

# The Virginia Tech – U.S. Forest Service

## November 2017

### Housing Commentary: Section II



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# Table of Contents

Slide 3: [Federal Reserve System Indicators](#)

Slide 36: [Private Indicators](#)

Slide 73: [Demographics](#)

Slide 88: [Economics](#)

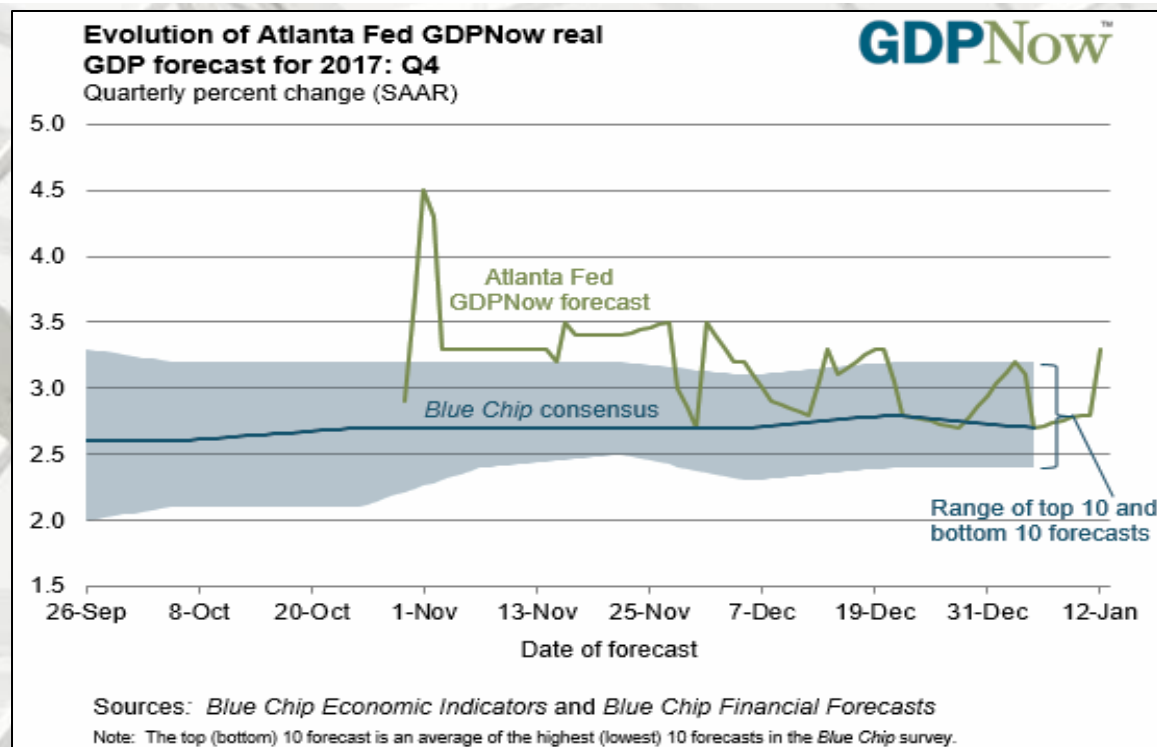
Slide 111: [Virginia Tech Disclaimer](#)

Slide 112: [USDA Disclaimer](#)



# **Federal Reserve System and Private Indicators**

# U.S. Economic Indicators



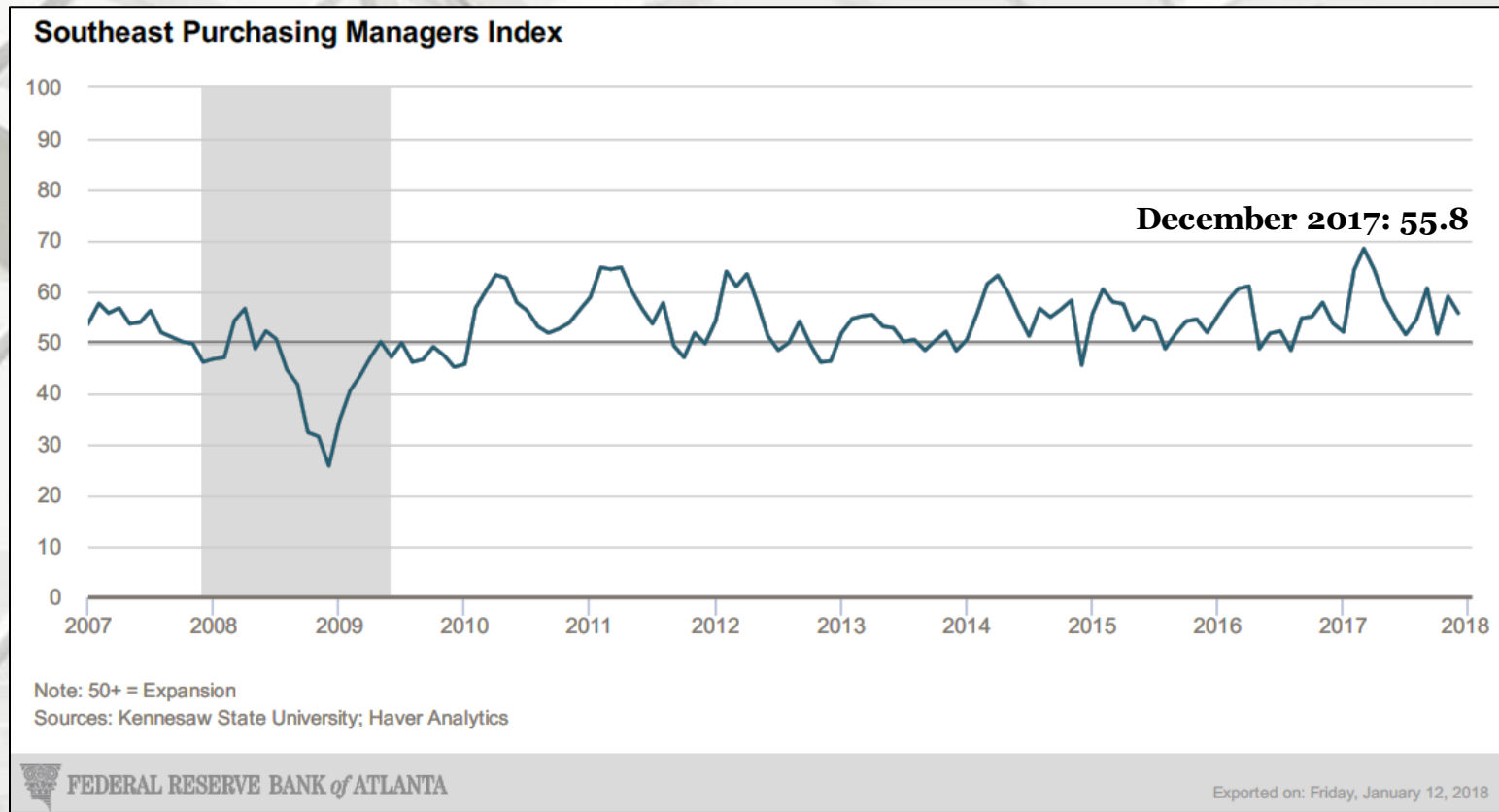
## Atlanta Fed GDPNow™

**Latest forecast: 3.3 percent — January 12, 2018**

“The GDPNow model forecast for real GDP growth (seasonally adjusted annual rate) in the fourth quarter of 2017 is **3.3 percent** on January 12, up from 2.8 percent on January 10. The forecast of fourth-quarter real consumer spending growth increased from 3.0 percent to 3.8 percent after this morning's retail sales report from the U.S. Census Bureau and this morning's Consumer Price Index release from the U.S. Bureau of Labor Statistics.” – Pat Higgins, Economist, Federal Reserve Bank of Atlanta



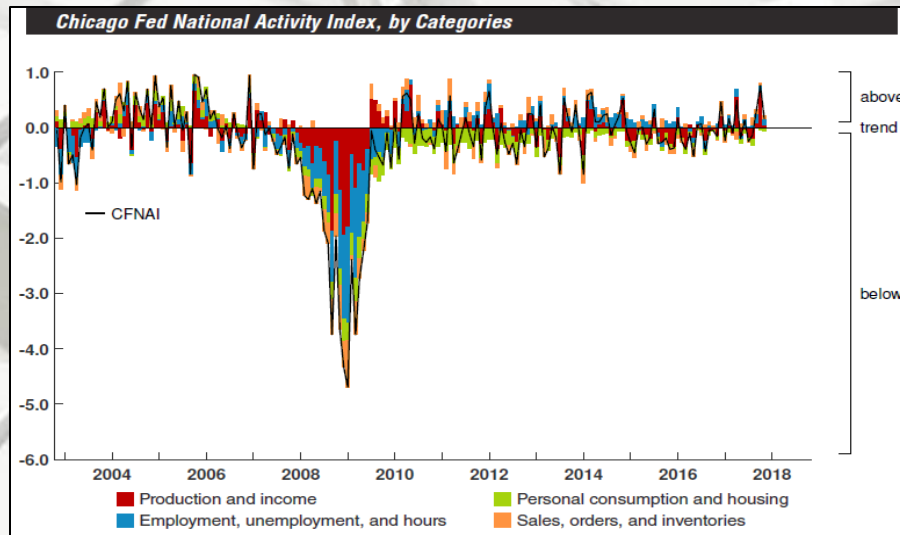
# U.S. Economic Indicators



## The Federal Reserve Bank of Atlanta Southeast Purchasing Managers Index

“The composite index measures the region's manufacturing sector based on key sector indicators; a reading below 50 indicates manufacturing is contracting, while over 50 means the industry is expanding.” – The Federal Reserve Bank of Atlanta

# Chicago Fed: National Activity Index



“Led by slower growth in production-related indicators, the Chicago Fed National Activity Index (CFNAI) declined to +0.15 in November from +0.76 in October. Two of the four broad categories of indicators that make up the index decreased from October, but three of the four categories made positive contributions to the index in November. The index’s three-month moving average, CFNAI-MA3, increased to +0.41 in November from +0.31 in October.

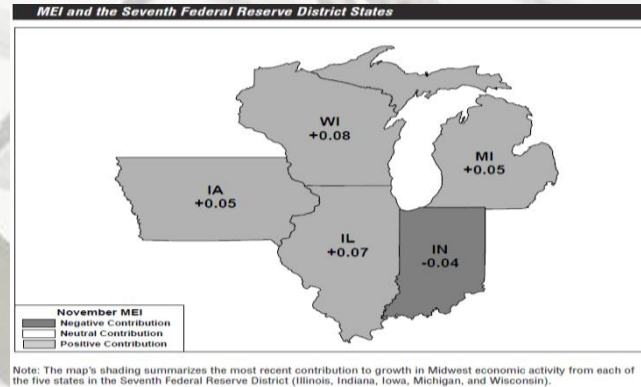
## Index Points to a Moderation in Economic Growth in November

The CFNAI Diffusion Index, which is also a three-month moving average, moved up to +0.28 in November from +0.18 in October. Forty-two of the 85 individual indicators made positive contributions to the CFNAI in November, while 43 made negative contributions. Thirty-six indicators improved from October to November, while 49 indicators deteriorated. Of the indicators that improved, 13 made negative contributions.

The contribution from production-related indicators to the CFNAI declined to +0.05 in November from +0.66 in October. Industrial production increased 0.2 percent in November after moving up 1.2 percent in October. The Institute for Supply Management’s Manufacturing New Orders Index increased to 64.0 in November from 63.4 in October.

The sales, orders, and inventories category also contributed +0.05 to the CFNAI in November, up slightly from +0.04 in October. The contribution from employment-related indicators to the CFNAI was unchanged at +0.11 in November. The civilian unemployment rate remained at 4.1 percent in November. The contribution of the personal consumption and housing category to the CFNAI edged down to -0.06 in November from -0.04 in October.” – Laura LaBarbera, Media Relations, Federal Reserve Bank of Chicago

# Chicago Fed: Midwest Economy Index



## Midwest Economy Index

“The manufacturing sector’s contribution to the MEI increased to +0.35 in November from +0.21 in October. The pace of manufacturing activity increased in Illinois, Iowa, Michigan, and Wisconsin, but was unchanged in Indiana. Manufacturing’s contribution to the relative MEI decreased to +0.23 in November from +0.31 in October.

## Index Points to a Pickup in Midwest Economic Growth in November

The Midwest Economy Index (MEI) increased to +0.22 in November from –0.11 in October. Contributions to the November MEI from all four broad sectors of nonfarm business activity increased from October, though only the manufacturing sector made a positive contribution to the index. Contributions from all five Seventh Federal Reserve District states also increased from October. The relative MEI moved down to –0.25 in November from –0.07 in October. Contributions to the November relative MEI from three of the four sectors and four of the five states decreased from October..

The construction and mining sector’s contribution to the MEI moved up to –0.06 in November from –0.11 in October. The pace of construction and mining activity was stronger in Indiana, Iowa, Michigan, and Wisconsin, but unchanged in Illinois. Construction and mining made a contribution of –0.10 to the relative MEI in November, up slightly from –0.12 in October.

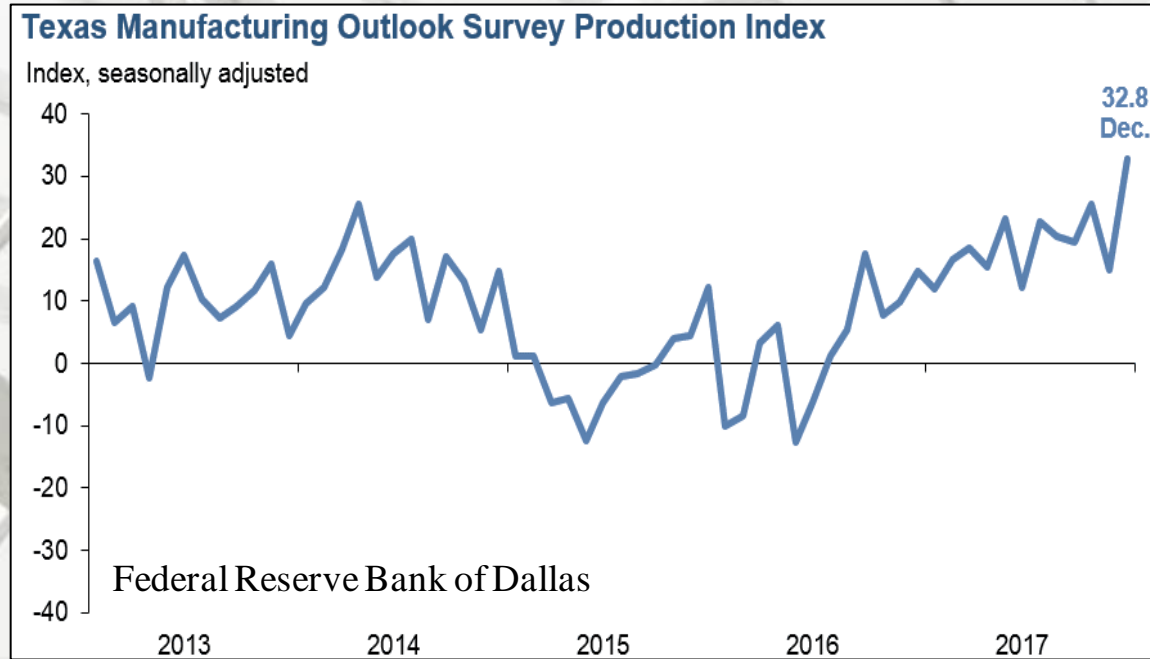
The contribution of the service sector to the MEI increased to –0.01 in November from –0.08 in October. The pace of service sector activity was up in Indiana, Michigan, and Wisconsin, but down in Iowa and unchanged in Illinois. The service sector’s contribution to the relative MEI moved down to –0.29 in November from –0.20 in October.

The contribution from consumer spending indicators to the MEI increased to –0.05 in November from –0.14 in October. Consumer spending indicators were, on balance, up in Illinois, Iowa, and Wisconsin, but steady in Indiana and Michigan. Consumer spending’s contribution to the relative MEI edged down to –0.10 in November from –0.07 in October.” – Laura LaBarbera, Media Relations, Federal Reserve Bank of Chicago

Source: <https://www.chicagofed.org/publications/mei/index>; 12/29/17

[Return to TOC](#)

# U.S. Economic Indicators



## Texas Manufacturing Activity Shows Robust Growth

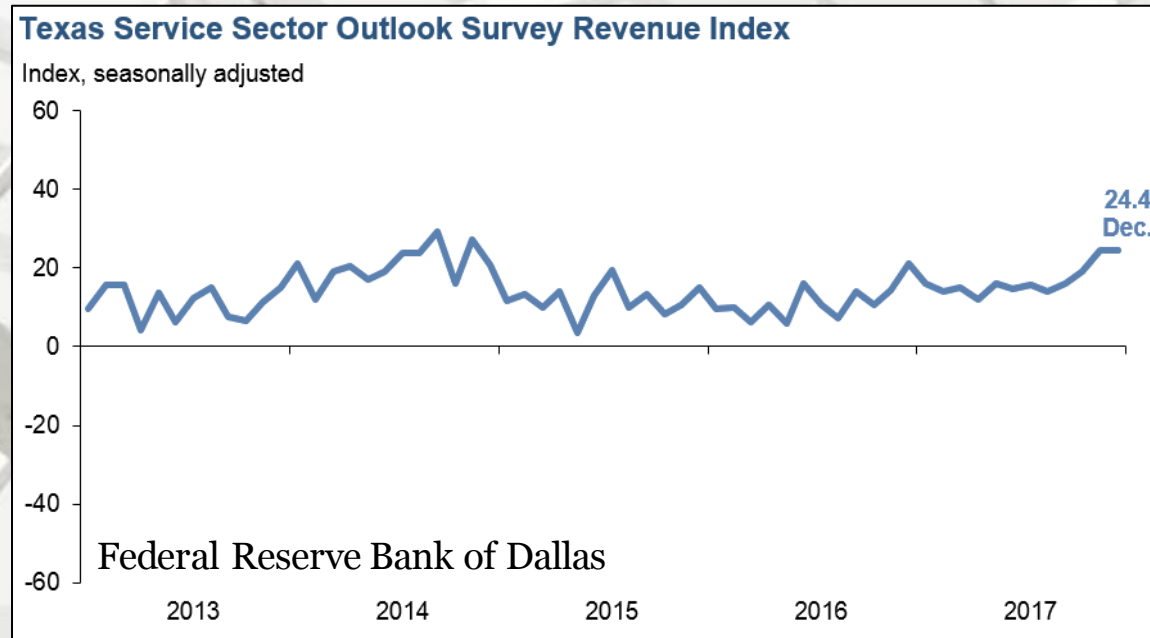
“Texas factory activity expanded strongly in December, according to business executives responding to the *Texas Manufacturing Outlook Survey*. The production index, a key measure of state manufacturing conditions, spiked 18 points to 32.8, reaching its highest level in more than 11 years.

Other measures of manufacturing activity also pointed to more rapid growth in December. The new orders index jumped 10 points to 30.1, another 11-year high, and the growth rate of orders index moved up to 21.4. The capacity utilization index increased nine points to 26.3, and the shipments index rose from 16.7 to 21.5 this month.

Perceptions of broader business conditions were markedly more positive in December. The general business activity index and the company outlook index posted double-digit increases, coming in at 29.7 and 31.5, respectively. Both represent highs last seen in 2006.” – Emily Kerr, Business Economist, The Federal Reserve Bank of Dallas



# U.S. Economic Indicators



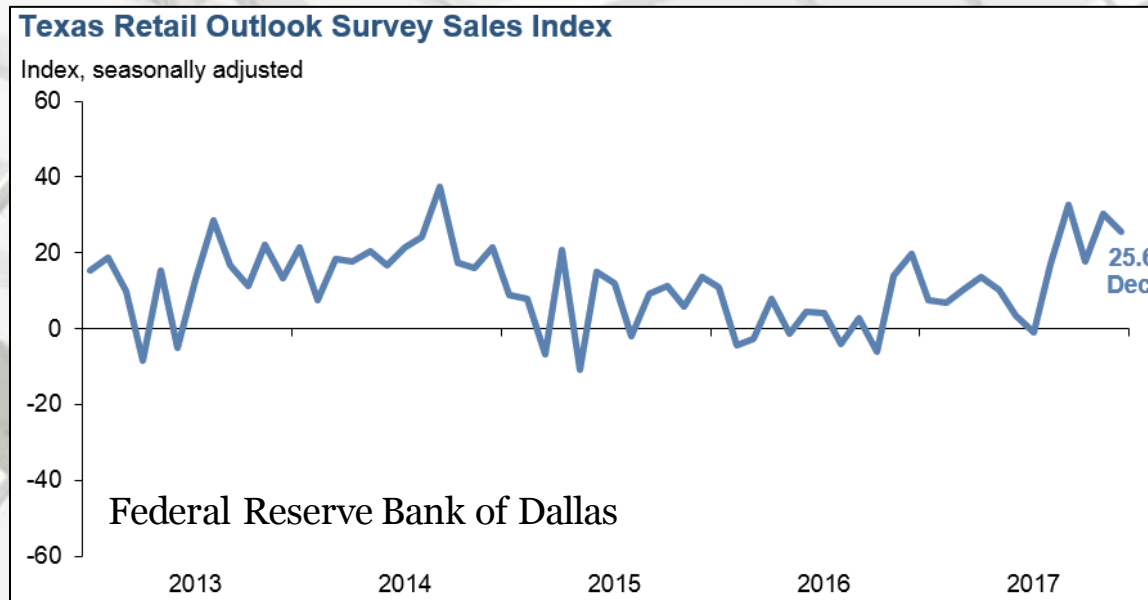
## Texas Service Sector Activity Remains Solid

“Texas service sector activity continued to increase in December, according to business executives responding to the *Texas Service Sector Outlook Survey*. The revenue index, a key measure of state service sector conditions, was unchanged at 24.4 in December.

Labor market indicators reflected faster employment growth and longer workweeks this month. The employment index rose from 9.8 to 15.3. The hours worked index edged up to 9.2.

Perceptions of broader economic conditions continued to reflect optimism in December. The general business activity index edged down two points to 18.1. The company outlook index moved up to 19.6, its highest reading this year, with 26 percent of respondents reporting that their outlook improved from last month and 7 percent noting it worsened.” – Amy Jordan, Assistant Economist, The Federal Reserve Bank of Dallas

# U.S. Economic Indicators



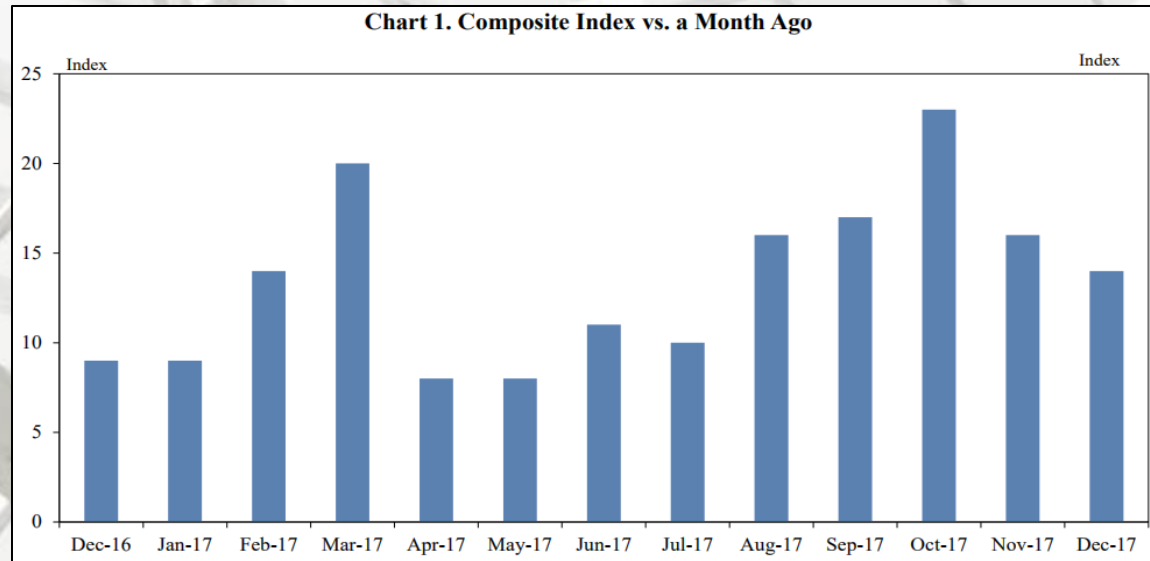
## Retail Sales Expand but at a Slower Pace

“Retail sales increased in December, albeit at a slower pace than last month, according to business executives responding to the Texas Retail Outlook Survey. The sales index fell from 30.4 in November to 25.6 in December. Inventories increased at a similar pace as last month.

Labor market measures indicated faster retail employment growth and markedly longer workweeks this month. The employment index jumped 11 points to 13.1. The hours worked index rose sharply from 5.6 to 15.8, its highest reading in over 10 years.

Retailers’ perceptions of broader economic conditions continued to reflect optimism in December. The general business activity index fell from 25.4 to 20.9. The company outlook index was similar to last month at 24.7, with 29 percent of respondents reporting that their outlook improved from last month and 5 percent noting it worsened.” – Amy Jordan, Assistant Economist, The Federal Reserve Bank of Dallas

# U.S. Economic Indicators



## The Federal Reserve Bank of Kansas City

### Tenth District Manufacturing Growth Continued At A Solid Pace

“Growth in Tenth District manufacturing activity continued at a solid pace, and optimism remained high for future activity. Price indexes were mixed, but posted little change overall.

The month-over-month composite index was 14 in December, lower than 16 in November and 23 in October (Chart 1). The composite index is an average of the production, new orders, employment, supplier delivery time, and raw materials inventory indexes. Growth in factory activity moderated slightly at both durable and non-durable goods plants, particularly for chemicals and plastics products. Month-over-month indexes were mixed but remained generally solid. The shipments, new orders, and order backlog indexes all decreased somewhat. However, the production index edged up from 15 to 21, and the employment and new orders for exports indexes also rose. The finished goods inventory index dropped from 2 to -11, and the raw materials inventory index also decreased.” – Pam Campbell, The Federal Reserve Bank of Kansas City

# U.S. Economic Indicators

## The Federal Reserve Bank of Kansas City

“Most year-over-year factory indexes were slightly lower in December. The composite index eased from 37 to 30, and the production, shipments, new orders, and order backlog indexes also fell. In contrast, the capital expenditures index jumped from 19 to 39, and the employment index inched higher. The new orders for exports index was mostly unchanged. The raw materials inventory index fell from 45 to 15, and the finished goods inventory index also decreased.

Future factory activity expectations eased slightly but remained favorable. The future composite index eased from 27 to 22, and the future production, shipments, new orders, and order backlog also slowed slightly. The future employment index edged lower from 35 to 33, while the future capital expenditures index was mostly unchanged. The future raw materials inventory index decreased from 13 to 6, while the future finished goods inventory index increased modestly.

Price indexes were mixed in December, but posted little change overall. The month-over-month finished goods price index edged up from 12 to 15, while the raw materials price index eased slightly. The year-over-year finished goods price index inched higher from 35 to 37, while the year-over-year raw materials price index fell somewhat. The future finished goods price index slipped from 37 to 33, and the future raw materials price index also moved slightly lower.” – Pam Campbell, The Federal Reserve Bank of Kansas City

“Factories in our region remain upbeat about hiring and capital spending as we head into 2018, following strong growth in recent months,” – Chad Wilkerson, Vice President and Economist, The Federal Reserve Bank of Kansas City



# U.S. Economic Indicators

## Empire State Manufacturing Survey

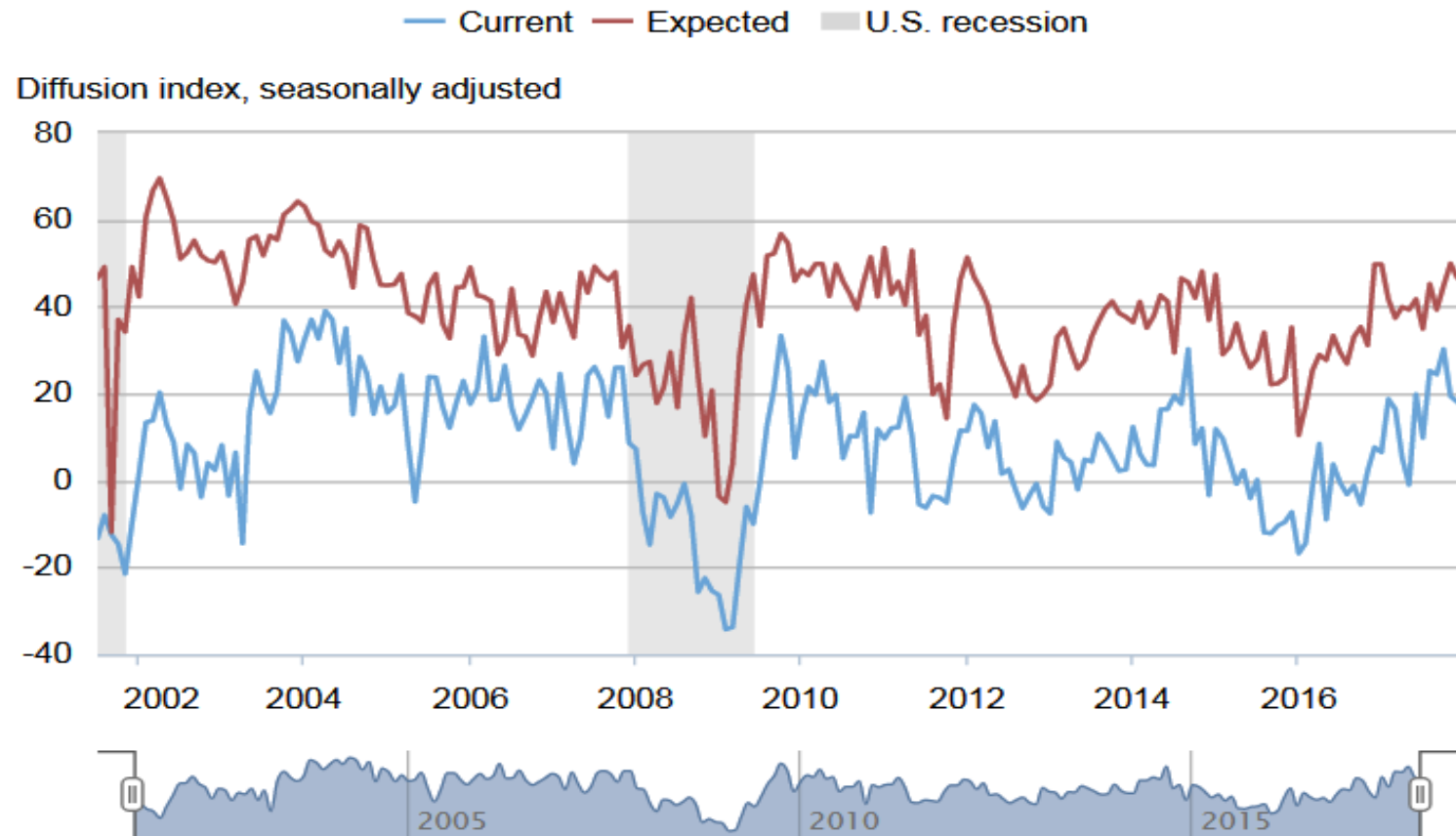
### Growth Continues

“Business activity continued to grow at a solid clip in New York State, according to firms responding to the December 2017 Empire State Manufacturing Survey. The headline general business conditions index, at 18.0, remained close to last month’s level. The new orders index and the shipments index both showed sustained strong gains, with the former holding steady at 19.5 and the latter edging up to 22.4. Delivery times were slightly longer than last month, and inventory levels were stable. Labor market indicators pointed to a small increase in employment but no change in hours worked. Both input prices and selling prices rose at a somewhat faster pace than last month. Indexes assessing the six-month outlook suggested that firms remained optimistic about future business conditions.

Manufacturing firms in New York State reported that business activity continued to expand strongly. The general business conditions index was little changed at 18.0. Thirty-seven percent of respondents reported that conditions had improved over the month, while 19 percent reported that conditions had worsened. The new orders index held steady at 19.5, and the shipments index rose four points to 22.4 – readings that indicated ongoing solid growth in orders and shipments. The unfilled orders index moved down four points to -8.7, reflecting a decline in unfilled orders. The delivery time index climbed into positive territory, indicating that delivery times lengthened, and the inventories index fell to 1.4, a sign that inventory levels were steady.” – The Federal Reserve Bank of New York

# U.S. Economic Indicators

## General Business Conditions



# **U.S. Economic Indicators**

## **Empire State Manufacturing Survey**

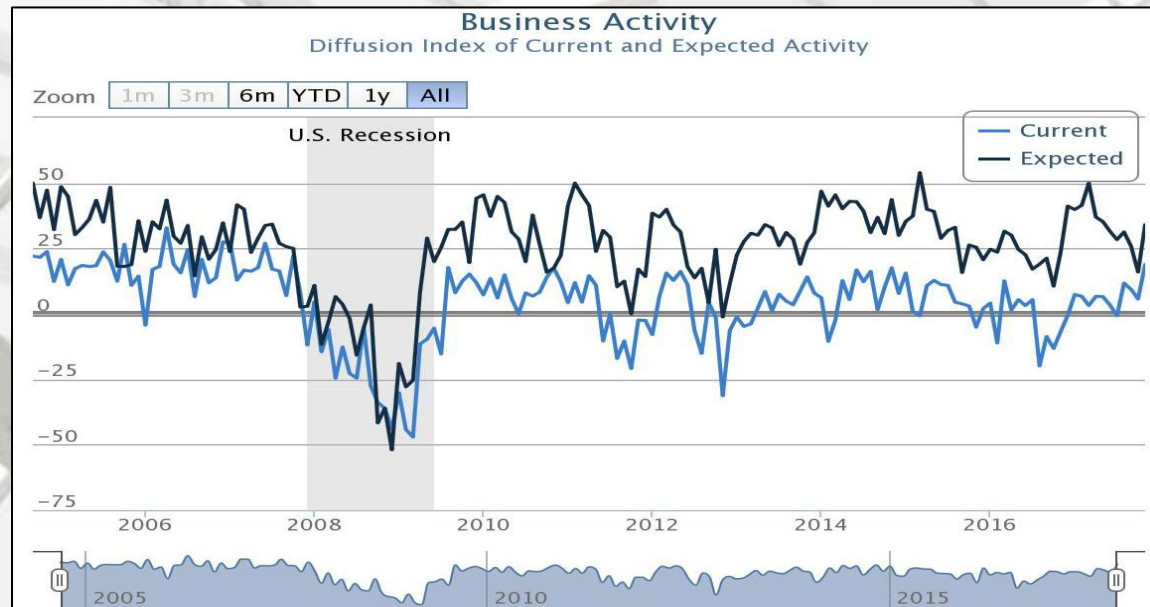
### **Price Increases Pick Up**

“The index for number of employees fell six points to 5.1, a level suggesting a small increase in employment levels. The average workweek index was zero, indicating that hours worked were unchanged. Prices increased at a faster pace than last month: the prices paid index climbed five points to 29.7, and the prices received index edged up two points to 11.6.

### **Firms Remain Optimistic about Future Conditions**

Looking ahead, firms remained optimistic about the six-month outlook, though to a somewhat lesser extent than in November. The index for future business conditions fell three points to 46.6. After advancing to its highest level in several years last month, the index for future new orders declined thirteen points to 41.1. The index for future number of employees rose eight points to 29.0, its highest level in nearly a year, and the capital expenditures index climbed nine points to 34.1, a multiyear high.” – The Federal Reserve Bank of New York

# U.S. Economic Indicators



## Business Leaders Survey (Services) Activity Picks Up Markedly

“Activity in the region’s service sector expanded at a robust pace, according to firms responding to the Federal Reserve Bank of New York’s November 2017 *Business Leaders Survey*. The survey’s headline business activity index climbed thirteen points to 18.9, a multiyear high. The business climate index remained slightly negative at -3.5, a sign that firms, on balance, regarded the business climate as somewhat worse than normal. The employment index fell nine points to 9.3, indicating that employment increased at a slower pace than last month, and the wages index declined eleven points to 25.5, suggesting that wages grew more slowly than in November. Input price increases were little changed, while selling prices rose at a somewhat slower pace. Capital spending advanced moderately. The indexes for future business activity and future business climate rose markedly, suggesting that firms grew more optimistic about future conditions.” – The Federal Reserve Bank of New York



# U.S. Economic Indicators

## Business Leaders Survey

“Business activity in the region’s service sector grew strongly in November. The headline business activity index climbed thirteen points to 18.9, a multiyear high. Thirty-nine percent of respondents reported that conditions improved over the month, while 20 percent said that conditions worsened. The business climate index inched up two points to -3.5, signaling that, on balance, firms viewed the business climate as somewhat worse than normal.

## Employment and Wages Increase More Slowly

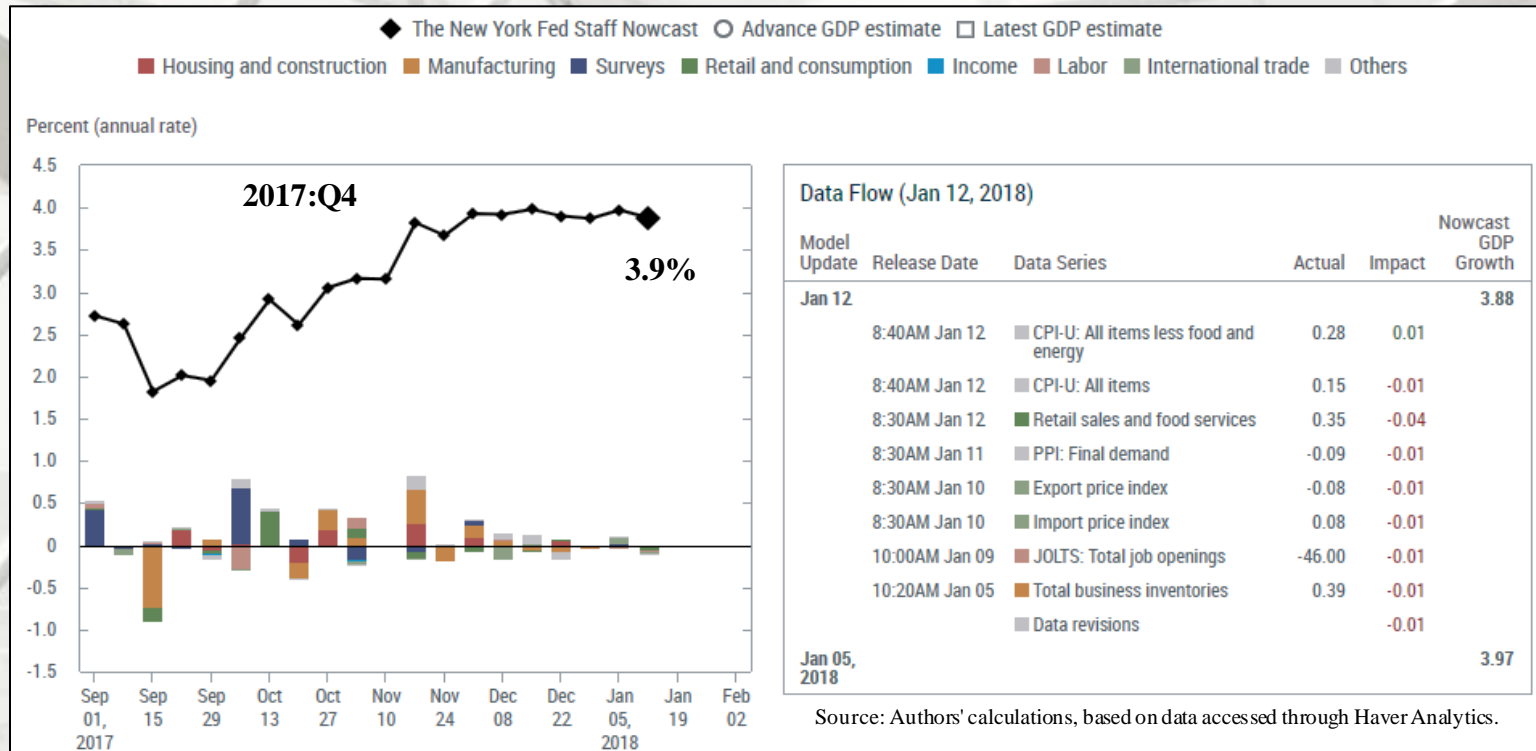
The employment index fell nine points to 9.3, indicating that employment levels increased, though not as strongly as in November. The wages index retreated eleven points to 25.5, a sign that wage increases were not as strong as they had been in recent months. The prices paid index was little changed at 43.8, indicating that the pace of input price increases held fairly steady, and the prices received index fell five points to 11.3, suggesting that selling prices rose at a somewhat slower pace. The capital spending index moved up to 13.1.

## Optimism Grows

Optimism about the six-month outlook picked up in November. After trending lower for much of the past year, the index for future business activity reversed course, jumping eighteen points to 34.1. The reading signaled that firms were more optimistic about future conditions than they had been for some time. The index for future business climate also rose markedly, climbing sixteen points to 20.0. The index for future employment suggested that respondents expected employment to increase in the months ahead, and the index for planned capital spending edged up to 20.2.” – The Federal Reserve Bank of New York

# U.S. Economic Indicators

## The Federal Reserve Bank of New York Nowcast



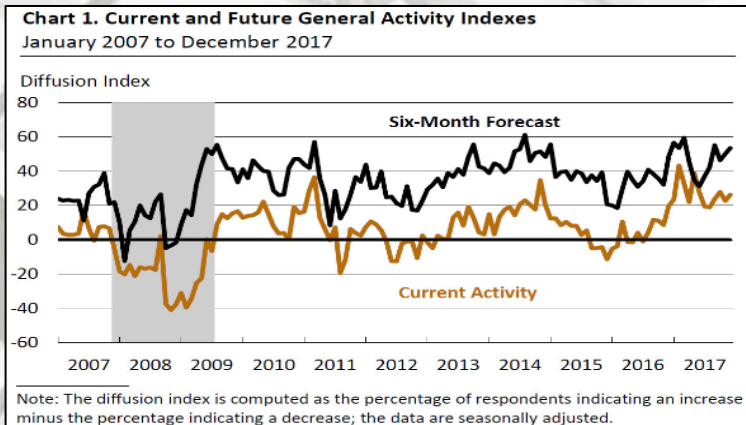
Notes: We start reporting the Nowcast for a reference quarter about one month before the quarter begins; we stop updating it about one month after the quarter closes.

Colored bars reflect the impact of each broad category of data on the Nowcast; the impact of specific data releases is shown in the accompanying table.

### January 12, 2018: Highlights

- “The New York Fed Staff Nowcast stands at 3.9% for 2017:Q4 and 3.2% for 2018:Q1.” – The Federal Reserve Bank of New York

# U.S. Economic Indicators



“Regional manufacturing activity continued to improve in December, according to results from this month’s *Manufacturing Business Outlook Survey*. The diffusion index for current general activity increased from a reading of 22.7 in November to 26.2 in December. Most broad indicators reflecting firms’ expectations for the next six months improved modestly this month.

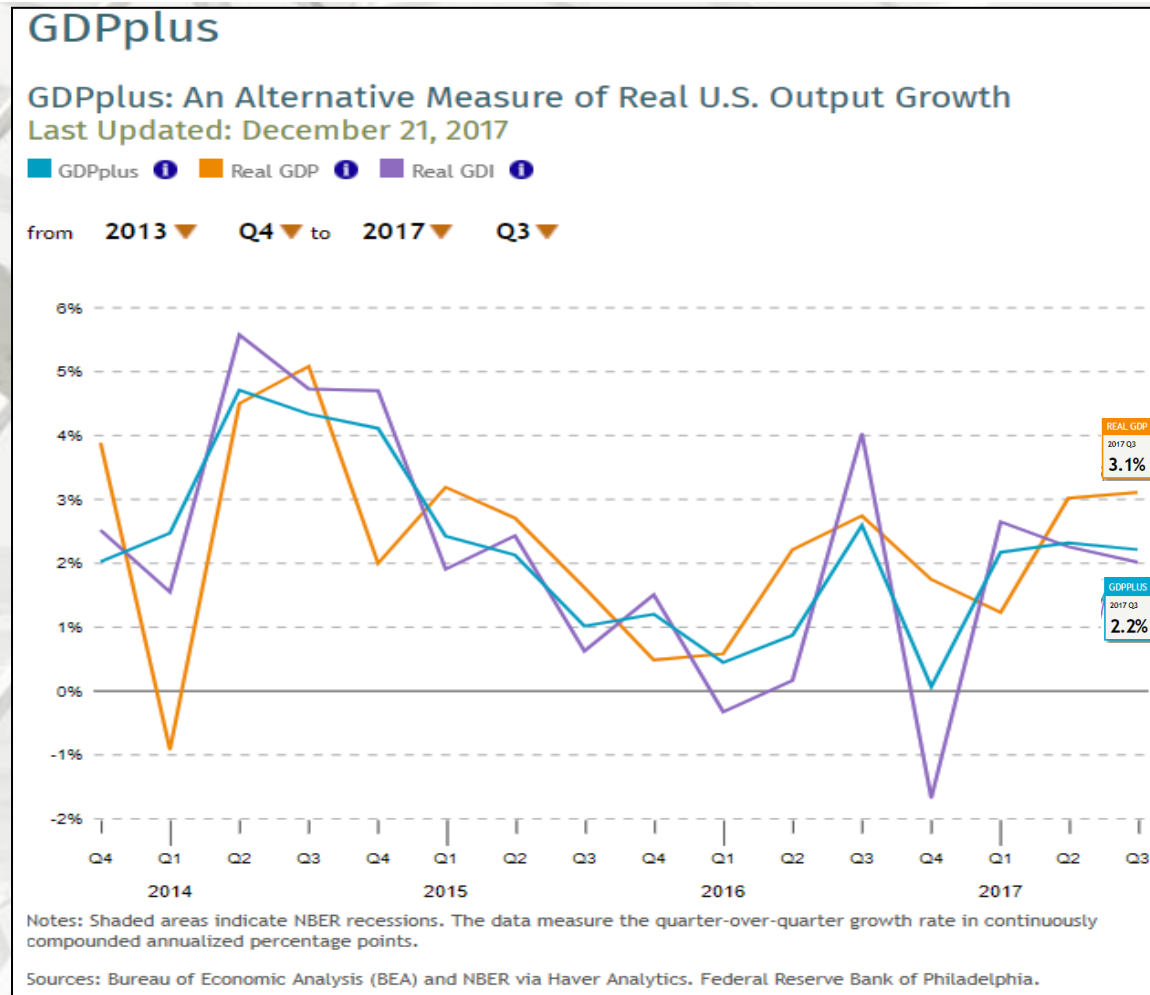
## December 2017 Manufacturing Business Outlook Survey

### Manufacturing Activity Showed Solid Growth in December

The diffusion index for current general activity increased from a reading of 22.7 in November to 26.2 this month (see Chart 1). Nearly 41 percent of the firms indicated increases in activity this month, up from 35 percent in November. Both the current new orders and shipments indexes also improved this month, increasing 8 points and 2 points, respectively. Although they moderated slightly, both the delivery times and unfilled orders indexes remained positive, suggesting longer delivery times and increases in unfilled orders. Inventories were, on balance, nearly steady this month: The percentage of firms reporting lower inventories (19 percent) was slightly higher than the percentage reporting higher inventories (17 percent).

The firms continued to report increases in employment. The current employment index fell 5 points but remained in positive territory, where it has been for 13 consecutive months. More than 29 percent of the responding firms reported increases in employment, while 11 percent of the firms reported decreases this month. The average workweek index declined 3 points after being in positive territory for 14 consecutive months.” – Mike Trebing, Senior Economic Analyst, The Federal Reserve Bank of Philadelphia

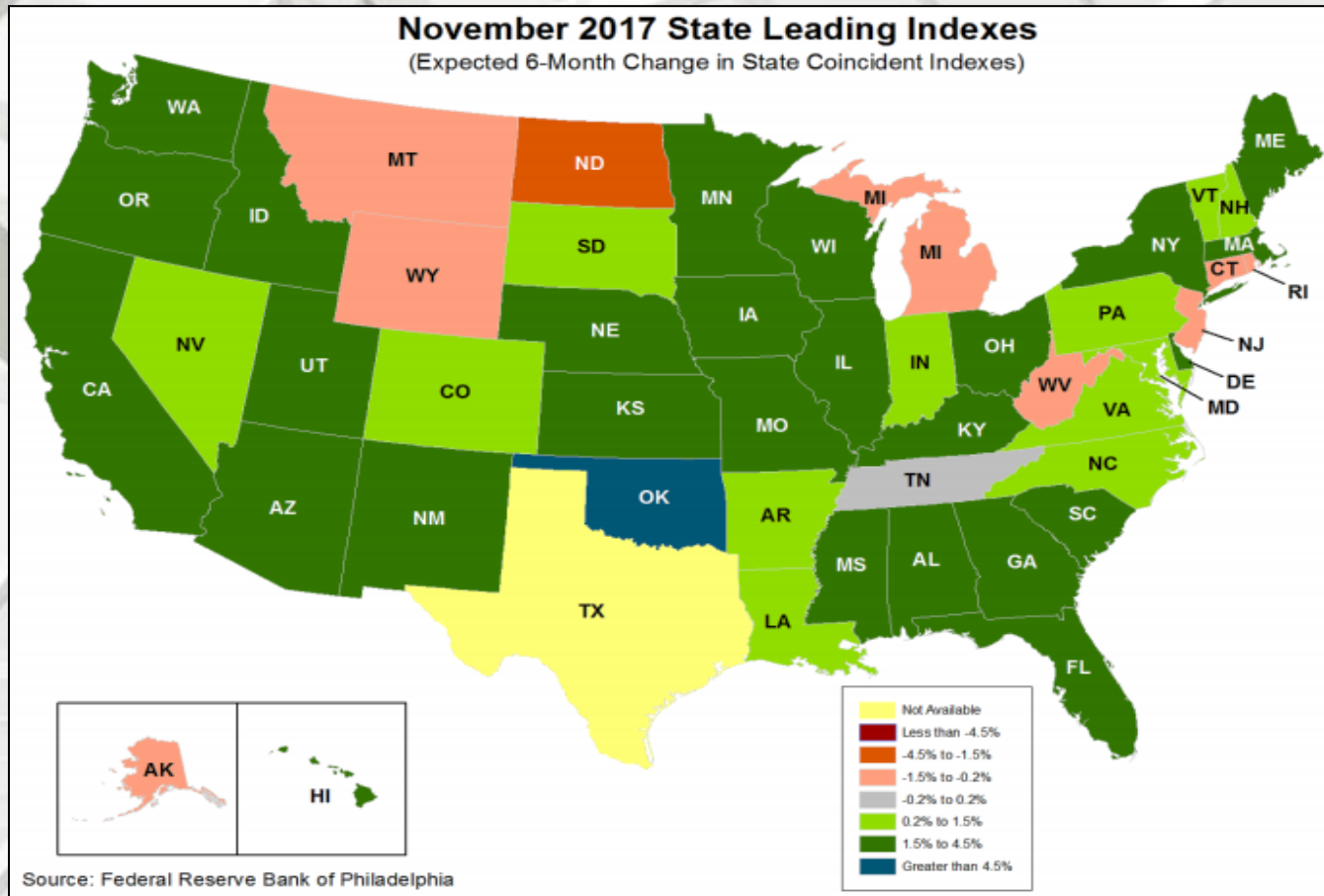
# Philadelphia Fed: GDPplus



“As of December 21 Q3 2017 GDPplus = 2.2%; Real GDP = 3.1%; and Real GDI = 2.0%.” – The Federal Reserve Bank of Philadelphia



# Philadelphia Fed



“The Federal Reserve Bank of Philadelphia has released the leading indexes for the 50 states for November 2017. The indexes are a six-month forecast of the state coincident indexes (also released by the Bank). Thirty-nine state coincident indexes are projected to grow over the next six months, 10 are projected to decrease, and one (Texas) is not available this month. For comparison purposes, the Philadelphia Fed has also developed a similar leading index for its U.S. coincident index, which is projected to grow 1.4 percent over the next six months.” – Daniel Mazone, The Federal Reserve Bank of Philadelphia

# **U.S. Economic Indicators**

## **The Federal Reserve Bank of Richmond**

### **Fifth District Manufacturing Activity Saw Robust Growth in November**

“Manufacturing firms reported robust growth in November, according to the latest survey by the Federal Reserve Bank of Richmond. The composite index jumped from 12 to 30, the highest it has been since 1993. This rise was bolstered by strengthening conditions across all three components of the index. While indicators of current wages and finished goods fell in November, both maintained positive values, dropping from 24 to 21 and 14 to 9, respectively.

District manufacturing firms remained optimistic that growth will continue in the coming six months. But a smaller share of firms raised their expectations than had in November in all areas, except for wages and capital expenditures.

Manufacturing firms reported stronger price growth in November, as growth rates for both prices paid and prices received reached a three-month high. They expect prices to continue to grow in the next six months but at a slightly lower rate.” – Jeannette Plamp, Economic Analyst, The Federal Reserve Bank of Richmond

# U.S. Economic Indicators

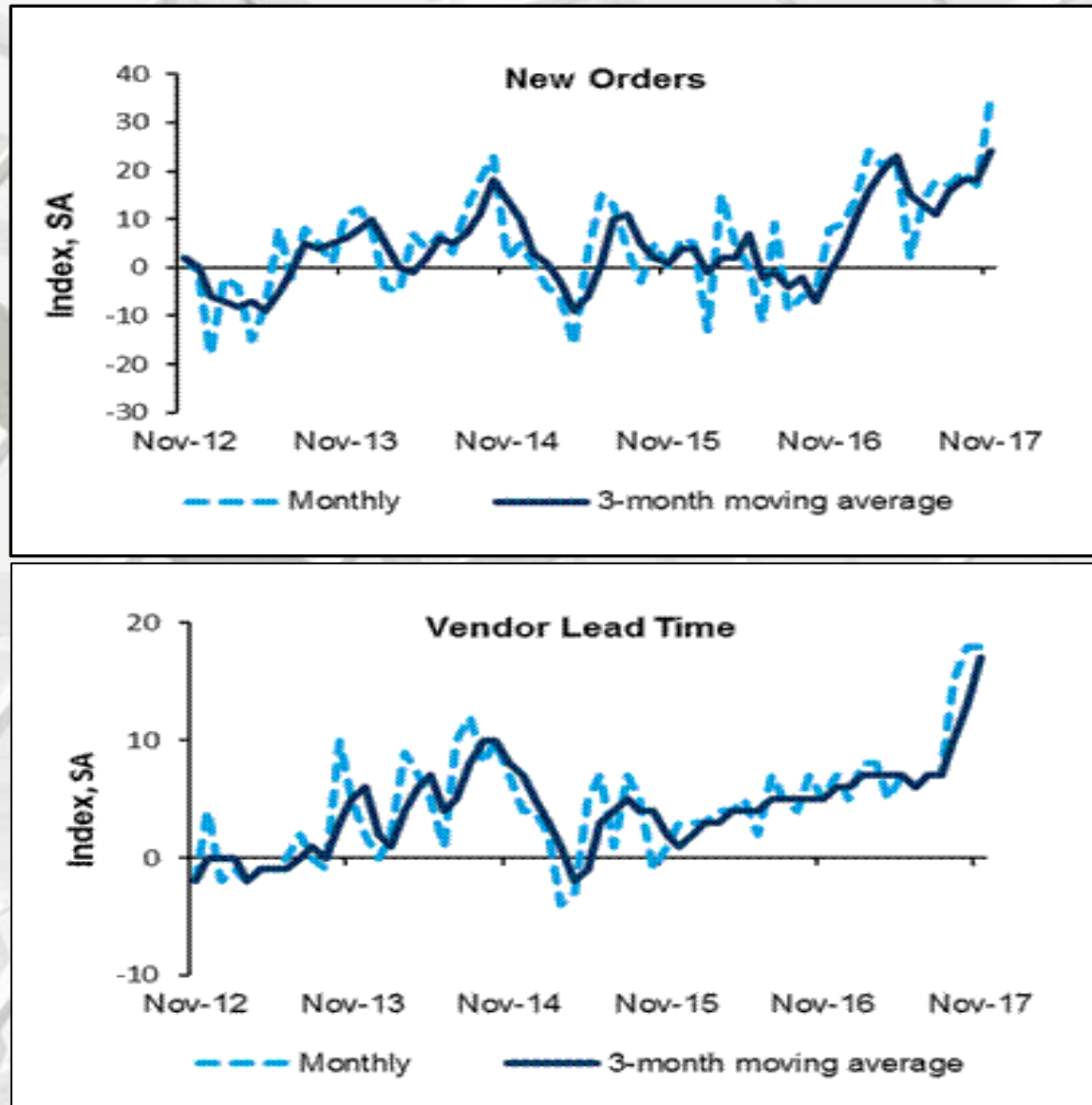


# U.S. Economic Indicators





# U.S. Economic Indicators



# U.S. Economic Indicators

## The Federal Reserve Bank of San Francisco

### FRBSF FedViews

- “Real GDP grew at an annual rate of 3.3% in the third quarter, according to the most recent estimate of the Bureau of Economic Analysis. Over the first three quarters of this year, real GDP has expanded at an average annual rate of about 2.5%. This growth reflects solid gains in personal income and improved consumer confidence, supported by a strong labor market and boom in the stock market. Dollar depreciation this year also has contributed to net export growth.
- If Congress passes the tax reform legislation by the end of this year or early next year, we expect a modest boost to GDP growth in 2018 and 2019. We expect real GDP to grow at an average annual rate of about 2¼% through 2018, before slowing to 1¾% in 2019. This forecast reflects the expected gradual tightening of monetary policy, as well as the longer term effects of population aging and slower productivity growth.
- Labor market conditions continued to strengthen. Nonfarm payroll employment increased by 228,000 jobs in November, following 224,000 in October. Despite the hurricane-related employment slowdown in September, the recent job growth brought the six-month average to about 178,000 per month, putting the U.S. economy on track of gaining over 2 million jobs this year.” – Zheng Liu, Senior Research Advisor, The Federal Reserve Bank of San Francisco

# U.S. Economic Indicators

## The Federal Reserve Bank of San Francisco

### FRBSF FedViews

- “The unemployment rate was unchanged in November from its October value of 4.1%. We expect the unemployment rate to decline further to slightly below 4.0% by the middle of 2018 as the economy continues to strengthen. With gradual removals of monetary policy accommodation, we expect the unemployment rate to return gradually to our estimate of the natural rate of 4¾%.”
- The unemployment rate was unchanged in November from its October value of 4.1%. We expect the unemployment rate to decline further to slightly below 4.0% by the middle of 2018 as the economy continues to strengthen. With gradual removals of monetary policy accommodation, we expect the unemployment rate to return gradually to our estimate of the natural rate of 4¾%.
- Inflation remains below the FOMC’s target of 2%. In October, the personal consumption expenditure (PCE) price index rose 1.6% over the past 12 months, and the core PCE price index, which removes volatile food and energy prices, rose only 1.4%. This low inflation partly reflects declining costs of health-care and telecommunication services, which are likely to be transitory and are less sensitive to changes in overall economic conditions than prices such as housing, restaurants, and recreation services.” – Zheng Liu, Senior Research Advisor, The Federal Reserve Bank of San Francisco

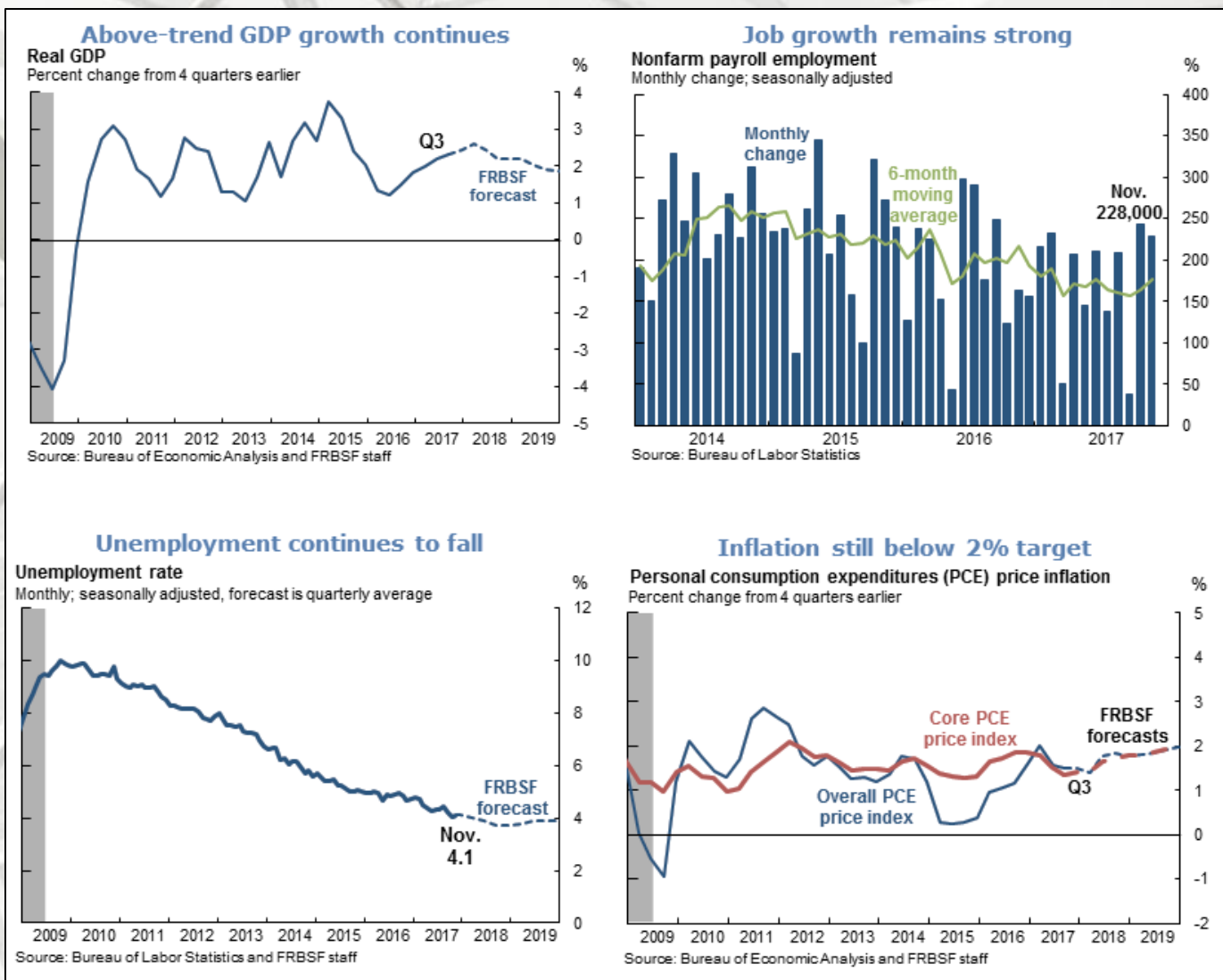
# U.S. Economic Indicators

## The Federal Reserve Bank of San Francisco

### FRBSF FedViews

- “Inflation dynamics are driven by several factors. These include domestic economic slack such as the unemployment gap and wage growth; monetary policy, which affects inflation expectations; transitory factors such as health-care and telecommunication services; global economic slack, which drives foreign demand for U.S. exports; and the dollar exchange rate.
- The dollar exchange rate measured by the trade-weighted broad dollar index has depreciated about 6% since the beginning of this year. A weaker dollar can boost U.S. inflation directly by raising import prices and indirectly by passing through to other prices. It can also raise inflation by increasing global demand for U.S. exports.
- Staff statistical analysis suggests that fluctuations in the dollar value are not a big driver of inflation. Over the period from January 1999 to September 2017, the dollar exchange rate is estimated to account for about 13% of inflation fluctuations on average.” – Zheng Liu, Senior Research Advisor, The Federal Reserve Bank of San Francisco

# U.S. Economic Indicators





# U.S. Economic Indicators

## The Federal Reserve Bank of San Francisco

### Economic Outlook

“... Despite the terrible human tragedy caused by recent hurricanes in the Southeast and the wildfires in my home state of California, the economic expansion remains on track. I see the economy continuing on a moderate growth path over the next few years. Our overall measure of the economy, gross domestic product or GDP for short, grew at an annual rate of 3% in the third quarter based on the initial estimate, and I forecast growth will average 2.5% for 2017, before slowing back down toward its trend pace over the next few years.

My role as a policymaker is to keep this expansion going for as long as possible, and that means maintaining a sustainable pace of growth consistent with labor force and productivity growth.

If you weren't overly impressed with my GDP figures, you should be blown away with the unemployment rate, which stands a touch above 4%. We've not only achieved our maximum employment goal, we've exceeded it. It may sound strange to say that we can exceed full employment when four out of every hundred potential workers is unemployed. But the way economists think about unemployment is that, even in a very strong economy, there will always be a certain number of people who are either between jobs or who have recently joined the labor market. Although we'll never reach an unemployment rate of zero, a rate in the 4% range is clearly a sign of a very strong labor market.” – John C. Williams, President and Chief Executive Officer, The Federal Reserve Bank of San Francisco

# U.S. Economic Indicators

## The Federal Reserve Bank of San Francisco Economic Outlook

“We’re on track to add 2 million jobs to the economy this year and with continued strong momentum in the labor market, I expect the unemployment rate to continue to drift downward, bottoming out at around 3¾% next year.

As I said earlier, one of the Fed’s two monetary policy goals is maximum employment, so our report card’s looking very good on that front. The other goal is price stability, and this is where we’ve faced some challenges. The inflation goal we’ve set for ourselves is 2%, but over the past few years it’s remained stubbornly below that and currently stands at 1.6%. Now, let’s be honest: Most Americans are very happy with the status quo. They have no desire to see prices rise rapidly and neither do I.

In fact, there’s something called the misery index, which is a combination of inflation and unemployment. The higher that number, the more miserable people tend to be. The misery index has been running at 6½% so far this year. For context, in 2011 when we were dealing with the fallout of the crisis it was around double that figure and in 1980, if you can remember those dark days, it reached an all-time peak of over 20%. The average American should be far from “miserable” about the current state of the economy.

But for policy wonks and economists, low inflation against a backdrop of such strong employment numbers seems a bit surprising. The newspapers would have you believe that it’s a mystery of Sherlock Holmes proportions. However, at the Fed in San Francisco we’ve done some good old-fashioned detective work and we’re fairly sure we have a handle on why it’s so low (Mahedy and Shapiro 2017).” – John C. Williams, President and Chief Executive Officer, The Federal Reserve Bank of San Francisco

# U.S. Economic Indicators

## The Federal Reserve Bank of San Francisco

### Economic Outlook

“My staff found that inflation rates for prices that tend to move up and down with the economy have recovered. But inflation for things that tend to be less sensitive to the economy have fallen or remained low. This includes price drops for pharmaceuticals, airline tickets, cell phones, and education. For example, Verizon and AT&T were in a price war for much of the early part of this year, which pushed down the cost of your phone bill.

An even bigger contribution to low inflation has come from the health-care sector, where mandated cuts to Medicare payment growth have muted price rises in overall health-care services.

On top of the lack of price rises in these categories, there tends to be a delay in the effect of a strong labor market on prices. It typically takes about 12 months for a shift in the economy to have its full effect on inflation. With the economy doing so well this year and based on the historical pattern, I expect to see a rise in inflation in 2018. In this regard, it’s important to remember that things like salaries and contracts tend to be negotiated on an annual basis, so it often takes a while for wages and prices to respond to the tightening labor market.

So, the next time you see a headline about stubbornly low inflation, you can smile to yourself, knowing that the mystery isn’t all that mysterious after all.” – John C. Williams, President and Chief Executive Officer, The Federal Reserve Bank of San Francisco

# **U.S. Economic Indicators**

## **The Federal Reserve Bank of San Francisco**

### **Economic Outlook**

#### **Conclusion**

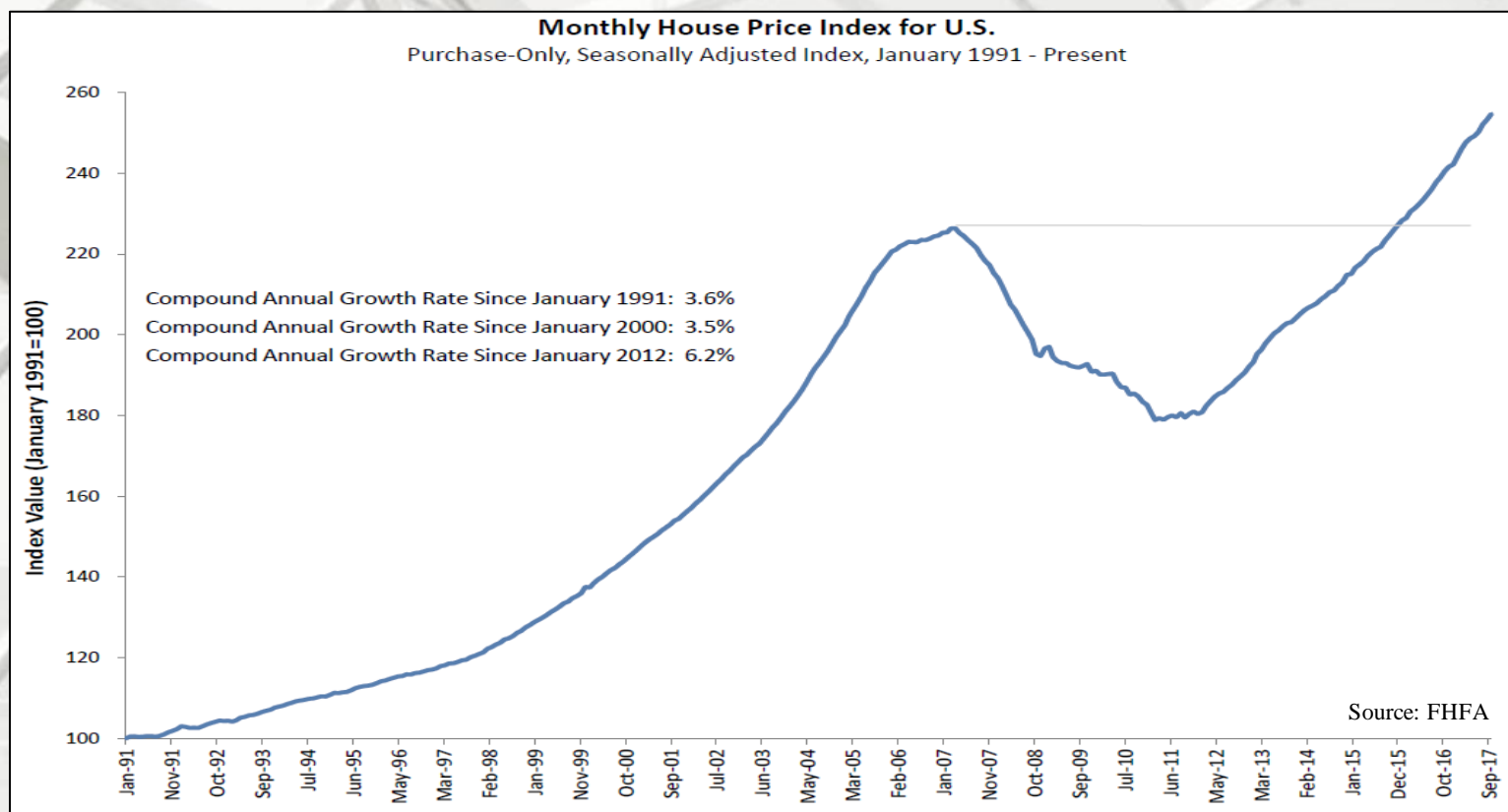
“Ladies and gentlemen, the economy is in a very good place. Unemployment is low and confidence is high. While low inflation remains a challenge for someone in my position, I imagine most of you aren’t overly concerned about a 1.6% inflation rate!

As we wrap up 2017 and look ahead to 2018, the problems we face are good ones: How to keep the economic expansion going, how to bring inflation up to its 2% target, and how we use this period to normalize monetary policy in general and interest rates in particular.

The years ahead will be about taking a balanced approach, and my guiding principle will always be to follow the data.

I’d like to wish you a very happy holiday season, and a healthy and prosperous new year.” – John C. Williams, President and Chief Executive Officer, The Federal Reserve Bank of San Francisco

# U.S. Economic Indicators



## FHFA House Price Index

### FHFA House Price Index Up 0.5 Percent in October

“U.S. house prices rose in October, up **0.5 percent** from the previous month, according to the Federal Housing Finance Agency (FHFA) seasonally adjusted monthly House Price Index (HPI). The previously reported 0.3 percent increase in September was revised upward to 0.5 percent.” – Stefanie Johnson and Corinne Russell, FHFA



# U.S. Global Economic Indicators

**Chart 1**  
**Third-Quarter Gross Domestic Product Revised Down**



\*Quarter/quarter, real pesos; seasonally adjusted, annualized rate.

NOTE: Data through third quarter 2017.

SOURCE: Instituto Nacional de Estadística y Geografía (National Institute of Statistics and Geography).

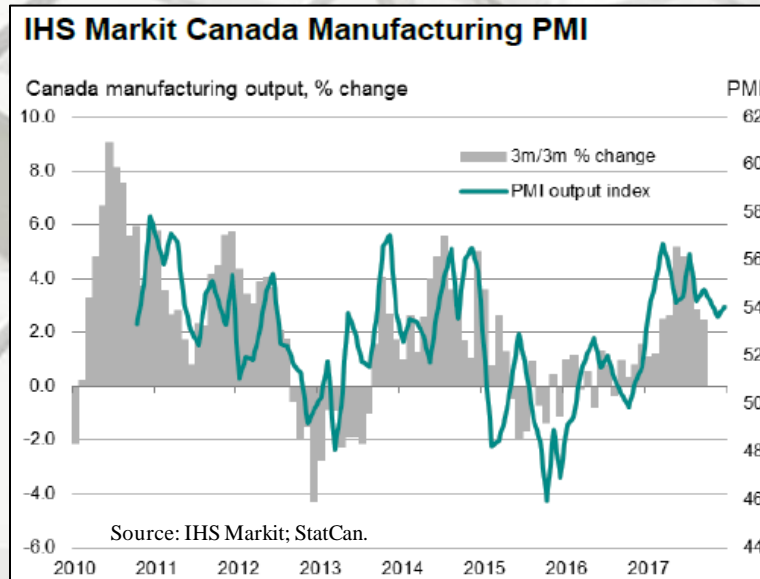
## Mexico Economic Update

### Economic Outlook Stable Despite Weaker Third-Quarter Data

“The consensus Gross Domestic Product (GDP) growth forecast for 2018 remained at 2.3 percent despite a downward revision of third quarter 2017 growth. Forecasters are predicting a bounceback in activity in the fourth quarter; 2017 GDP growth is still expected to come in at 2.1 percent.

More recent data are mixed. Exports, industrial production and retail sales all declined while employment growth remained strong. The peso weakened slightly against the dollar in November, and inflation ticked up.” – Jesus Cañas, Senior Business Economist and Alexander Abraham, Research Assistant; The Federal Reserve Bank of Dallas

# Private Indicators: Global



## Markit Canada Manufacturing PMI™

“At 54.7, up from 54.4 in November, the seasonally adjusted **IHS Markit Canada Manufacturing Purchasing Managers’ Index®** (PMI™) pointed to the strongest improvement in business conditions since September. The headline index has posted above the 50.0 no-change threshold in each month since March 2016. Stronger business conditions were driven by the fastest rise in new business volumes for three months in December.

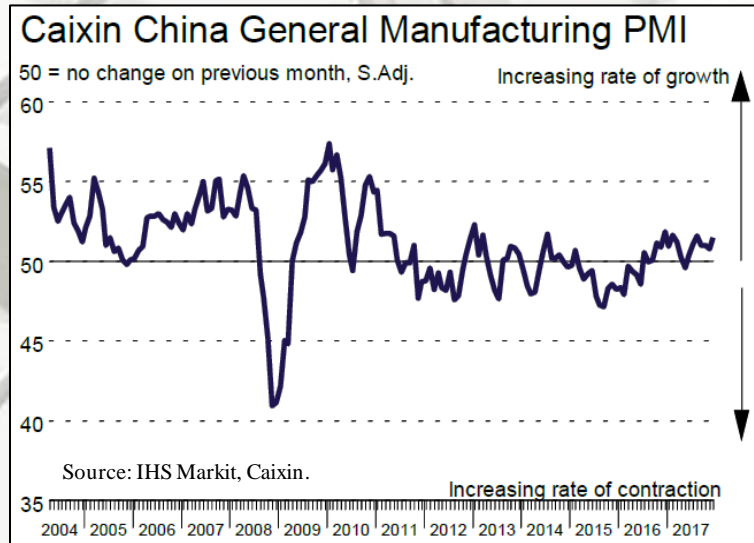
### Manufacturing PMI hits three-month high, led by faster new order growth

Stronger new order growth helped to underpin the sharpest improvement in business conditions across the manufacturing sector for three months in December. There were also positive signs for near-term growth, with survey respondents recording upbeat sentiment regarding the outlook for production levels in 2018.

Moreover, a number of firms cited efforts to boost operating capacity, in response to an accumulation of outstanding business. The latest increase in backlogs of work was the fastest for almost three-and-a-half years in December.

Canadian manufacturers experienced the sharpest improvement in business conditions for three months during December, driven by a sustained rebound in order book growth.” – Tim Moore, Associate Director at Survey Compilers, IHS Markit

# Private Indicators: Global



## Caixin China General Manufacturing PMI™

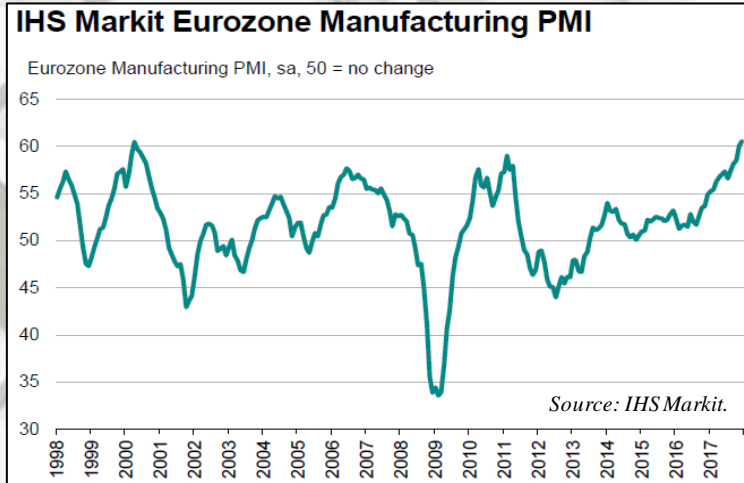
### Operating conditions improve at quickest pace for four months

“The seasonally adjusted *Purchasing Managers’ Index*™ (*PMI*™) – a composite indicator designed to provide a single-figure snapshot of operating conditions in the manufacturing economy – posted 51.5 in December, up from 50.8 in November, to signal a further improvement in the health of the sector. Though modest, the rate of strengthening was the highest seen for four months.

The headline PMI pointed to a stronger improvement in Chinese manufacturing operating conditions at the end of 2017. Latest data highlighted faster growth of output, total new work and export sales. Greater production led to a further rise in buying activity, with the rate of growth quickening to a four-month high. At the same time, capacity pressures continued to build, with backlogs rising amid a further decline in workforce numbers (albeit marginal). Inflationary pressures remained elevated, with input costs rising sharply and prices charged increasing at a solid pace. Optimism towards the business outlook picked up slightly from November’s joint-record low, but remained weak in the context of historical data.

Manufacturing operating conditions improved in December, reinforcing the notion that economic growth has stabilized in 2017 and has even performed better than expected. However, we should not underestimate downward pressure on growth next year due to tightening monetary policy and strengthening oversight on local government financing.” – Dr. Zhengsheng Zhong, Director of Macroeconomic Analysis, CEBM Group

# Private Indicators: Global



## Markit Eurozone Manufacturing PMI®

“The eurozone manufacturing sector ended 2017 on a high note. Strong rates of expansion in output, new orders and employment pushed the final IHS Markit Eurozone Manufacturing PMI® to 60.6 in December, its best level since the survey began in mid-1997. The PMI was up from 60.1 in November and identical to the earlier flash estimate.

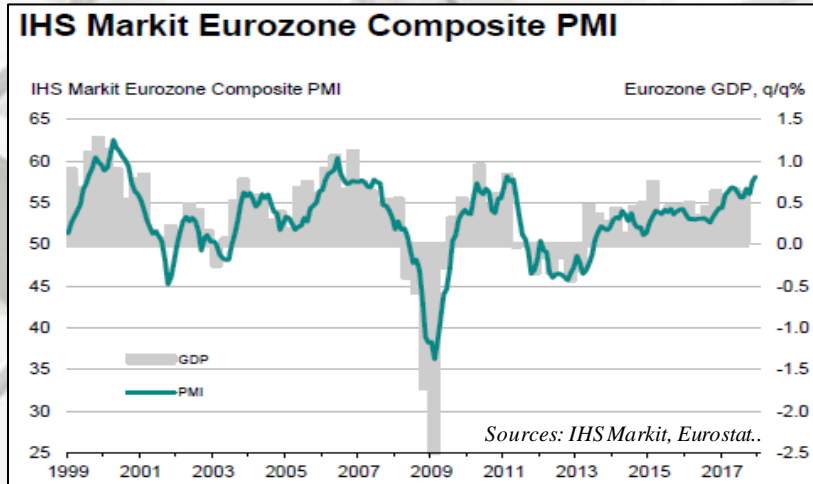
### **Eurozone Manufacturing PMI ends 2017 at series-record high**

The expansion was led by the investment goods sector, where the pace of growth signalled by the PMI was also a record high. The rate of improvement in the intermediate goods sector remained close to November’s survey-record. Growth was slower in the consumer goods sector by comparison, but remained solid and well above its long-run trend.

The eurozone manufacturing boom gained further momentum in December, rounding off the best year on record and setting the scene for a strong start to 2018. The final PMI was in line with the earlier flash number, confirming a record monthly improvement in business conditions at the end of 2017. Forward-looking indicators bode well for the New Year: new orders rose at a near-record pace, while purchasing growth hit a new peak as firms readied themselves for higher production. Meanwhile, job creation was maintained at November’s record pace.

Perhaps most encouraging of all is the extent to which the strongest upturn is being recorded for producers of investment goods such as plant and machinery, which highlights the upswing in business investment. Higher investment should help boost productivity and profits, and therefore enhance the sustainability of the upturn.” – Chris Williamson, Chief Business Economist, Markit®

# Private Indicators: Global



## Markit Eurozone Composite PMI®

“The final **IHS Markit Eurozone PMI® Composite Output Index** posted 58.1 in December, up from 57.5 in November, to register its highest reading since February 2011. The headline index has signalled growth for 54 successive months, with the average level during quarter four the best since the opening quarter of 2011.

## Eurozone economic growth highest since early-2011

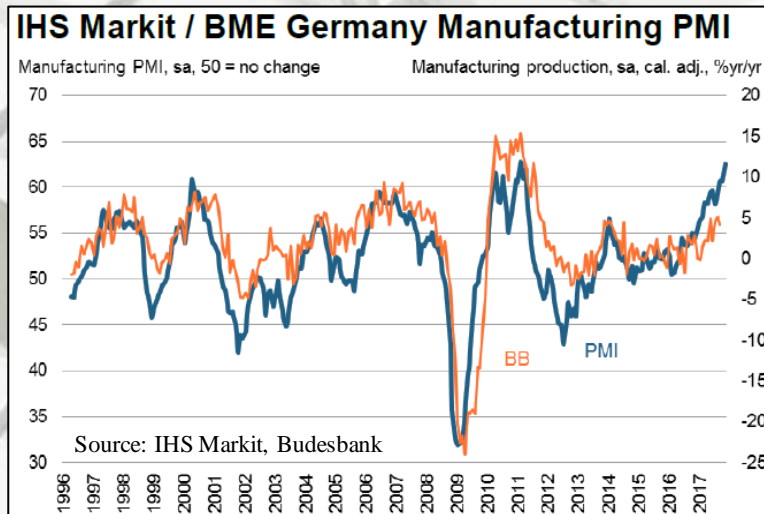
The euro area economy gathered further growth momentum at the end of 2017, spurred on by a near-record expansion of manufacturing production and the steepest increase in service sector activity for over-six-and-a-half years.

A stellar end to 2017 for the eurozone rounded off the best year for over a decade, continuing to confound widely-held fears that rising political uncertainty would curb economic growth. At 56.4, the average PMI reading for 2017 was the highest annual trend since 2006. Manufacturing is enjoying its best growth spell since data were first collected over two decades ago while the service sector closed off its best year since 2007.

...Based on past experience, the extent to which demand appears to be outstripping supply for many goods and services suggests that inflationary pressures could continue to build in the coming months. A big question for 2018 will therefore be whether relatively high unemployment and spare capacity in many countries will continue to hold down pay growth and keep a ceiling on consumer price inflation; a reminder that many wounds from the global financial crisis and the region's sovereign debt crisis are still healing.” – Chris Williamson, Chief Business Economist, Markit®



# Private Indicators: Global



## Markit/BME Germany Manufacturing PMI®

### Manufacturing PMI reaches record high in December

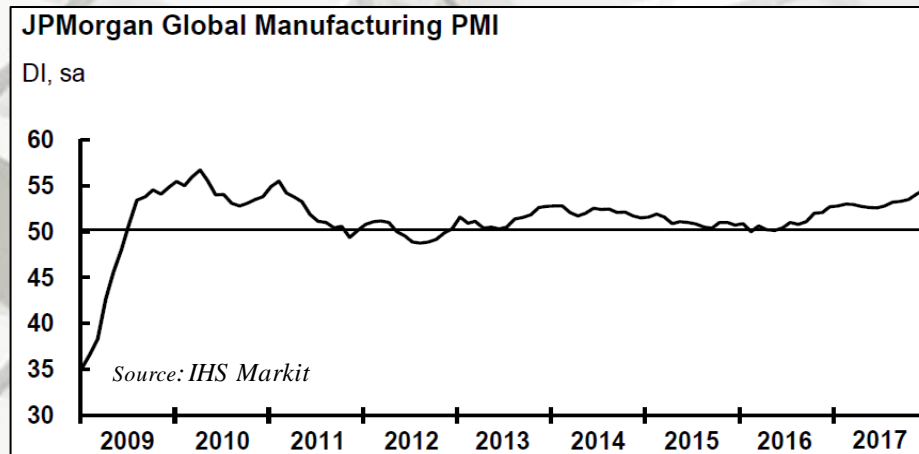
“The headline **Final IHS Markit/BME Germany Manufacturing PMI** – a single-figure snapshot of the performance of the manufacturing economy – climbed to an all-time high of 63.3 in December from 62.5 in November, surpassing the previous highest reading recorded in February 2011 (62.7).

Germany’s manufacturing sector ended a strong year with a further pick-up in performance in December, according to the latest *PMI*® survey data from IHS Markit and BME. Production growth reached a level not seen since early-2011, buoyed by one of the fastest rises in new export orders ever recorded in the survey’s near 22-year history. An associated increase in demand for raw materials meanwhile led to greater pressure on supply chains, with delivery delays found to be the worst on record.

2017 was a record-breaking year for the German manufacturing sector: the PMI posted an all-time high in December, and the current 37-month sequence of improving business conditions surpassed the previous record set in the run up to the financial crisis. ... Business confidence rebounded back up to an elevated level by historical standards in December, further adding to the positive outlook.

A lingering concern is that supply-side constraints pose a risk to the sector’s ability to kick on. The survey’s measure of supplier delivery performance has already moved into uncharted territory, signalling the worst delays for more than 20 years, which will inevitably be borne out by sustained upward pressure on input costs as a sellers’ market for materials becomes more entrenched.” – Phil Smith, Principal Economist, IHSMarkit®

# Private Indicators: Global



## JP Morgan Global Manufacturing PMI™

“The J.P. Morgan Global Manufacturing PMI™ – ... – rose to a near seven-year high of 54.5 in December, up from 54.1 in November. The PMI has signalled expansion in each of the past 22 months.

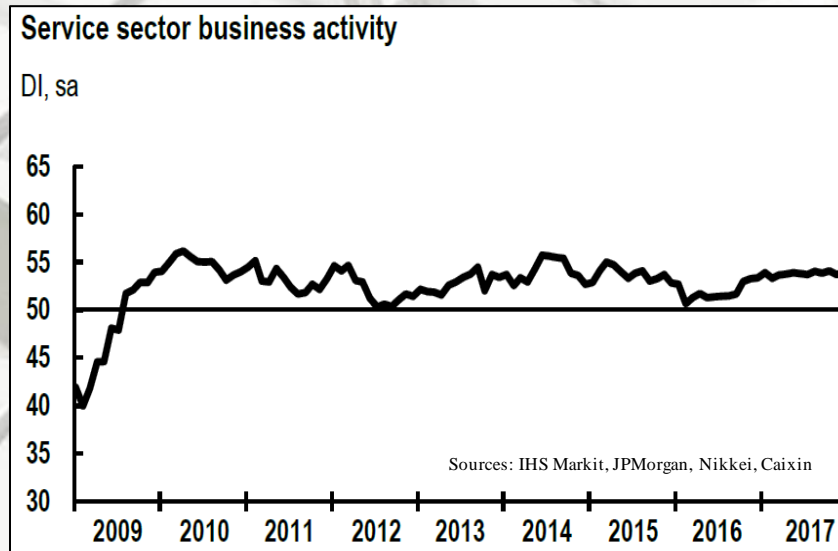
### Global PMI ends 2017 at near seven-year high

The upturn in the global manufacturing economy gathered further pace at the end of 2017. Rates of expansion in output and new orders accelerated to the best seen since February 2011, leading to improved jobs growth and rising business optimism. Price inflation also eased slightly after strengthening in recent months.

Growth was registered across the consumer, intermediate and investment goods sectors in December, with rates of expansion accelerating in all three. The strongest pace of improvement was in the intermediate goods category, followed closely by investment goods, with PMI readings at eighty-two month highs in both cases. Growth was mild in comparison in the consumer goods sector, despite its PMI ticking up to a four-month high.

The performance of the global manufacturing sector continued to strengthen at the end of the year, with growth of output, new orders and employment reaching levels last achieved in early -2011. Improved inflows of new business, rising backlogs of work and improved business optimism all point to this robust upswing in output growth being carried over into 2018. ” – David Hensley, Global Economist, J.P. Morgan

# Private Indicators: Global



## **JP Morgan Global Services PMI™**

“The J.P. Morgan Global Services Business Activity Index—a composite index produced by J.P. Morgan and HIS Markit in association with ISM and IFPSM—rose to 53.9 in December, up from 53.7 in November. The average index reading over the final quarter of 2017 was identical to the prior quarter, which was the highest since Q2 2015.

### **Growth of global service sector activity improves in December**

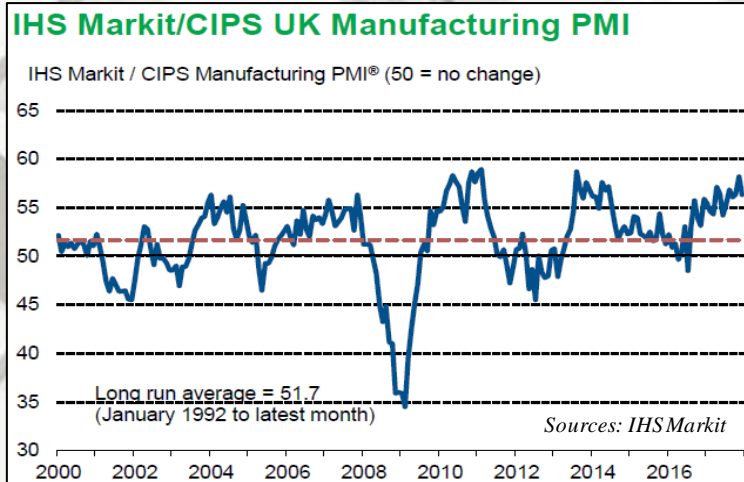
The end of 2017 saw rates of expansion in global service sector output and new orders tick higher, leading to a further solid increase in staffing levels.

The strongest upturn in business activity was registered in the business services category, where the rate of increase accelerated to a four-month high. Growth eased in the consumer and financial services sectors, with the slower pace of expansion in the former.

National PMI data highlighted broad-based growth of business activity, with expansions signalled in almost all of the countries covered. The sole exception was Brazil, which saw output contract for the third straight month.

According to the global PMI, growth of global services output and new business improved at the end of 2017. The performance over the final quarter was also solid, with business activity rising at a similar pace to the third quarter’s recent high. On this positive heading, the sector should maintain its current pace of expansion at the start of 2018.” – David Hensley, Global Economist, J.P. Morgan

# Private Indicators: Global



## Markit/CIPS UK Manufacturing PMI™

“The seasonally adjusted IHS Markit/CIPS Purchasing Managers’ Index® (PMI®) posted 56.3 in December, down from November’s 51-month high of 58.2. The headline PMI has now remained above the 50.0 no-change mark for 17 consecutive months. The average reading over the final quarter of 2017 (57.0) was the best since the second quarter of 2014.

### UK manufacturing sector growth remains solid at end of 2017

The UK manufacturing sector ended 2017 on a positive note. Although December saw rates of expansion in output, new orders and employment slow from November’s highs, growth in all three remained solid and well above long-run trends.

UK manufacturing ended 2017 on a positive footing. Although growth of output and new orders moderated during December, rates of expansion remained comfortably above long-term trend rates. The sector has therefore broadly maintained its solid boost to broader economic expansion in the fourth quarter. The outlook is also reasonably bright, with over 50% of companies expecting production to be higher one year from now.

The main growth engines were the intermediate and investment goods sectors during December, suggesting resilient business-to-business demand and capital spending trends, albeit in part due to rising exports. Growth in the consumer goods sector remained weak in comparison and was the only sub-industry to see output expand at a slower pace than November.” – Rob Dobson, Director & Senior Economist, IHS Markit

# **Private Indicators American Institute of Architects (AIA)**

## **November Architecture Billings Index**

### **Firm billings see fastest growth pace of the year**

#### **With growing workloads, firms pursue wide-ranging set of strategies to deal with staffing issues**

“Though billings at US architecture firms have seen healthy gains throughout 2017, AIA’s Architecture Billings Index (ABI) for November indicated that the pace of growth accelerated the score jumped to 55.0 for the month, its strongest reading for the year. New project inquiries, as well as new design contracts coming into architecture firms, also signified healthy growth. As such, indicators broadly point to very solid business conditions at architecture firms as 2017 winds down.” – Kermit Baker, Chief Economist, AIA , Honorable AIA



# Private Indicators

## American Institute of Architects

### National

A surge in architecture firm billings in November

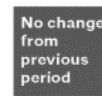
Graphs represent data from November 2016–November 2017.



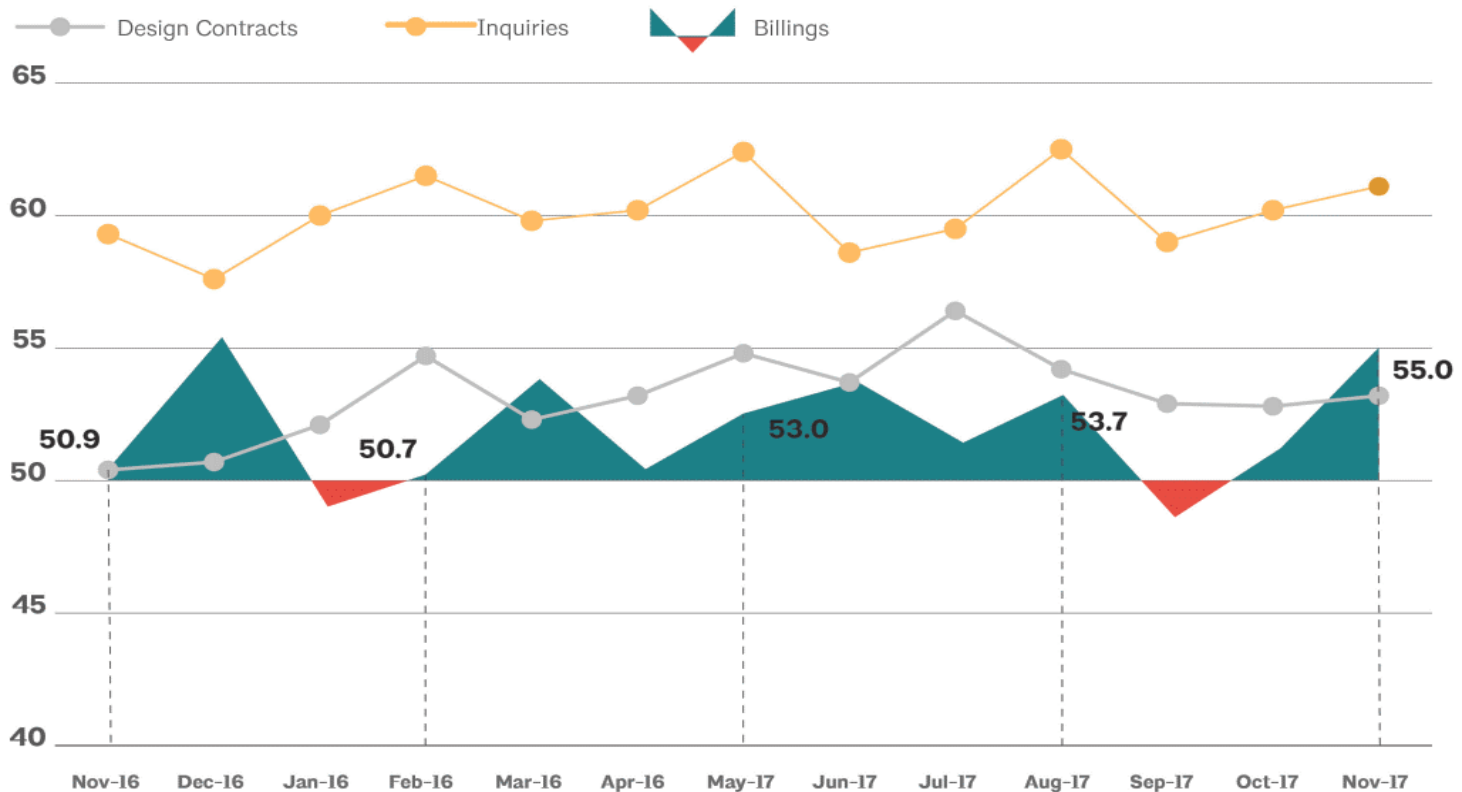
Above 50



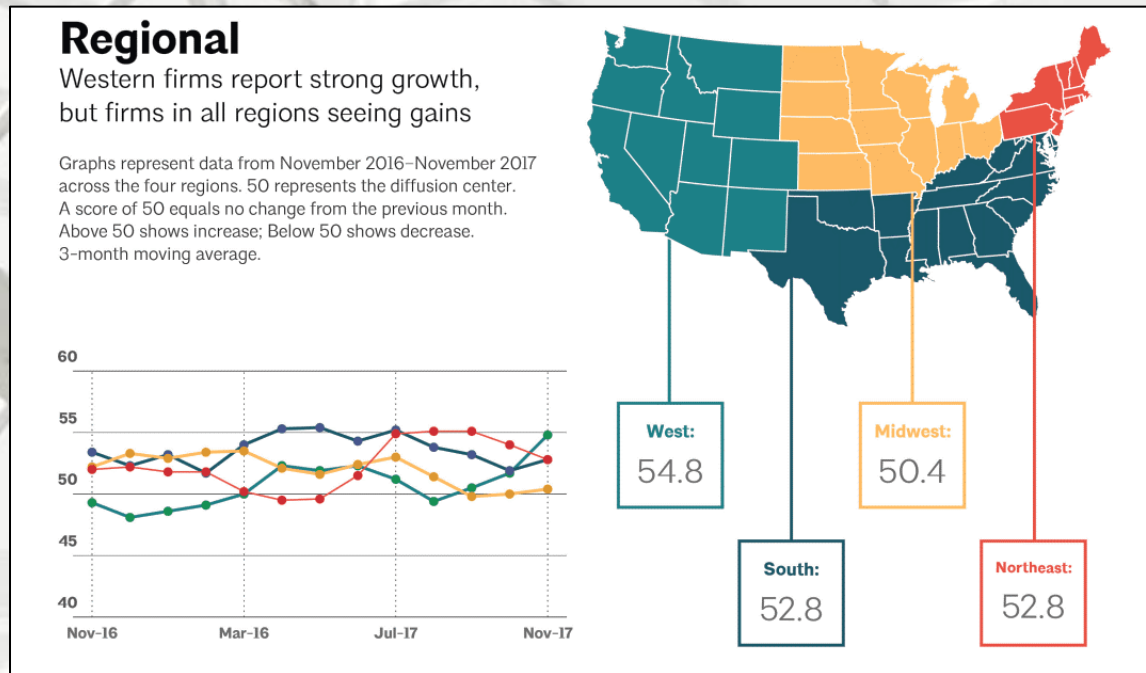
Below 50



No change from previous period



# Private Indicators: AIA



## Region

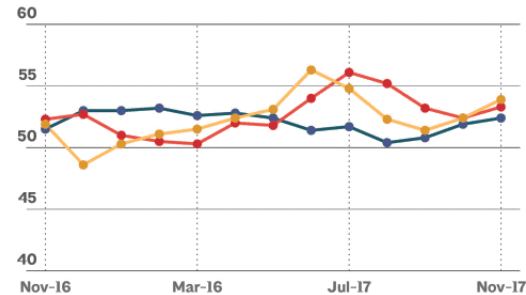
“Recent strength in ABI readings has pushed all four major regions and the three major building categories into growth territory. In particular, firms in the West have benefitted from the recent strength in billings, as they are reporting their strongest scores in over four years. Firms in the Northeast and South are also seeing healthy increases in design revenue. Firms in the Midwest report only very modest revenue gains.” – Kermit Baker, Chief Economist, AIA , Honorable AIA

# Private Indicators: AIA

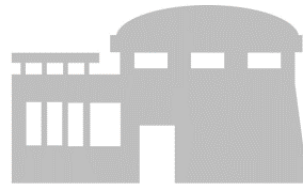
## Sector

In all major building sectors, design activity is healthy

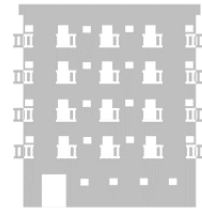
Graphs represent data from November 2016–November 2017 across the three sectors. 50 represents the diffusion center. A score of 50 equals no change from the previous month. Above 50 shows increase; Below 50 shows decrease. 3-month moving average.



**Commercial/Industrial: 53.3**



**Institutional: 52.4**



**Residential: 53.9**

## Sector

“Even more significant is that all of the major building sectors are participating in the solid gains in billings. Residential firms (preliminary November ABI score of 53.9), commercial/industrial (53.3), and institutional (52.4) all are reporting growth levels above the average pace of the first ten months of the year. Balanced growth across the building spectrum points to a healthy construction sector for 2018.” – Kermit Baker, Chief Economist, AIA , Honorable AIA

# Private Indicators

## Dodge Data & Analytics

### New Construction Starts in November Slide 12 Percent

“At a seasonally adjusted annual rate of \$650.5 billion, new construction starts in November dropped 12% from October, according to Dodge Data & Analytics. Nonresidential building fell 14% in November, retreating for the second month in a row after the sharp improvement reported in late summer. The nonbuilding construction sector, which can be volatile on a month-to-month basis, plunged 32% in November after its 28% hike in October, which included the start of two large natural gas pipeline projects. Meanwhile, residential building managed to edge up 1% in November, as an improved amount for single family housing slightly outweighed a moderate pullback for multifamily housing. During the first eleven months of 2017, total construction starts on an unadjusted basis were \$687.1 billion, up 1% from a year ago. The year-to-date increase for total construction was restrained by a 39% downturn for the electric utility/gas plant category. Excluding electric utilities and gas plants, total construction starts during the first eleven months of 2017 would be up 4% compared to last year.

November’s data lowered the Dodge Index to 138 (2000=100), down from 157 for October and this year’s high of 173 for September, which reflected the boost coming from several unusually large projects – a \$6.0 billion ethane cracker plant in Pennsylvania, the \$4.0 billion Delta Airlines new terminal facility at LaGuardia Airport in New York NY, and the \$1.7 billion 50 Hudson Yards office tower in New York NY.” – Benjamin Gorelick, Spector & Associates

# Private Indicators

## Dodge Data & Analytics

“While total construction starts fell considerably during October and November, the declines came after an exceptionally strong September. If one takes the average of September, October, and November, total construction starts during that period would be down only 1% from the average of the previous eight months. On balance, the construction expansion has continued during 2017, although it’s true that the rate of growth has slowed from the 6% gain reported for 2016 as well as the 11% to 13% yearly gains reported from 2012 through 2015.

Several features stand out about the pattern of construction starts during 2017. For nonresidential building, the upward momentum has shifted from commercial building to institutional building, and the manufacturing building category is no longer exerting a downward pull. *For residential building, growth is being reported for the single family side of the market, while multifamily housing appears to have peaked and is now retreating moderately* [emphasis added]. For nonbuilding construction, public works has been lifted this year by an especially strong amount of pipeline starts, while highway and bridge construction has been steady and environmental public works has weakened. A further retreat by electric utilities and gas plants continues to depress the nonbuilding total. Heading into 2018, it’s expected that total construction activity will register modest growth next year, and the passage of tax reform will play some role in shaping the pattern of activity.

Assuming that economic growth is boosted by the corporate tax cuts, the likely beneficiaries would be commercial building and multifamily housing, although there’s also concern that more limited deductions for state and local taxes could dampen some of the growth expected for single family housing. The fact that private activity bonds retained their tax-exempt status in the final tax reform legislation is viewed as a plus for institutional building and public works.” – Robert Murray, Chief Economist, McGraw Hill Construction



# Private Indicators

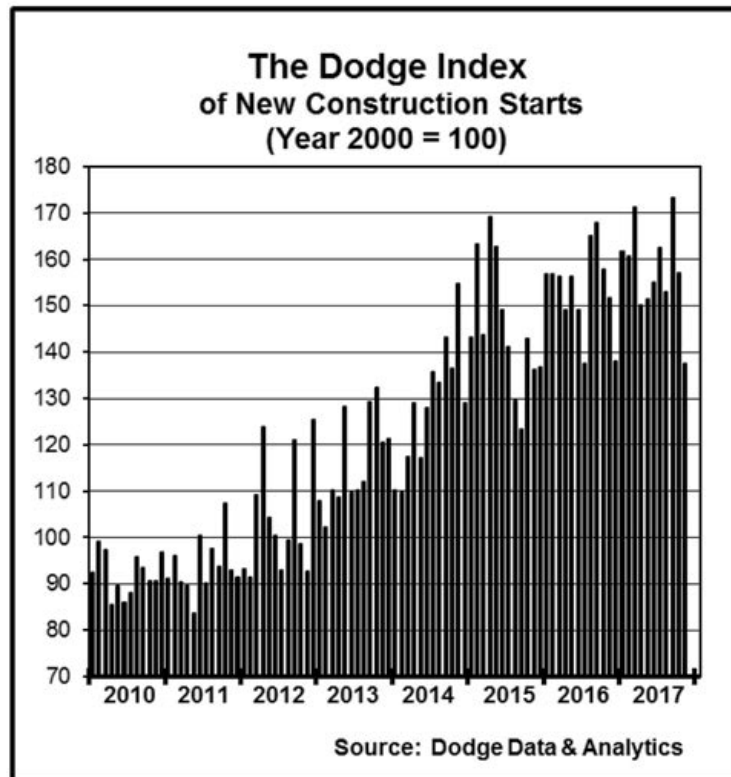
## Dodge Data & Analytics

“**Residential building** in November was \$302.1 billion (annual rate), up 1% from October. Single family housing rose 4%, showing upward movement once again after the pause experienced earlier in the year. **Multifamily housing decreased 5%** in November, retreating for the second month in a row as the number of very large projects that are reaching groundbreaking continues to settle back. In November, there were 6 multifamily projects valued each at \$100 million or more that reached groundbreaking, ... . The top five metropolitan markets ranked by the dollar amount of multifamily starts in November were – New York NY, Boston MA, Washington DC, Philadelphia PA, and Los Angeles CA.

During the January-November period of 2017, residential building grew 2% compared to last year. **Single family housing climbed 8%, providing the lift to the residential total as the result of this year-to-date regional pattern** – the South Atlantic, up 12%; the South Central and the West, each up 8%; the Midwest, up 5%; and the Northeast, down 1%. **In contrast, multifamily housing registered a 12% year-to-date decline**, as it begins to retreat after seven straight years of growth. The nation’s leading multifamily market by dollar volume, New York NY, increased 1% year-to-date as it appears to have stabilized after registering a 28% decline for the full year 2016. Rounding out the top five multifamily markets in the January-November period, with their percent change from a year ago, were – Los Angeles CA, down 12%; Chicago IL, down 22%; Washington DC, down 22%; and Atlanta GA, up 29%. Metropolitan areas ranked 6 through 10 were – Boston MA, down 32%; San Francisco CA, down 6%; Miami FL, down 48%; Seattle WA, down 16%; and Philadelphia PA, up 70%.” – Robert Murray, Chief Economist, McGraw Hill Construction

# Private Indicators

## November 2017 Construction Starts



## November 2017 Construction Starts

### Monthly Summary of Construction Starts Prepared by Dodge Data & Analytics

#### Monthly Construction Starts Seasonally Adjusted Annual Rates, in Millions of Dollars

	November 2017	October 2017	% Change
Nonresidential Building	\$220,082	\$255,279	-14
Residential Building	302,072	297,932	+1
Nonbuilding Construction	<u>128,385</u>	<u>189,539</u>	<u>-32</u>
Total Construction	\$650,539	\$742,750	-12

#### The Dodge Index Year 2000=100, Seasonally Adjusted

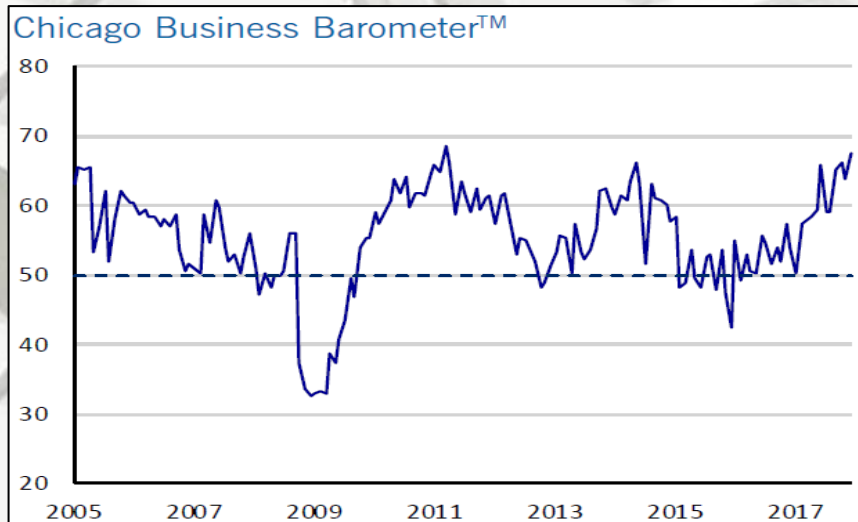
November 2017 .....138

October 2017 .....157

#### Year-to-Date Construction Starts Unadjusted Totals, in Millions of Dollars

	11 Mos. 2017	11 Mos. 2016	% Change
Nonresidential Building	\$250,388	\$233,895	+7
Residential Building	278,875	274,380	+2
Nonbuilding Construction	<u>157,820</u>	<u>169,931</u>	<u>-7</u>
Total Construction	\$687,083	\$678,206	+1
Total Construction, excluding electric utilities/gas plants	\$659,176	\$632,175	+4

# Private Indicators



## **MNI Chicago December Chicago Business Barometer Rises to 67.6**

“The MNI Chicago Business Barometer rose to 67.6 in December, up from 63.9 in November, closing the year at the highest level since March 2011.

## **Production, New Orders Propel Barometer to Six-and-a-Half Year High**

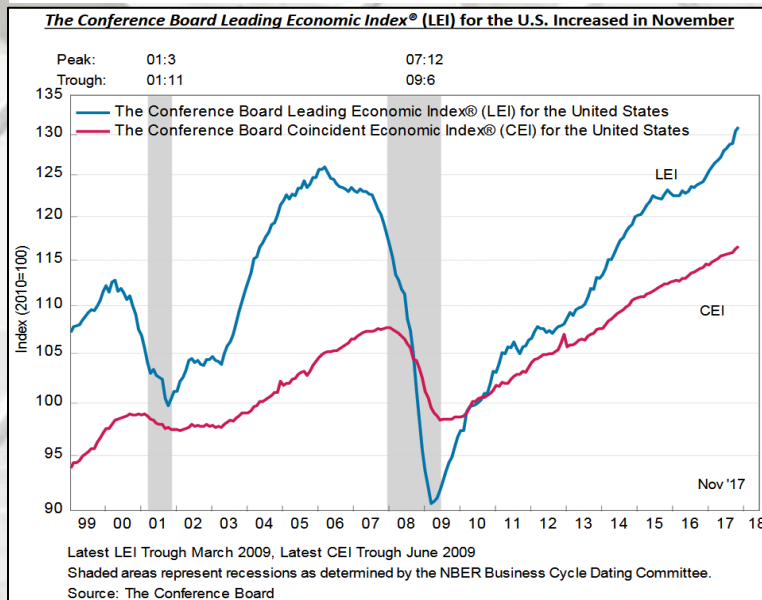
On a calendar quarter basis, the Barometer rose to 65.9 in Q4 from 61.0 in Q3, the best quarterly performance since Q1 011, only the second time in the last decade there have been three consecutive above-60 readings in the Oct-Dec period. Both output and demand showed strong gains in December, with each rising to multi-year highs. The Production indicator rose to a level last seen higher 34 years ago, while the New Orders Indicator hit a three-and-a-half year high. As for the other three indicators that comprise the Barometer, Order Backlogs also grew, but Employment and Supplier Deliveries fell on the month.

Sentiment among businesses started 2017 in good shape and only impressed more as the year progressed. December’s result secured the MNI Chicago Business Barometer’s first full year of expansion since 2014 and with New Orders ending the quarter in fine shape there is every chance this form could be carried over into 2018.” – Jamie Satchi, Economist, MNI Indicators

# Private Indicators

***The Conference Board Leading Economic Index®*** (LEI) for the U.S. Increased Again 0.4 percent in December to 130.9 (2010 = 100), following a 1.2 percent increase in October, and a 0.1 percent increase in September.

## U.S. Composite Economic Indexes (2010 = 100)



## Solid Growth to Continue into Early 2018

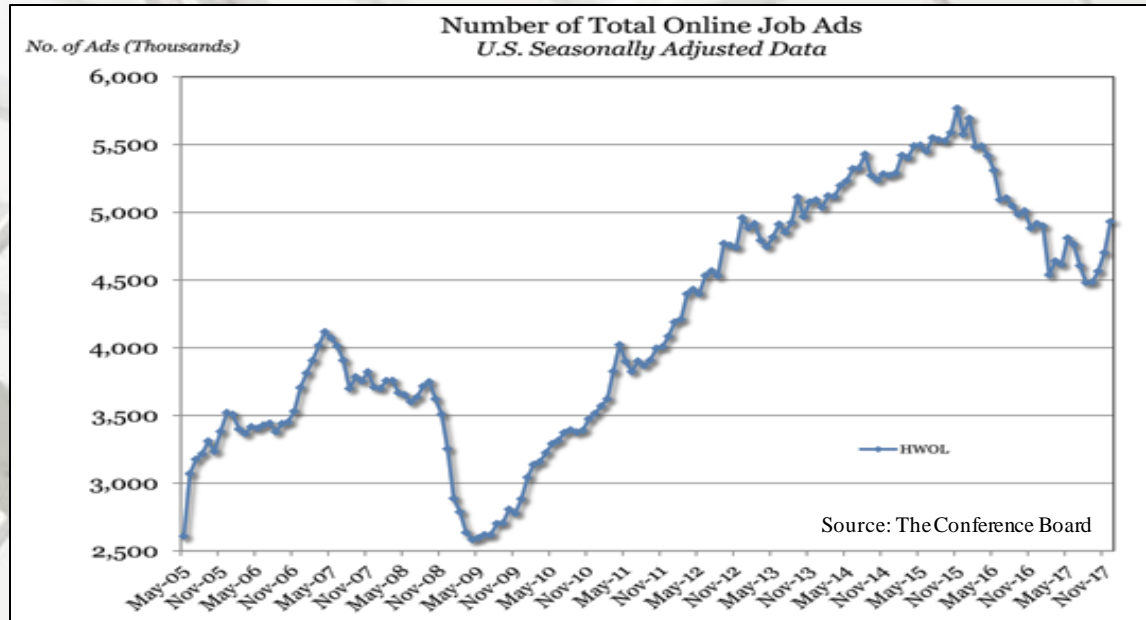
“The U.S. LEI rose again in November, suggesting that solid economic growth will continue into the first half of 2018. In recent months, unemployment insurance claims have returned to pre-hurricane levels. In addition, improving financial indicators, new orders in manufacturing and historically high consumer sentiment have propelled the U.S. LEI even higher.” – Ataman Ozyildirim, Director of Business Cycles and Growth Research, The Conference Board

***The Conference Board Coincident Economic Index®*** (CEI) for the U.S. increased 0.3 percent in November to 116.5 (2010 = 100), following a 0.3 percent increase in October, and a 0.1 percent increase in September.

***The Conference Board Lagging Economic Index®*** (LAG) for the U.S. increased 0.1 percent in November to 125.6 (2010 = 100), following a 0.3 percent increase in October and a 0.1 percent decline in September.” – The Conference Board



# Private Indicators



## The Conference Board Help Wanted OnLine® (HWOL) Online Job Ads Increased 229,700 in December

- “Gains widespread across all regions and most States and MSAs
- Most occupations showed gains over the month

Online advertised vacancies increased 229,700 to 4,930,700 in December, according to **The Conference Board Help Wanted OnLine® (HWOL) Data Series**. The November Supply/Demand rate stands at 1.41 unemployed for each advertised vacancy, with a total of 1.9 million more unemployed workers than the number of advertised vacancies. The number of unemployed was approximately 6.6 million in November.

The Professional occupational category saw gains in Education, Training, and Library (56.0), Art, Design, Entertainment (13.3) and Management (12.5). The Services/Production occupational category saw gains in Transportation (49.2), Office and Admin (21.6), and Building and Grounds Cleaning and Maintenance (14.0).” – Carol Courter, The Conference Board



# Private Indicators

## Equipment Leasing and Finance Association

### Equipment Leasing and Finance Industry Confidence Increases Again in December

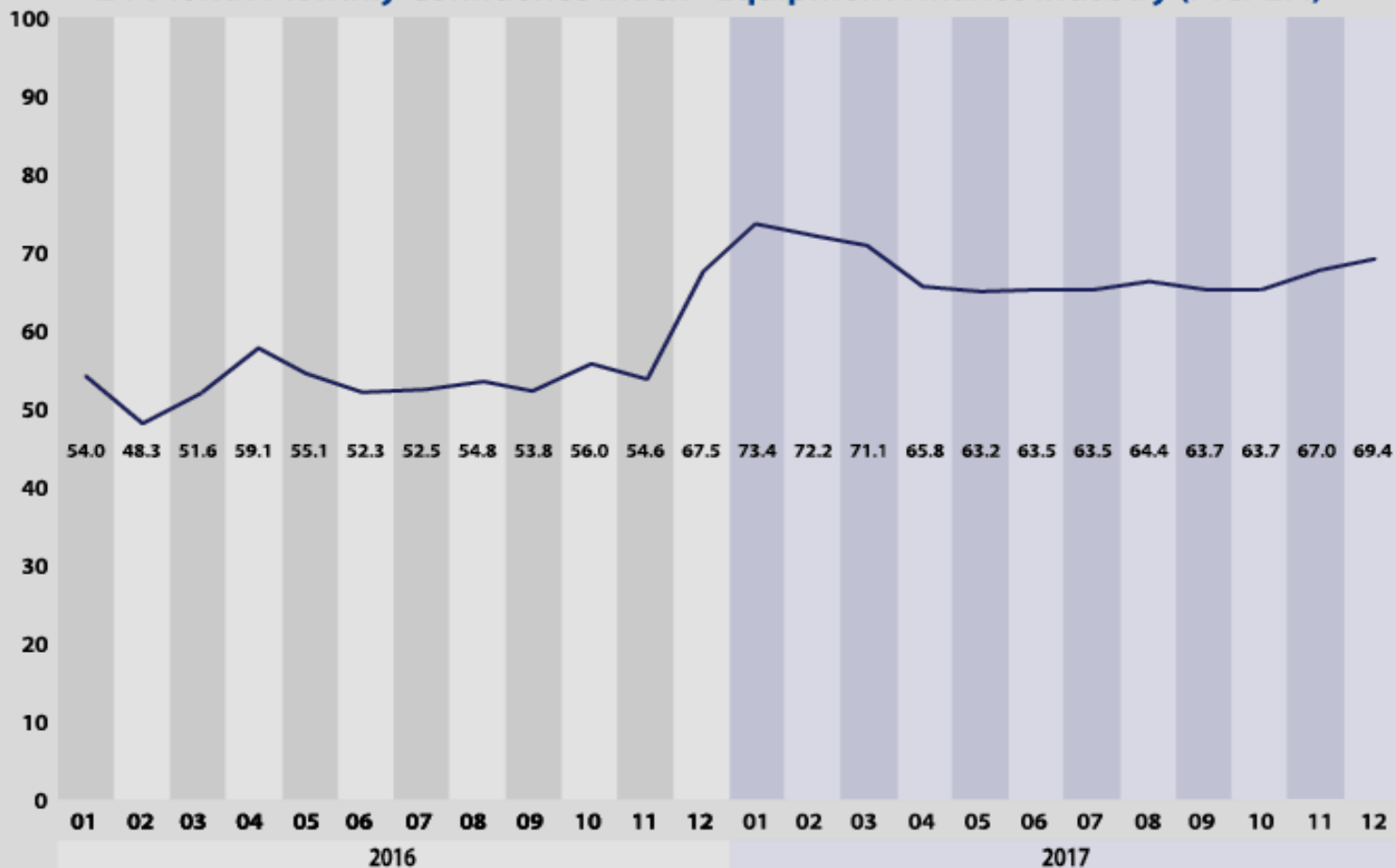
“The Equipment Leasing & Finance Foundation (the Foundation) releases the December 2017 Monthly Confidence Index for the Equipment Finance Industry (MCI-EFI). Designed to collect leadership data, the index reports a qualitative assessment of both the prevailing business conditions and expectations for the future as reported by key executives from the \$1 trillion equipment finance sector. Overall, confidence in the equipment finance market is 69.4 in December, an increase from 67.0 in November and the highest level in nine months.” – Anneliese DeDietmar, Author, Equipment Leasing & Finance Association

“A number of factors enter into our optimism regarding an improved business environment, however, the anticipated removal of uncertainty regarding accounting rule and tax code changes are key events. Aligned with this optimism is our expansion into new business silos to take advantage of a resurgence of business in key sectors of our large ticket model. Our ability to drive higher returns through niche markets has encouraged the bank to increase its investment in our business providing a strong commitment to growth.” – Frank Campagna, Group Vice President, Line of Business Manager, M&T Bank Commercial Equipment Finance

# Private Indicators



24-Month Monthly Confidence Index - Equipment Finance Industry (MCI-EFI)



# Private Indicators

## Equipment Leasing and Finance Association

### December 2017 Survey Results:

“The overall MCI-EFI is **69.4** in December, up from **67.0** in November.

- When asked to assess their business conditions over the next four months, 32.1% of executives responding said they believe business conditions will improve over the next four months, relatively unchanged from 32.4% in November. 67.9% of respondents believe business conditions will remain the same over the next four months, also relatively unchanged from 67.7% the previous month. None believe business conditions will worsen, also unchanged from the previous month.
- 46.4% of survey respondents believe demand for leases and loans to fund capital expenditures (capex) will increase over the next four months, an increase from 35.3% in November. 53.6% believe demand will “remain the same” during the same four-month time period, down from 64.7% the previous month. None believe demand will decline, unchanged from November.
- 25.0% of the respondents expect more access to capital to fund equipment acquisitions over the next four months, down from 29.4% in November. 67.9% of executives indicate they expect the “same” access to capital to fund business, relatively unchanged from 67.7% last month. 7.1% expect “less” access to capital, up from none last month.
- When asked, 53.6% of the executives report they expect to hire more employees over the next four months, an increase from 35.5% in November. 46.4% expect no change in headcount over the next four months, a decrease from 61.8% last month. None expect to hire fewer employees, a decrease from 2.9% in November.” – Anneliese DeDiemar, Author, Equipment Leasing & Finance Association

# Private Indicators

## Equipment Leasing and Finance Association

### December 2017 Survey Results:

- “0.7% of the leadership evaluate the current U.S. economy as “excellent,” down from 17.7% last month. 89.3% of the leadership evaluate the current U.S. economy as “fair,” an increase from 82.4% in November. None evaluate it as “poor,” unchanged from last month.
- 42.9% of the survey respondents believe that U.S. economic conditions will get “better” over the next six months, an increase from 32.5% in November. 57.1% of survey respondents indicate they believe the U.S. economy will “stay the same” over the next six months, a decrease from 64.7% the previous month. None believe economic conditions in the U.S. will worsen over the next six months, a decrease from 2.9% who believed so in November.
- In December, 57.1% of respondents indicate they believe their company will increase spending on business development activities during the next six months, an increase from 52.9% in November. 42.9% believe there will be “no change” in business development spending, a decrease from 47.1% the previous month. None believe there will be a decrease in spending, unchanged from last month.” – Anneliese DeDiemar, Author, Equipment Leasing & Finance Association

# Private Indicators

## 2018 Equipment Leasing & Finance U.S. Economic Outlook

### December 2017: Economic Headwinds

“The housing sector may continue to disappoint in 2018, major changes in immigration policy behind the scenes will take some wind out of the U.S. economy’s sales, and trade policy risks persist.

- **Weak Residential Investment:** Residential investment growth was remarkably weak in 2017, posting its two largest quarterly contractions since 2010. This weakness was driven by various supply-side headwinds, including a skilled labor shortage and high input prices (particularly lumber). As such, housing starts lagged for most of the year and are essentially flat compared to last December. Housing permits have also flat lined in 2017, though in October they did climb above 1.3 million for the first time in more than two years. While many economists have been expecting a housing recovery, the critically low supply of homes for sale has sent prices rising much faster than buyers’ incomes. Moreover, the Fed’s planned policy normalization will drive up mortgage rates, which will exacerbate existing affordability concerns. This combination of shrinking supply and rising borrowing costs should incentivize builders to break ground on new homes – though there are few signs yet that this will occur in early 2018.” – Equipment Leasing & Finance Association



# **December 2017 Manufacturing ISM® Report On Business®**

## **December PMI® at 59.7%**

### **New Orders, Production, and Employment Continue Growing Supplier Deliveries Slowing at Faster Rate, Backlog Growing Raw Materials Inventories Contracting, Customers' Inventories Too Low Prices Increasing at Faster Rate**

“Economic activity in the **manufacturing sector** expanded in November, and the overall economy grew for the 103rd consecutive month, say the nation’s supply executives in the latest **Manufacturing ISM® Report On Business®**.

The December PMI® registered 59.7 percent, an increase of 1.5 percentage points from the November reading of 58.2 percent.

The New Orders Index registered 69.4 percent, an increase of 5.4 percentage points from the November reading of 64 percent.

The Production Index registered 65.8 percent, a 1.9 percentage point increase compared to the November reading of 63.9 percent.

The Employment Index registered 57 percent, a decrease of 2.7 percentage points from the November reading of 59.7 percent.

The Supplier Deliveries Index registered 57.9 percent, a 1.4 percentage point increase from the November reading of 56.5 percent.

The Inventories Index registered 48.5 percent, an increase of 1.5 percentage points from the November reading of 47 percent.

The Prices Index registered 69 percent in December, a 3.5 percentage point increase from the November reading of 65.5 percent, indicating higher raw materials prices for the 22nd consecutive month.

Comments from the panel reflect expanding business conditions, with new orders and production leading gains; employment expanding at a slower rate; order backlogs expanding at a faster rate; and export orders and imports continuing to grow in December. Supplier deliveries continued to slow (improving) at a faster rate, and inventories continued to contract at a slower rate during the period. Price increases continued at a faster rate. The Customers’ Inventories Index declined and remains at low levels.” – Timothy R. Fiore, CPSM, CPSD, Chair of the ISM® Manufacturing Business Survey Committee

# Private Indicators

## December 2017 Non-Manufacturing ISM® Report On Business®

**December NMI® at 55.9%**

**Business Activity Index at 57.3%; New Orders Index at 54.3%;  
Employment Index at 56.3%**

“Economic activity in the non-manufacturing sector grew in November for the 96th consecutive month, say the nation's purchasing and supply executives in the latest **Non-Manufacturing ISM® Report On Business®**. The NMI® registered 55.9 percent, which is 1.5 percentage points lower than the November reading of 57.4 percent. This represents continued growth in the non-manufacturing sector at a slower rate.

The Non-Manufacturing Business Activity Index decreased to 57.3 percent, 4.1 percentage points lower than the November reading of 61.4 percent, reflecting growth for the 101st consecutive month, at a slower rate in December.

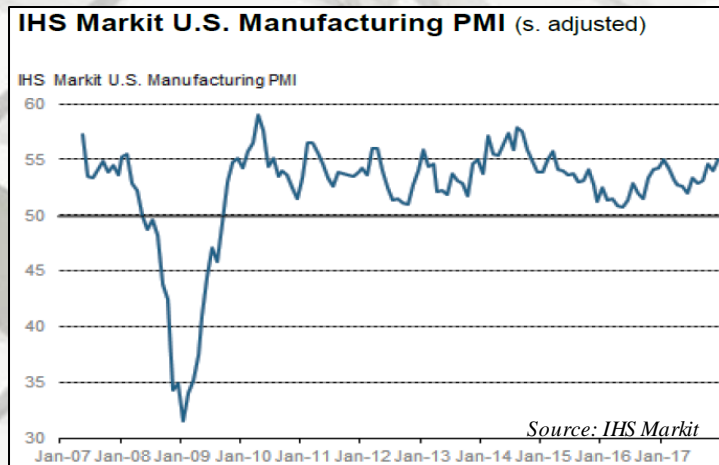
The New Orders Index registered 54.3 percent, 4.4 percentage points lower than the reading of 58.7 percent in November.

The Employment Index increased 1 percentage point in December to 56.3 percent from the November reading of 55.3 percent.

The Prices Index increased by 0.1 percentage point from the November reading of 60.7 percent to 60.8 percent, indicating that prices increased in December for the seventh consecutive month.

According to the NMI®, 14 non-manufacturing industries reported growth. There has been a second consecutive month of pullback in the rate of growth. Overall, the majority of respondents' comments indicate that they finished the year on a positive note. They also indicate optimism for business conditions and the economic outlook going forward.” – Anthony Nieves, CPSM, C.P.M., CFPM, Chair of the Institute for Supply Management® (ISM®) Non-Manufacturing Business Survey Committee

# Private Indicators



## Markit U.S. Manufacturing PMI™

“The seasonally adjusted IHS Markit final **US Manufacturing Purchasing Managers’ Index™ (PMI™)** registered 55.1 in December, up from 53.9 in November. The latest index reading was the highest since March 2015 and signalled a solid improvement in the health of the sector. December data also rounded off the strongest quarterly performance since the start of 2015.

### **December PMI signals strongest manufacturing growth since March 2015**

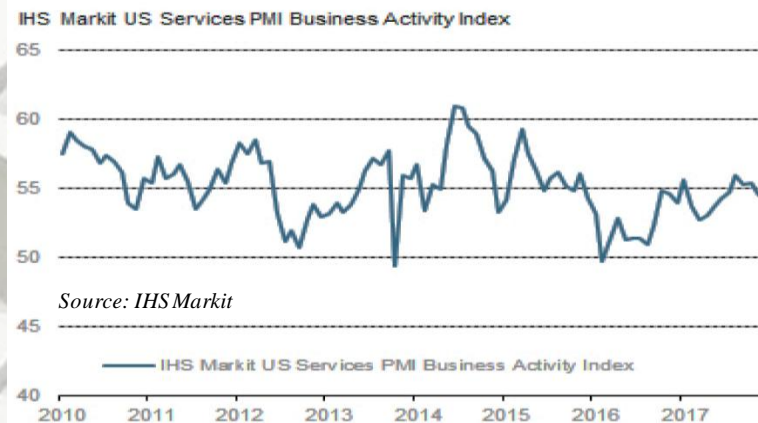
December data indicated a marked improvement in US manufacturing operating conditions. The latest upturn was supported by faster increases in output and new orders, amid reports of greater client demand. In line with stronger production growth, employment rose further and at the fastest pace since September 2014. Backlogs meanwhile increased at the quickest rate since October 2015 to indicate ongoing capacity pressures. Supply chain delays and increased global demand for inputs pushed costs up further, with the rate of cost inflation remaining sharp overall. Charge inflation, however, softened. Business confidence remained robust, driven by more favourable demand conditions.

US manufacturers ended 2017 on a high. Output growth accelerated to its fastest since the start of the year on the back of a marked upswing in demand as the year came to a close. Prospects for the upturn also look good. With business optimism about the year ahead running at its highest for two years in the closing months of 2017, companies are clearly expecting to be busier in 2018.

The combination of strengthening growth, a solid labour market and rising prices will add to expectations that the Fed will remain on track for another rate hike in the near future, with March looking a likely possibility.” – Chris Williamson, Chief Economist, Markit®

# Private Indicators

## Service sector business activity (seasonally adjusted)



## Markit U.S. Services PMI™

“The seasonally adjusted **IHS Markit U.S. Services Business Activity Index** registered 54.5 in November, down from 55.3 in November. Although the latest index reading indicated a slightly weaker output expansion, the overall rate of growth was strong by recent standards nonetheless. Anecdotal evidence suggested that increases in activity were due to greater new order volumes and robust client demand.

## Business activity growth eases in November

November survey data signalled a slower rate of expansion in business activity across the US service sector. Although output growth eased slightly to a five-month low, the upturn in new business accelerated and was solid overall. Employment growth meanwhile reached a three-month peak, which helped alleviate capacity pressures. In line with this, backlog accumulation softened to a five-month low. Inflationary pressures intensified with both input prices and output charges rising at quicker paces. The latest survey also indicated a fall in business confidence to the joint-lowest since February.

The slowest growth of service sector business activity since June, alongside a slight dip in the pace of manufacturing expansion, means the November PMI surveys registered a modest cooling in the overall rate of business growth. Mid-way through the fourth quarter, the surveys are still pointing to a reasonable GDP growth rate of approximately 2.5%. Disappointingly, optimism about the year ahead deteriorated as companies grew increasingly cautious about the outlook for 2018, suggesting risk aversion may start to rise, which could hit hiring and investment. However, for now, businesses generally remain in expansion mode and the upturn shows few signs of losing momentum to any significant extent.” – Chris Williamson, Chief Economist, Markit®



# Private Indicators

## National Association of Credit Management – Credit Managers' Index

“After a record-setting November, credit managers are reporting a slight step back in the latest Credit Managers' Index (CMI). The drop in the performance of the favorable factors was dramatic and not the least expected given the patterns that have been noted for the last several months.

The overall score in November was 56.6 and has fallen to 54.2 – the lowest reading since May. More distressing is the reason for the decline, as the biggest drop was in the favorable factors. They fell from an overall score of 65.7 to 59.4, the first time this category has dropped out of the 60s in well over a year. The unfavorable category was the bright spot this month, as it scarcely changed – increasing from 50.4 to 50.8.

All of the favorable measures suffered this month. Some dropped like a stone. Sales fell hard from 68.3 to 59.2 – nearly a 10-point decline – hitting a low point not reached since December 2016. The new credit applications also fell from the 60s to 57.3. The dollar collections category slipped out of the 60s by the narrowest of margins (63.1 to 59.1). Only amount of credit extended managed to stay in the 60s, with a reading of 61.8 after November's 67.8.

There was considerably less movement in the unfavorable categories, which is a good thing this month. There were even some minor improvements. The rejections of credit applications stayed in the 50s, but slid slightly from 52.4 to 51.4. Accounts placed for collection fell out of the 50s again by slipping to 49.8 from November's 50.5. This category has been slipping back and forth across the barrier between expansion (over 50) and contraction (under 50) all year. The disputes category increased a little, but still stayed in the contraction zone – 49.7 as compared to the 48.3 notched in November.” – Adam Fusco, Associate Editor, NACM



# Private Indicators

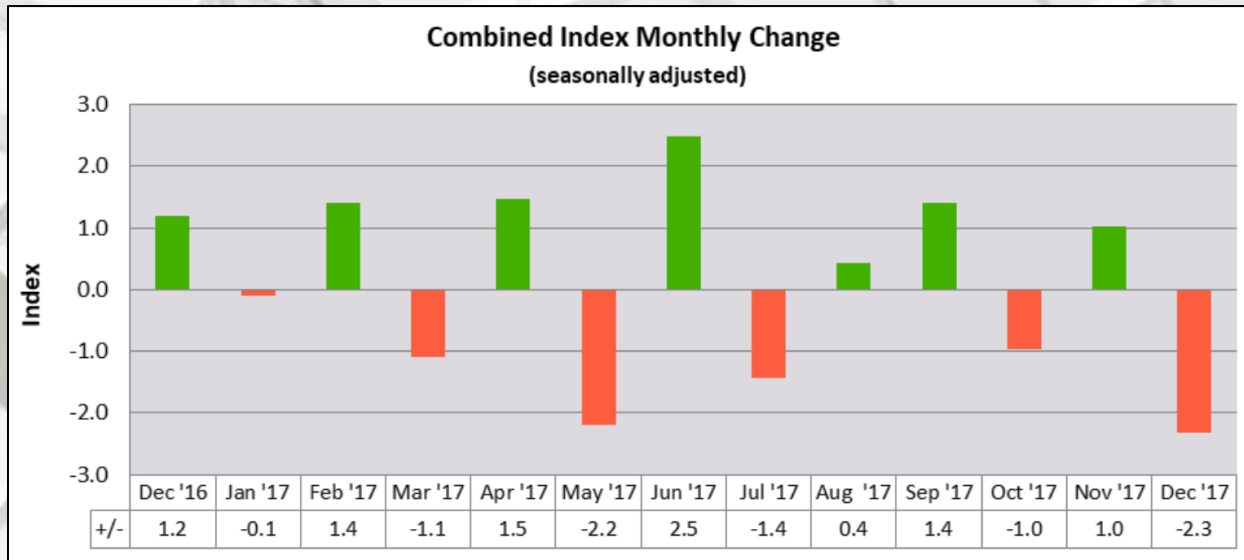
## **National Association of Credit Management – Credit Managers' Index**

“In November, the sense was that real progress was ahead and many people have been speaking of 2018 with great expectations . It may yet work out that way. This month may be written off as an anomaly, but it may also signal that some of those weaknesses that had been warned about are manifesting.

The dollar amount beyond terms has been a challenge all year as the slow pays show up one month and not so much the next. This time the reading was better than it was the month before, but still hovers in the 40s.

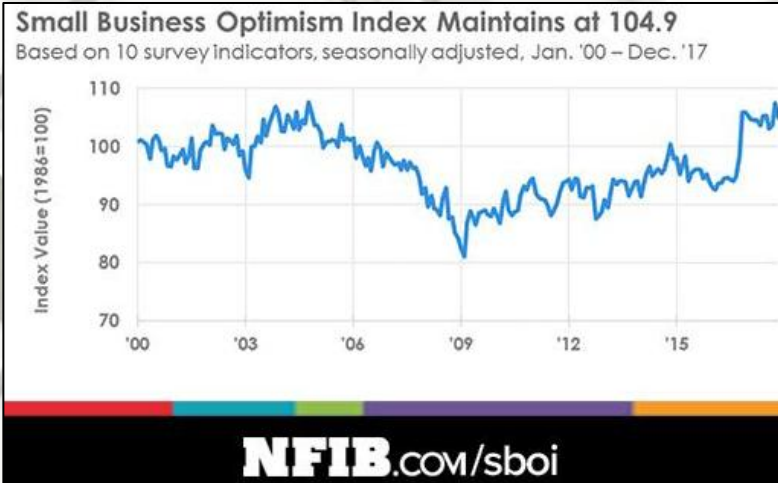
It begs the question – which of these is the anomaly? Is it the good growth that has been showing up in the GDP numbers or is this month an oddity for the credit managers? Both the manufacturing and service sectors have seen this decline, so it isn't a matter of one part of the economy struggling. This is the point that demands some attention to the pattern that has been established with the CMI in the past. Given that credit activity precedes a great deal of the business cycle, the CMI often serves as an early warning system. Still, even with the big declines, the overall score is comfortably above the line and in expansion territory. The favorable categories have been near record levels much of the year. Perhaps it was time for them to come back to earth. It is hoped that this is not the beginning of a more serious slide.”  
– Dr. Chris Kuehl, Economist, NACM

# Private Indicators



<b>Combined Manufacturing and Service Sectors (seasonally adjusted)</b>	Dec '16	Jan '17	Feb '17	Mar '17	Apr '17	May '17	Jun '17	Jul '17	Aug '17	Sep '17	Oct '17	Nov '17	Dec '17
Sales	58.6	60.1	62.6	61.2	63.8	60.6	66.5	62.8	62.2	67.3	66.8	68.3	59.2
New credit applications	57.0	60.8	62.0	60.5	62.0	59.3	59.8	59.7	61.2	60.5	62.8	63.7	57.3
Dollar collections	59.5	58.2	63.0	56.4	61.2	56.7	62.5	60.2	58.9	60.0	60.2	63.1	59.1
Amount of credit extended	61.4	64.1	66.8	64.4	67.2	63.6	66.8	64.1	66.7	66.3	65.5	67.8	61.8
<b>Index of favorable factors</b>	<b>59.1</b>	<b>60.8</b>	<b>63.6</b>	<b>60.6</b>	<b>63.6</b>	<b>60.0</b>	<b>63.9</b>	<b>61.7</b>	<b>62.2</b>	<b>63.5</b>	<b>63.8</b>	<b>65.7</b>	<b>59.4</b>
Rejections of credit applications	51.3	50.6	51.4	51.6	52.1	52.4	52.6	51.9	52.2	52.5	51.8	52.4	51.4
Accounts placed for collection	49.7	49.4	48.2	49.8	49.0	48.5	49.3	48.9	48.7	50.3	49.5	50.5	49.8
Disputes	49.8	46.0	48.7	48.5	49.1	47.9	50.4	48.8	49.1	51.7	47.6	48.3	49.7
Dollar amount beyond terms	49.3	48.4	51.0	47.4	51.0	45.9	50.4	48.3	47.4	50.4	47.3	47.5	49.3
Dollar amount of customer deductions	49.8	48.7	47.6	49.8	49.2	48.7	49.1	48.1	49.2	49.8	48.7	48.9	49.7
Filings for bankruptcies	55.0	53.9	53.2	53.8	53.5	52.7	53.4	53.6	55.3	56.2	55.3	55.1	55.0
<b>Index of unfavorable factors</b>	<b>50.8</b>	<b>49.5</b>	<b>50.0</b>	<b>50.2</b>	<b>50.6</b>	<b>49.3</b>	<b>50.9</b>	<b>49.9</b>	<b>50.3</b>	<b>51.8</b>	<b>50.0</b>	<b>50.4</b>	<b>50.8</b>
<b>NACM Combined CMI</b>	<b>54.1</b>	<b>54.0</b>	<b>55.4</b>	<b>54.3</b>	<b>55.8</b>	<b>53.6</b>	<b>56.1</b>	<b>54.6</b>	<b>55.1</b>	<b>56.5</b>	<b>55.5</b>	<b>56.6</b>	<b>54.2</b>

# Private Indicators



## **DECEMBER 2017 Report:**

### **Average Monthly Optimism Sets All-time Record In 2017**

“Small business confidence blasted off the day after the 2016 election and remained in the stratosphere for all of 2017, making last year an all-time record setter for the NFIB Index of Small Business Optimism... .” – Holly Wade, NFIB

## **NFIB Small Business Optimism Index For December Caps A History-making Year**

“2017 was the most remarkable year in the 45-year history of the NFIB Optimism Index. With a massive tax cut this year, accompanied by significant regulatory relief, we expect very strong growth, millions more jobs, and higher pay for Americans.” – Juanita Duggan, NFIB President and CEO, NFIB

“We’ve been doing this research for nearly half a century, longer than anyone else, and I’ve never seen anything like 2017. The 2016 election was like a dam breaking. Small business owners were waiting for better policies from Washington, suddenly they got them, and the engine of the economy roared back to life.” – William C. Dunkelberg, Chief Economist, NFIB

“The Optimism Index for last month came in at 104.9, slightly lower than the near-record November report but still a historically exceptional performance. That makes 2017 the strongest year ever in the history of the survey. The average monthly Index for 2017 was 104.8. The previous record was 104.6, set in 2004.” – Holly Wade, NFIB

# Private Indicators

## Commentary

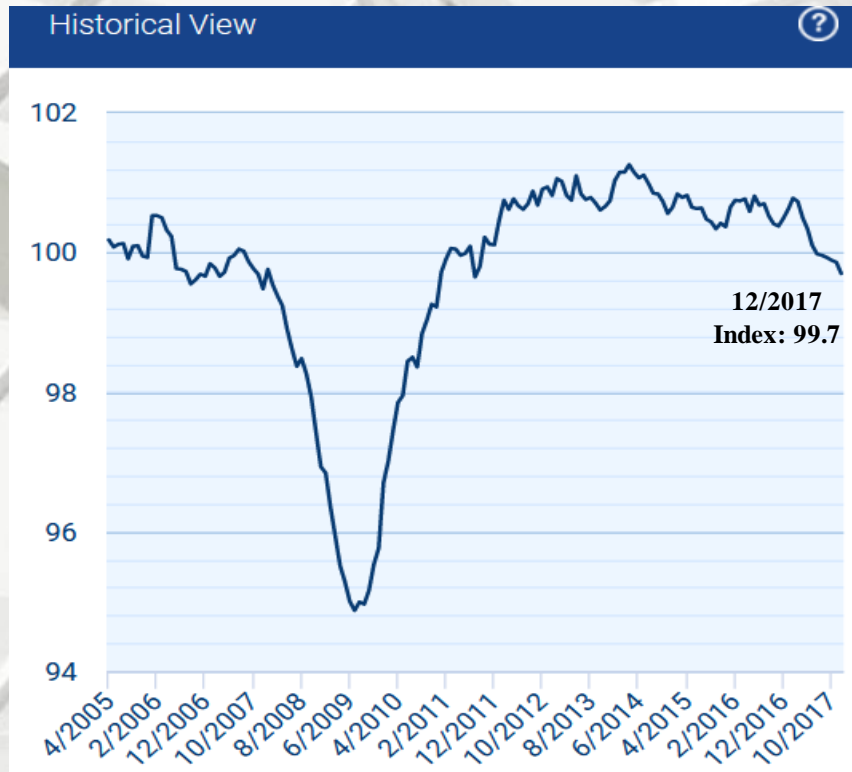
“There’s a critical shortage of qualified workers and it’s becoming a real cost driver for small businesses. They are raising compensation for workers in order to attract and keep good employees, but that’s a positive indicator for the overall economy.” – William C. Dunkelberg, Chief Economist, NFIB

“Two of the December components posted gains, five declined, and three remained unchanged. Moving the Index moderately lower were declines in Expected Better Business Conditions (11-point decline) which tends to fluctuate sharply and Inventory Plans (8-point decline). Small business owners were bedeviled by a labor shortage in 2017 that grew more intense as optimism rose. The [NFIB Jobs Report](#) last week showed that problem reaching record levels.

Offsetting the dip in Expected Better Business Conditions was a dramatic, 14-point improvement in Actual Sales for December. In November, a net negative five percent of all firms reported sales increases. A net nine percent reported higher sales in December, indicating a very strong holiday season for small business.” – Holly Wade, NFIB

“The lesson of 2017 is that better policies make for better economic results. The evidence is overwhelming that small business owners pay close attention to Washington, and that federal policies affect their decisions on whether to hire, whether to invest, whether to grow inventory, and whether to seek capital.” – Juanita Duggan, NFIB President and CEO, NFIB

# Private Indicators

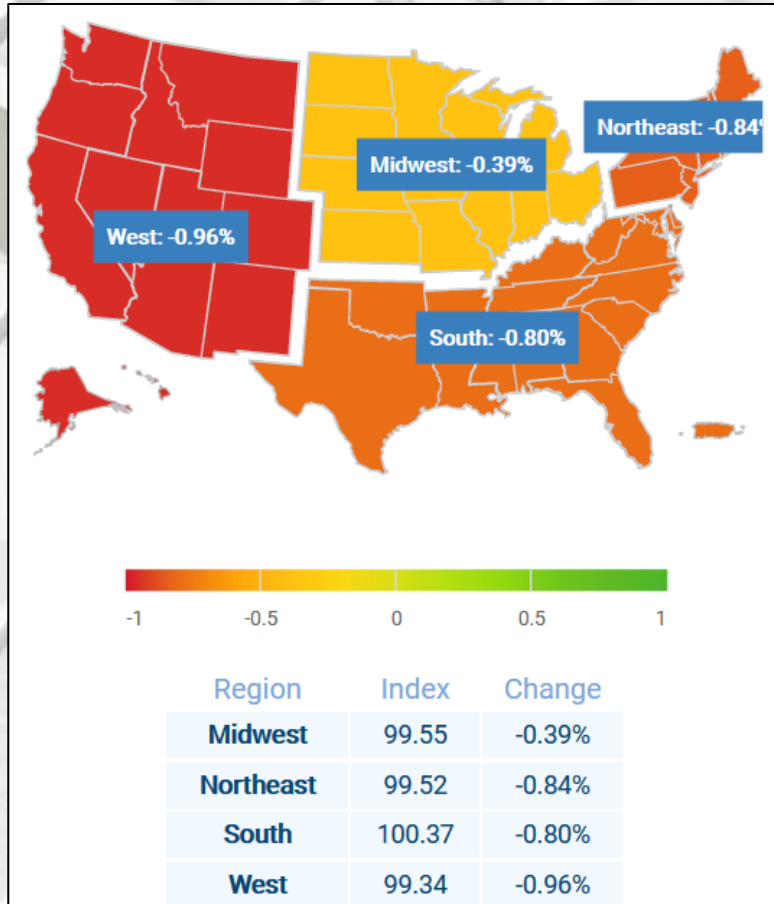


## The Paychex | IHS Small Business Jobs Index National Jobs Index

- “At 99.70 in December, the Paychex | IHS Market Small Business Jobs Index has fallen a full percentage point from its February level, 100.78.
- After moderating just below 100 for several months, the national index dropped more in December (0.16 percent) than the past four months combined (0.12 percent).” – James Diffley, Chief Regional Economist, IHS Markit



# Private Indicators



*Note: Percentages displayed in the regional heat map reflect 12-month changes.*

## The Paychex | IHS Small Business Jobs Index Regional Jobs Index

- “At 100.37, the South is the only region with an index above 100, and has ranked first every month in 2017.
- All four regions declined from last month and last year. At the division level, only the West South Central, with the oil recovery, and New England improved the pace of small business job growth year-over-year.”  
– James Diffley, Chief Regional Economist, IHS Markit

# Private Indicators

“The S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index, covering all nine U.S. census divisions, reported a 6.2% annual gain in October, up from 6.1% in the previous month. The 10-City Composite annual increase came in at 6.0%, up from 5.7% the previous month. The 20-City Composite posted a 6.4% year-over-year gain, up from 6.2% the previous month..

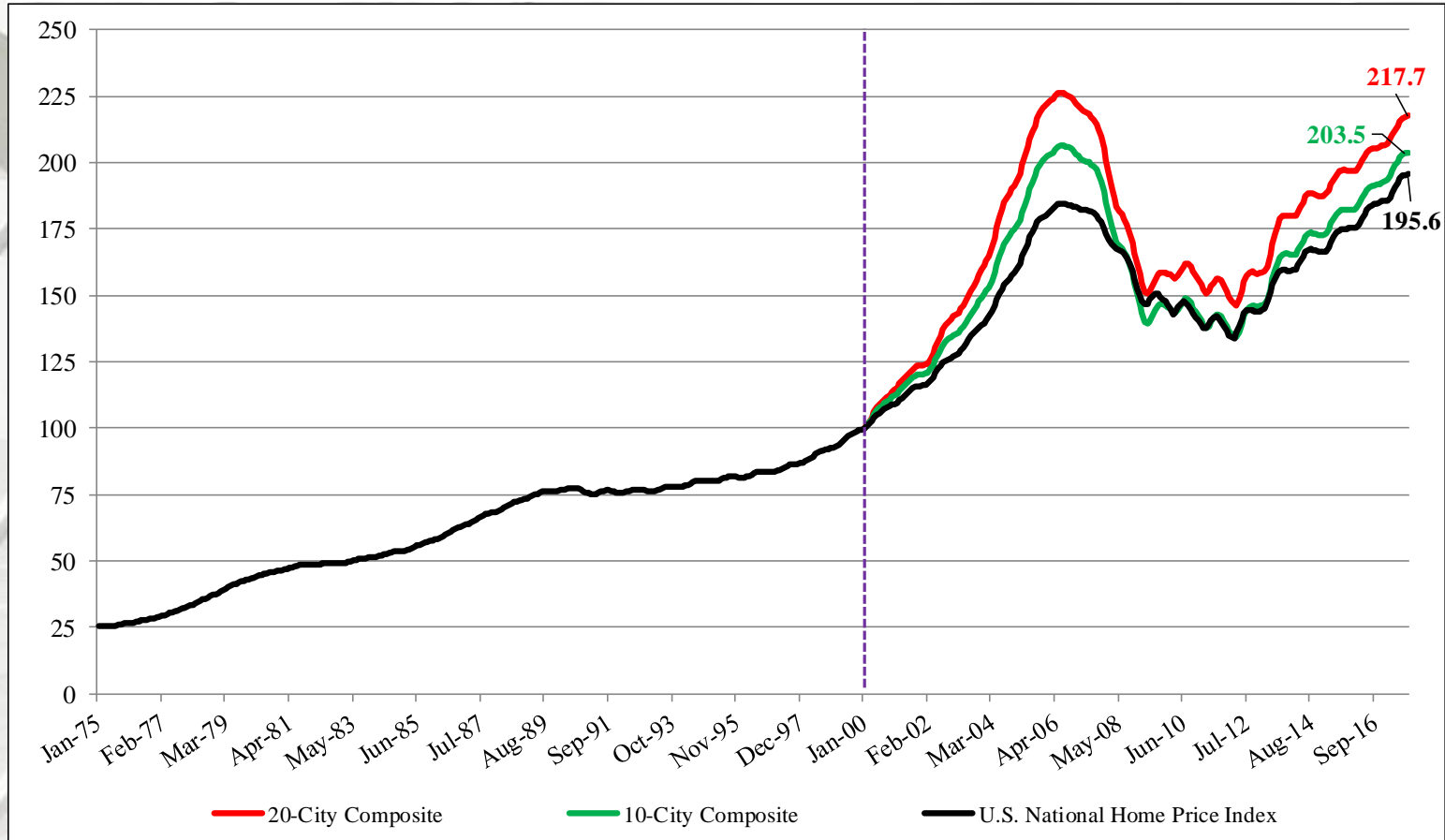
## **S&P CoreLogic Case-Shiller National Home Price NSA Index Continues Steady Gains in October**

Home prices continue their climb supported by low inventories and increasing sales. Nationally, home prices are up 6.2% in the 12 months to October, three times the rate of inflation. Sales of existing homes dropped 6.1% from March through September; they have since rebounded 8.4% in November. Inventories measured by months-supply of homes for sale dropped from the tight level of 4.2 months last summer to only 3.4 months in November.

Underlying the rising prices for both new and existing homes are low interest rates, low unemployment and continuing economic growth. Some of these favorable factors may shift in 2018. The Fed is widely expected to raise the Fed funds rate three more times to reach 2% by the end of the New Year. Since home prices are rising faster than wages, salaries, and inflation, some areas could see potential home buyers compelled to look at renting. Data published by the Urban Institute suggests that in some West coast cities with rapidly rising home prices, renting is more attractive than buying.” – David Blitzer, Managing Director and Chairman of the Index Committee, S&PDow Jones

# Private Indicators

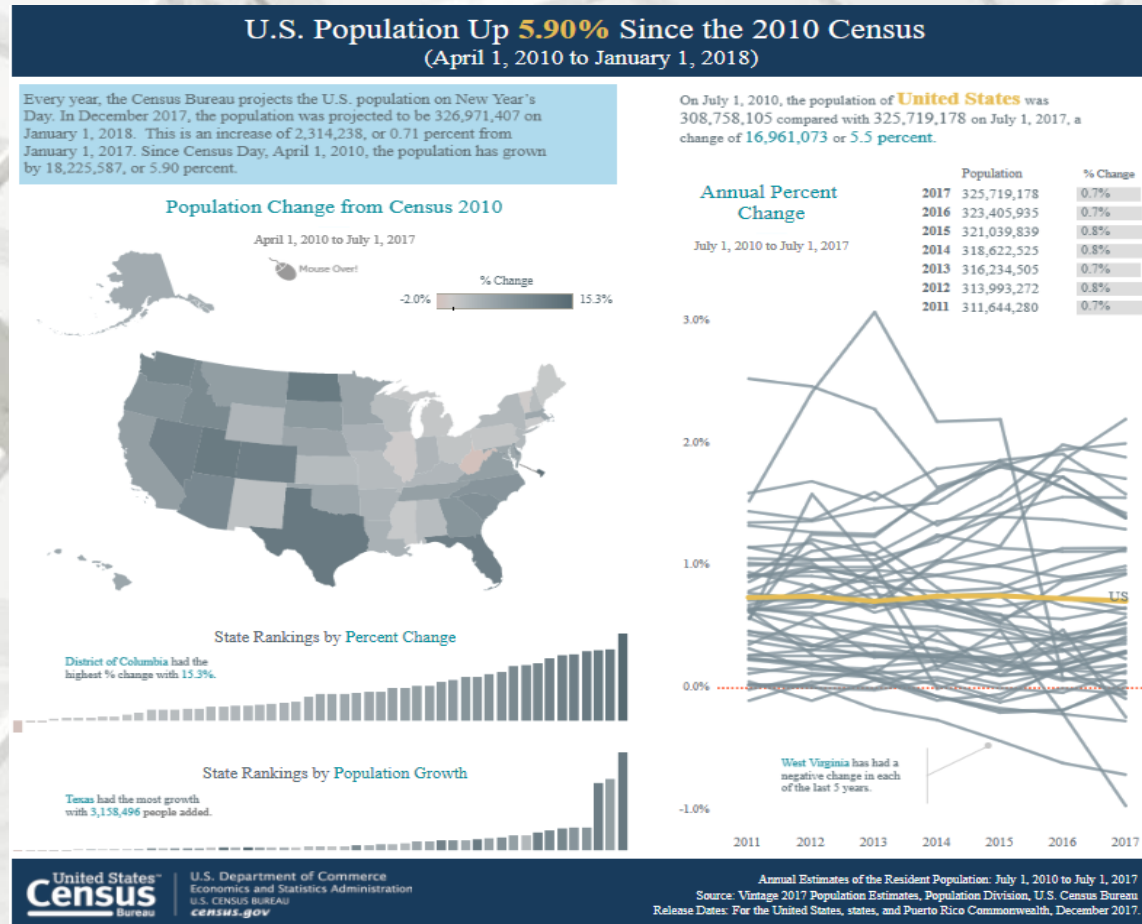
## S&P/Case-Shiller Home Price Indices



“The indices have a base value of 110 in January 2000; thus, for example, a current index value of 150 translates to a 50% appreciation rate since January 2000 for a typical home located within the subject market.” – S&P CoreLogic

Sources: S&P Dow Jones Indices and CoreLogic; Data through August 2017

# Demographics



## U.S. Population Up 5.90% Since the 2010 Census

Link to U.S. interactive population map:

<https://www.census.gov/library/visualizations/interactive/population-increase.html>

Source: <https://www.census.gov/library/visualizations/interactive/population-increase.html>; 1/8/18

Return TOC

# Demographics

## **U.S. Census Bureau Idaho is Nation's Fastest-Growing State**

“Idaho was the nation’s fastest-growing state over the last year. Its population increased 2.2 percent to 1.7 million from July 1, 2016, to July 1, 2017. Following Idaho for the [largest percentage increases in population](#) were: Nevada (2.0 percent), Utah (1.9 percent), Washington (1.7 percent), and Florida along with Arizona (1.6 percent).

The U.S. population grew by 2.3 million between July 1, 2016, and July 1, 2017, representing a 0.72 percent increase to 325.7 million. Furthermore, the population of voting-age residents (adults age 18 and over) grew to 252.1 million (77.4 percent of the 2017 total population), an increase of 0.93 percent from 2016 (249.5 million). Net international migration decreased 1.8 percent between 2016 and 2017, making it the first drop since 2012-2013. However, net international migration continues to be a significant factor in the population growth of the United States, adding just over 1.1 million people in the last year.

States in the South and West continued to lead in population growth. In 2017, 38.0 percent of the nation’s population lived in the South and 23.8 percent lived in the West.

In addition to the population estimates for the 50 states and the District of Columbia, the new estimates show that Puerto Rico had an estimated population of 3.3 million, a decline from 3.4 million in 2016.” – U.S. Census Bureau

“Domestic migration drove change in the two fastest-growing states, Idaho and Nevada, while an excess of births over deaths played a major part in the growth of the third fastest-growing state, Utah.” – Luke Rogers, Chief, Population Estimates Branch, U.S. Census Bureau



# Demographics

## Top 10 States in Numeric Growth: 2016 to 2017

Rank	Name	2010	2016	2017	Numeric growth
1	Texas	25,146,100	27,904,862	28,304,596	399,734
2	Florida	18,804,594	20,656,589	20,984,400	327,811
3	California	37,254,518	39,296,476	39,536,653	240,177
4	Washington	6,724,545	7,280,934	7,405,743	124,809
5	North Carolina	9,535,721	10,156,689	10,273,419	116,730
6	Georgia	9,688,690	10,313,620	10,429,379	115,759
7	Arizona	6,392,309	6,908,642	7,016,270	107,628
8	Colorado	5,029,325	5,530,105	5,607,154	77,049
9	Tennessee	6,346,295	6,649,404	6,715,984	66,580
10	South Carolina	4,625,381	4,959,822	5,024,369	64,547

## Top 10 Most Populous States: 2017

Rank	Name	2010	2016	2017
1	California	37,254,518	39,296,476	39,536,653
2	Texas	25,146,100	27,904,862	28,304,596
3	Florida	18,804,594	20,656,589	20,984,400
4	New York	19,378,110	19,836,286	19,849,399
5	Pennsylvania	12,702,857	12,787,085	12,805,537
6	Illinois	12,831,565	12,835,726	12,802,023
7	Ohio	11,536,730	11,622,554	11,658,609
8	Georgia	9,688,690	10,313,620	10,429,379
9	North Carolina	9,535,721	10,156,689	10,273,419
10	Michigan	9,884,129	9,933,445	9,962,311

## Top 10 States in Percentage Growth: 2016 to 2017

Rank	Name	2010	2016	2017	Percent growth
1	Idaho	1,567,650	1,680,026	1,716,943	2.2
2	Nevada	2,700,691	2,939,254	2,998,039	2.0
3	Utah	2,763,889	3,044,321	3,101,833	1.9
4	Washington	6,724,545	7,280,934	7,405,743	1.7
5	Florida	18,804,594	20,656,589	20,984,400	1.6
6	Arizona	6,392,309	6,908,642	7,016,270	1.6
7	Texas	25,146,100	27,904,862	28,304,596	1.4
8	District of Columbia	601,766	684,336	693,972	1.4
9	Colorado	5,029,325	5,530,105	5,607,154	1.4
10	Oregon	3,831,072	4,085,989	4,142,776	1.4

## U.S. Census Bureau

“Eight states lost population between July 1, 2016, and July 1, 2017. Illinois had the largest numeric decline, losing 33,703 people (this was a relatively small percentage change compared to its population of 12.8 million). Wyoming had the largest percentage decline (1.0 percent). Three states that had been losing population in the previous year, Pennsylvania, Connecticut and Vermont, saw slight increases.” – U.S. Census Bureau

# Demographics

## Zillow

### As Rents Rise, More Renters Turn to Doubling Up

- “30 percent of working-age adults — aged 23 to 65 — live in doubled-up households, up from a low of 21 percent in 2005 and 23 percent in 1990.
- Adults living with roommates or family members earn 67 cents for every dollar made by adults who live on their own (or with a partner).
- More than half (54 percent) of young adults aged 23-29 live in doubled-up households, with either roommates or family members.

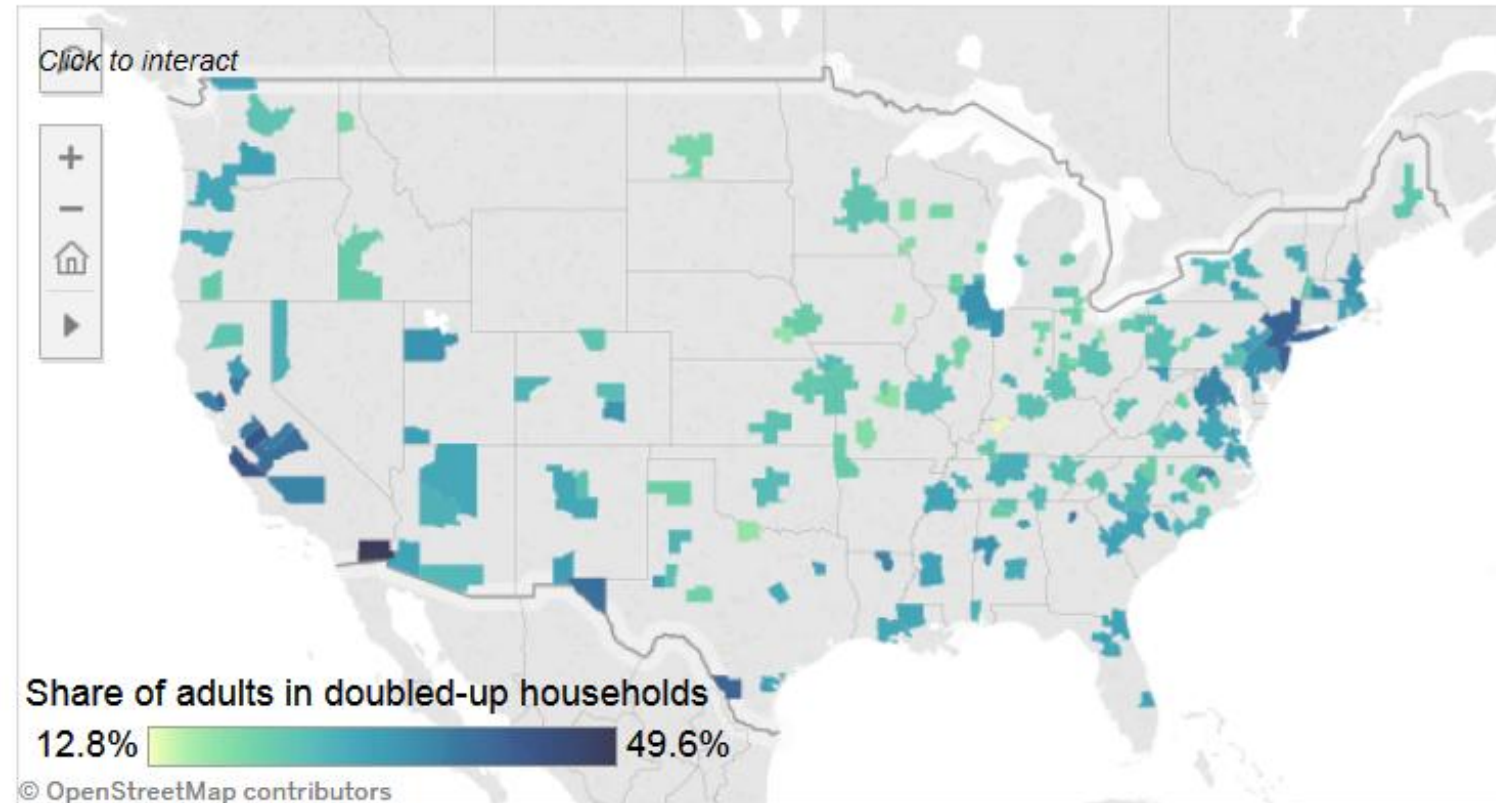
As rent consumes a growing share of household income [in many cities](#), some people must relocate or find ways to offset rising prices. An increasingly popular way to cut costs is by adding a roommate. Nationally, 30 percent of working-age adults — aged 23 to 65 — live in doubled-up households, up from a low of 21 percent in 2005 and 23 percent in 1990. [1]

We define a doubled-up household as one in which at least two working-age, unmarried or unpartnered adults live together. For example, a 25-year-old son living with his middle-aged parents would constitute a doubled-up household, as would two 23-year-old roommates who are not partnered to each other. A doubled-up household contains people who might choose to live apart under different circumstances, financial or otherwise.” — Lauren Bretz. Data Scientist, Zillow

# Demographics

## The Share of Adults Living in Doubled-Up Households Varies Dramatically By Metro

Share of (working-age) adults in doubled-up households



Source: Zillow Rent Affordability, Zillow analysis of U.S. Census Bureau American Community Survey, 2016, made available by the University of Minnesota, IPUMS-U:

# Demographics

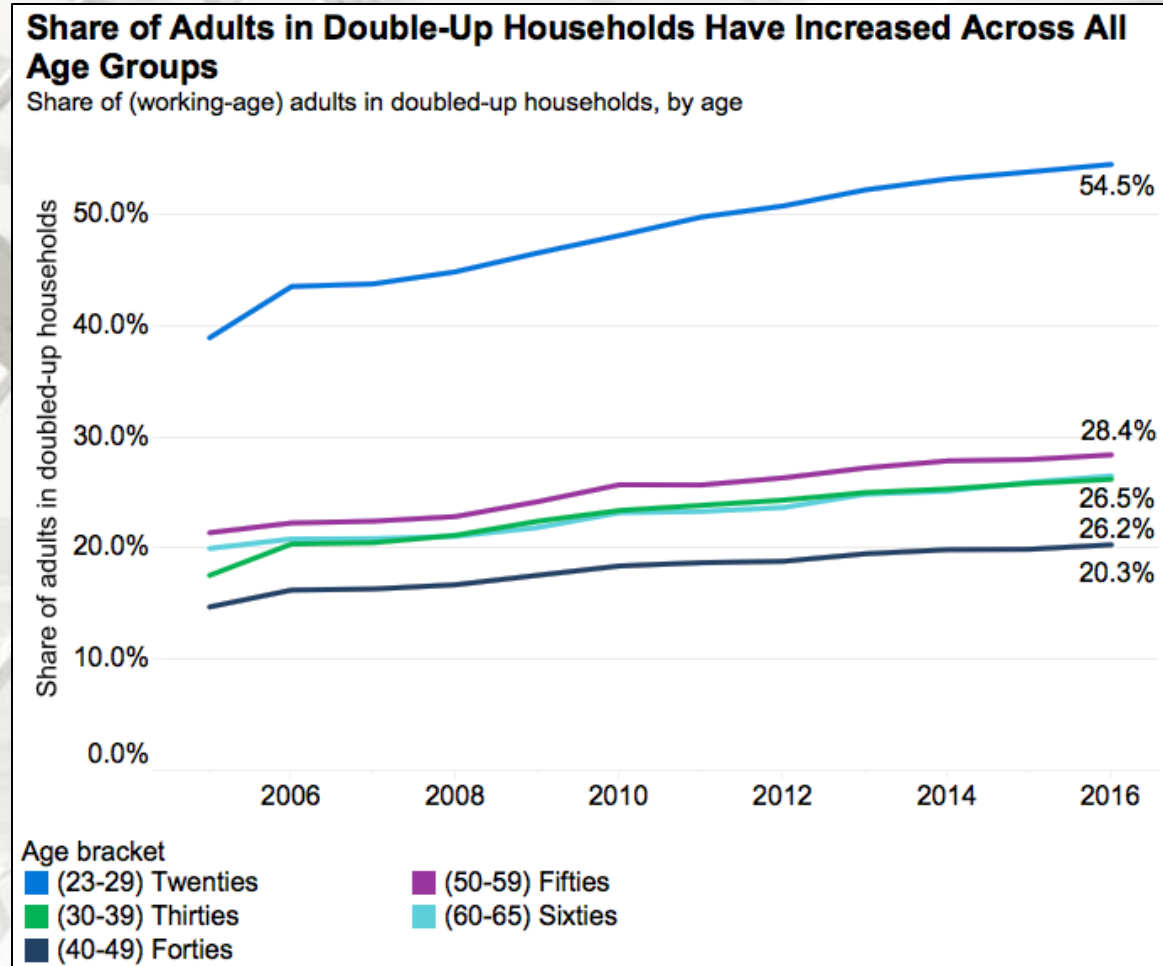


“Some people do choose to live with others for companionship or convenience. However, our research suggests that the trend toward doubling-up is often driven by financial concerns. For instance, there is a strong relationship between doubling-up and rental affordability: In metro areas where rent drains a larger share of household income, more adults choose to live with roommates or family members. Some of the most extreme examples include Los Angeles (46 percent doubled-up), Miami (41 percent), and San Francisco (38 percent).

There is other evidence that doubling up is motivated by affordability concerns. The median individual income of an employed adult in a doubled-up household is \$30,000, compared to the \$45,000 earned by their non-doubled-up counterpart. In other words, adults living with roommates or family members earn 67 cents for every dollar made by adults who live on their own (or with a partner). This suggests that in many places, employed people who currently live in doubled-up households would not be able to afford rent if they lived by themselves.” – Lauren Bretz, Data Scientist, Zillow



# Demographics





# Demographics

## Zillow

### As Rents Rise, More Renters Turn to Doubling Up

“Since 2005, the share of adults doubling up has increased year-over-year in every age bracket. But the share of twenty-somethings (aged 23 to 29) living in doubled-up households has climbed faster than any other age bracket, from 39 percent to 54 percent in just 11 years.

At first glance, this trend might be attributed to more unemployed young people living at home with their parents. However, the likelihood of doubling up has increased at the same rate among employed and unemployed adults since 2005, regardless of age. A more likely hypothesis is that young people are especially likely to be underemployed: Despite high education levels, many twenty-somethings work in relatively low-wage jobs, rendering some of them unable to afford escalating rents on their own.

When working-age adults are doubled up, it’s typically because they live with either roommates or family members. While the share of working-age adults in both situations has risen since 2000, the rate of family members doubling-up has risen more dramatically. As of 2016, 73 percent of doubled-up adults live with family members rather than roommates, up from 70 percent in 2000.” – Lauren Bretz, Data Scientist, Zillow

[1] Based on a Zillow analysis of individual Census responses in the Integrated Public Use Microdata Series: Version 7.0.

# Demographics

## Harvard Joint Center for Housing Studies America's Rental Housing 2017

- **“Signs Of A Slowdown.** Overall, rents increased more slowly in most markets across the country. Starts of new multifamily units reached a plateau in 2016 and have now fallen by about 9 percent through October 2017.
- **The Changing Nature Of Renters.** While renters are disproportionately younger and lower-income, growing shares of renters are older and higher-income. For example, the number of renter households earning more than \$100,000 per year increased from 3.3 million in 2006 to 6.1 million in 2016.
- **The Changing Nature Of New Rental Units.** Additions to the rental stock are increasingly concentrated at the high end of the market. The share of new units renting for \$1,500 or more (in real terms) soared from 15 percent in 2001 to 40 percent in 2016. Additionally, the share of new units renting for less than \$850 per month fell from 42 percent of the rental stock to 18 percent. The challenges to building low- and moderate-cost units are most severe in metros like San Jose, San Francisco, Honolulu, and Washington, D.C., where more than 50 percent of all rental units rent for over \$1,500 a month.” – Joint Center for Housing Studies of Harvard University

# Demographics

## Harvard Joint Center for Housing Studies America's Rental Housing 2017

- **“Affordability Continues To Be A Major Problem.** Despite rising incomes, nearly half (47 percent) of all renter households (21 million) are cost burdened — meaning they pay more than 30 percent of their income for housing, including 11 million households paying more than 50 percent of their income for housing. While these figures are down slightly from recent years, the number and share of cost-burdened renters is much higher than it was in 2001, when 41 percent (15 million) were cost burdened. Burdens are particularly high in Miami, Los Angeles, New Orleans, and San Diego, where 55 percent or more of renters are cost burdened.
- **Availability Of Rental Assistance Has Shrunk.** Even as low-cost housing units are disappearing, rental assistance is becoming harder to access for very-low-income households. The share of very-low-income households who receive rental assistance declined from 28 percent in 2001 to 25 percent in 2015. ” – Joint Center for Housing Studies of Harvard University

# Demographics

## Harvard Joint Center for Housing Studies

### America's Rental Housing 2017

#### A Decade Of Soaring Demand Coming To An End

“Rental housing demand has grown at an unprecedented pace for more than a decade. According to the Census Bureau’s Housing Vacancy Survey, the number of renter households jumped by nearly a third, or roughly 10 million, between the homeownership peak in 2004 and 2016. From 2010 through 2016, growth has averaged 976,000 renters per year, far exceeding the 430,000–500,000 added annually in the 1970s and 1980s when the baby boomers started to enter the rental market. As of mid-2017, the number of US renters stood at 43 million.

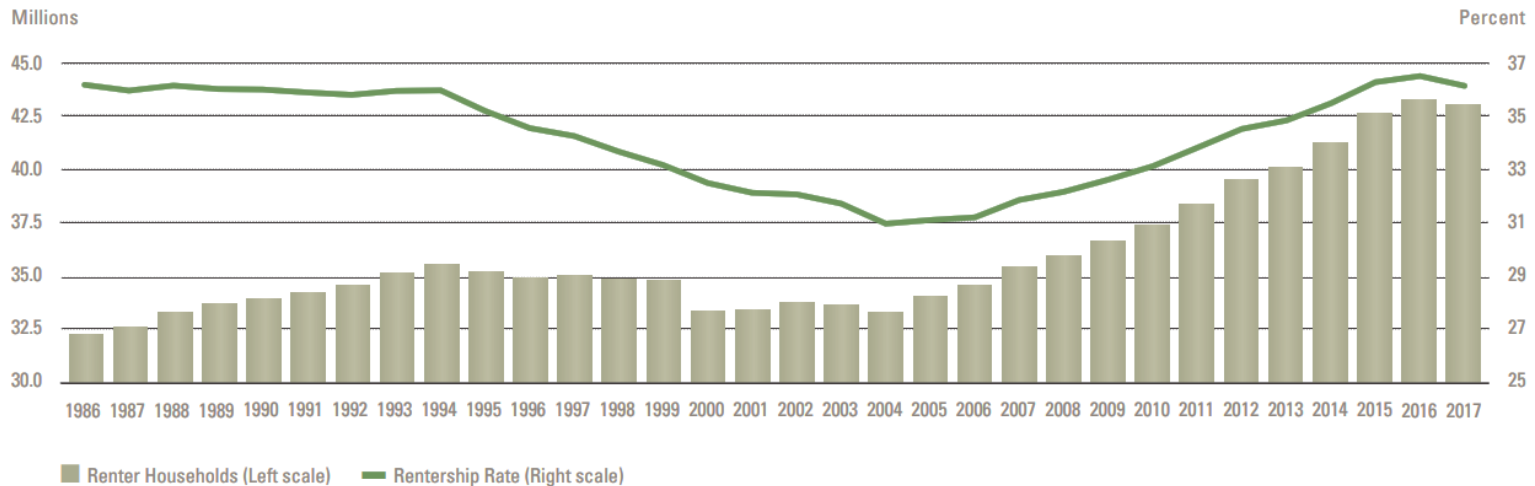
The surge in renter households erased a decade of declining demand between 1994 and 2004, when the national rentership rate fell from 36 percent to just 31 percent (Figure 7). The share of renter households was back up above 36 percent by early 2015, where it has stabilized now that fewer owners are losing their homes to foreclosure and more young households are buying first homes. As a result, rental markets generally are drawing less demand from homeowner markets.

The latest survey data are beginning to reflect these trends. All of three annual Census Bureau household surveys reported slowdowns in renter growth in 2016. Indeed, the Housing Vacancy Survey showed a year-over-year decline in the number of renter households in mid-2017. But given that the trend is new and survey data are unprecise, the full extent and duration of the decline in rental demand are still unclear. Assuming that the homeownership rate does stabilize, renters should continue to account for roughly a third of household growth in the years ahead.” – Joint Center for Housing Studies of Harvard University

# Demographics

FIGURE 7

## The Wave of Growth Since 2004 Has Lifted the Number and Share of Renter Households



Note: Estimate for 2017 is the average of second- and third-quarter data.

Source: JCHS tabulations of US Census Bureau, Housing Vacancy Survey.

## America's Rental Housing 2017 The Surge In High-income Renters

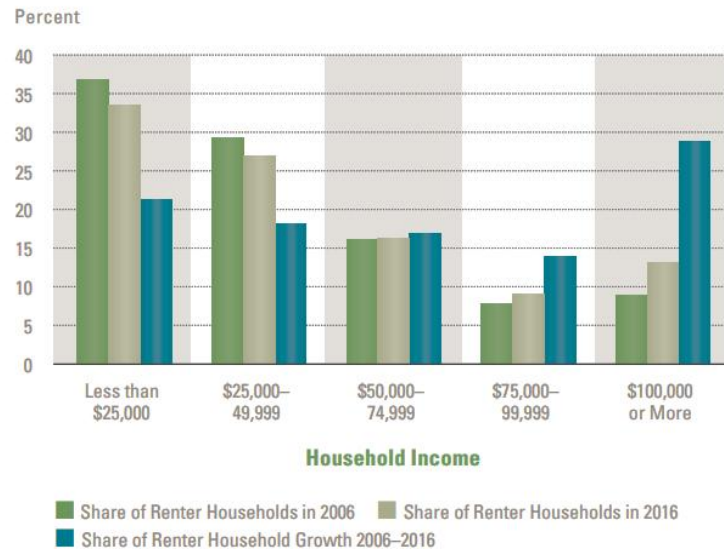
“Households of all ages, incomes, races/ethnicities, and family types helped to fuel the recent growth in renters, but the role of high-income households is particularly noteworthy. According to the Current Population Survey, households with real annual incomes of \$50,000 or more – a group that accounted for just one-third of all renter households in 2006 – drove well over half (60 percent) of the growth in renter households from 2006 to 2016. Moreover, households with real annual incomes of \$100,000 or more – making up just 9 percent of renters in 2006 – were responsible for 29 percent of the 9.9 million increase in renters over the decade (Figure 8).” – Joint Center for Housing Studies of Harvard University



# Demographics

FIGURE 8

## Higher-Income Households Represent a Growing Share of Renters...



Note: Household incomes are in constant 2015 dollars, adjusted for inflation using the CPI-U for All Items.  
Source: JCHS tabulations of US Census Bureau, Current Population Surveys.

FIGURE 9

## ...Particularly in High-Cost Metros Like New York, San Francisco, and Washington, DC

Growth in Renter Households, 2006–2016 (Thousands)



Note: Household incomes are in constant 2016 dollars, adjusted for inflation using the CPI-U for All Items.  
Source: JCHS tabulations of US Census Bureau, 2016 American Community Survey 1-Year Estimates using the Missouri Census Data Center MABLE/Geocorr14.

## America's Rental Housing 2017 The Surge In High-income Renters

“Many, though not all, of the outsized increases in higher-income renters were concentrated in high-cost metro areas. For example, households earning \$100,000 or more accounted for 65 percent of the growth in renter households in the New York City metro and fully 93 percent in San Francisco (Figure 9). But even in metros where they were less prevalent, higher-income households were responsible for significant shares of renter growth, including Miami (15 percent) and Phoenix (20 percent).” – Joint Center for Housing Studies of Harvard University

# Demographics

## **America's Rental Housing 2017** **The Surge In High-income Renters**

“Strong growth in high-income renter households was driven in large measure by sharply higher rentership rates among this group. Indeed, the share of households with incomes of at least \$75,000 that rented their housing jumped by 6.9 percentage points in 2006–2016, more than twice the 3.3 percentage point increase among households earning less than \$50,000. Without this increase in rentership rates among high-income households, there would be 3.4 million fewer renters today.

The strong growth in higher-income households altered the distribution of renter household types. Unlike lower-income renters, who primarily live in single-person households, higher-income renters live in a variety of household settings that are likely to include multiple adults, such as married couples or unmarried partners. These types of households, which are apt to have at least two earners, made up half of the growth in renters earning \$50,000 or more over the past decade.

### **The Outlook**

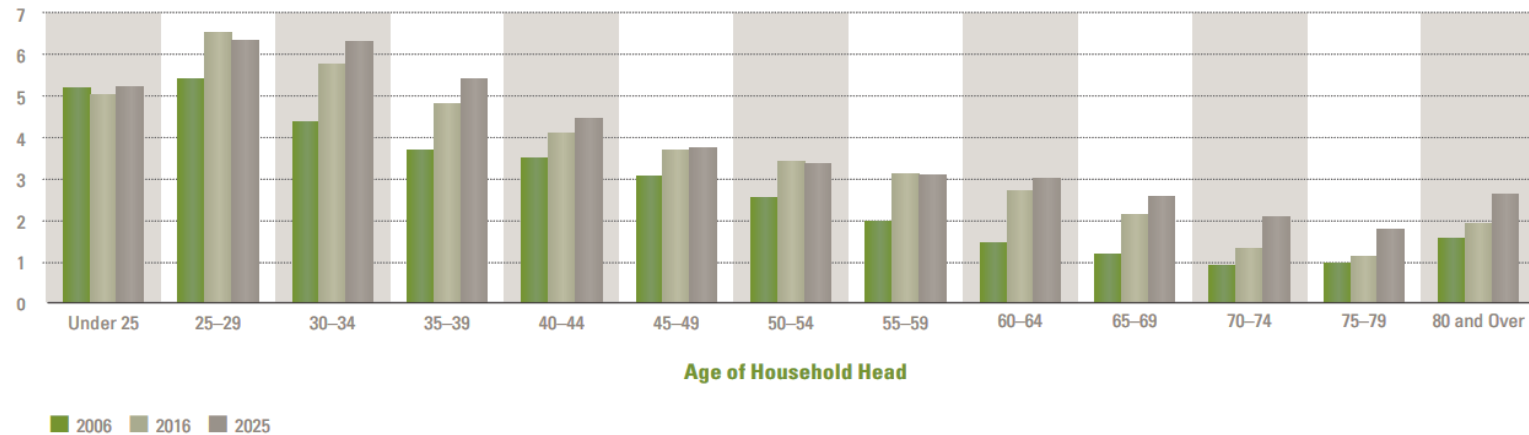
Given the sharp swings in rentership rates over the past two decades, predicting future rental demand is difficult. Shifting preferences, macroeconomic conditions and government policy help to shape many of the factors that determine rates of renting and owning, including housing affordability, mortgage accessibility, labor markets, and household incomes. As a starting point, though, future rental demand depends on the rate of household growth. JCHS projections suggest that overall household growth will be strong over the next 10 years as increasing numbers of the large millennial generation reach adulthood (Figure 13). At the same time, the aging of the baby-boom generation will lift the number of older households. Household growth is therefore expected to total 13.6 million in 2015–2025, before moderating to 11.5 million in 2025–2035 when losses of older households begin to accelerate.” – Joint Center for Housing Studies of Harvard University

# Demographics

FIGURE 13

## Over the Next Ten Years, Aging of the Baby Boomers and Millennials Will Drive Growth in Renter Households

Renter Households (Millions)



Note: JCHS projection for 2025 assumes homeownership rates by five-year age group and race/ethnicity hold at current values.

Sources: JCHS tabulations of US Census Bureau, Current Population Surveys; JCHS 2016 Household and Tenure Projections.

## The Outlook

Despite the aging of the adult population (which tends to favor higher homeownership rates), certain other demographic forces should support healthy growth in rental demand. Over the next 10 years, the younger half of the millennial generation – the largest generation in US history – will move into their 20s and 30s, the age groups most likely to rent. In addition, minority households are expected to account for nearly three-quarters of household growth in 2015–2025 and fully 90 percent in 2025–2035. If minority homeownership rates remain at current levels, the national rentership rate will increase in the coming decades. Taking all of these forces into account, the base scenario from the 2016 JCHS household tenure projections shows that, if homeownership rates stabilize at their 2015 levels, underlying demographics – that is, growth and change in the composition of US households by age, race/ethnicity, and family type – will support the addition of 4.7 million renters and 8.9 million homeowners between 2015 and 2025.” – Joint Center for Housing Studies of Harvard University

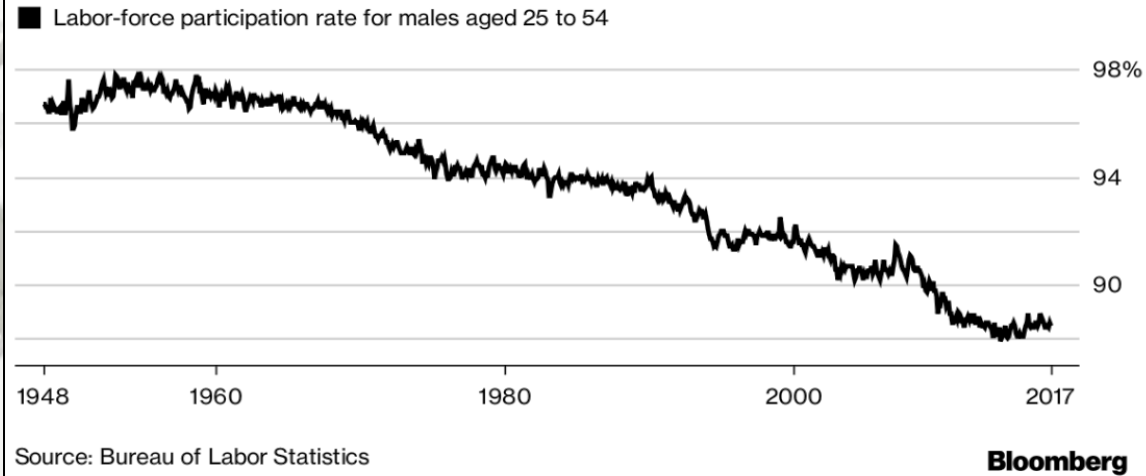
Source: [http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/02\\_harvard\\_jchs\\_americas\\_rental\\_housing\\_2017.pdf](http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/02_harvard_jchs_americas_rental_housing_2017.pdf); 12/14/17

# Economics

## 1. Boosting prime-age male participation will be an uphill fight

### The Main Problem

Nearly all working-age males were in the labor force at one point, today one in nine are out of it



## Bloomberg

### What Powell Needs to Know About U.S. Labor-Force Participation

*Six lessons that hold the key to the next phase of Fed policy*

“Jerome Powell, President Donald Trump’s nominee to head the Federal Reserve, says he’s focused on the disappearance of men from the U.S. labor force. He’s not the first: Fed Chair Janet Yellen counted it as a major concern and part of why she never took the main unemployment rate at face value, even as it dipped to a 16-year low.

But Powell, who’s slated to succeed Yellen in February, is correct that prime-age male labor participation may hold the key to getting the next stage of Fed policy right. We took a dive into labor data across the country, and here are six lessons that the new chairman will need to have a handle on.” – Catarina Saraiva and Steve Matthews, Reporters, Bloomberg



# Economics

## Bloomberg

### **What Powell Needs to Know About U.S. Labor-Force Participation**

*Six lessons that hold the key to the next phase of Fed policy*

“The participation rate of prime-age workers – those 25 to 54 years old – tells a more complete picture than the main unemployment rate. Just after World War II, 97 percent of working-age men were participating in the labor force – either employed or actively searching for a job. That number has steadily decreased and is today at 88.5 percent.

That means one out of every nine men is not only unemployed, but has given up looking for work. Since the unemployment rate only takes into account people actively in the workforce, those not participating are left out of that calculation. That’s how you can have an unemployment rate of 3.3 percent for prime-age males, but also have 11.5 percent of that cohort not in the workforce.

As things stand now, the participation rate for all males will continue to decline, according to Congressional Budget Office projections. Even adjusted to exclude the effects of an aging population, which accounts for a large share of the decline in the overall participation rate, the rate is still expected to fall over the next 25 years.” – Catarina Saraiva and Steve Matthews, Reporters, Bloomberg



# Economics

## 2. Participation will be even harder to tackle in some states

### Where Have All The Men Gone?

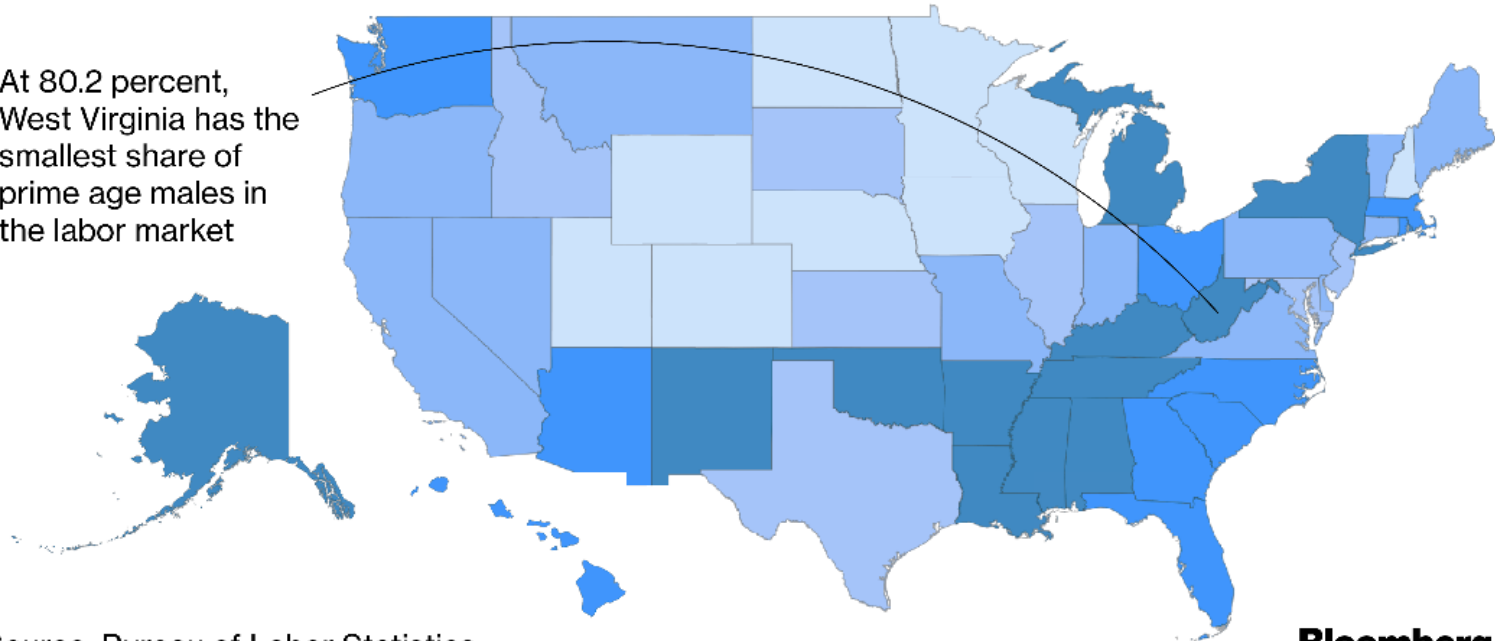
Prime-age male labor-force participation is lower in poorer, more rural states

80.2%      86.9%      88.5%      90.3%      91.8% or higher



2016 participation rate, males 25-54 years old

At 80.2 percent, West Virginia has the smallest share of prime age males in the labor market



Source: Bureau of Labor Statistics

**Bloomberg**

# Economics

## Bloomberg

### **What Powell Needs to Know About U.S. Labor-Force Participation**

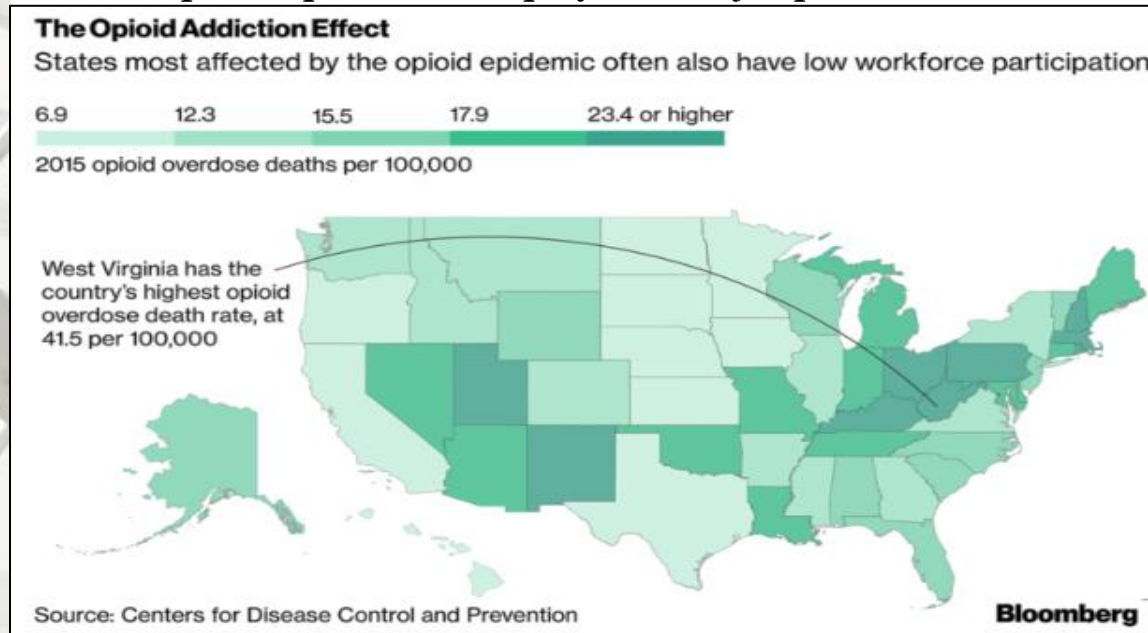
*Six lessons that hold the key to the next phase of Fed policy*

“The shortfall in male participation that Powell pointed to varies dramatically by state, which may support the Fed nominee's idea that it represents slack. As of 2016, the most recent year for which data is available, West Virginia had the lowest rate among prime-age men, at 80.2 percent. The Appalachian state has historically had one of the country's lowest participation rates. Even at the end of the 1970s, when the national rate for 25-to-54-year-old males hovered in the mid-90s, West Virginia's was at 90 percent.

Close behind it are other states with long histories of poverty: Mississippi, Kentucky and New Mexico. While Utah's 93.1 percent rate leads the nation, all 50 states have seen a decline in labor-force participation for prime-age men since the 1970s.” – Catarina Saraiva and Steve Matthews, Reporters, Bloomberg

# Economics

## 3. The opioid epidemic has played a major part



## Bloomberg

### What Powell Needs to Know About U.S. Labor-Force Participation

“Both Powell and Yellen have said opioid addiction is one of the reasons more men aren't in the labor market. The data show that states with low prime-age male participation rates also have high rates of opioid overdose deaths.

Princeton University economist Alan Krueger’s [research](#) has found that the increase in opioid prescriptions from 1999 to 2015 could account for one-fifth of the decline in men’s labor-force participation. Krueger also finds that nearly half of prime-age men not in the labor force take prescription painkillers daily.” – Catarina Saraiva and Steve Matthews, Reporters, Bloomberg

# Economics

## Bloomberg

### **What Powell Needs to Know About U.S. Labor-Force Participation**

It's not just the opioid crisis. In the late 1970s, the U.S. workforce was heavily concentrated in male-dominated industries. Manufacturing was the largest industry in the country, employing about 22 percent of workers in 1978. Nearly three-quarters of those were men, which hasn't changed. That industry has by far seen the biggest decline in the past 50 years and today only employs 8.5 percent of the workforce. The largest gainer in employment is education and health services, which is 77 percent female and now makes up almost 16 percent of the labor force.

Those manufacturing jobs are unlikely to return in droves following years of offshoring and globalization. That means more men will need to go into traditionally female occupations, such as nursing, if they want to rejoin the workforce. Colorado, which has the fourth highest prime-age male participation rate, has a high percentage of its workforce employed in professional and business services, and leisure and hospitality, two of the top -employing industries nationally.

The states that have seen the biggest declines in male labor-force participation in the past 50 years are ones that have large blue-collar workforces in sectors that mostly have employed men. In West Virginia, mining, manufacturing and construction employed 23 percent of the state workforce in 1990. That had plunged to 13 percent by this year.

The state's drop, "relative to the nation, has been driven in large part due to industrial composition," said John Deskins, a West Virginia University economics professor." – Catarina Saraiva and Steve Matthews, Reporters, Bloomberg

# Economics

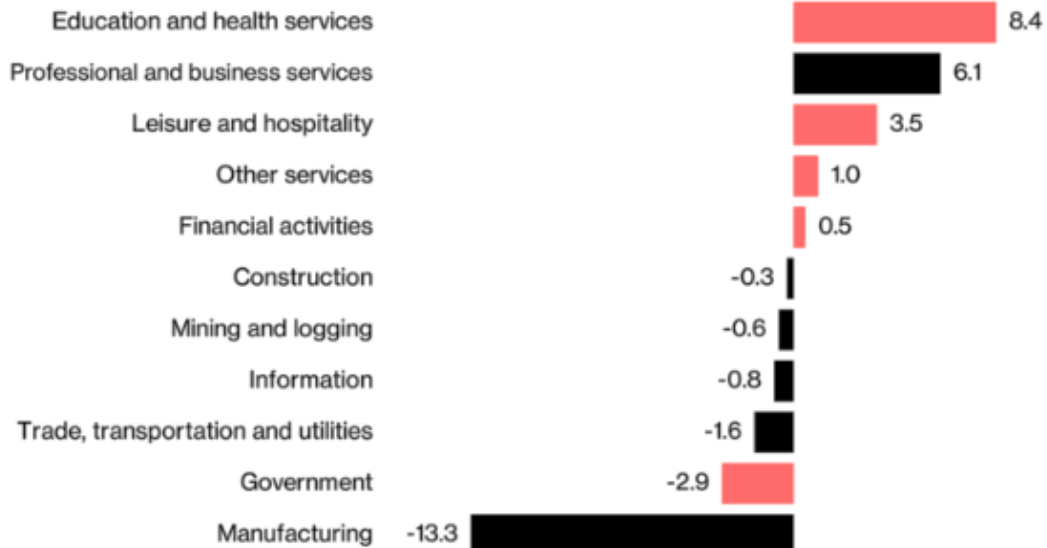
## 4. But the decline of male-dominated jobs has also taken a toll

### Who's Hiring?

Most of the industries that have grown as a part of the labor force are now majority female

Percentage point change in industry's share of the labor force, 1978-2017:

■ Majority male ■ Majority female



Source: Bureau of Labor Statistics

Bloomberg



# Economics

## Bloomberg

### **What Powell Needs to Know About U.S. Labor-Force Participation**

*Six lessons that hold the key to the next phase of Fed policy*

“The change in industries in the U.S. has also created an environment where higher education is increasingly becoming necessary for stable, middle-income jobs. In the 1970s, men without college degrees could often get good work in manufacturing or other sectors. Today, many of those jobs have disappeared and in their place are jobs like nursing or teaching, which require college degrees. Workers with at least a bachelor’s degree earn two-thirds more than those with only a high school education, and participate in the labor market at a higher rate.

With the low unemployment rate, job openings are near a record high as employers struggle to find workers with the skills they seek. Some corporations have created training programs, or partnered with community colleges, to ensure they get workers with the high-tech skills now required for manufacturing in the U.S. Economists and politicians, including the Trump administration, have advocated for a revival of vocational training programs to help better prepare U.S. workers.

The U.S. job market is becoming increasingly polarized as the labor force transitions from routine tasks – manufacturing, construction – to non-routine tasks. This latter category is often either low-skill or high-skill: a taxi cab driver or a lawyer. The middle layer, often comprised of jobs that pay a living wage, is effectively fading away.” – Catarina Saraiva and Steve Matthews, Reporters, Bloomberg

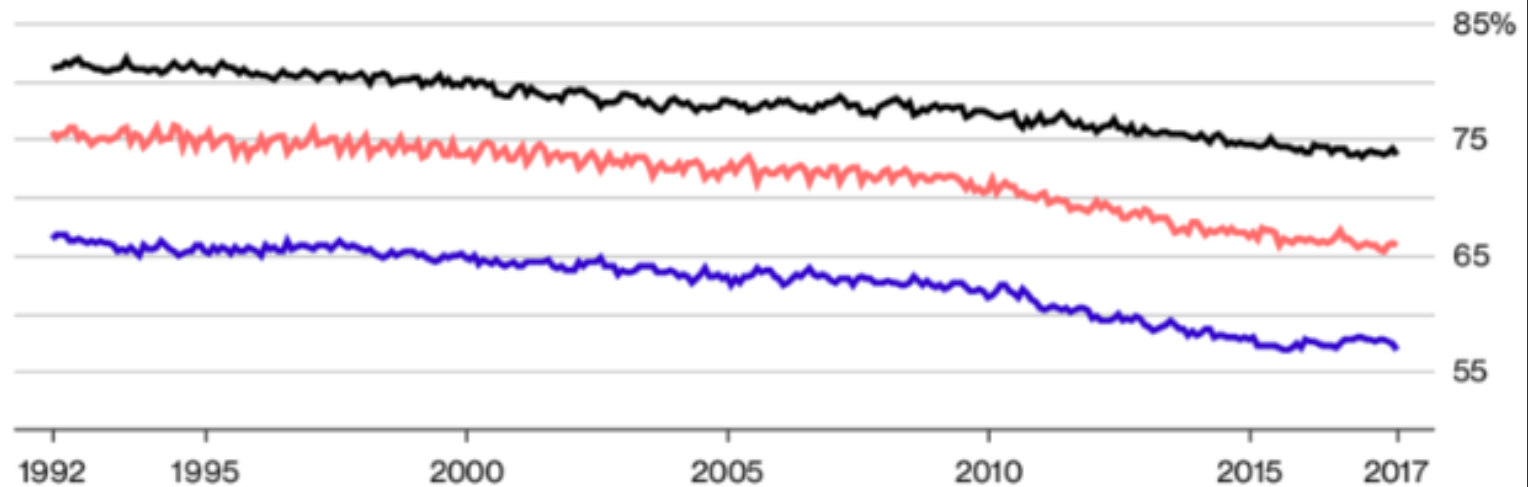
# Economics

## 5. Education and skills training are key to boosting male participation

### The More Educated, the More Employed

Workers with a college education tend to participate in the labor market at higher rates

■ Bachelor's degree or higher ■ Some college or associate degree ■ High school only



Source: Bureau of Labor Statistics

Bloomberg

# Economics

## 6. Women are gaining but could use a boost as well

### Women March In

Women entered the labor force in droves in the second half of the 20th century

■ Labor-force participation rate for females aged 25 to 54



Source: Bureau of Labor Statistics

**Bloomberg**

### Bloomberg

#### What Powell Needs to Know About U.S. Labor-Force Participation

“Only one-third of prime-age women worked immediately following World War II, a number that has surged to 75 percent today. But one thing that increase didn't result in is more stay-at-home dads: The share of married-couple families where women are the sole breadwinners was 5.4 percent in 2016, little changed from 4.6 percent in 1995.” – Catarina Saraiva and Steve Matthews, Reporters, Bloomberg

# Economics

## ***The Wall Street Journal*** **Millennials, Gen-X'ers and Boomers Are Still Poorer Than Before the Recession**

***Federal Reserve data shows that the elderly are the one age group better off***

“If you’re younger than 75, chances are the long recovery from the 2007-2008 recession has left you poorer than you would have been at the same age a decade ago. If you’re older, you may be better off.

The recovery has opened up a wealth gap between the oldest households and younger ones, a divergence that could make it difficult for younger families to benefit from the rebound in home sales and stock prices, according to new data from the Federal Reserve’s Survey of Consumer Finances.

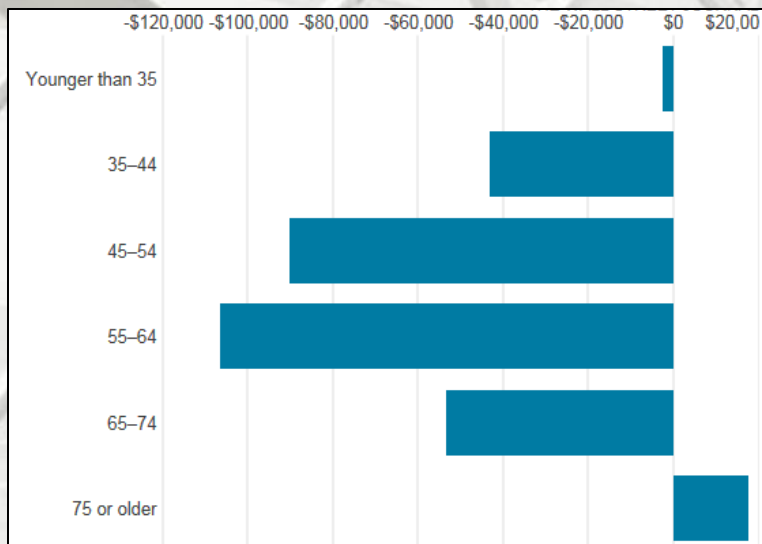
The median net worth for households headed by somebody under age 75 is lower than it was for comparable households in 2007, with the biggest declines among those aged 45-64. The net worth of older people, on the other hand, has risen. The figures are adjusted for inflation.

Net worth takes into account a household’s assets such as property, bank accounts or retirement funds and subtracts debts such as mortgages, student loans or credit card balances. To understand the recent age divergence, it helps to look at assets and debts separately.

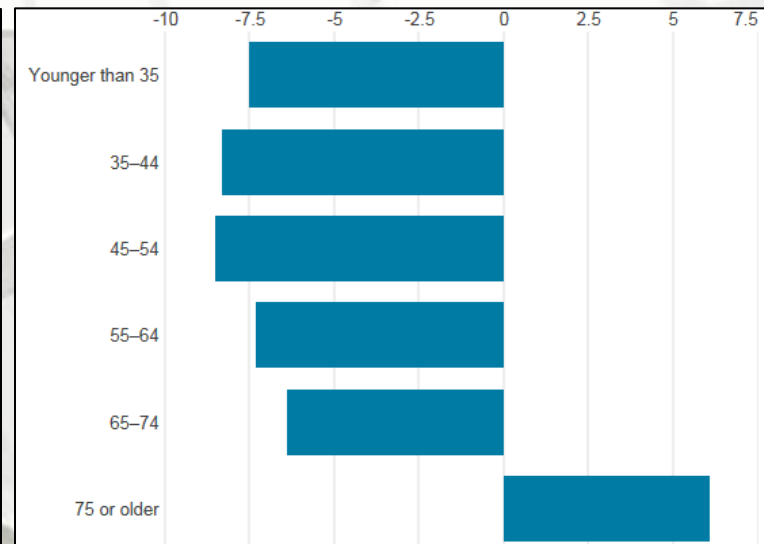
For many households, the biggest store of wealth is their homes. But the housing crash and the wave of foreclosures that followed have reduced the ranks of homeowners among all but the oldest households.” – David Harrison, Reporter, *The Wall Street Journal*

# Economics

## ***Worse Off*** Change in median household net worth by the head of household's age, 2007-2016



## ***Home Sweet Home*** Percentage-point change in share of households owning a home, 2007-2016

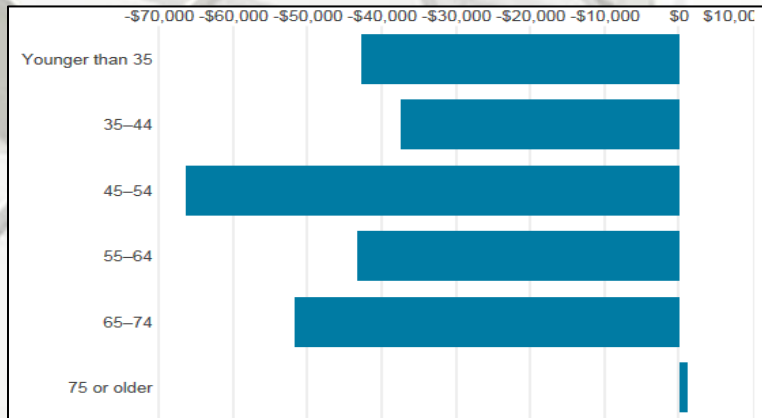


Source: *The Wall Street Journal*, Federal Reserve, Note: 2016 dollars



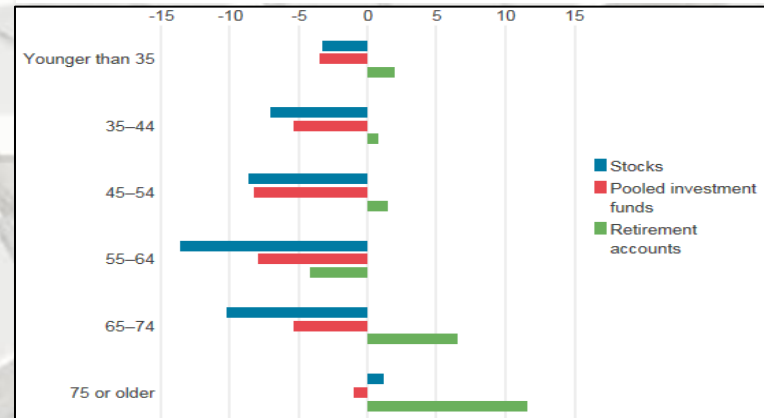
# Economics

## ***Sunken Values*** **Change in median home value among homeowners, 2007-2016**



Source: *The Wall Street Journal*, Federal Reserve, Note: 2016 dollars

## ***What Investments?*** **Percentage-point change in share of households owning selected financial assets, 2007-2016**



“Despite the recovery in the housing market, most families fortunate enough to own a home have found their home values are still lower than they were for families in the same age range in 2007. The only households to have seen a slight uptick in home values are those headed by somebody over 75.

Another major store of a family’s wealth sits in its investments, either through a retirement fund or other investment vehicles. Here again, the recession has reduced the share of households holding assets. The share of American families who own stock or pooled investment funds such as directly-held mutual funds, hedge funds, exchange traded funds or stock and bond funds has gone down for all but the oldest age groups.

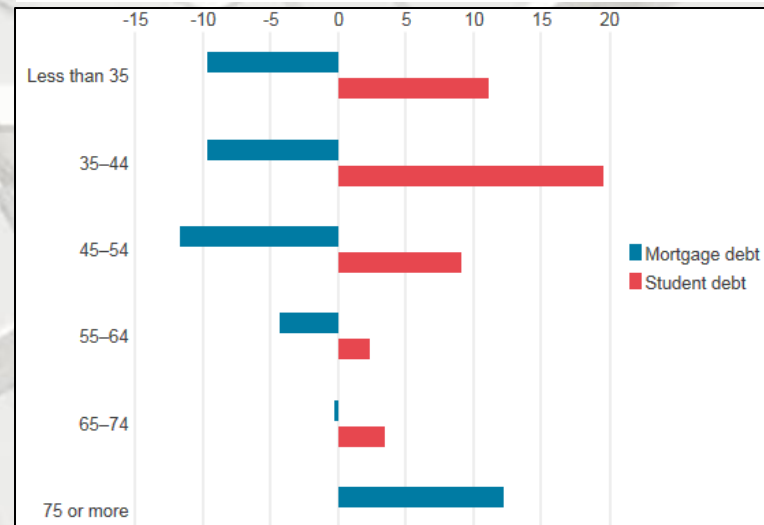
One interesting detail: Households are more likely to have retirement accounts than they were in 2007. That’s probably due to the long-running shift from defined-benefit pensions (where employers guarantee retirees a monthly income) to defined-contribution accounts (where employees contribute to their own retirement through IRA’s or 401k’s).” – David Harrison, Reporter, *The Wall Street Journal*

# Economics

## ***Nice Returns, If You Can Get Them*** Change in median value of selected financial assets among households holding the asset, 2007-2016.



## ***Changing Debt Composition*** Percentage-point change in share of households holding selected debt types, 2007-2016.



Source: *The Wall Street Journal*, Federal Reserve, Note: 2016 dollars

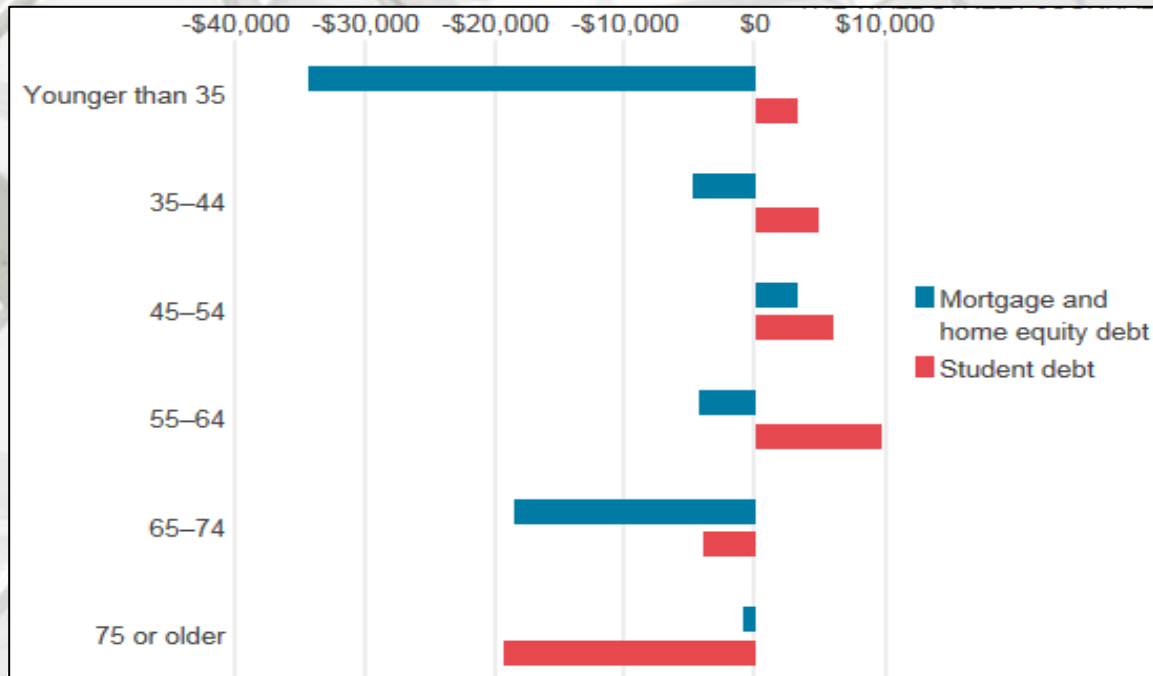
“If you don’t own much in the way of investments, you missed out on a significant rally. Stock prices have rebounded strongly since 2009, boosting the portfolio of households fortunate enough to own them. That has contributed to the increase in net worth for older families.

Household debt has also changed since 2007, perhaps accentuating the age split. Since fewer families in younger age groups are homeowners, they are less likely to have a mortgage. But many of those households have replaced their mortgage debt with student debt. The oldest households, who are now more likely than in 2007 to be homeowners, are more likely to have a mortgage.” – David Harrison, Reporter, *The Wall Street Journal*

# Economics

## *What We Owe*

**Change in median value of select household debt among debt-holding households, 2007-2016**

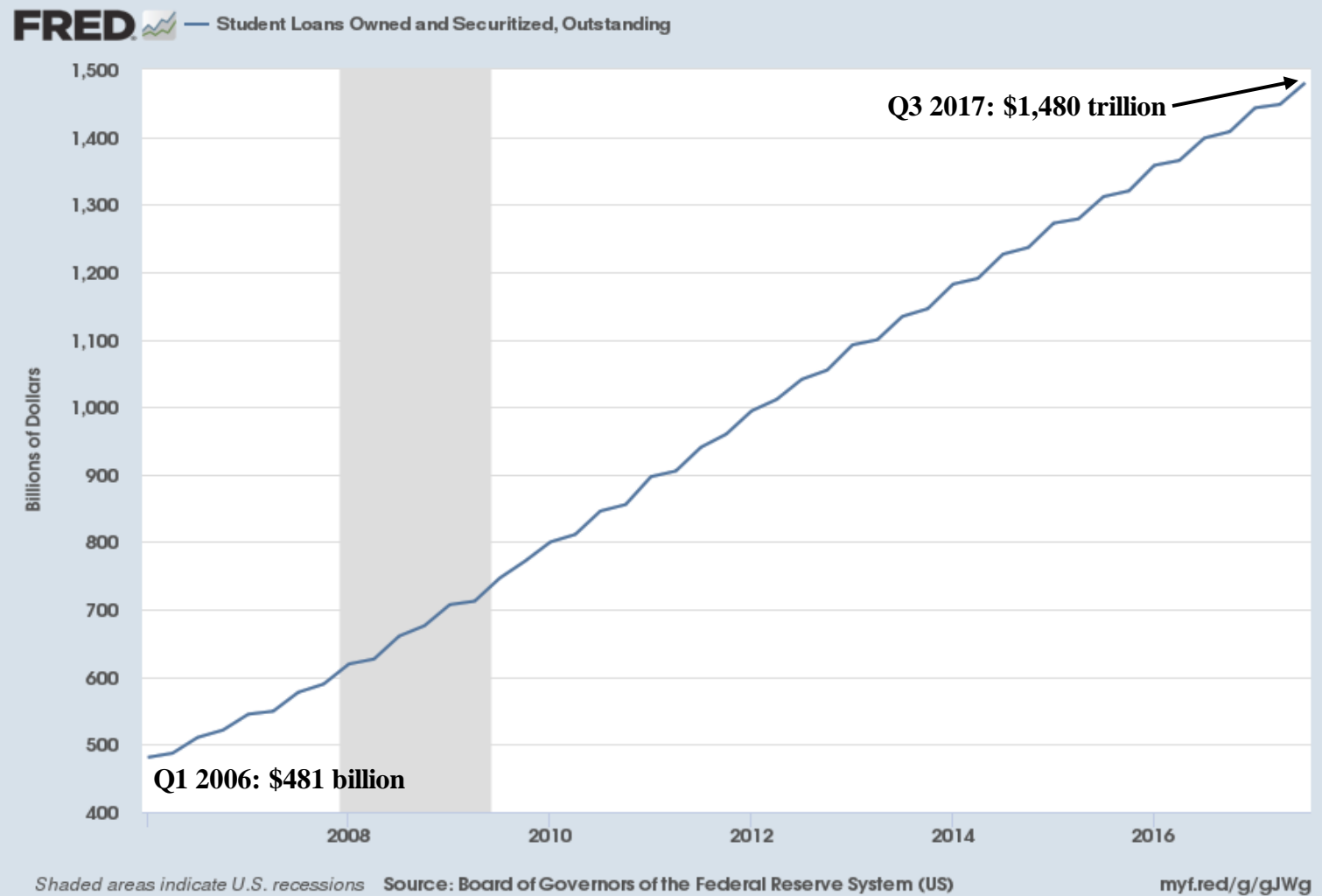


Source: *The Wall Street Journal*, Federal Reserve, Note: 2016 dollars

“How much do we owe on our debts? Most age groups who have a mortgage owe less than equivalent households did in 2007. But those with student loans owe more on those.

Economists expect the economy to continue to strengthen in 2018, which could prop up asset values. Unless more people are able to invest, they may find themselves partially shut out of the boom and the gap between old and young could grow wider.” – David Harrison, Reporter, *The Wall Street Journal*

# Economics



Student debt continues to expand

# Economics

## **The looming student loan default crisis is worse than we thought**

Key findings from new analysis of these data include:

- “Trends for the 1996 entry cohort show that cumulative default rates continue to rise between 12 and 20 years after initial entry. Applying these trends to the 2004 entry cohort suggests that nearly 40 percent may default on their student loans by 2023.
- The new data show the importance of examining outcomes for all entrants, not just borrowers, since borrowing rates differ substantially across groups and over time. For example, for-profit borrowers default at twice the rate of public two-year borrowers (52 versus 26 percent after 12 years), but because for-profit students are more likely to borrow, the rate of default among all for-profit entrants is nearly four times that of public two-year entrants (47 percent versus 13 percent).
- The new data underscore that default rates depend more on student and institutional factors than on average levels of debt. For example, only 4 percent of white graduates who never attended a for-profit defaulted within 12 years of entry, compared to 67 percent of black dropouts who ever attended a for-profit. And while average debt per student has risen over time, defaults are highest among those who borrow relatively small amounts.
- Debt and default among black college students is at crisis levels, and even a bachelor’s degree is no guarantee of security: black BA graduates default at five times the rate of white BA graduates (21 versus 4 percent), and are more likely to default than white dropouts.
- Trends over time are most alarming among for-profit colleges; out of 100 students who ever attended a for-profit, 23 defaulted within 12 years of starting college in the 1996 cohort compared to 43 in the 2004 cohort (compared to an increase from just 8 to 11 students among entrants who never attended a for-profit).” – Judith Scott-Clayton, Nonresident Senior Fellow-Economic Studies, Brookings



# Economics

## **The looming student loan default crisis is worse than we thought**

“Until recently, the dominant focus of public concern around student loans has been simply how much of it there is, and how rapidly it has been growing over time. At nearly \$1.4 trillion in loans outstanding, student debt is now the second-largest source of household debt (after housing) and is the only form of consumer debt that continued to grow in the wake of the Great Recession.

But as many observers have noted, these aggregate statistics tell us little about the student-level experience with college debt. About one-quarter of the aggregate increase in student loans since 1989 is due to more students enrolling in college. More recent work that tracks debt outcomes for individual borrowers documents that the main problem is not high levels of debt per student (in fact, defaults are lower among those who borrow more, since this typically indicates higher levels of college attainment), but rather the low earnings of dropout and for-profit students, who have high rates of default even on relatively small debts.

### **How Debt and Default Evolve Over Time, By Entry Cohort**

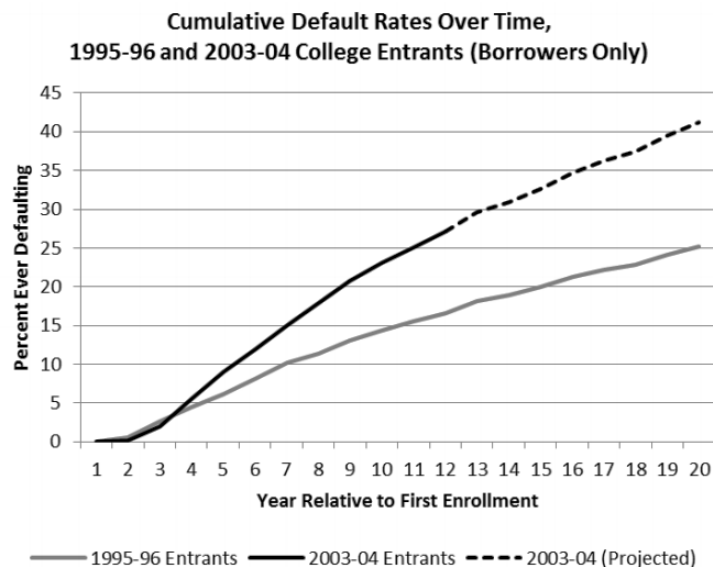
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Figure 1 plots the resulting cumulative rates of default relative to initial entry for borrowers in both cohorts, with the data points after year 12 for the 2003-04 cohort representing projections. Defaults increase by about 40 percent for the 1995-96 cohort between years 12 and 20 (rising from 18 to 26 percent of all borrowers). Even by year 20, the curve does not appear to have leveled off; it seems likely that if we could track outcomes even longer, the default rate would continue to rise.

For the more recent cohort, default rates had already reached 27 percent of all borrowers by year 12. But based on the patterns observed for the earlier cohort, a simple projection indicates that about 38 percent of all borrowers from the 2003-04 cohort will have experienced a default by 2023.” – Judith Scott-Clayton, Nonresident Senior Fellow-Economic Studies, Brookings

# Economics

**Figure 1**



Source: Author's calculations using NCES Power Stats with BPS-96 and BPS-04 data.

**Table 1**

Borrowing, debt, and default, by cohort and years since entry

	12 Years After Entry		20 Years After Entry	
	BPS-1996	BPS-2004	BPS-1996	BPS-2004 (Projected)
Ever borrowed for undergraduate study (federal)	51.8	59.8	55.1	63.6
Ever borrowed (federal, any level)	55.0	62.9	58.9	67.3
<i>Debt and default among all first-time students</i>				
Average amount of UG federal loans borrowed	\$6,973	\$10,127	\$8,692	\$12,623
Average amount of federal loans borrowed (any level)	\$10,723	\$16,706	\$14,843	\$23,126
Average amount owed on federal loans, incl. interest	\$9,080	\$15,094	\$11,784	\$19,589
Ever defaulted on a federal loan	10.0	17.1	15.0	25.7
<i>Debt and default among borrowers</i>				
Average amount of UG federal loans borrowed	\$12,672	\$16,089	\$14,769	\$18,752
Average amount of federal loans borrowed (any level)	\$19,485	\$26,540	\$25,222	\$34,355
Average amount owed on federal loans, incl. interest	\$16,500	\$23,979	\$20,024	\$29,101
Ever defaulted on a federal loan	18.2	27.2	25.5	38.2

Source: Author's calculations using NCES Power Stats with BPS-96 and BPS-04 data. Notes: Dollar amounts are not inflation-adjusted. Analyses are weighted to reflect sample that responded to the 6-year follow up survey (WTD000 for BPS-96 and WTA000 for BPS-04). Projections for BPS 2004 20-year outcomes based on 12-to-20 year percent increases for the 1996 cohort.

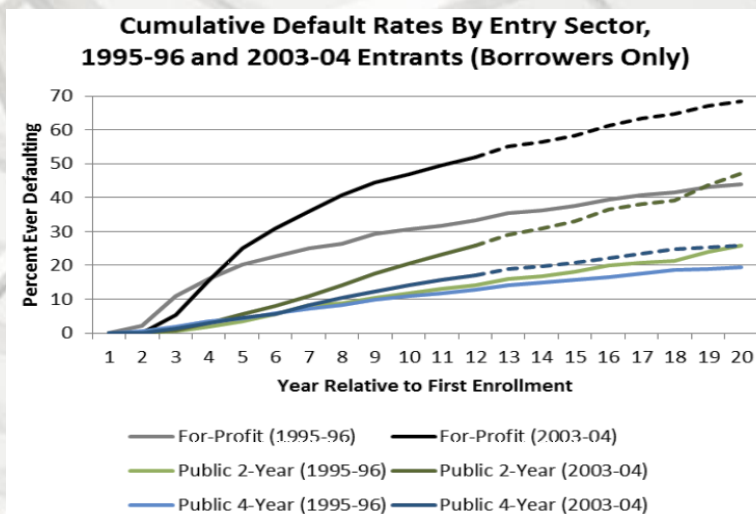
## How Debt and Default Evolve Over Time, By Entry Cohort

“Table 1 provides cross-cohort comparisons and projections over a 20-year time frame for defaults as well as additional measures of borrowing and repayment. Figure 1 focuses on borrowers only, which is common when analyzing default rates. But because of increases in borrowing rates across cohorts, restricting the analysis to borrowers only can understate the full extent of heterogeneity across groups and time periods. For example, Table 1 shows that while 12-year default rates have risen by nearly 50 percent among borrowers (18 to 27 percent), they have risen by 71 percent if we consider all entrants (from 10 to 17 percent).” – Judith Scott-Clayton, Nonresident Senior Fellow-Economic Studies, Brookings

# Economics

**Figure 2**

Source: Author's calculations using NCES Power Stats with BPS-96 and BPS-04 data.



## How Debt and Default Evolve Over Time, By Entry Cohort

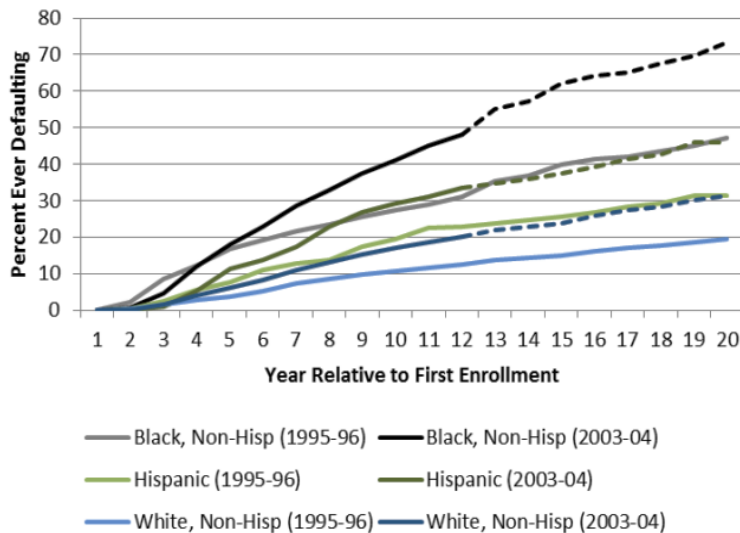
“In fact, the trends here are even more stark than found by Looney and Yannelis (2015), due in part to the large and rapidly growing differences in borrowing rates across sectors. Among all new students entering the for-profit sector in 2004, nearly half had defaulted within 12 years (47 percent), compared to “just” 24 percent in the 1996 cohort. The default rate for for-profit entrants is nearly four times the rate seen in other sectors, where only 12 to 13 out of every 100 entrants default. Figure 2, which focuses on borrowers only and projects default rates out to year 20, suggests that default rates in the for-profit sector could ultimately approach 70 percent.

Defaults have also risen most rapidly among students who never complete an associate’s or bachelor’s degree. While much attention has been given to the high rates of default among dropouts (24 percent), defaults are actually even higher among those who complete a postsecondary certificate (28 percent). This is despite relatively low levels of average debt in these groups. Though not shown in the table, the new data confirm a previously-documented pattern that defaults are highest among those with small debts: 37 percent of those who borrow between \$1 and \$6,125 for undergraduate study default within 12 years, compared with 24 percent of those who borrow more than \$24,000.” – Judith Scott-Clayton, Nonresident Senior Fellow-Economic Studies, Brookings

# Economics

**Figure 3**

**Cumulative Default Rates By Race Over Time,  
1995-96 and 2003-04 Entrants (Borrowers Only)**



Source: Author's calculations using NCES Power Stats with BPS-96 and BPS-04 data.

**Table 2**

**Debt and Default Among BA Graduates, By Race  
12 Years After College Entry, 2004 Entry Cohort**

	Undergraduate Amount Borrowed	Total Amount Borrowed	Total Owed	Ever Defaulted
Bachelor's degree graduates				
White	\$10,848	\$26,005	\$20,770	4.0
Black or African American	\$21,149	\$55,667	\$64,142	20.6
Hispanic or Latino	\$10,854	\$28,599	\$27,969	8.6
Asian	\$6,618	\$30,612	\$22,234	1.4
Black-White Gap (level)	\$10,301	\$29,662	\$43,372	16.6
Black-White Ratio	1.9	2.1	3.1	5.2

Source: Author's calculations using NCES Power Stats with BPS-04 data.

Source: Author's calculations using NCES Power Stats with BPS-04 data.

## How Debt and Default Evolve Over Time, By Entry Cohort

“While prior work has raised alarm bells about the crisis for African-American borrowers (Miller, 2017), the new data should ring the alarm even louder. As shown in Table 2, nearly 38 percent of all black first-time college entrants in 2004 had defaulted within 12 years, a rate more than three times higher than their white counterparts, and 13 percentage points higher than black students entering just eight years prior. Focusing on borrowers only and projecting default rates out through year 20 (as shown in Figure 3) suggests that 70 percent of black borrowers may ultimately experience default.” – Judith Scott-Clayton, Nonresident Senior Fellow-Economic Studies, Brookings



# Economics

## How Debt and Default Evolve Over Time, By Entry Cohort Conclusion

“The analyses presented above highlight the value of tracking individual students from the beginning of their college trajectory for many years beyond when they leave school, and the importance of disaggregating trends by student and institutional characteristics. Key findings include:

- Trends for the 1996 entry cohort show that cumulative default rates continue to rise between 12 and 20 years after initial entry. Applying these trends to the 2004 entry cohort suggests that nearly 40 percent may default on their student loans by 2023.
- The new data show the importance of examining outcomes for all entrants, not just borrowers, since borrowing rates differ substantially across groups and over time. For example, for-profit borrowers default at twice the rate of public two-year borrowers (52 versus 26 percent after 12 years), the rate of default among all for-profit entrants is nearly four times that of public two-year entrants (47 percent versus 13 percent).
- The new data underscore that default rates depend more on student and institutional factors than on average levels of debt. For example, only 4 percent of white graduates who never attended a for-profit defaulted within 12 years of entry, compared to 67 percent of black dropouts who ever attended a for-profit. And while average debt per student has risen over time, defaults are highest among those who borrow relatively small amounts.” – Judith Scott-Clayton, Nonresident Senior Fellow-Economic Studies, Brookings



# Economics

## How Debt and Default Evolve Over Time, By Entry Cohort Conclusion

- “Debt and default among black or African-American college students is at crisis levels, and even a bachelor’s degree is no guarantee of security: black BA graduates default at five times the rate of white BA graduates (21 versus 4 percent), and are more likely to default than white dropouts.
- Trends over time are most alarming among for-profit colleges; out of 100 students who started college at a for-profit, 23 defaulted within 12 years of starting college in the 1996 cohort compared to 43 in the 2004 cohort (compared to an increase from just 8 to 11 students among entrants who never attended a for-profit).

The data used here are not without their own limitations. For example, the BPS considers only first-time beginning college students – but older, returning students borrow too and may have worse outcomes. Graduate students also represent a growing share of student debt. Further, even the 2004 cohort considered here predates the rapid growth in for-profit enrollment during the recession. If the Department of Education linked the administrative data on debt and repayment used here to the National Postsecondary Student Aid Survey (NPSAS) survey as well, the analyses above could be extended to a broader and more recent population of students.

To conclude, the results suggest that diffuse concern with rising levels of average debt is misplaced. Rather, the results provide support for robust efforts to regulate the for-profit sector, to improve degree attainment and promote income-contingent loan repayment options for all students, and to more fully address the particular challenges faced by college students of color.” – Judith Scott-Clayton, Nonresident Senior Fellow-Economic Studies, Brookings

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