.1 percentage point to 2.5% in August.
  - This matches recent historical lows observed in September 2002, October 2015, and some months in the first half of this year.

- Long-term inflation expectations have remained within a narrow range (between 2.5% and 2.7%) over the last 12 months.

- The entire distribution of long-term inflation expectations remains near its historical lows.
**US Equity Market Returns and Volatility**

- Broad US equity markets traded in very tight ranges over the course of August, staying near all-time highs.
  - Valuations continued to be supported by the low level of interest rates and economic news broadly in line with market expectations.
  - As of September 2, the index is up 8.3% for the year.

- Option-implied stock market volatility as measured by the VIX index remains at low levels.
  - The VIX index averaged about 12.5 over the course of August.
  - This level is well below the spike of 25 following the UK referendum, and also below the average level over the first half of the year, which was around 18 (close to the historical median value).

**International Equity Indices**

- Major global equity indices recorded gains in August, continuing to exceed their levels prior to the UK referendum in June.
  - The Shanghai A shares index increased by more than 4% over the past month, but remains down about 7% since the beginning of the year.
  - European indices, such as the German DAX and the UK FTSE, recorded more modest gains but are up for the year.
**Corporate Credit Spreads**

- Following a gradual increase over 2015 and a spike in February 2016, corporate bond spreads relative to Treasury yields have been on a downward trend over the past six months, reflecting in part the rebound in oil prices.
  - The BofA Merrill Lynch Corporate Master option-adjusted spread index for investment grade bonds has decreased from 220 basis points in mid-February to 140 basis points, a level last seen in June 2015.
  - Similarly, the option-adjusted spread on high-yield bonds has decreased by almost 400 basis points since its February peak.

**Expected Federal Funds Rate**

- The expected path for the Federal Funds rate (FFR) implied by rates on overnight indexed swaps (OIS) steepened modestly over the course of August.
  - The FFR path moved upward following the release of the July labor market report, as well as communication by Federal Reserve officials.

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

- Over the course of August, the U.S. 10-year Treasury yield remained in a narrow range just above its all-time low reached in July.
  - At 1.62 percent, the 10-year yield is 10 basis points lower than its level just prior to the UK referendum in June, and 75 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 remain in substantially negative territory.

**5-10 Year Forward Decomposition**

- Market-implied TIPS-based measures of long-term inflation expectations (“breakevens”) remained flat near multi-year lows over the course of August.
  - The five-to-ten year breakeven inflation rate stands around 1.4%, which is 0.3 percentage point below its level at the beginning of the year.

- Based on 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 is near multi-year lows of around -0.7%.
SPECIAL TOPIC: RECENT DEVELOPMENTS IN CREDIT CARD BORROWING

Credit card usage declines

- The share of individuals with at least one card peaked in 2008Q2 at 68 percent of borrowers.
  - Participation now stands at 61%, an uptick from a low of 59% in 2013.

- There was a ten percentage point decline in subprime (score<620; about 1/5 of borrowers) participation during the Great Recession, with little change in the participation of the most creditworthy (score≥780) borrowers.
  - Banks closed accounts, as the Card Act of 2009 reduced lending to younger borrowers and changed certain practices, and consumers also deleveraged.

Higher credit scores, lower balances

- Borrowers with the highest credit scores hold smaller debt balances.
  - Nearly 40% of borrowers with scores higher than 780 have balances under $500.
  - By contrast, nearly 80% of subprime borrowers have balances over $500.
**SPECIAL TOPIC: RECENT DEVELOPMENTS IN CREDIT CARD BORROWING**

### Credit Card Extensions and Closures

<table>
<thead>
<tr>
<th>Total Cards Issued, Millions of Cards</th>
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<tbody>
<tr>
<td>2003</td>
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<tr>
<td>150</td>
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Source: New York Fed Consumer Credit Panel / Equifax

### Issuance expands, especially to subprime borrowers

- The bars above the horizontal axis show that issuance has been expanding since 2009.
  - Net issuance has been higher to subprime borrowers.
- The bars below the horizontal axis show that account closures have been slowing.
  - Nearly half of all card closures in 2010 and 2011 belonged to subprime borrowers.

### Credit Limit Extensions and Reductions

<table>
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<th>Aggregate Limit Changes, Bil. $</th>
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<tr>
<td>2003</td>
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<tr>
<td>800</td>
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</table>

Source: New York Fed Consumer Credit Panel / Equifax

### Limits are rising for most credit worthy

- The bars above the horizontal axis show that the overall extension of new credit, measured by increases in aggregate credit limits, has been slowly increasing since 2010.
  - Newly extended credit continues to go largely (72%) to borrowers with credit scores above 720.
  - Subprime borrowers have seen their share increase modestly over the past two years, commensurate with an increasing number of new cards.