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 July 7, 2017.
OVERVIEW

- While real consumer spending rose at a modest pace in May, data still suggest a notable pickup in consumption growth in Q2 compared to Q1.
  - Auto sales have continued to slow this year from the strong pace of 2016.

- Capital spending indicators suggest rather sluggish growth for business equipment spending in Q2, with signals of only modest near-term momentum.

- Housing activity data indicate that the gradual recovery in this sector is being maintained, while surveys generally signal a solid pickup in manufacturing activity.

- Payroll growth was solid in June. The unemployment rate, the employment-to-population ratio and the labor force participation rate all increased slightly.
  - Growth in labor compensation measures remains subdued.

- Recent monthly readings on PCE inflation remain soft, suggesting a pause in the progress toward the FOMC’s longer-run objective.

- U.S. equity indexes were little changed overall, while the nominal yield on the 10-year Treasury note has moved up since late June. The trade-weighted index for the U.S. dollar and the price of oil have been relatively stable.

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**Output still modestly below its potential level**

- The gap between real GDP and the Congressional Budget Office’s (CBO) measure of real potential GDP was about 1.0% in 2017Q1.
  - The CBO projects that the growth rate of real potential GDP will remain fairly subdued over the next few years.
  - The June unemployment rate of 4.4% is below many estimates of its natural rate, including that of the CBO (4.74%).

- The CBO output gap indicates modest resource slack remains in the U.S. economy.
  - Unemployment gap measures generally indicate no slack remains.
  - However, capacity utilization rates remain well below historical averages, suggesting more substantial resource slack than the other measures.
**Labor Market Indicators**

- **Unemployment Rate** (Left Axis)
- **Labor Force Participation Rate** (Right Axis)
- **Employment to Population Ratio** (Right Axis)

Source: Bureau of Labor Statistics via Haver Analytics
Note: Shading shows NBER recessions.

**Labor market conditions remain solid**

- The unemployment rate rose from 4.3% in May to 4.4% in June.
  - The share of long-term unemployed (27+ weeks) in the pool of unemployed workers increased for the second consecutive month from 24.0% in May to 24.3% in June.
  - Since June 2016, this share has fallen 1.5 percentage points.

- The labor force participation rate rose slightly from 62.7% to 62.8% in June.

- The employment-to-population ratio rose 0.1 percentage point to 60.1%.

**PCE Deflator**

12 Month % Change

- **Total PCE**
- **Core PCE**
- **FOMC Objective**

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

**Recent inflation readings have been soft**

- The total PCE deflator fell 0.1% in May, following a 0.2% rise in April. The core PCE deflator (which excludes food and energy prices) increased 0.1% in May, the same as in April.
  - Energy prices fell 3.0% in May after a 1.0% rise in April, and are now up 5.3% from a year ago.
  - Food prices were unchanged in May and have yet to fall in 2017, a marked change from the price declines that frequently occurred during 2016.

- The 12-month changes in the total PCE deflator and the core PCE deflator were both 1.4%.
  - Since rising above 2% in February, the 12-month change in the total PCE deflator has moved down for three consecutive months.
ECONOMIC ACTIVITY

Output growth in Q1 revised up

- According to the third estimate, real GDP rose at a 1.4% annual rate in Q1, an upward revision from the second estimate of a 1.2% increase.

- The upward revision to GDP growth reflected stronger consumer spending and higher exports that were partly offset by weaker nonresidential structures investment.

- Real gross domestic income (GDI), which provides an alternative measure of economic activity, increased at a 1.0% annual rate in Q1.
  - The four-quarter change in real GDI was 1.3%, below the 2.1% increase for real GDP.

Surveys signal continued expansion in manufacturing

- Manufacturing production decreased 0.4% in May after increasing 1.1% in April.

- The ISM Manufacturing index rose 2.9 percentage points to 57.8 in June, its highest reading since August 2014.
  - The jump was driven by increases in new orders, production, and employment, while supplier deliveries and inventories failed to keep pace with accelerated growth.

- All regional Fed manufacturing surveys in June indicated continued expansion.
  - Headline indexes for the New York, Philadelphia, and Dallas Districts signaled brisk growth, while those for Kansas City and Richmond signaled more modest growth.
**Households**

**Disposable Income, Consumption, and Wealth**

- **Quarter % Change**
- **% of Disposable Income**

- **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 grew modestly in May**

- Real personal consumption expenditures (PCE) increased 0.1% in May, after increasing 0.2% in April.
  - Real spending on goods and real spending on services both increased 0.1%.

- Real disposable income grew a solid 0.6% in May, supported by a sharp increase in dividend income.
  - Employee compensation growth was modest, following a strong increase in April.
  - The personal saving rate increased to 5.5% in May, above the average of 5.1% for the previous two months.

- Households’ net worth as a percentage of disposable income rose again in the first quarter, surpassing its pre-recession peak.

**Total Light Vehicle Retail Sales**

- **Millions**
- **Millions**

Source: Autodata via Haver Analytics

Note: Shading shows NBER recessions.

**Light vehicle sales continue to decline in 2017**

- Sales of light motor vehicles (automobiles and light trucks) in June were 16.5 million units at a seasonally-adjusted annual rate (SAAR), down from 16.7 million units in May.
  - Light vehicle sales averaged 16.7 million units in 2017Q2, a notable step-down from the pace of 18.1 million units in 2016Q4.

- The softening in demand for light motor vehicles over the first half of 2017 principally reflects lower automobile sales.
  - Automobile sales averaged 6.3 million units in 2017 compared to 7.2 million units in 2016Q4, while light truck sales have averaged 10.6 million units in 2017 compared to 10.9 million units in 2016Q4.
  - The slowdown in light motor vehicle sales has been partly attributed to lower used-car prices from a large inventory and a possible tightening in lending standards.
**Business Sector**

**Equipment Investment and Capacity Utilization**

- **Business investment in new equipment remains weak**
  - After rebounding strongly coming out of the Great Recession, growth of real business investment in new equipment has progressively slowed since 2010 and was negative in 2016.
    - Over the four-quarters ending in 2017Q1, growth was an anemic 0.5%.
  - While there are many contributing factors, a key reason why business investment in new equipment remains so weak is that manufacturing capacity utilization remains at a relatively low 75.5%.
    - Historically, we have not observed double-digit growth of business investment in new equipment until the capacity utilization rate surpassed 80%.

**Nondefense Capital Goods Excluding Aircraft**

- **Loss of forward momentum for equipment spending**
  - Monthly data on new orders and shipments of nondefense capital goods excluding aircraft are indicators of business investment.
    - After trending lower through mid-2016, new orders and shipments of nondefense capital goods excluding aircraft have begun to increase again but only at low to mid-single digit (monthly) growth rates.
      - Recent readings have suggested some loss of forward momentum, with three-month growth rates slowing lately.
      - The recent slowing of growth has been broad based across many major categories, including computers and electronic products and machinery.
HOUSING SECTOR

Housing starts on downward trend since February

- Total housing starts fell 5.5% in May, the third consecutive monthly decline.
- The bulk of the decline has been in the volatile multi-family sector, where starts have declined for five consecutive months.
  - Multi-family starts have likely peaked due to a high volume of units currently under construction, a modest rise in the overall rental vacancy rate from 2016Q3-2017Q1, and a recent flattening out in the rate of increase of rents.
- Single-family starts have declined for three consecutive months but appear to remain on a gradual uptrend.
  - Home prices are rising at a brisk pace and mortgage applications to purchase homes continue to edge upward.

Home prices continue to display solid increases

- The CoreLogic single family national home price index rose 6.6% in May from a year ago.
  - While most states experienced increases, home prices declined in Alaska, West Virginia and Wyoming.
- The inventory of single family homes was 1.74 million units in May, equivalent to a 4.2 months’ supply at the current sales pace and marginally higher than the 4.1 months’ supply in April.
  - Since late 2015, the inventory of single family homes for sale has remained below the normal range of 5-7 months.
  - The lean supply of homes for sale along with a healthy job market and mortgage rates that are low on a historical basis have created upward pressures on home prices.
GOVERNMENT SECTOR

Real Government Consumption and Gross Investment

- Over the four quarters ending in 2017Q1, real spending by the federal government was down 0.5% and real state and local government spending was largely unchanged.

- The decline in spending at the federal level was concentrated in real defense outlays.
  - Defense outlays peaked in 2010Q3 and are down 20.6% as of 2017Q1, while nondefense outlays are down just 0.2% over the same period and have increased at a steady 2.5% to 3% rate for the past two and a half years.

- The decline at the state and local government level is due primarily to a steep and broad-based decline in investment in new structures and infrastructure such as roads and water treatment facilities.

Government spending contracting

State & local government spending weak in 2017Q1

- Real state and local government investment spending fell 6.4% in the four quarters ending in 2017Q1.
  - While revised upward from the previous estimate, investment spending in 2017Q1 remains very weak.
  - Apart from the period from 2014Q4-2016Q1, the four-quarter change in state and local investment has been declining since the Great Recession.

- State and local consumption growth has been moderate.
  - Consumption spending, which is about 80% of total state and local government spending, is dominated by wage and salary payments.
  - Consumption spending grew 0.7% in the four quarters ending in 2017Q1.
INTERNATIONAL DEVELOPMENTS

Real Exports and Nonoil Imports of Goods

- In May the nominal trade deficit declined to $46.5 billion from $47.6 billion in April, as export growth accelerated significantly and imports moderated.
  - Export volumes of goods rose 1 percent over the month due to increased exports of consumer goods, autos and industrial supplies.
  - Real nonoil imports fell 0.6 percent, driven by declines in imports of consumer goods and autos.
- The third estimate of 2017Q1 GDP indicates a slightly higher growth contribution from net exports.
  - The net export contribution to 2017Q1 GDP growth was revised up to 0.2 percentage point from 0.1 percentage point due to upwardly revised goods exports.

Trade deficit narrows in May

Dollar Exchange Rate and Nonoil Import Prices

- Nonoil import prices are rising at a modest pace
  - Nonoil import prices are increasing after falling in 2015 and 2016.
    - The volatility in the price index was due to swings in commodity prices.
  - Prices for imported consumer goods have not changed much in the last five years, while auto prices have been stable over the past three years.
    - Capital goods prices have been flat this year after steady declines in recent years.
  - The steep fall and subsequent recovery in the prices of industrial supplies have driven the behavior in the overall nonoil import price index.
    - Lumber and metal have been the most volatile categories.
LABOR MARKET

Payroll Employment and Aggregate Hours

![Chart showing Payroll Employment and Aggregate Hours from 2000 to 2016.]

Payroll employment growth above expectations

- Nonfarm payroll employment rose by 222,000 in June.
  - Median expectations from the Bloomberg survey called for an increase of 178,000.
  - Monthly payroll gains have averaged 180,000 in 2017, similar to the average monthly growth of 187,000 in 2016.

- The net revision to April and May payrolls increased employment gains by 47,000.

- Average weekly hours increased to 34.5 hours.
  - Aggregate hours worked by all private employees rose by 0.5% in June.
  - The 12-month change in aggregate hours was 2.0%.

Change in Employment/Population by Education

![Chart showing change in employment/population by education level.]

Employment gains seen for the less educated

- The rise in the employment-to-population ratio in June reflected increases across most education groups.

- Over the last year, the employment-to-population ratio has risen for the less educated.
  - For those with less than a high school degree and for high school graduates, the employment-to-population ratio rose by 0.4 percentage point and 0.9 percentage point, respectively.

- The employment-to-population ratio for the more highly educated has been on a downward trend, with the ratio for those with a college degree 0.2 percentage point lower in June relative to a year ago.
**LABOR MARKET**

**LFPR by Gender, Ages 25-54**

- Participation rate increases for women
  - The rise in the labor force participation rate (LFPR) in June was due to the rise in the female participation rate.
    - The female labor force participation rate increased from 56.9% to 57.0%, while the male participation rate was unchanged.
  - Over the last year, while the labor force participation rate has risen for women of all age groups, the prime-age (ages 25-54) female labor force participation rate has shown the largest increase.
    - For prime-age women, the participation rate increased by 0.90 percentage point over the last year.
  - The prime-age male participation rate has been essentially flat over the last year.

**Growth of Average Hourly Earnings and ECI**

- Compensation growth remains moderate
  - Average hourly earnings rose by 0.15% in June and 2.5% over the past 12 months.
  - Average weekly earnings increased by 0.44% from $901.62 to $905.63.
    - Over the past 12 months, average weekly earnings have grown 2.8%, which is higher than the 2.5% growth rate of average hourly earnings.
  - The employment cost index rose by 2.4% for the 4 quarters ending in 2017Q1.
**CPI Inflation: Core Goods and Core Services**

- Core Services CPI
- Total Core CPI
- Core Goods CPI

*Source: Bureau of Labor Statistics via Haver Analytics*  
*Note: Shading shows NBER recessions.*

**Core CPI inflation loses momentum in 2017**

- The core CPI, which had hovered slightly above 2% over the course of 2016, has lost some momentum in 2017.

- This slowing in core CPI inflation has been widespread across prices for both core services and core goods.
  - On a 12-month change basis, core services inflation slowed from 3.1% in January to 2.6% in May; core goods inflation has moved down from -0.3% to -0.8% over the same period.

- Compared to April, May saw some firming in core services CPI inflation as well as in most of the major components of core goods CPI inflation, suggesting that the recent slowdown might be temporary.

**Measures of Core CPI Inflation**

- FRB Cleveland Weighted Median CPI
- FRB Cleveland Trimmed Mean CPI
- CPI Excluding Food & Energy

*Source: Bureau of Labor Statistics and Federal Reserve Bank of Cleveland via Haver Analytics*  
*Note: Shading shows NBER recessions.*

**Alternative core inflation measures also move lower**

- 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 ‘large’ price increases and decreases.

- Similar to the ex-food and energy measure, alternative measures of core CPI inflation, such as the weighted median and trimmed-mean, have also shown a slowdown during 2017.
  - The weighted median CPI and trimmed-mean CPI grew 2.3% and 1.9%, respectively, in May from a year ago.
FINANCIAL MARKETS

U.S. Equity Market Index and Volatility

- U.S. equity markets valuations were little changed.
  - Between June 6 and July 7, the S&P 500 index decreased 0.2 percent.
  - The S&P 500 index achieved an all time high on June 19.

- Option-implied stock market volatility, as measured by the CBOE Volatility Index (VIX), remains low.
  - The VIX closed at 11.19 percent on July 7, an increase of 0.74 percentage point from its level on June 6.
  - From June 6 to July 7, the VIX showed little volatility, remaining in a band between 10 percent and 12.5 percent.

U.S. Bank Equities Performance

- As measured by the KBW Nasdaq bank index, bank equities increased 9.0 percent between June 6 and July 7, compared to a decrease of 0.2 percent for the S&P 500 index.
  - The XLF financial sector ETF increased by 7.1 percent over the same period.

- For 2017 year-to-date, U.S. bank equities are higher, but not as much as the broader stock market.
  - For 2017 year-to-date, the KBW index is up 4.8 percent, while the XLF ETF is up 6.6 percent and the S&P 500 has increased 7.4 percent.
Dollar was mixed against global currencies
- The exchange value of the dollar against a basket of global currencies was largely unchanged between June 6 and July 7.
  - On net, the dollar appreciated by about 4.1 percent against the Japanese yen, depreciated by about 1.8 percent against the Mexican peso, and was unchanged against the Euro.

Higher implied path for federal funds rate
- Between June 6 and July 7, the expected path of the federal funds rate implied by rates on overnight indexed swaps (OIS) shifted up at all maturities and steepened.
  - The expected federal funds rate rose about 10 basis points at the one-year horizon, and 25 basis points at the five-year horizon.
- The current market-implied path out to five years remains below 3%, which is the reported longer-run value of the median respondent of both the FOMC’s March 2017 Summary of Economic Projections and the March 2017 NY Fed Survey of Primary Dealers.
FINANCIAL MARKETS

10-Year Treasury and Term Premium

- The 10-year nominal yield increased by 17 basis points between June 6 and July 7, although Treasury yields remain low by historical standards.
  - The 10-year yield is down about 27 basis points from its year-to-date high observed in March.
  - Estimates from the Adrian-Crump-Moench term structure model attribute the decline in the 10-year yield over the last few months to both a reduction in the term premium and a modest downward revision to the expected average short-term interest rate over the next decade.
  - The estimated 10-year term premium remains at very low levels.

Longer-Term Treasury yields increase

Breakeven inflation increased

- Market-implicated TIPS-based measures of long-term inflation expectations (“breakevens”) increased in June.
  - The five-to-ten year breakeven inflation rate moved up 23 basis points between June 6 and July 7.
  - According to the Abrahams-Adrian-Crump-Moench term structure model, most of the movements in forward inflation compensation continue to reflect movements in the inflation risk premium.
SPECIAL TOPIC: DETERMINANTS OF STUDENT LOAN DEFAULT

**Dropouts have higher student loan default rates**
- Drawing on a unique data merge between National Student Clearinghouse education records and credit records from the New York Fed Consumer Credit Panel, we use 1980-86 birth cohorts to explore two questions:
  - How does loan default relate to the degree of study?
  - Does this relationship vary with graduation status?
- We find students with a two-year Associates degree (from vocational/community colleges for example) have higher default rates than those with Bachelors degrees.
- Regardless of degree type, non-graduates have markedly higher default rates.
  - Bachelors non-graduates have higher default rates than Associates graduates.

**High default rates at community and for-profit colleges**
- For-profit college students have the highest default rates, while not-for-profit college students have the lowest.
- For each college-type (public, for-profit, not-for-profit), 2-year students have higher default rates than 4-year students.
- There is a large gap (25 percentage points) between default rates of students at community colleges (public 2-year colleges) and students at public 4-year colleges.
  - This contrasts with the small gap between students at private 2- and 4-year colleges.
  - Community colleges and for-profit colleges have similar default rates, although loan take-up at community colleges (38%) are markedly lower than at for-profit colleges (69%).

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**Default Rate by Degree and Graduation Status**

Percentage ever defaulted by each age, out of college-goers with student loans. Default defined as at least 270 days past due. Bachelor+ refers to Bachelors and post-Bachelors. Source: New York Fed Consumer Credit Panel/Equifax and National Student Clearinghouse.

**Default Rate by School Type**

Percentage ever defaulted by each age, out of college-goers with student loans. Default defined as at least 270 days past due. Source: New York Fed Consumer Credit Panel/Equifax and National Student Clearinghouse.
**SPECIAL TOPIC: DETERMINANTS OF STUDENT LOAN DEFAULT**

### Default Rate by Field and School Selectivity

- Arts and Humanities, Non-Selective
- Business, Non-Selective
- Vocational, Non-Selective
- STEM, Non-Selective
- Arts and Humanities, Selective
- STEM, Selective
- Vocational, Selective
- Business, Selective

Percentage ever defaulted by each age, out of college-goers with student loans. Default defined as at least 270 days past due. Source: New York Fed Consumer Credit Panel/Equifax and National Student Clearinghouse.

### Choice of major matters more at non-selective colleges

- Students attending non-selective colleges (colleges that accept all students, regardless of aptitude) have higher default rates regardless of their field of study.
- For both selective and non-selective colleges, Arts and Humanities majors have the highest default rates.
- The choice of major matters much more for the likelihood of default at non-selective colleges.
  - The gap in default rates between the best and worst performing majors is small at selective colleges (3 percentage points), while the gap is much larger at non-selective colleges (8 percentage points).

### 2-, 3-, 5-year Default Rates by Repayment Cohort

- 2-year Cohort Default Rate (CDR)
- 3-year CDR
- 5-year CDR

Percentage ever defaulted within specified period. Default defined as at least 270 days past due. Source: New York Fed Consumer Credit Panel/Equifax and National Student Clearinghouse.

### Strong cyclicity in default rates

- Is there any relationship between the timing of labor market entry and a student borrower’s loan repayment ability?
  - To answer this question, we group students into repayment cohorts based on their loan repayment start date.
- We find sharp increases in cohort default rates for cohorts that entered the labor market during the recent recession.
  - Default rates highest for 2011 cohort (who entered the labor market in 2010).
  - Also reflects student composition changes during recession.
- Default rates are gradually declining for post-2011 cohorts, coinciding with the progressive recovery of the labor market.
SPECIAL TOPIC: DETERMINANTS OF STUDENT LOAN DEFAULT

Default Rates by Repayment Cohort and Degree

- Associates’ default rates impacted more by recession
  - This chart differentiates between students by repayment cohort and by degree program.
  - Associates students defaulted at higher rates than Bachelors students, regardless of repayment cohort.
  - There are much larger cyclical changes in default rates for Associates students compared to Bachelors students.
    - While default rates for Associates students increased by almost 13 percentage points between the 2010 and 2008 cohorts, default rates for Bachelors only rose by 5 percentage points.
    - Dropouts, students attending for-profit colleges and community colleges, and Arts and Humanities students were also more affected by the recent recession.