

Economic Outlook

Midwest Aerosol Association

Arlington Heights, IL

April 19, 2018

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Senior Economist

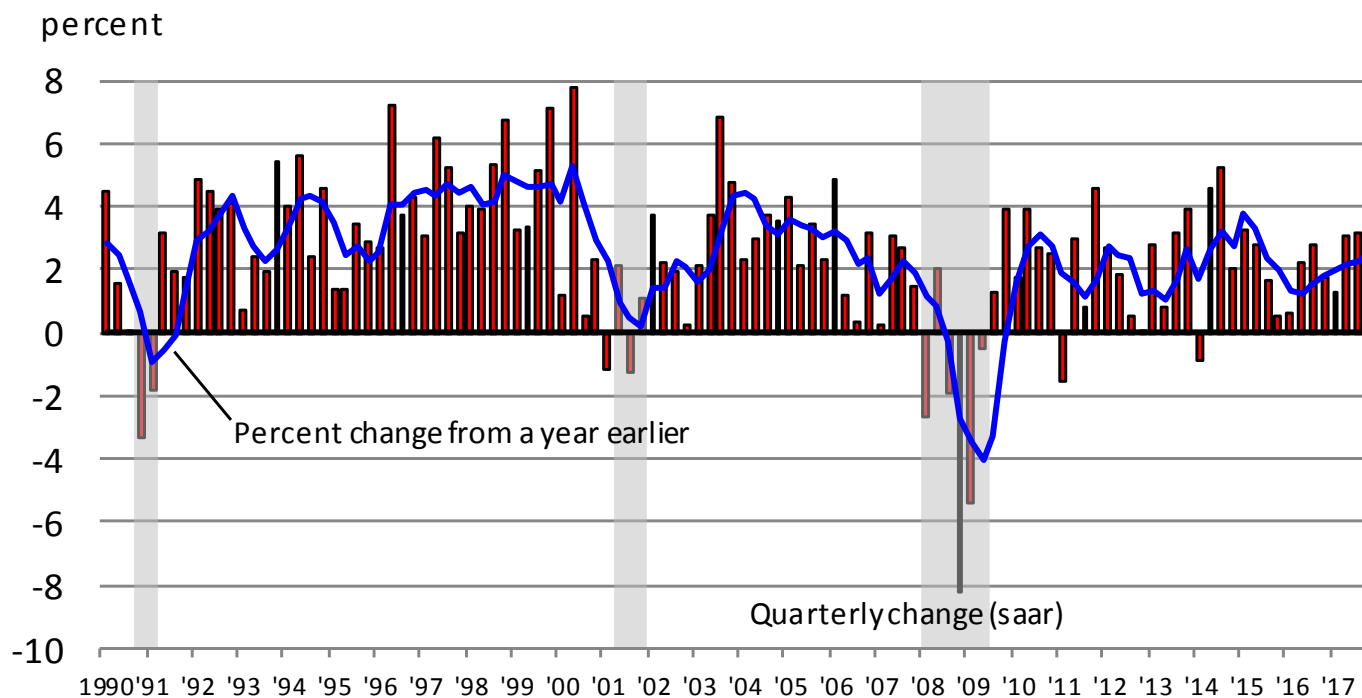
and Economic Advisor

Federal Reserve Bank of Chicago

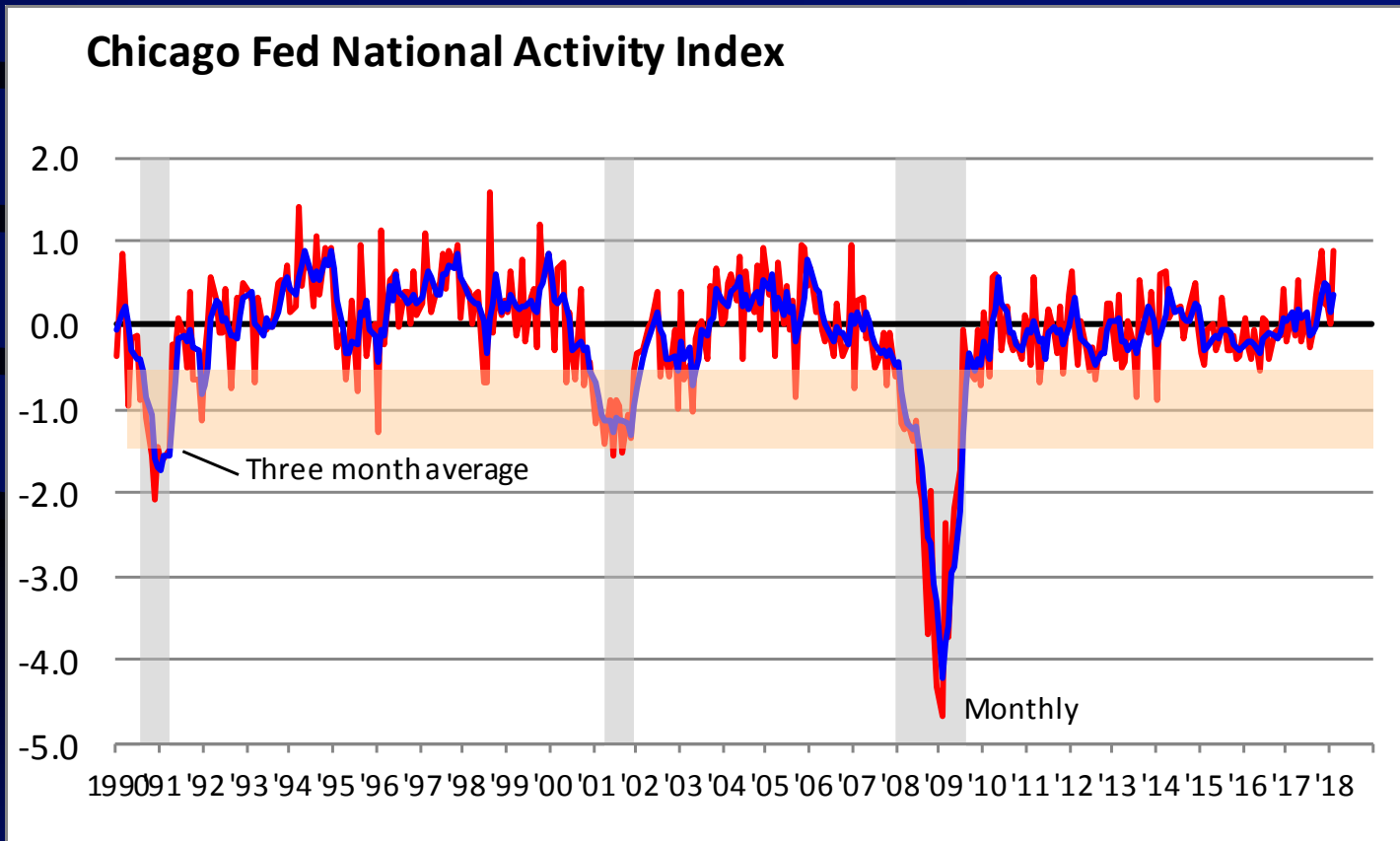


GDP expanded by 2.6% over the past year

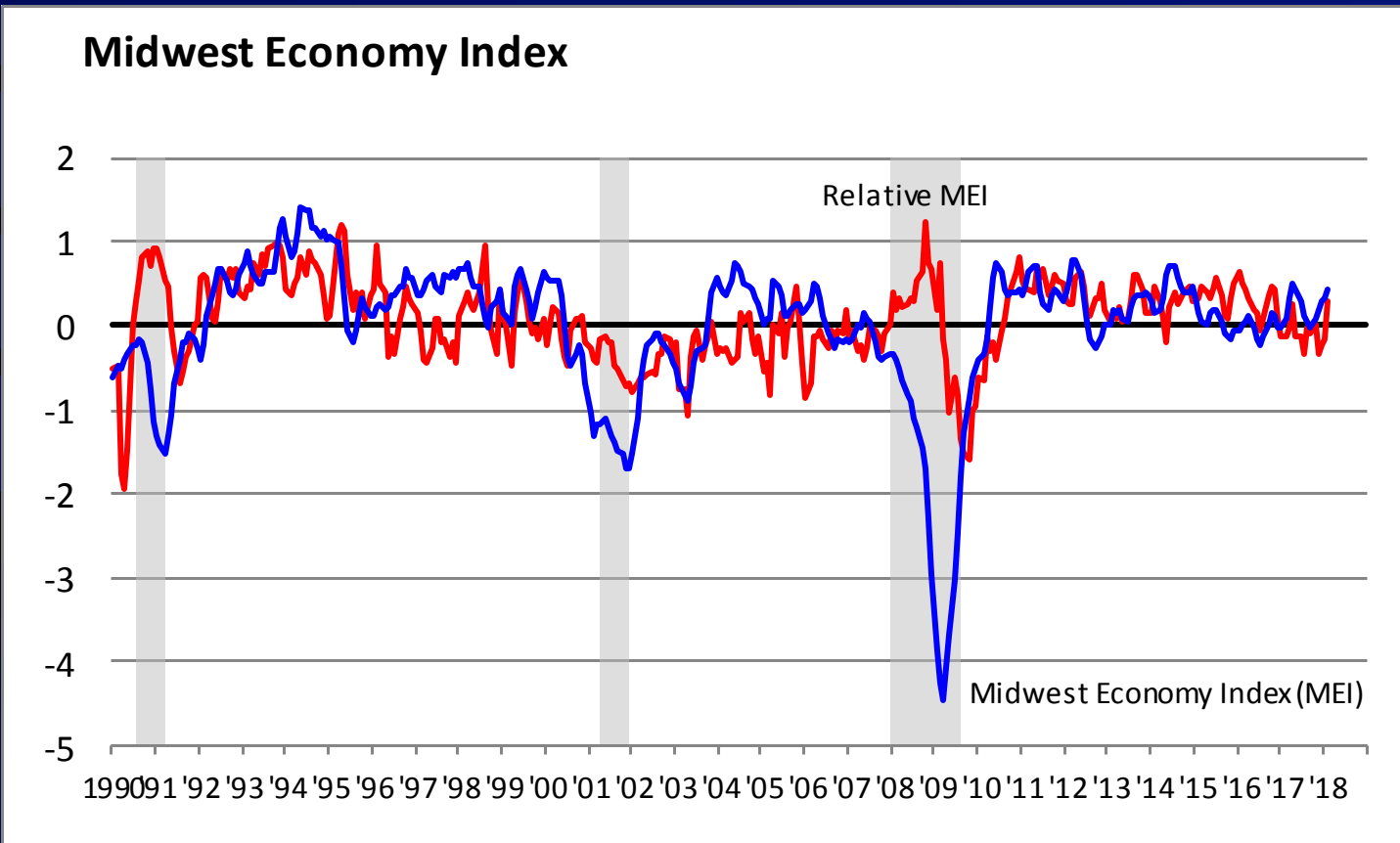
Real gross domestic product



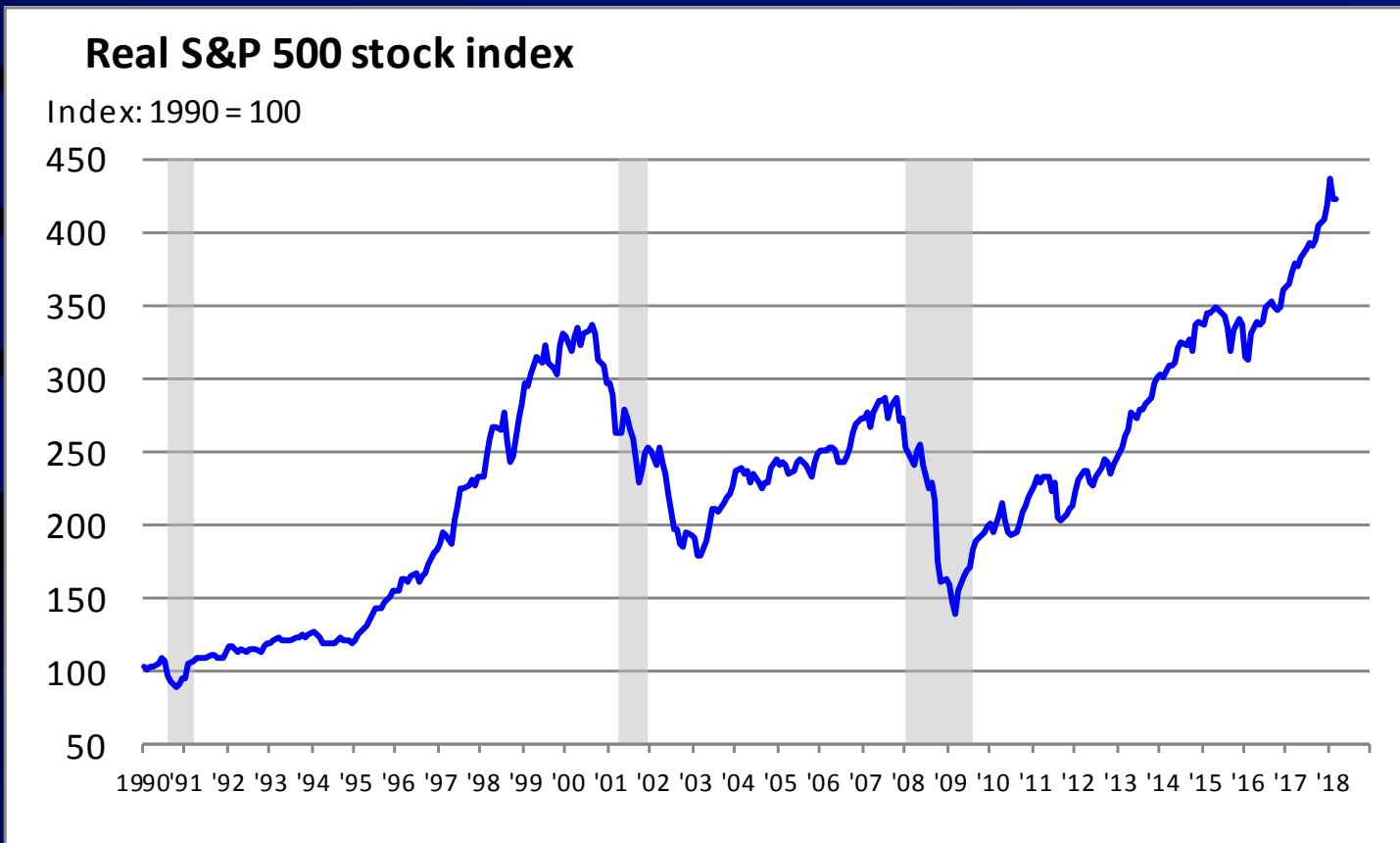
The Chicago Fed National Activity Index 3-month average remains above zero



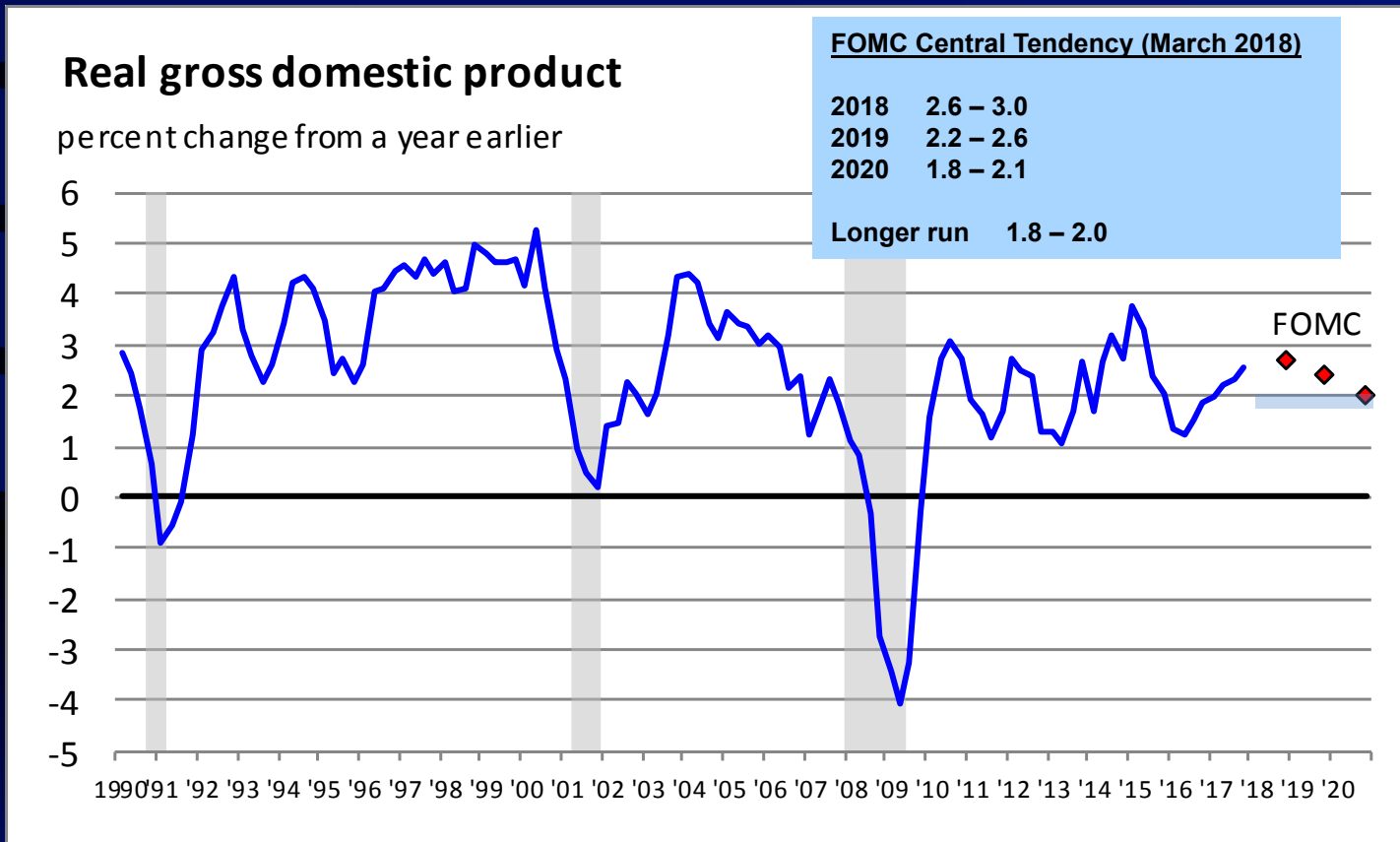
The Midwest Economy Index is above zero and is doing somewhat better than the nation's performance



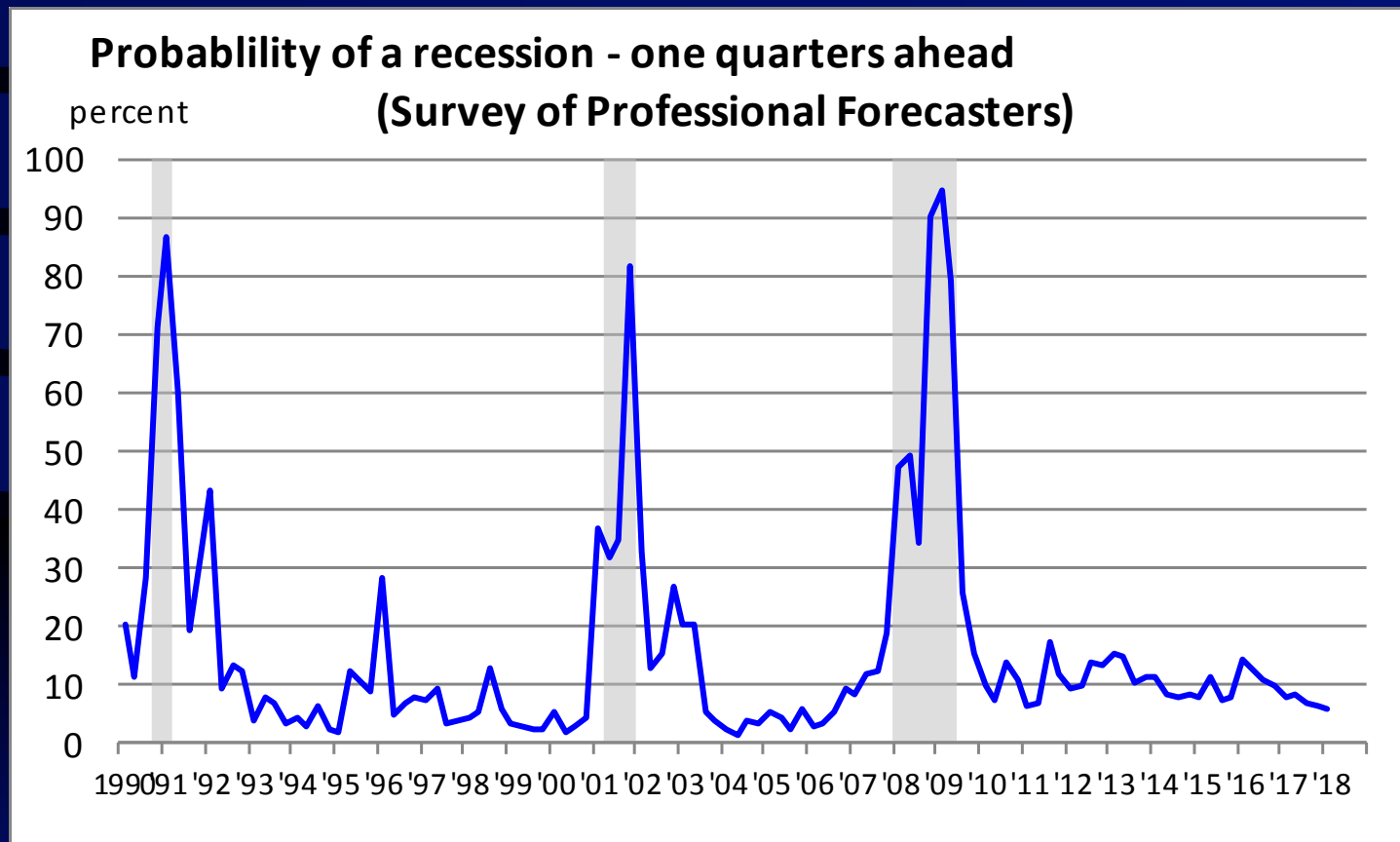
The real value of the stock market is very high



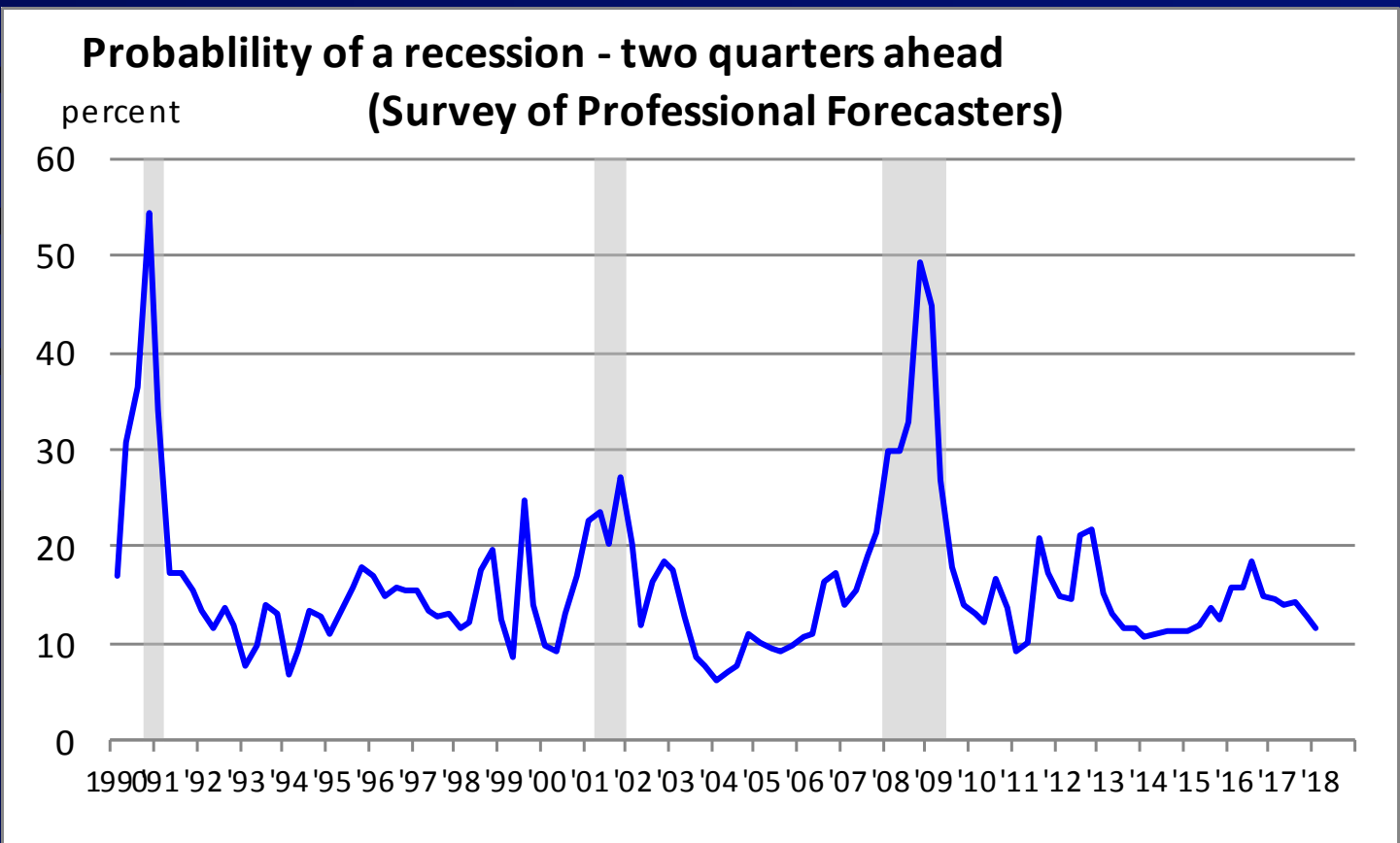
The Federal Open Market Committee (FOMC) expects GDP to grow above trend this year; somewhat above trend next year; and around trend in 2020



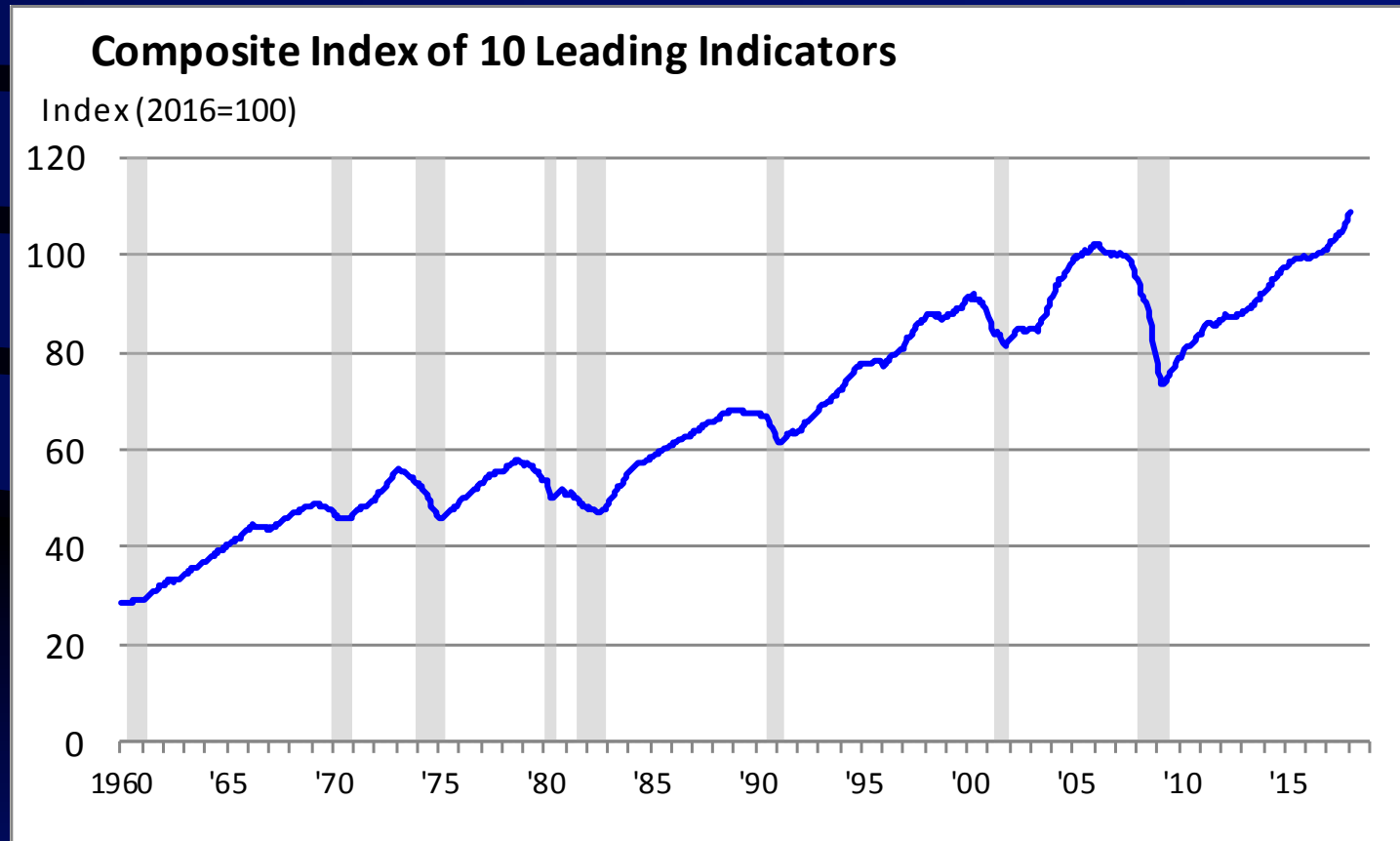
The probability of recession in the next quarter has eased



The same is true for the chances of a recession over the next two quarters

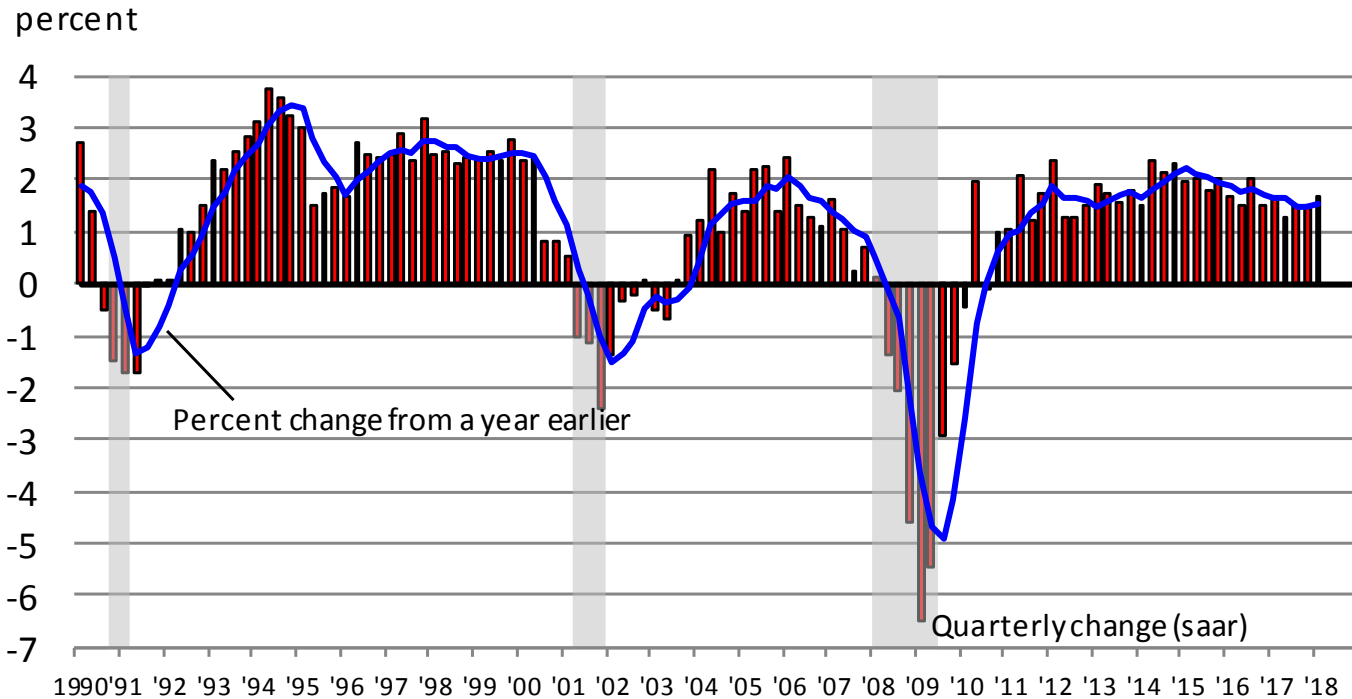


The index of leading indicators continues to rise

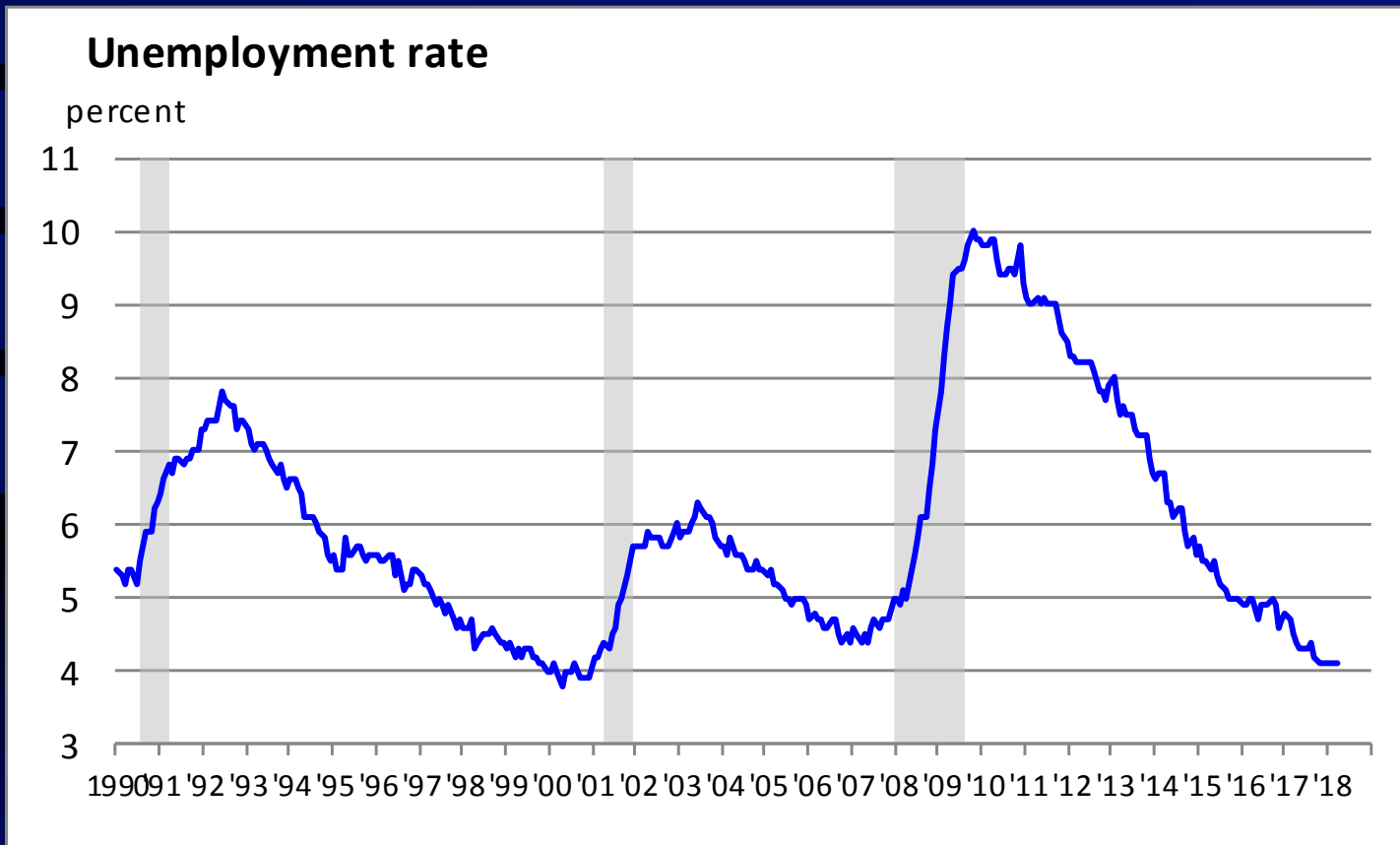


Employment increased by over 2.2 million jobs over the past 12 months

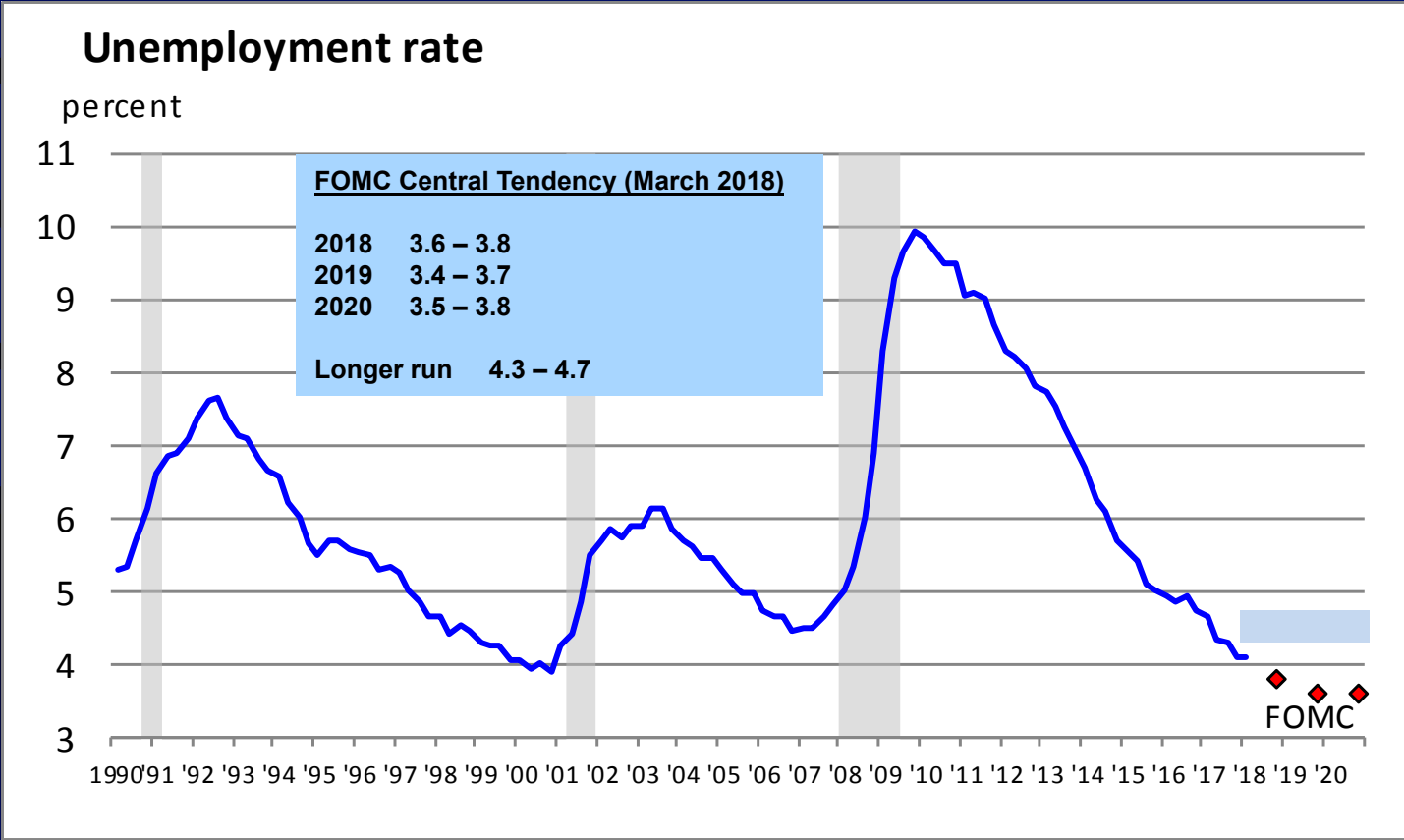
Total employment



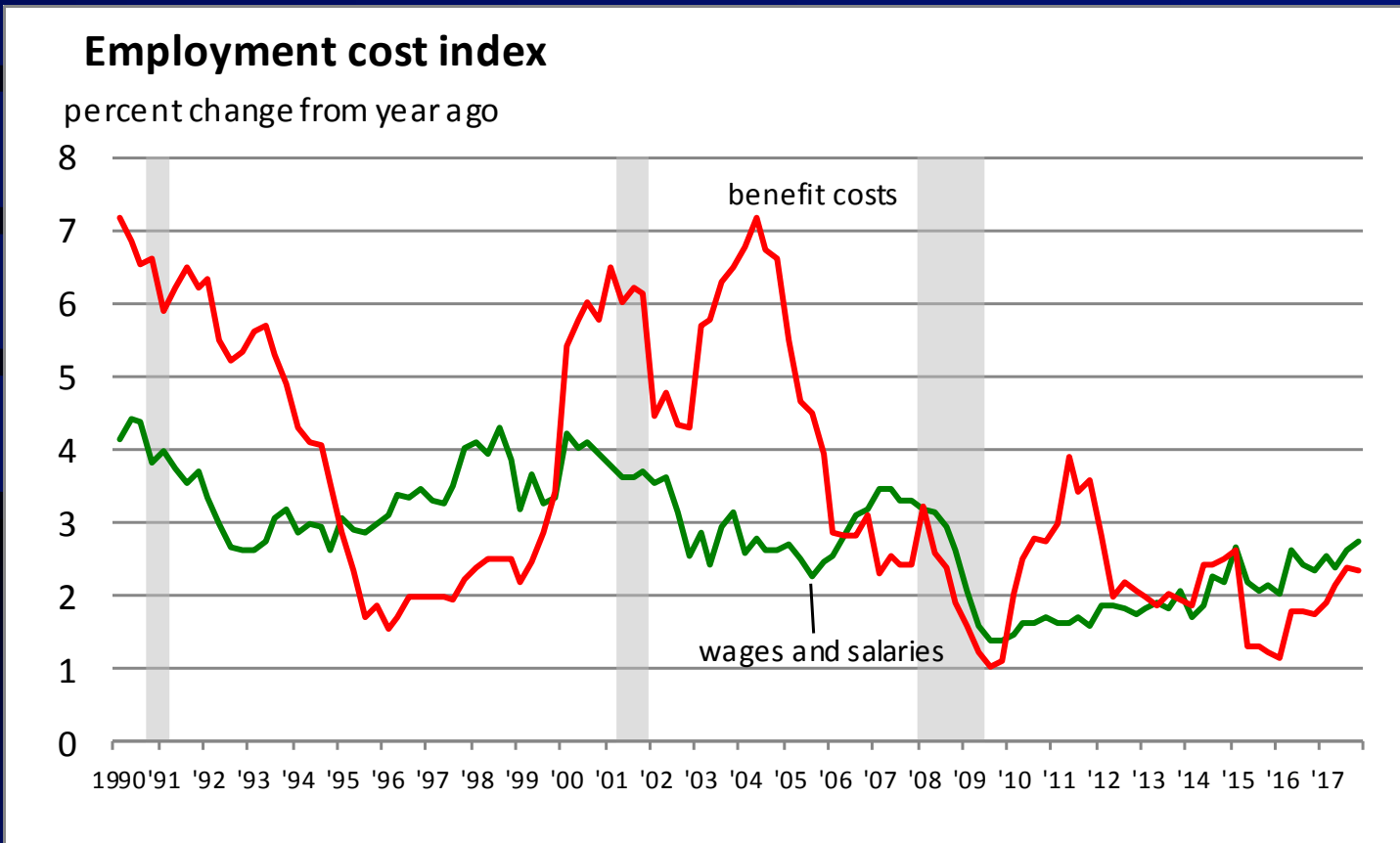
The unemployment rate has fallen to 4.1%



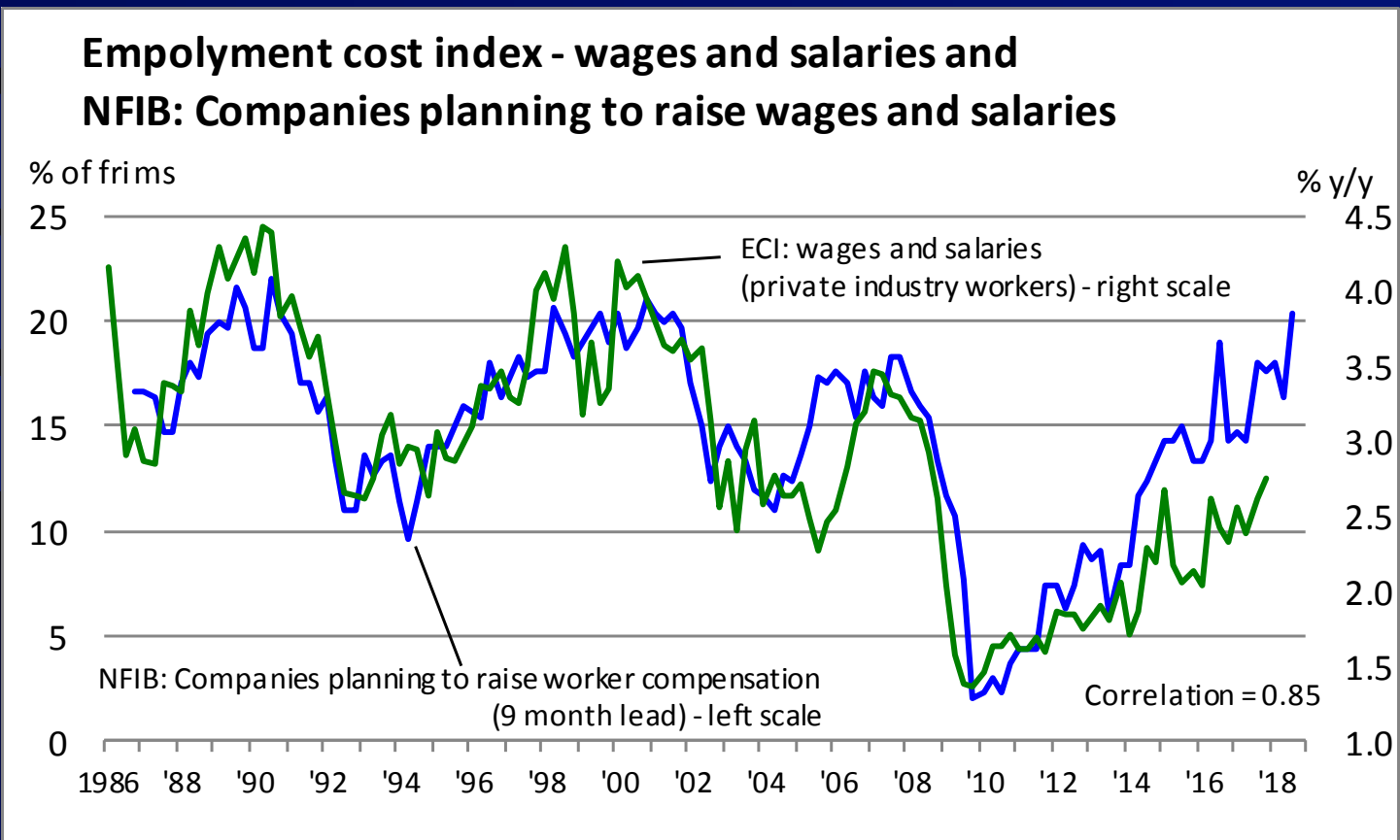
The FOMC forecasts that the unemployment rate will be well below the natural rate through 2020



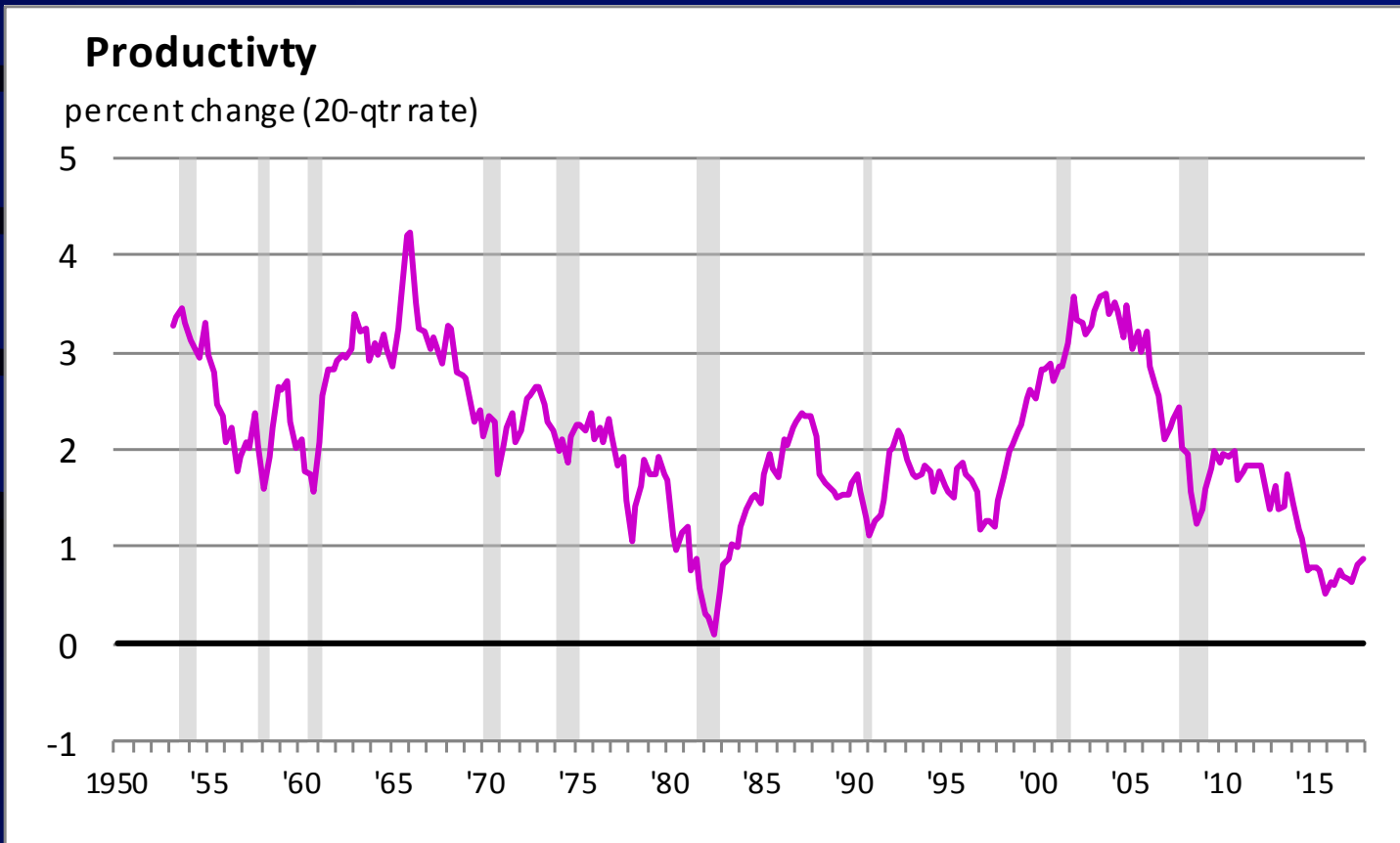
Wages and benefit costs continue to increase at a very slow rate, although it may finally be picking up some its pace



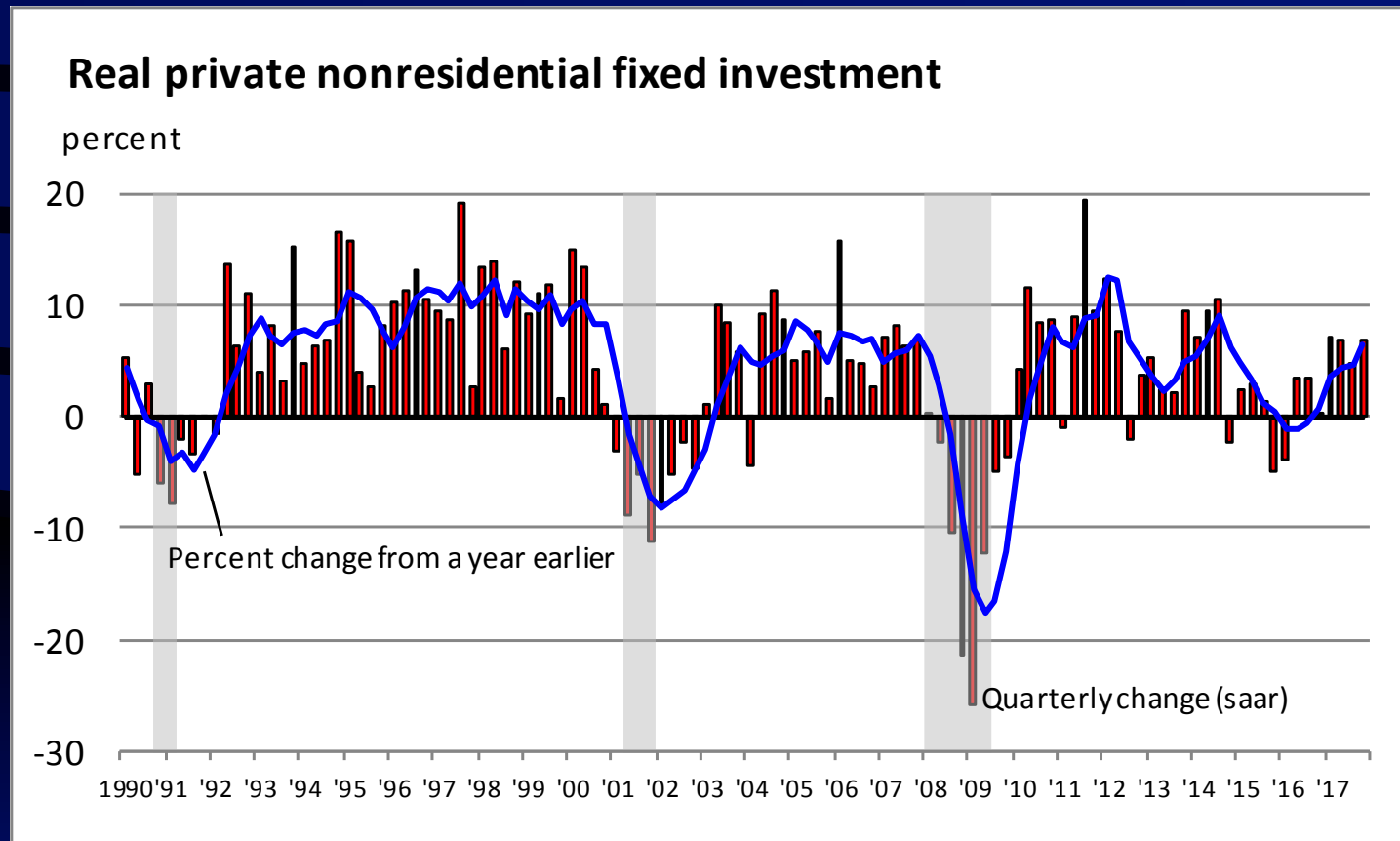
There is a very strong correlation between 9-month lead NFIB: planning to raise compensation and Employment Cost Index: wages and salaries



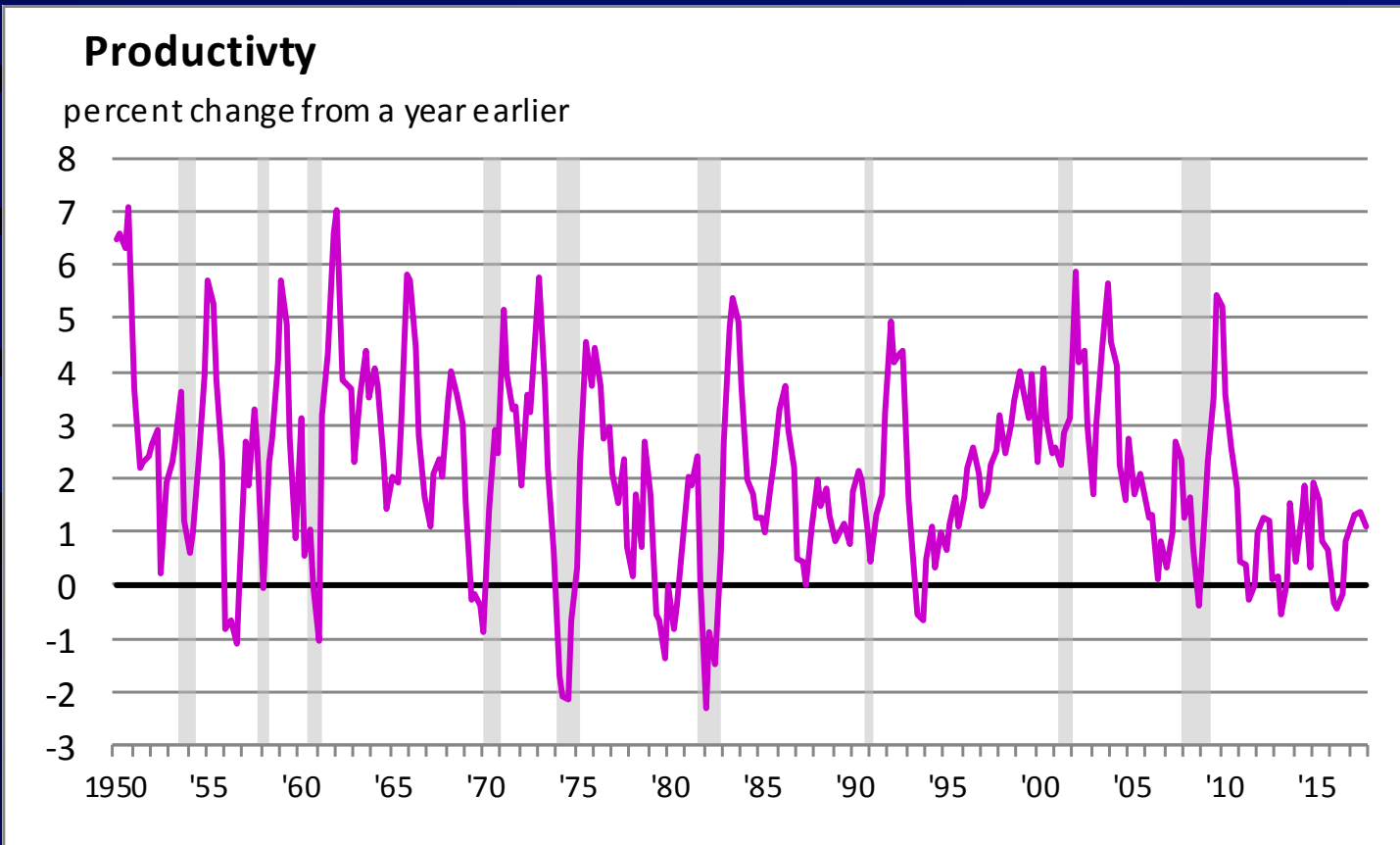
Slow productivity growth helps explain why relatively strong employment growth has not translated into higher wages



A large part of the weakness in productivity growth has been the weak pace of investment, although it increased at a solid pace during 2017



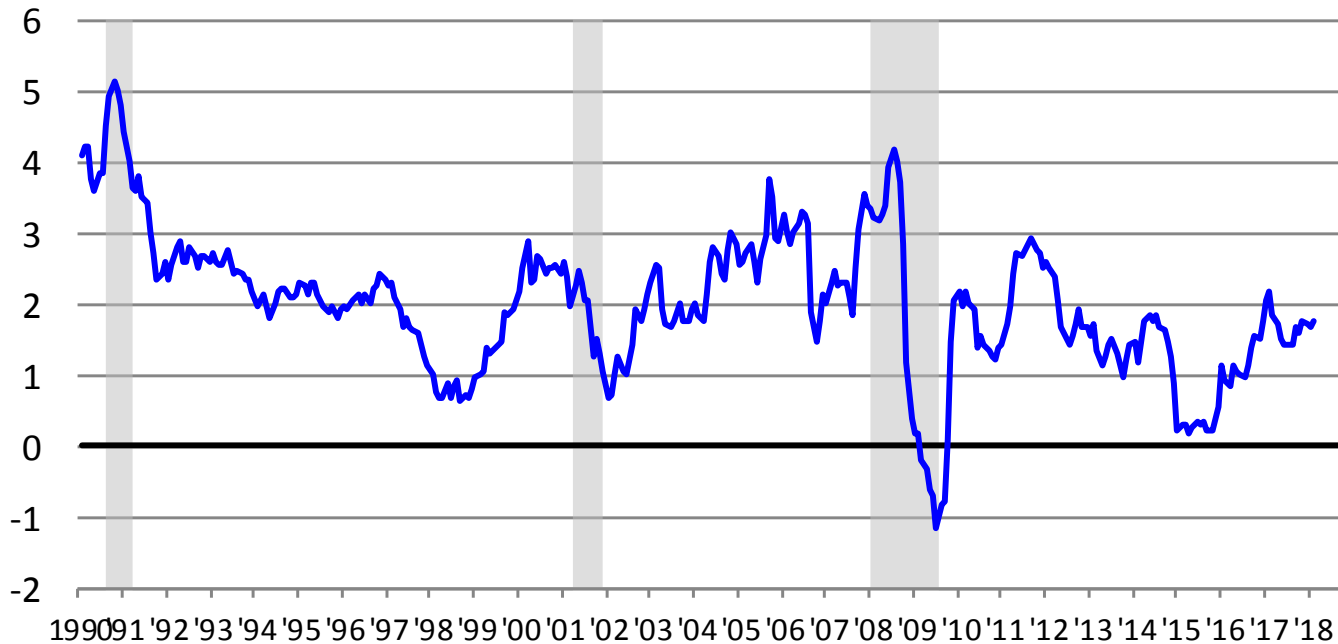
This may help explain the productivity growth improvement over the past year



Inflation has been edging higher to the Fed target of 2%

Personal consumption expenditure - chain price index

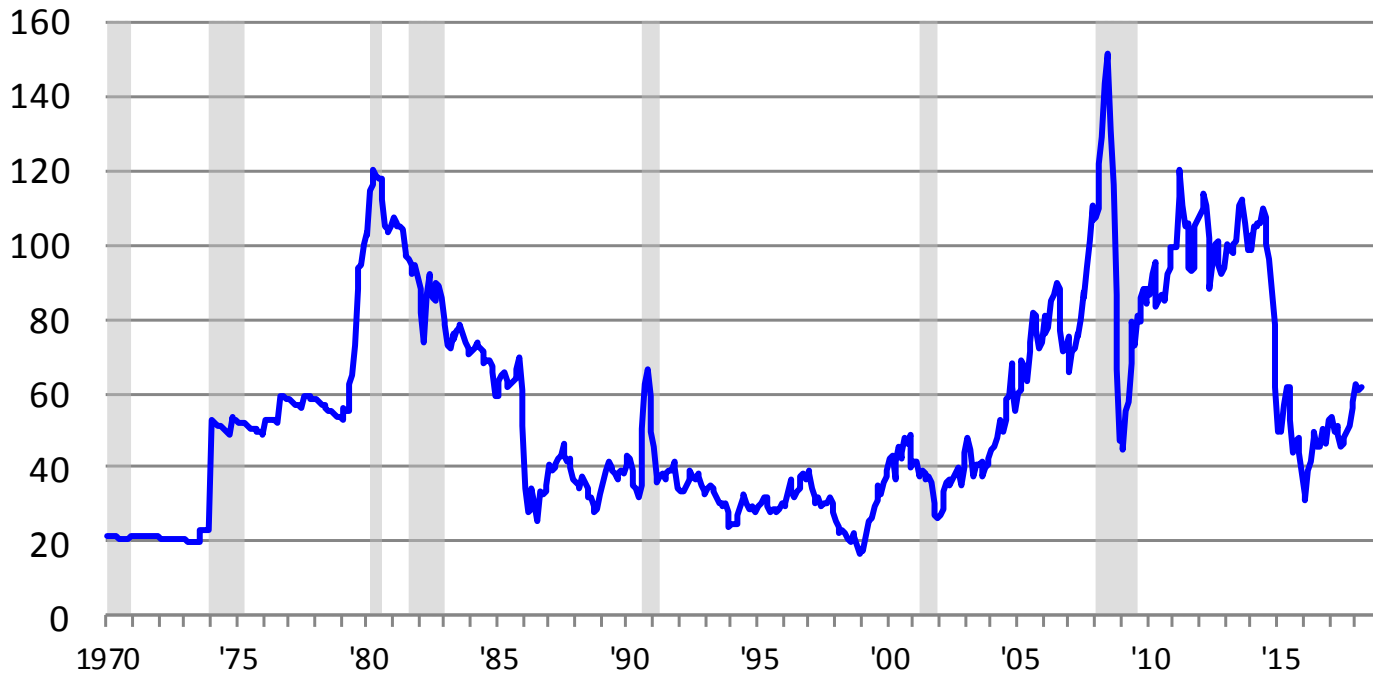
percent change from a year earlier



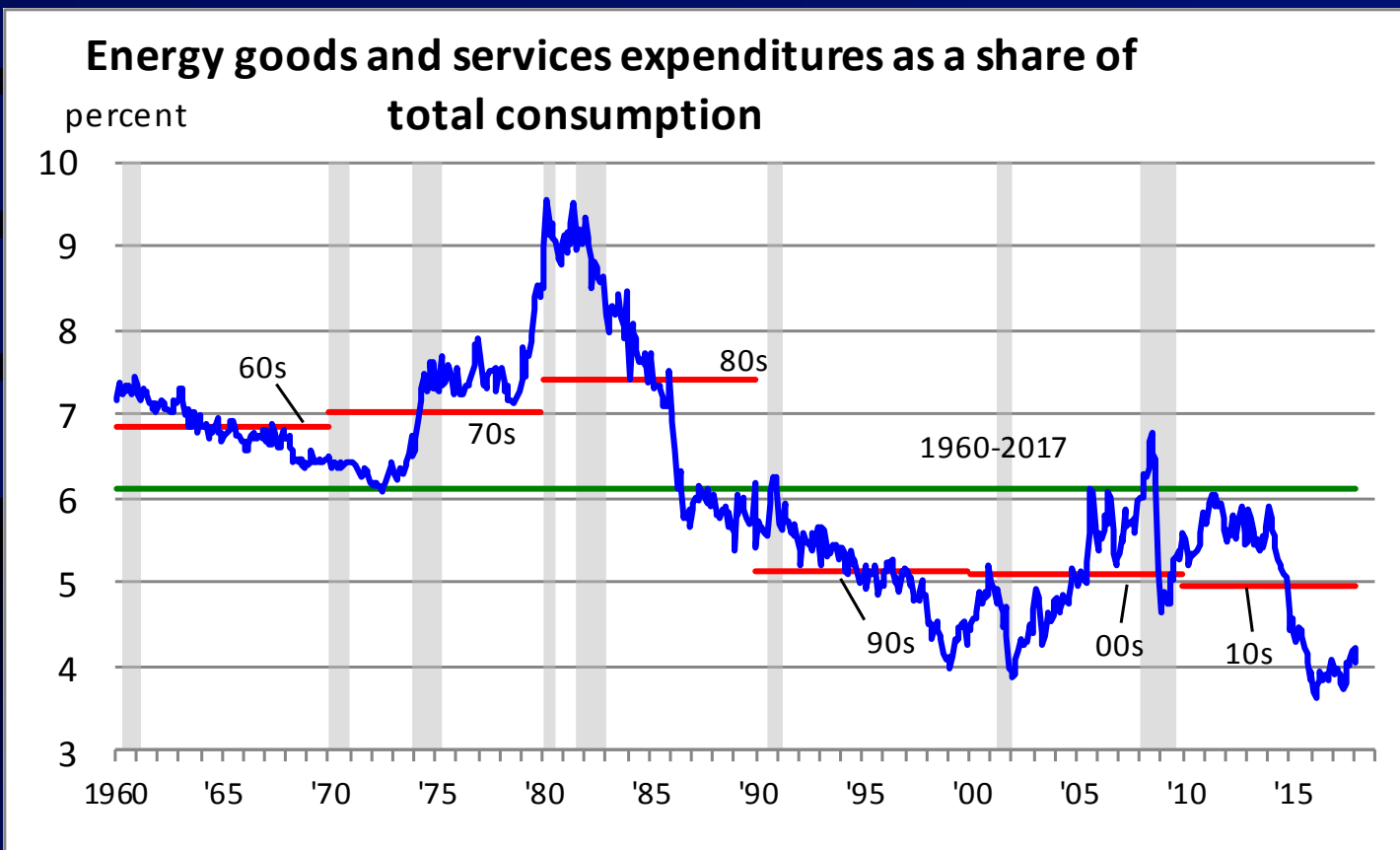
Inflation has been influenced by the pattern of energy prices

Real West Texas Intermediate oil price

dollars per barrel, 2016 dollars



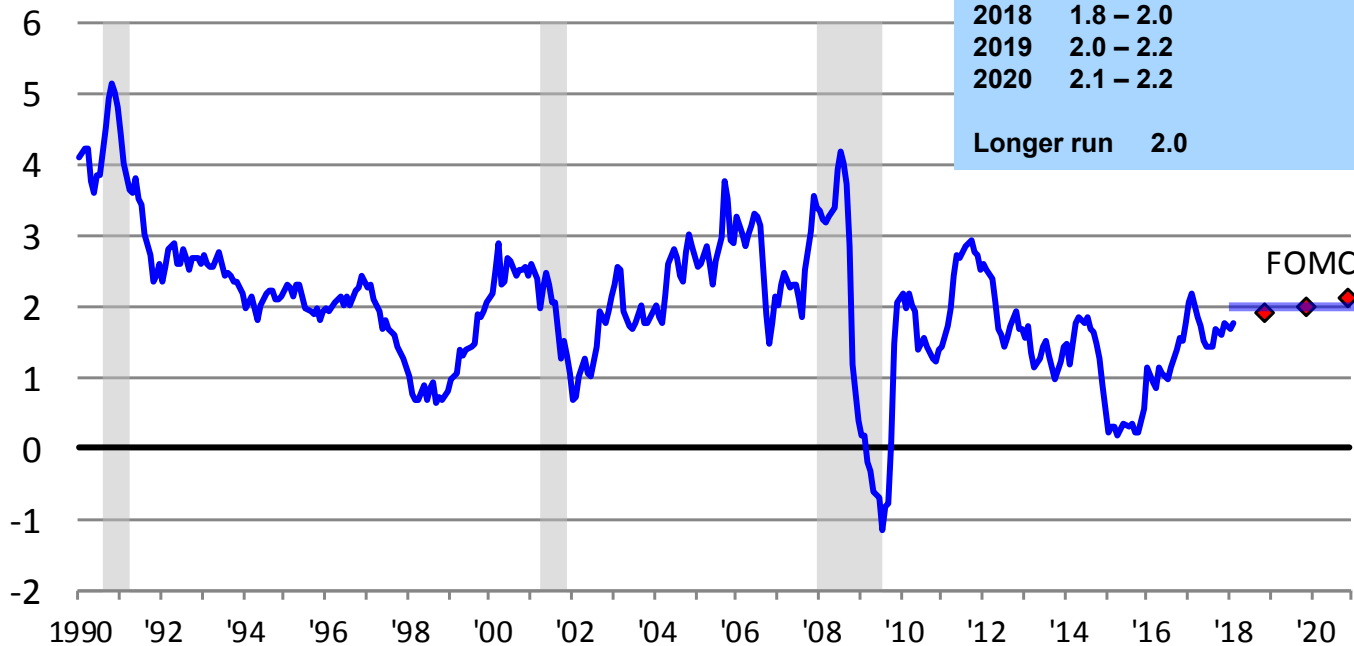
Expenditures on energy remain well below the historical average



The FOMC anticipates that PCE inflation will be around its two percent target beginning this year

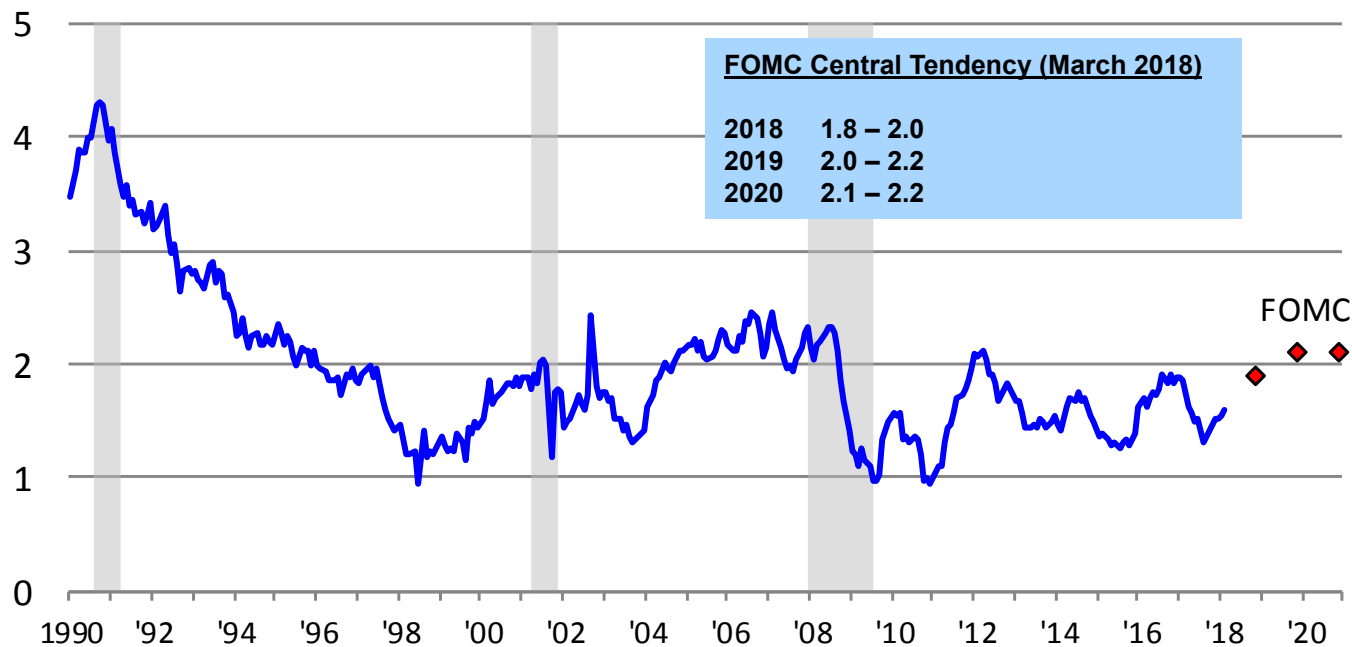
Personal consumption expenditure - chain price index

percent change from a year earlier



The FOMC anticipates that “core” PCE inflation will get close to two percent this year

Personal consumption expenditure - less food and energy - chain price index
percent change from a year earlier



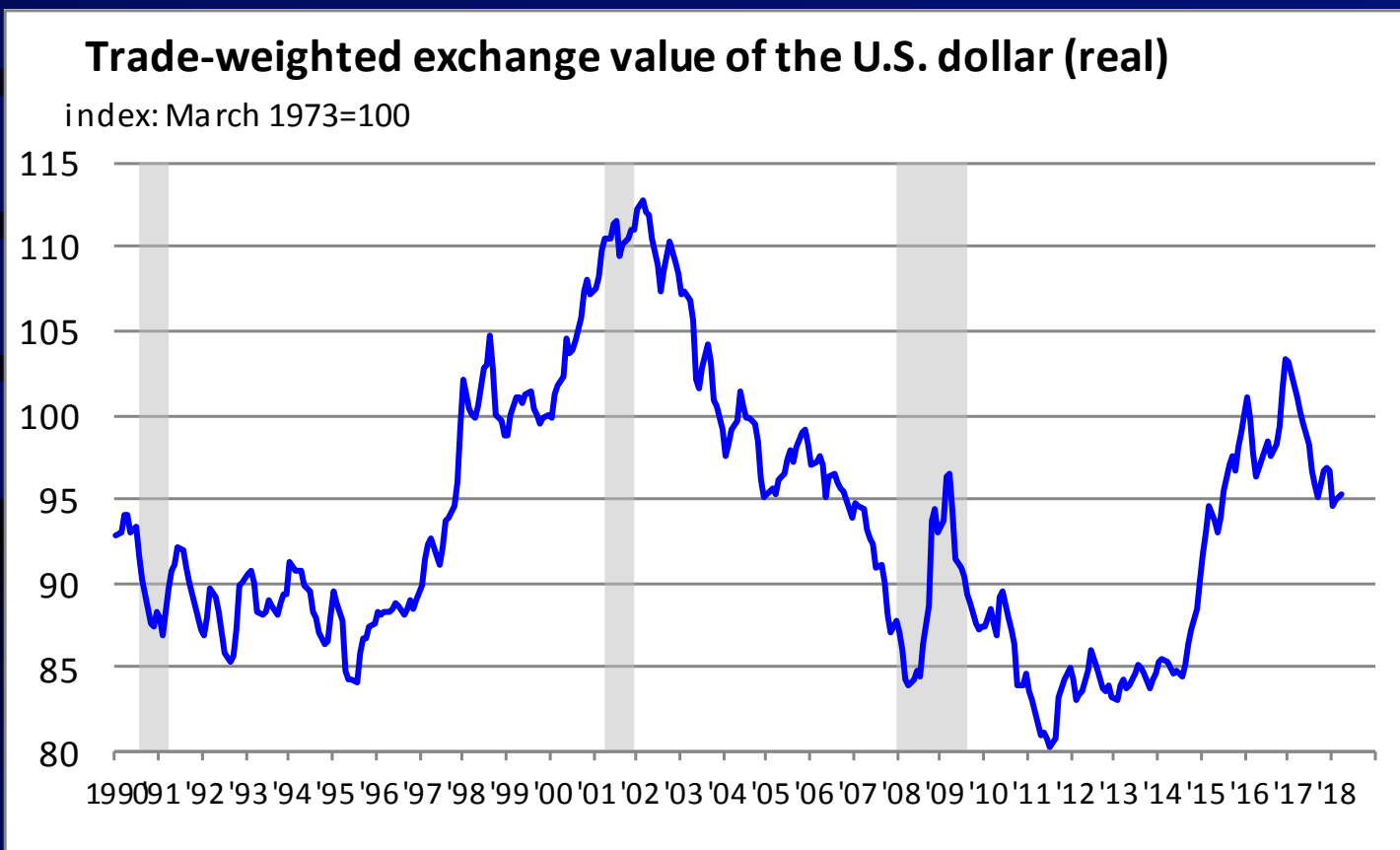
Blue Chip International Consensus Forecasts

| | Real GDP | | | Inflation | | | Exchange Rate | | Interest Rates | |
|----------------|----------|------|------|-----------|------|------|---------------|-------|----------------|------|
| | % change | | | % change | | | Against | | 3-Month | |
| | Annual | | | Annual | | | US Dollar | | End of Year | |
| | 2017 | 2018 | 2019 | 2017 | 2018 | 2019 | 2018 | 2019 | 2018 | 2019 |
| United States | 2.3 | 2.8 | 2.6 | 2.1 | 2.4 | 2.2 | - | - | 1.88 | 2.60 |
| Canada | 3.0 | 2.1 | 1.9 | 1.6 | 2.1 | 2.0 | 1.26 | 1.26 | 1.92 | 2.54 |
| Mexico | 2.1 | 2.1 | 2.3 | 6.0 | 4.5 | 3.8 | 18.99 | 18.69 | 7.09 | 6.50 |
| Japan | 1.7 | 1.4 | 1.1 | 0.5 | 1.1 | 1.1 | 107.5 | 107.6 | -0.03 | 0.03 |
| South Korea | 3.1 | 2.9 | 2.7 | 1.9 | 1.8 | 2.0 | 1,061 | 1,059 | 1.85 | 2.09 |
| United Kingdom | 1.7 | 1.5 | 1.4 | 2.7 | 2.5 | 2.1 | 1.39 | 1.42 | 0.89 | 1.20 |
| Germany | 2.5 | 2.4 | 2.0 | 1.7 | 1.7 | 1.8 | 1.24 | 1.28 | -0.23 | 0.12 |
| France | 1.9 | 2.1 | 1.8 | 1.2 | 1.5 | 1.5 | 1.24 | 1.28 | -0.23 | 0.12 |
| Euro Zone | 2.5 | 2.3 | 1.9 | 1.5 | 1.5 | 1.6 | 1.24 | 1.28 | -0.23 | 0.12 |
| Brazil | 1.0 | 2.5 | 2.8 | 3.4 | 3.5 | 4.2 | 3.35 | 3.36 | 6.64 | 7.24 |
| Russia | 1.8 | 1.8 | 1.7 | 3.7 | 3.2 | 4.0 | 58.0 | 57.7 | 7.13 | 6.91 |
| China | 6.9 | 6.4 | 6.3 | 1.6 | 2.3 | 2.5 | 6.36 | 6.41 | 4.08 | 4.06 |
| India | 6.7 | 7.3 | 7.5 | 3.5 | 4.9 | 4.9 | 65.6 | 66.0 | 6.57 | 6.60 |

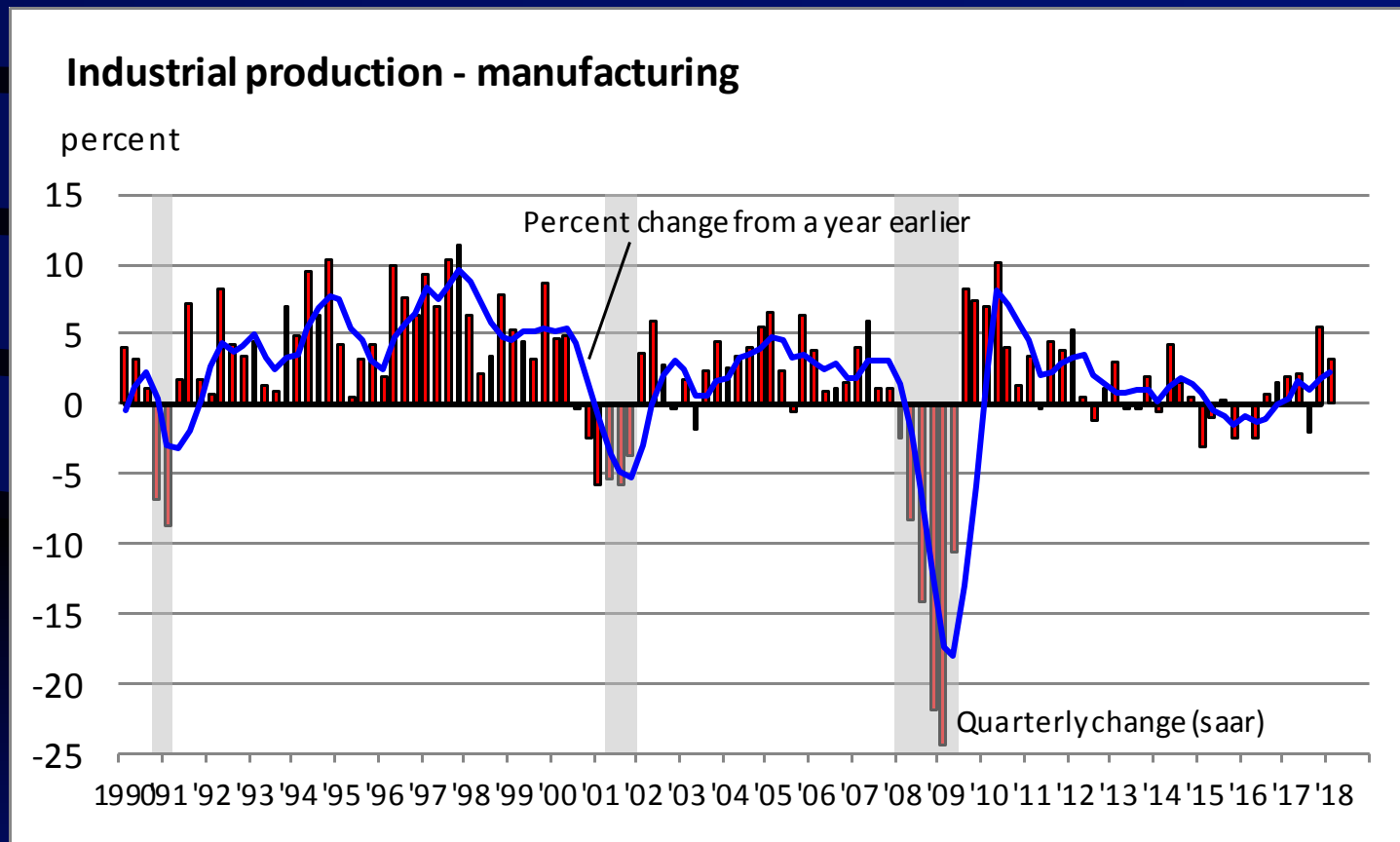
Blue Chip Economic Indicators Forecast April 10, 2018



**Over the past couple of years,
the real trade-weighted dollar increased by just over 22%,
but since early 2017 it has fallen nearly 8%**



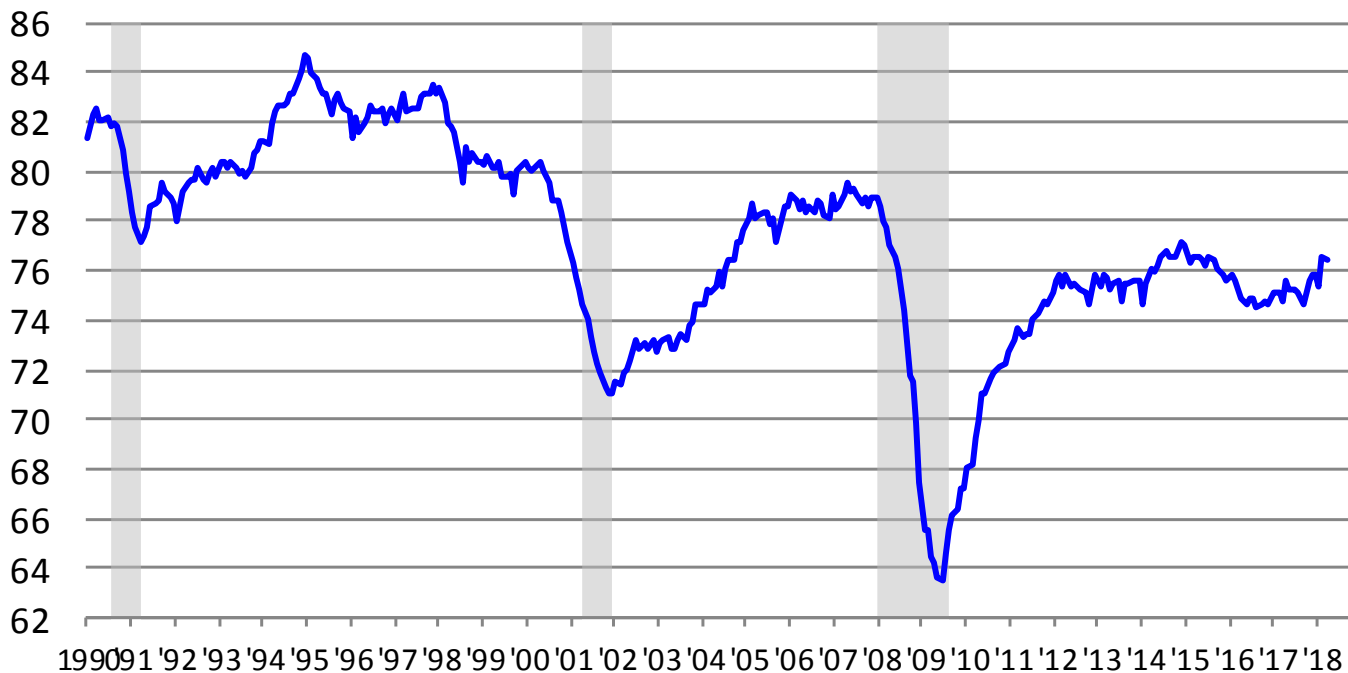
Manufacturing output is increasing at a solid pace



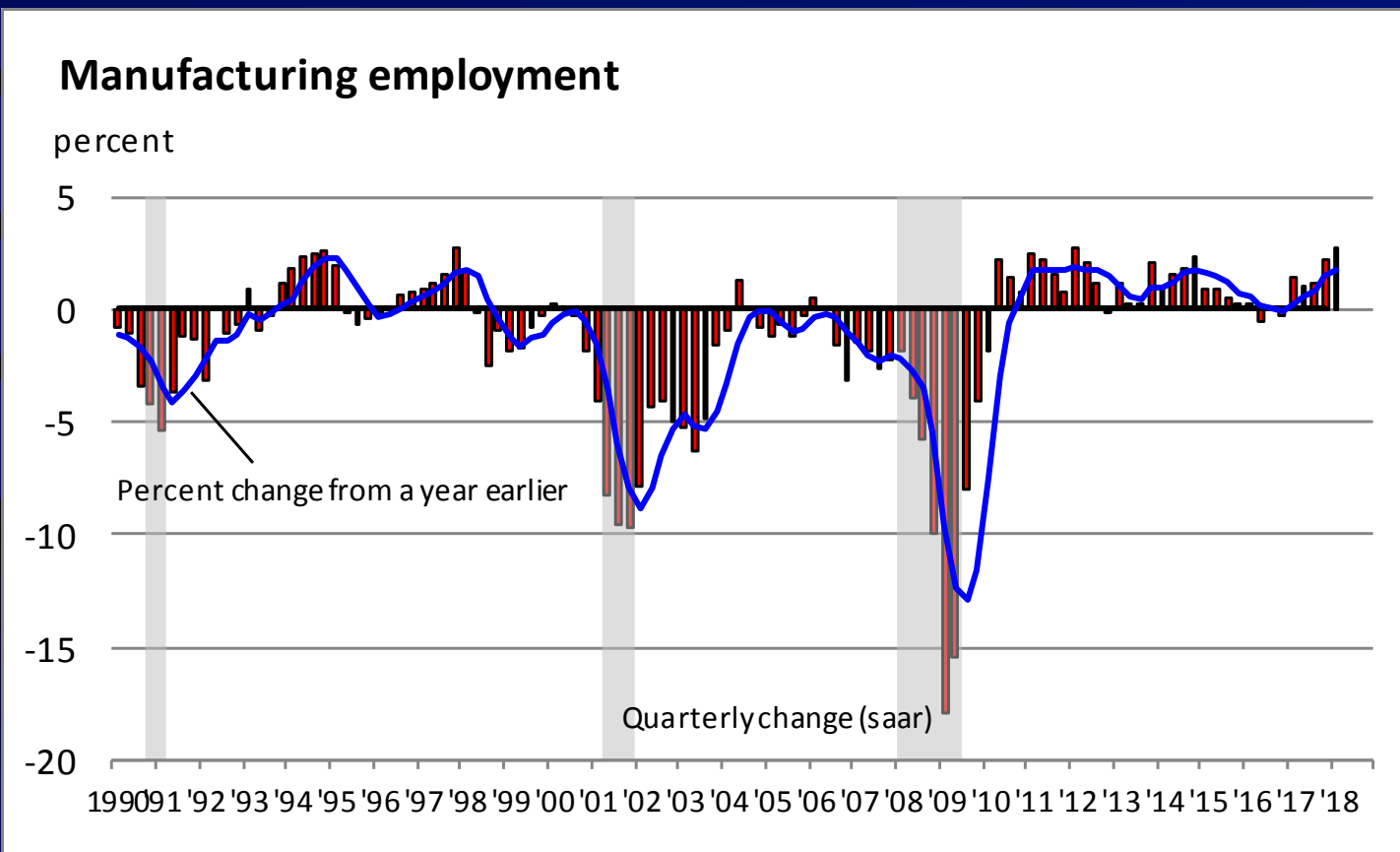
Capacity utilization has been moving higher over the past year, but is still below full utilization

Capacity utilization - manufacturing

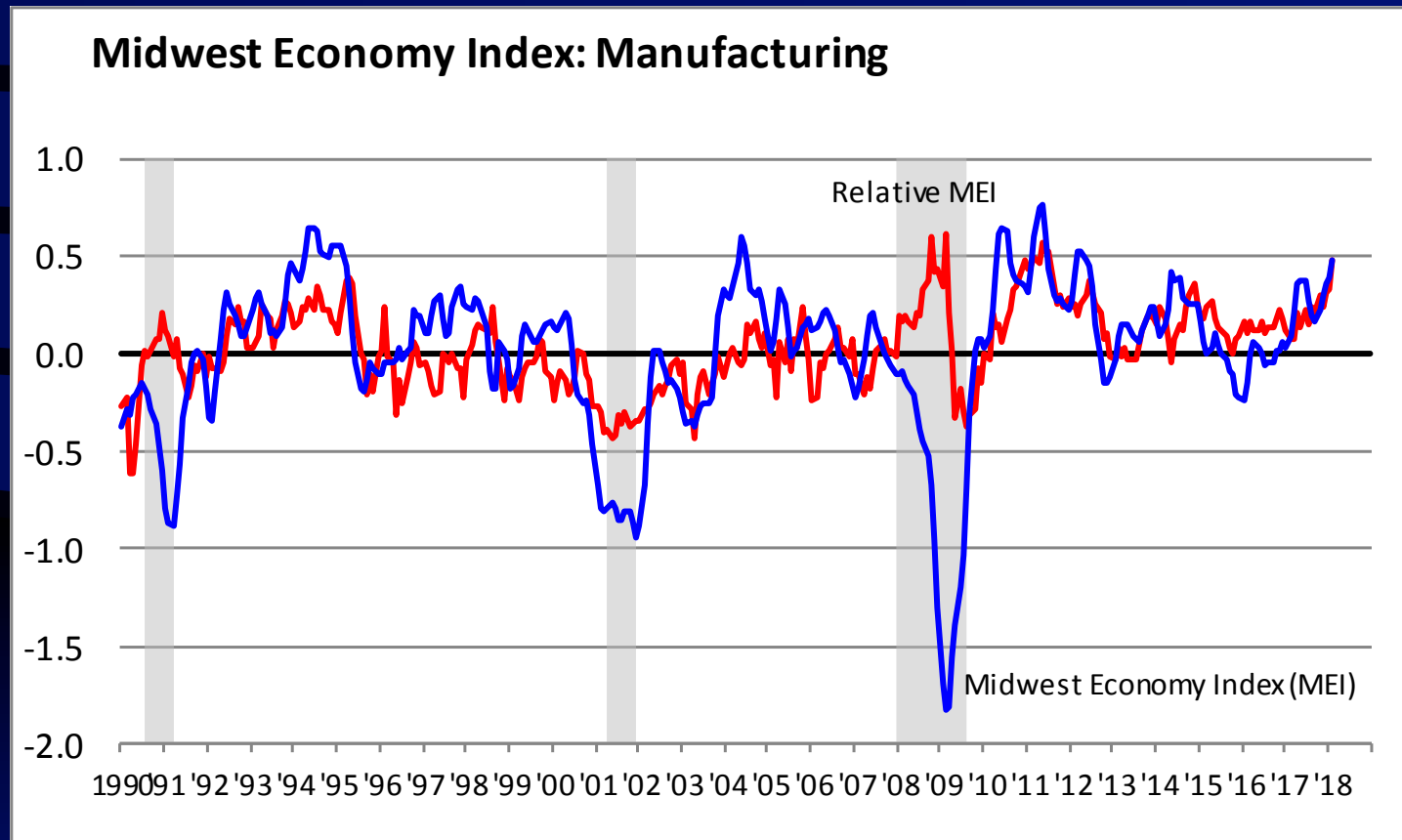
percent



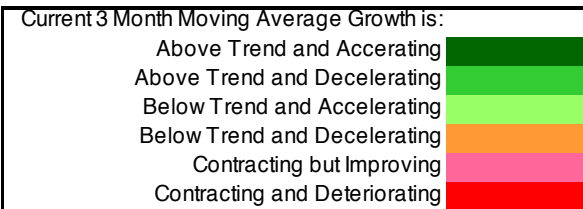
Manufacturing employment increased by 232,000 workers over the past 12 months



The Midwest Economy Indexes manufacturing component is above its trend and doing better than the nation

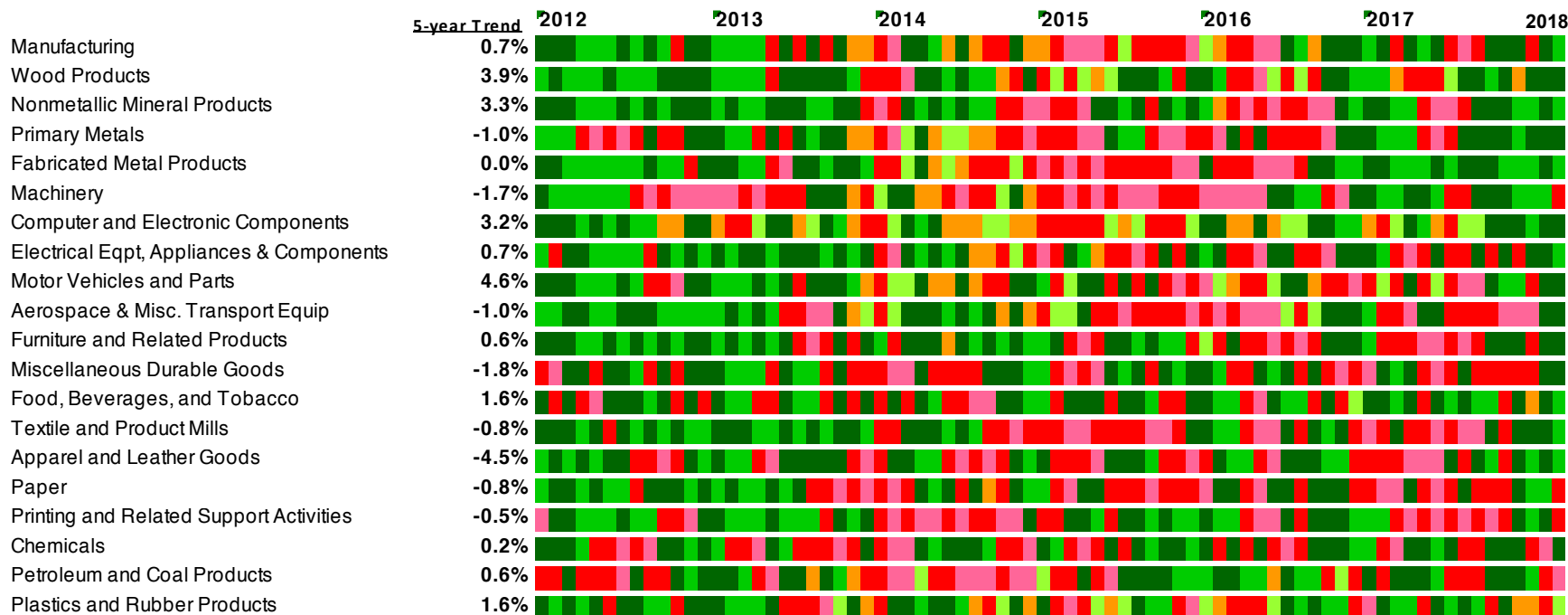


The industrial sector output growth has been strong over the past several months



Manufacturing Industries Activity Chart

Growth (3-month moving average)
compared with the most recent 5-year trend



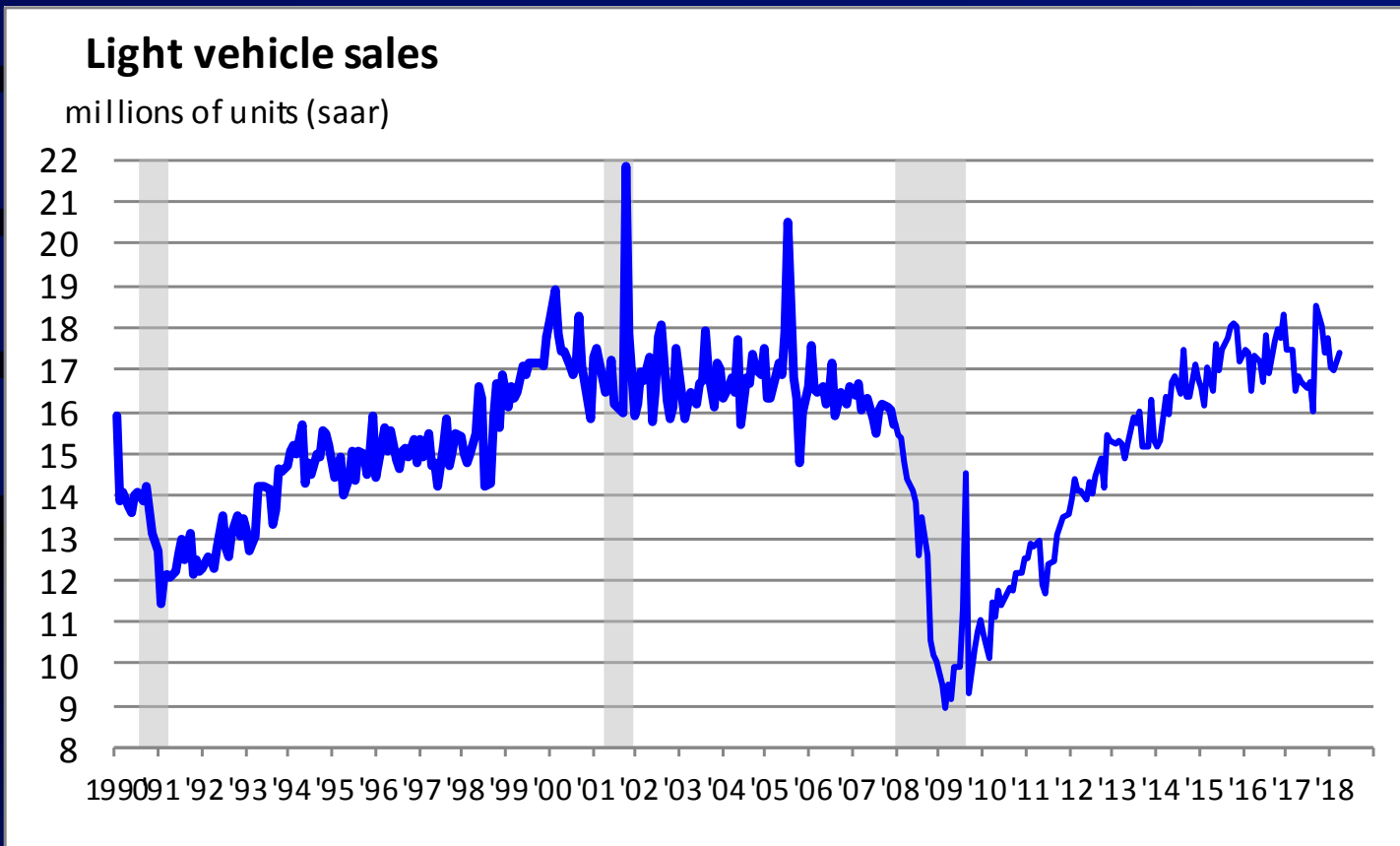
Manufacturers' Purchasing Managers Indexes

| | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Jan-18 | Feb-18 | Mar-18 |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Global | 52.7 | 52.6 | 52.6 | 52.7 | 53.1 | 53.3 | 53.5 | 54.1 | 54.5 | 54.4 | 54.1 | 53.4 |
| United States | 52.8 | 52.7 | 52.0 | 53.3 | 52.8 | 53.1 | 54.6 | 53.9 | 55.1 | 55.5 | 55.3 | 55.6 |
| Canada | 55.9 | 55.1 | 54.7 | 55.5 | 54.6 | 55.0 | 54.3 | 54.4 | 54.7 | 55.9 | 55.6 | 55.7 |
| Mexico | 50.7 | 51.2 | 52.3 | 51.2 | 52.2 | 52.8 | 49.2 | 52.4 | 51.7 | 52.6 | 51.6 | 52.4 |
| Eurozone | 56.7 | 57.0 | 57.4 | 56.6 | 57.4 | 58.1 | 58.5 | 60.1 | 60.6 | 59.6 | 58.6 | 56.6 |
| Germany | 58.2 | 59.5 | 59.6 | 58.1 | 59.3 | 60.6 | 60.6 | 62.5 | 63.3 | 61.1 | 60.6 | 58.2 |
| France | 55.1 | 53.8 | 54.8 | 54.9 | 55.8 | 56.1 | 56.1 | 57.7 | 58.8 | 58.4 | 55.9 | 53.7 |
| Italy | 56.2 | 55.1 | 55.2 | 55.1 | 56.3 | 56.3 | 57.8 | 58.3 | 57.4 | 59.0 | 56.8 | 55.1 |
| Spain | 54.5 | 55.4 | 54.7 | 54.0 | 52.4 | 54.3 | 55.8 | 56.1 | 55.8 | 55.2 | 56.0 | 54.8 |
| UK | 57.3 | 56.7 | 54.2 | 55.3 | 56.7 | 56.0 | 56.3 | 58.2 | 56.2 | 55.3 | 55.0 | 55.1 |
| Russia | 50.8 | 52.4 | 50.3 | 52.7 | 51.6 | 51.9 | 51.1 | 51.5 | 52.0 | 52.1 | 50.2 | 50.6 |
| Japan | 52.7 | 53.1 | 52.4 | 52.1 | 52.2 | 52.9 | 52.8 | 53.6 | 54.0 | 54.8 | 54.1 | 53.1 |
| China | 50.3 | 49.6 | 50.4 | 51.1 | 51.6 | 51.0 | 51.0 | 50.8 | 51.5 | 51.5 | 51.6 | 51.0 |
| India | 52.5 | 51.6 | 50.9 | 47.9 | 51.2 | 51.2 | 50.3 | 52.6 | 54.7 | 52.4 | 52.1 | 51.0 |
| Brazil | 50.1 | 52.0 | 50.5 | 50.0 | 50.9 | 50.9 | 51.2 | 53.5 | 52.4 | 51.2 | 53.2 | 53.4 |

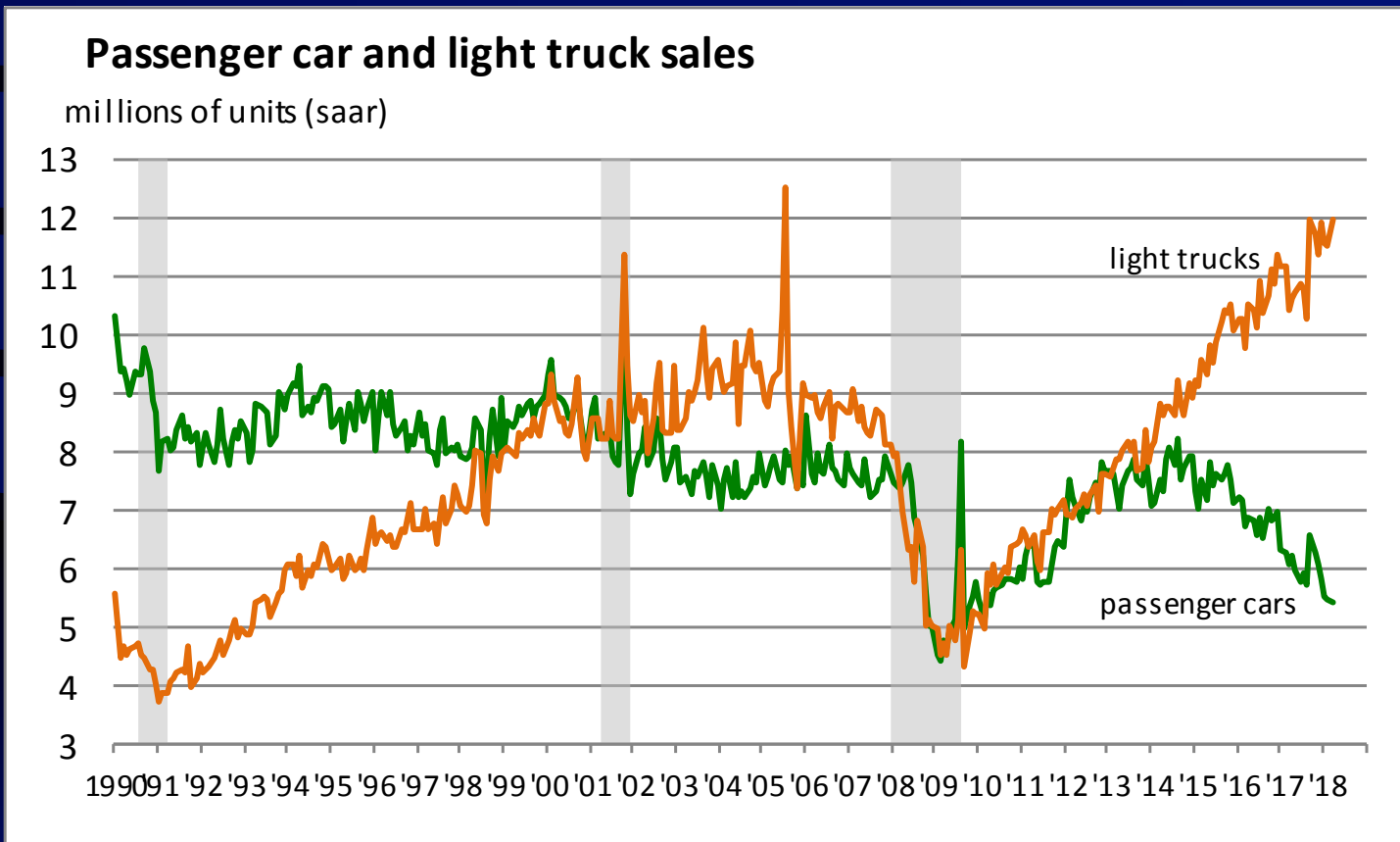
| | | | |
|-------------|-------|-------|-----------|
| >54 | 51-54 | 45-51 | <45 |
| Above Trend | Trend | Flat | Recession |



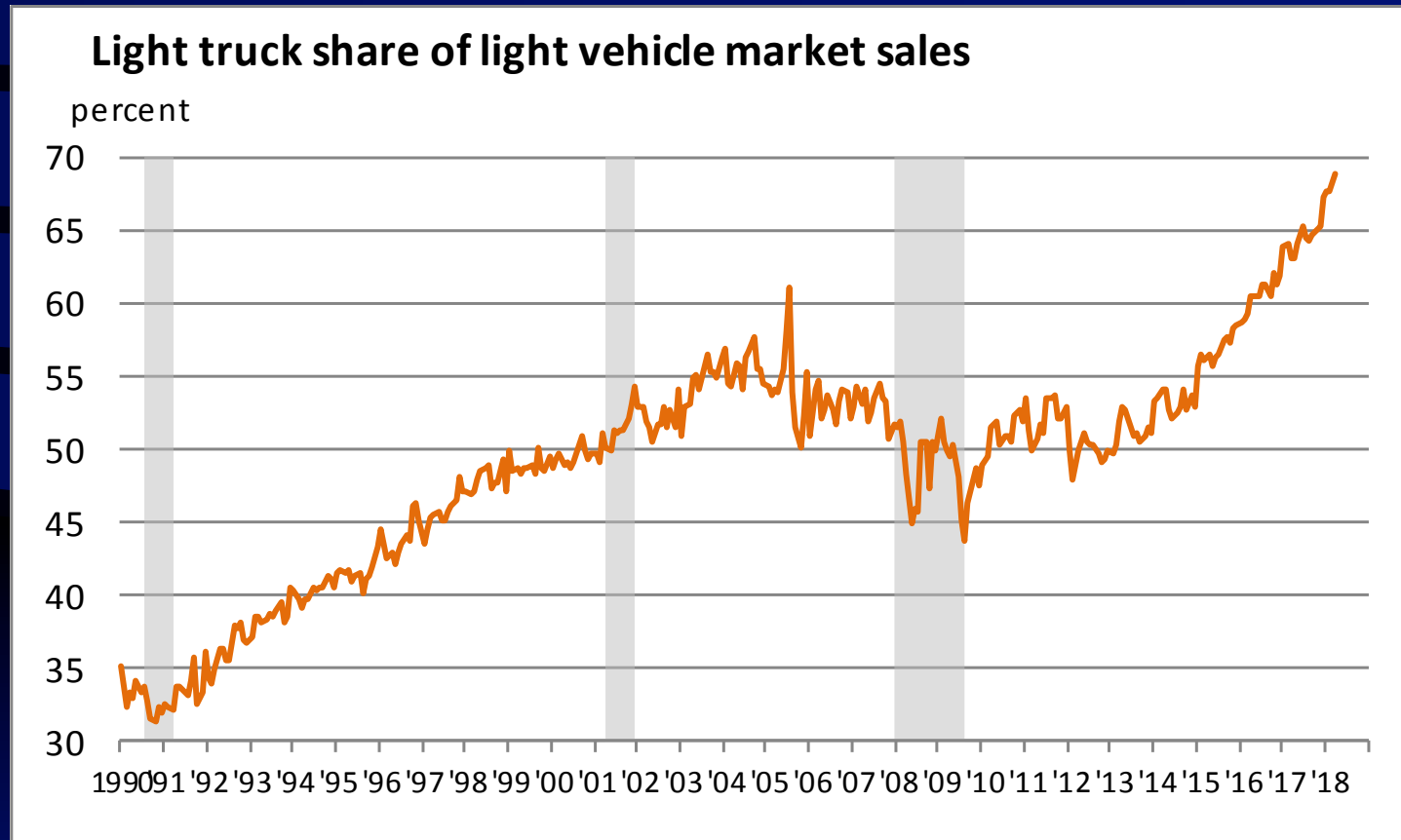
**After setting a record in 2016,
light vehicles sales fell by 1.4% in 2017
and sales for the first three months of 2018
has averaged 17.2 million units (saar)**



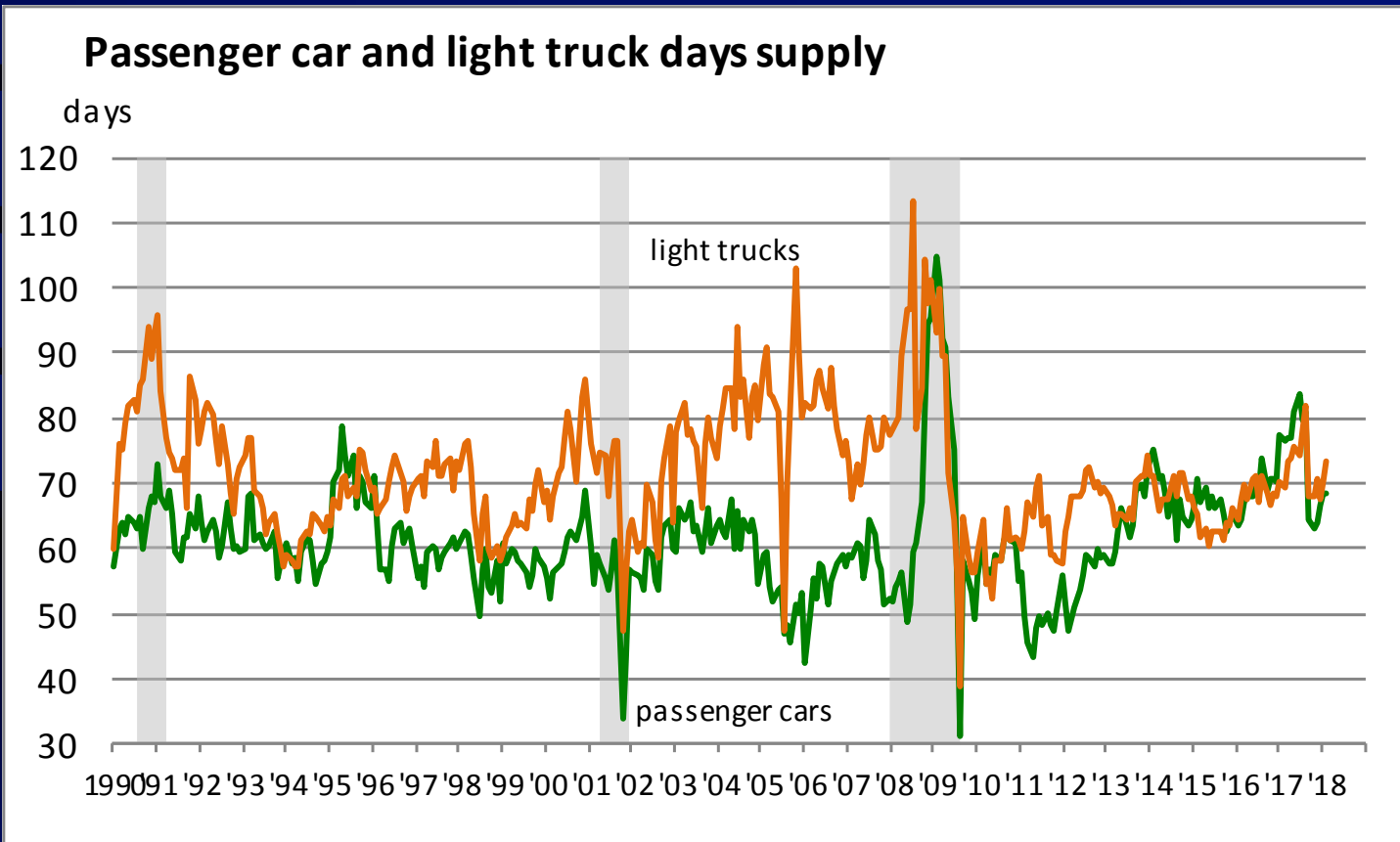
**Year-to-date light truck sales are 6.9% higher,
while year-to-date passenger car sales are 12.0% lower**



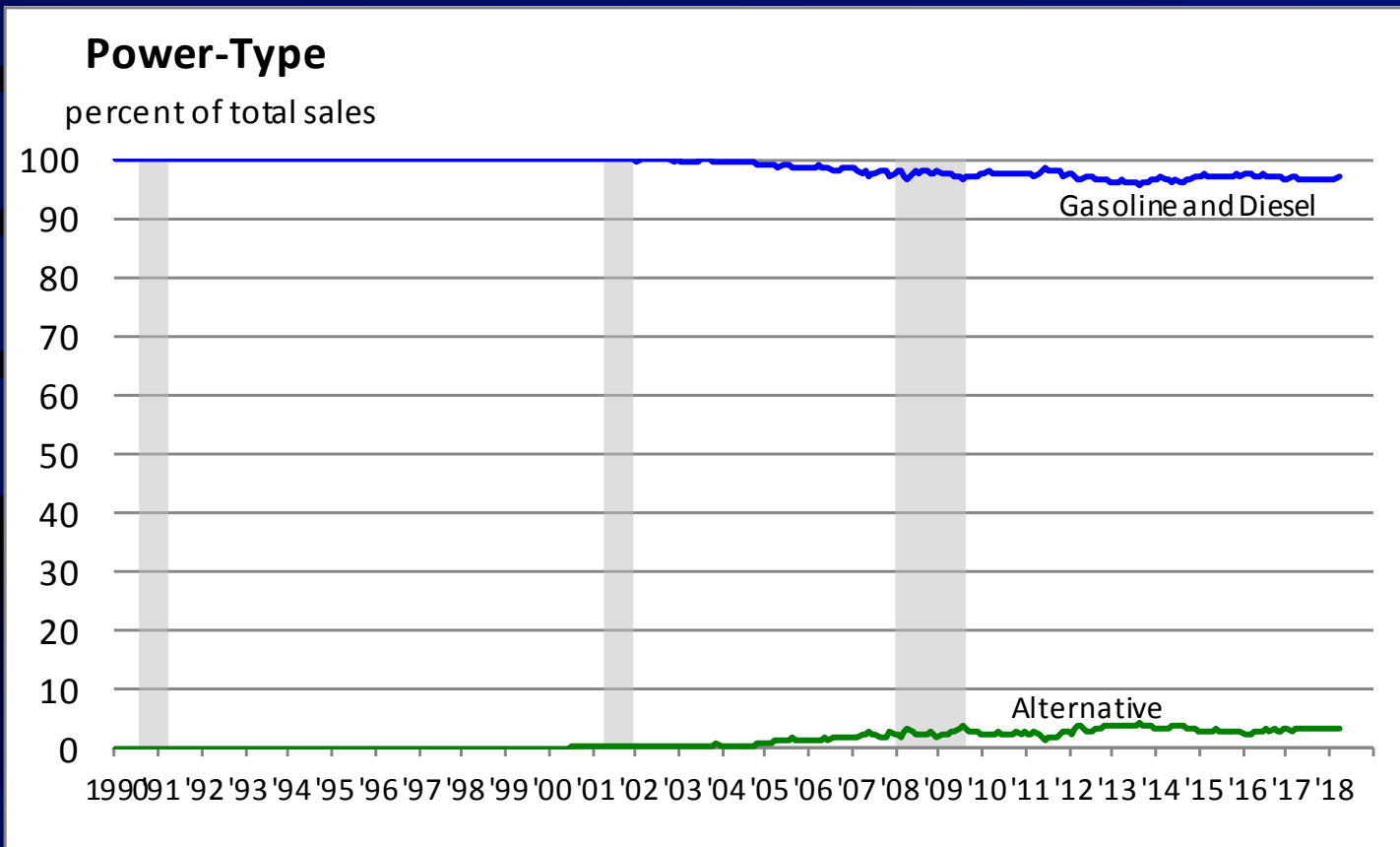
Light truck market share set a record high in March



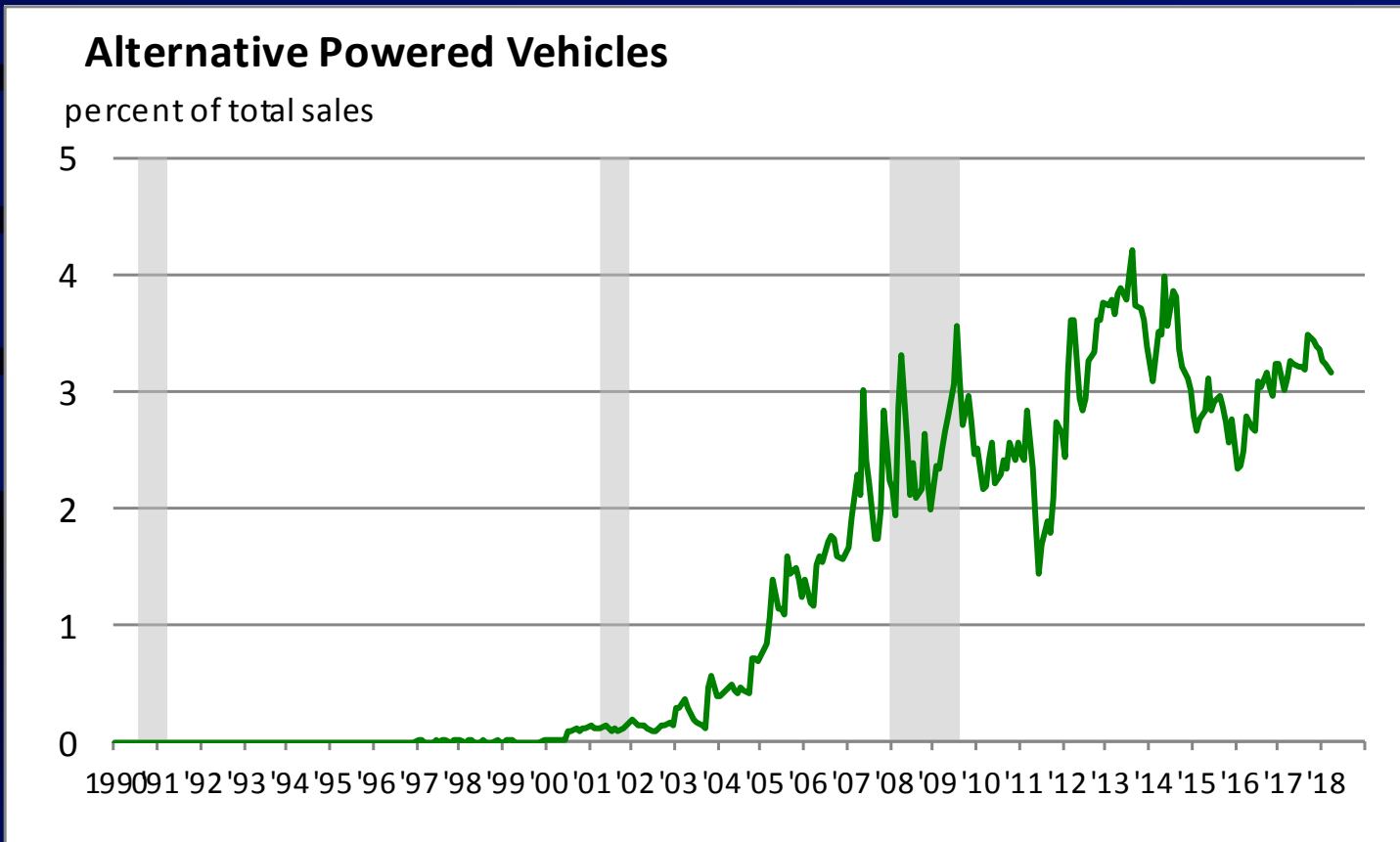
Days supply of vehicles are somewhat higher than desired, especially for passenger cars



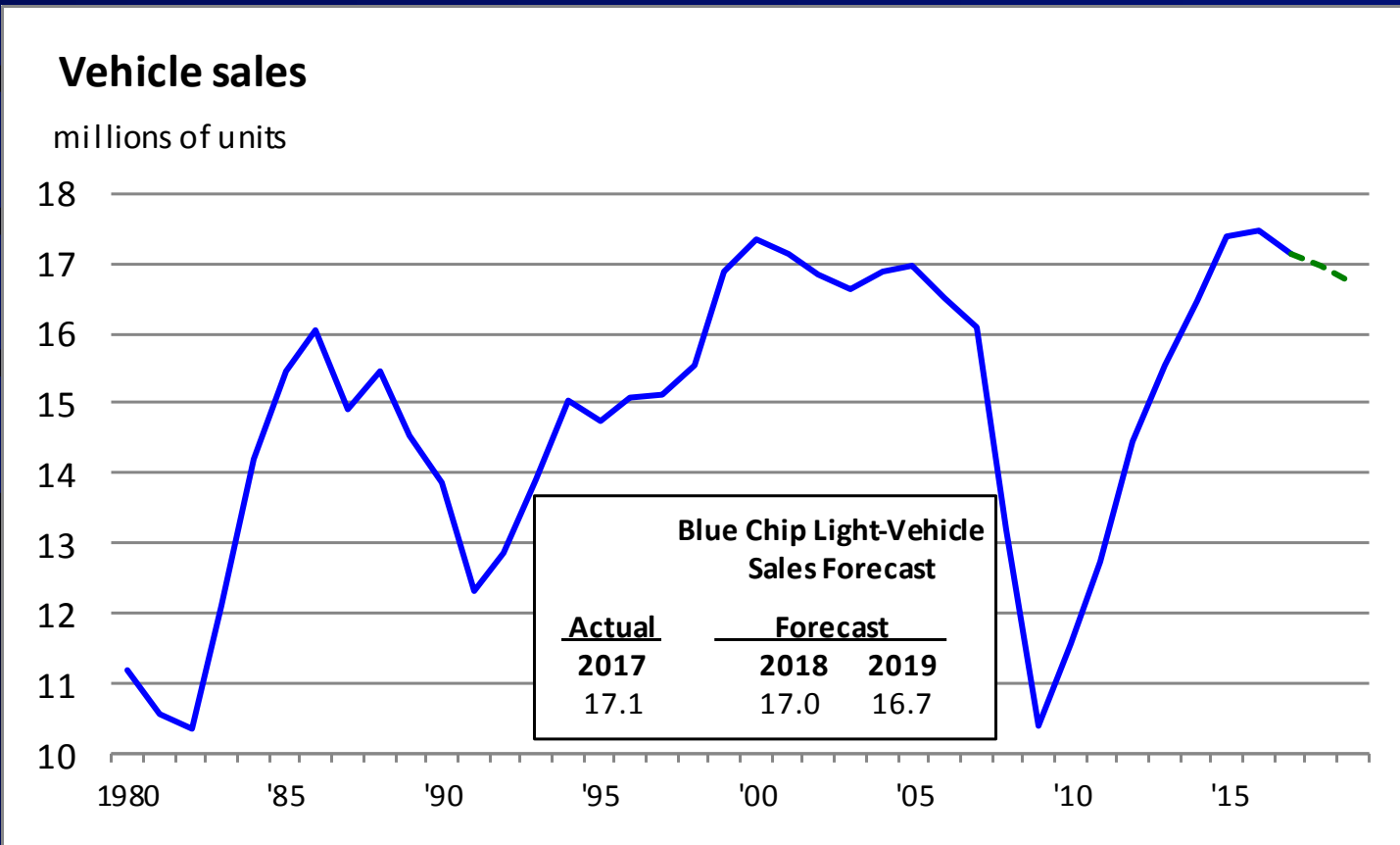
Alternative powered vehicles (including hybrids) are a very small fraction of total vehicle sales



**Alternative powered vehicles (including hybrids)
market share barely exceeded 4%
and have been well below that for the past four years**

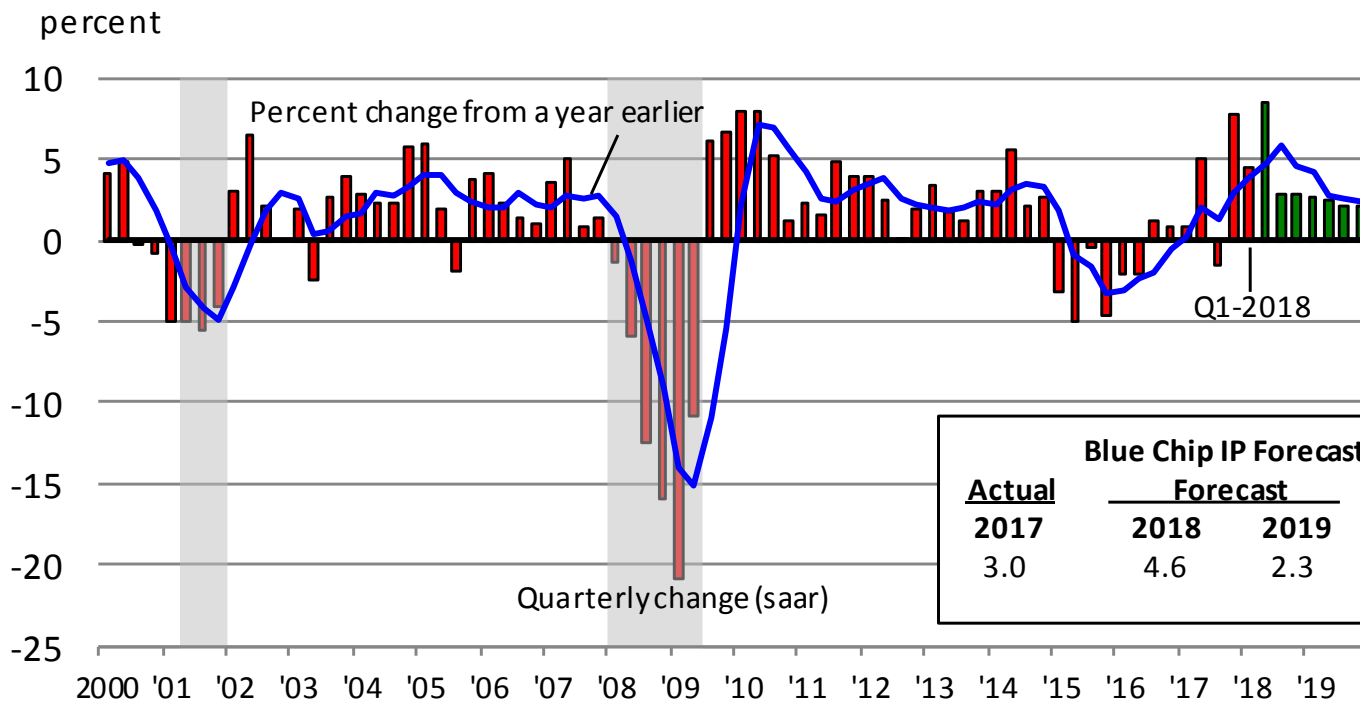


Blue Chip Forecasts vehicle sales to edge lower this year and next year

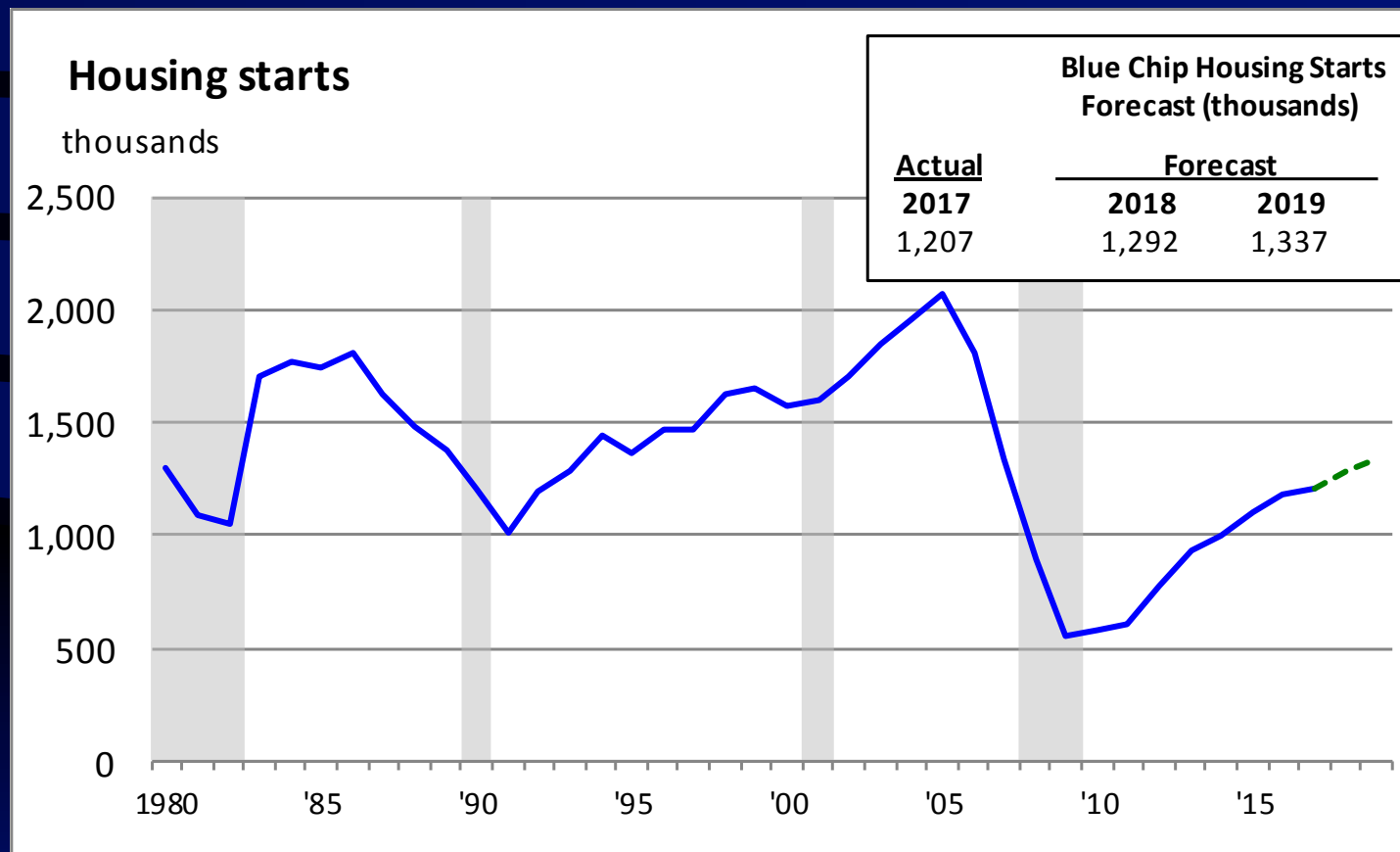


Industrial production is forecast to improve at a pace above its historical rate this year

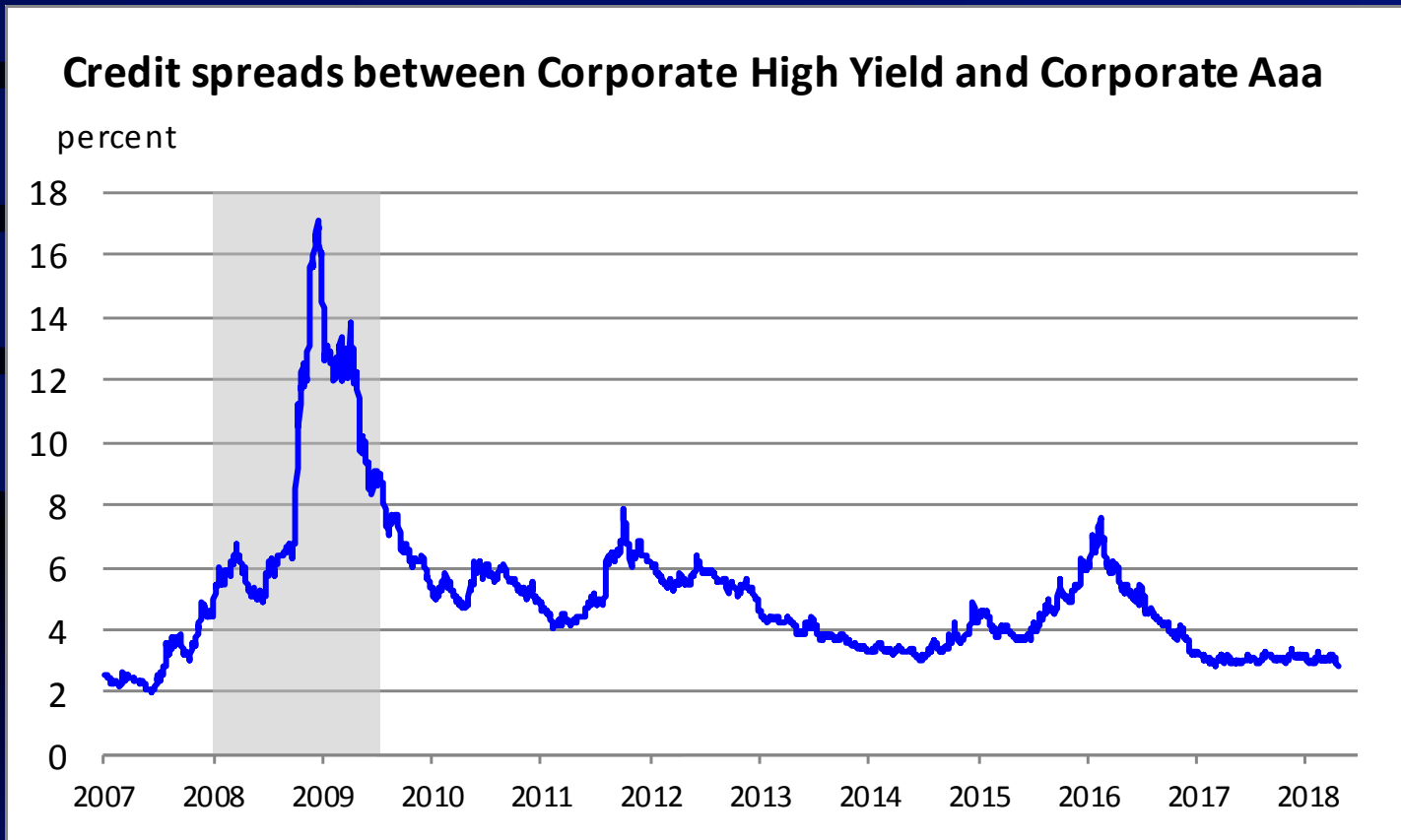
Total industrial production



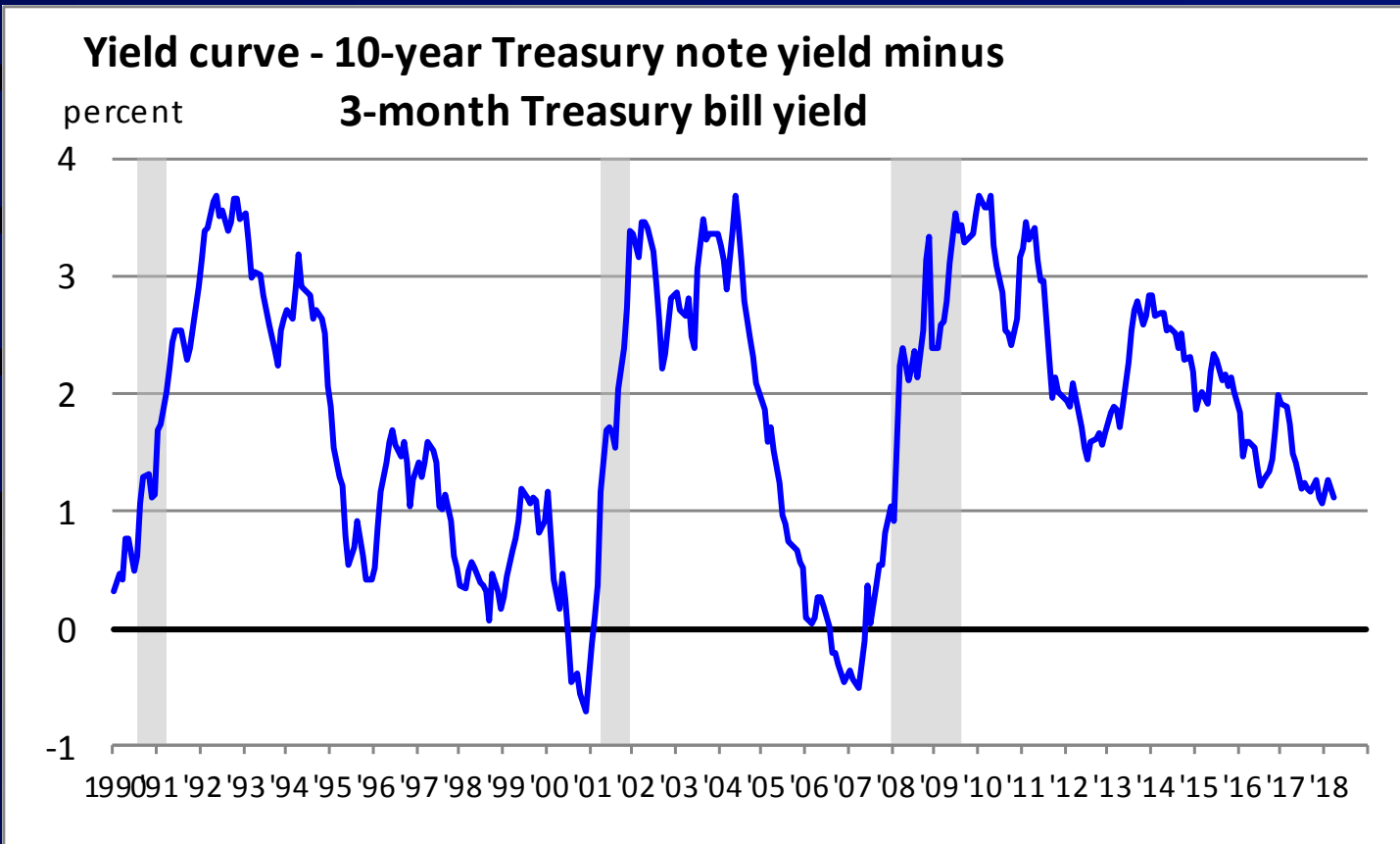
The Blue Chip Forecast calls for a continuation of the very gradual recovery in housing



Credit spreads between Corporate High Yield securities and Corporate Aaa securities remains very low



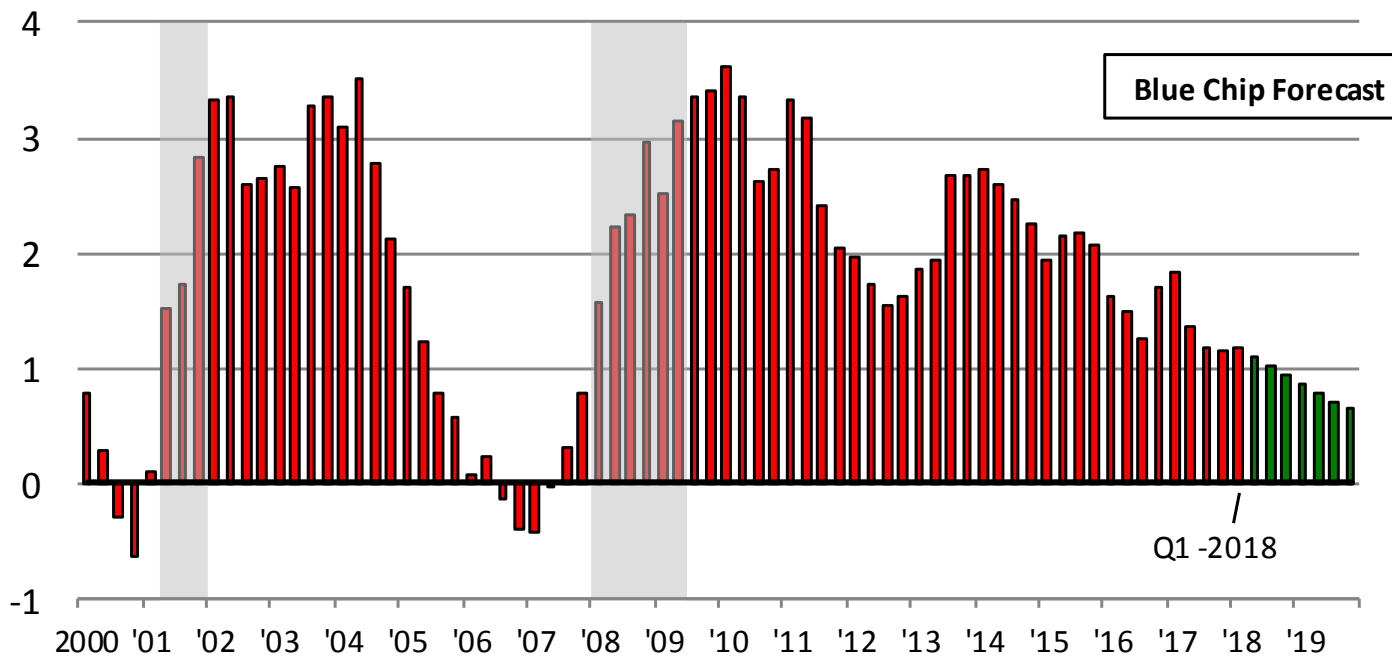
The yield curve remains well above zero



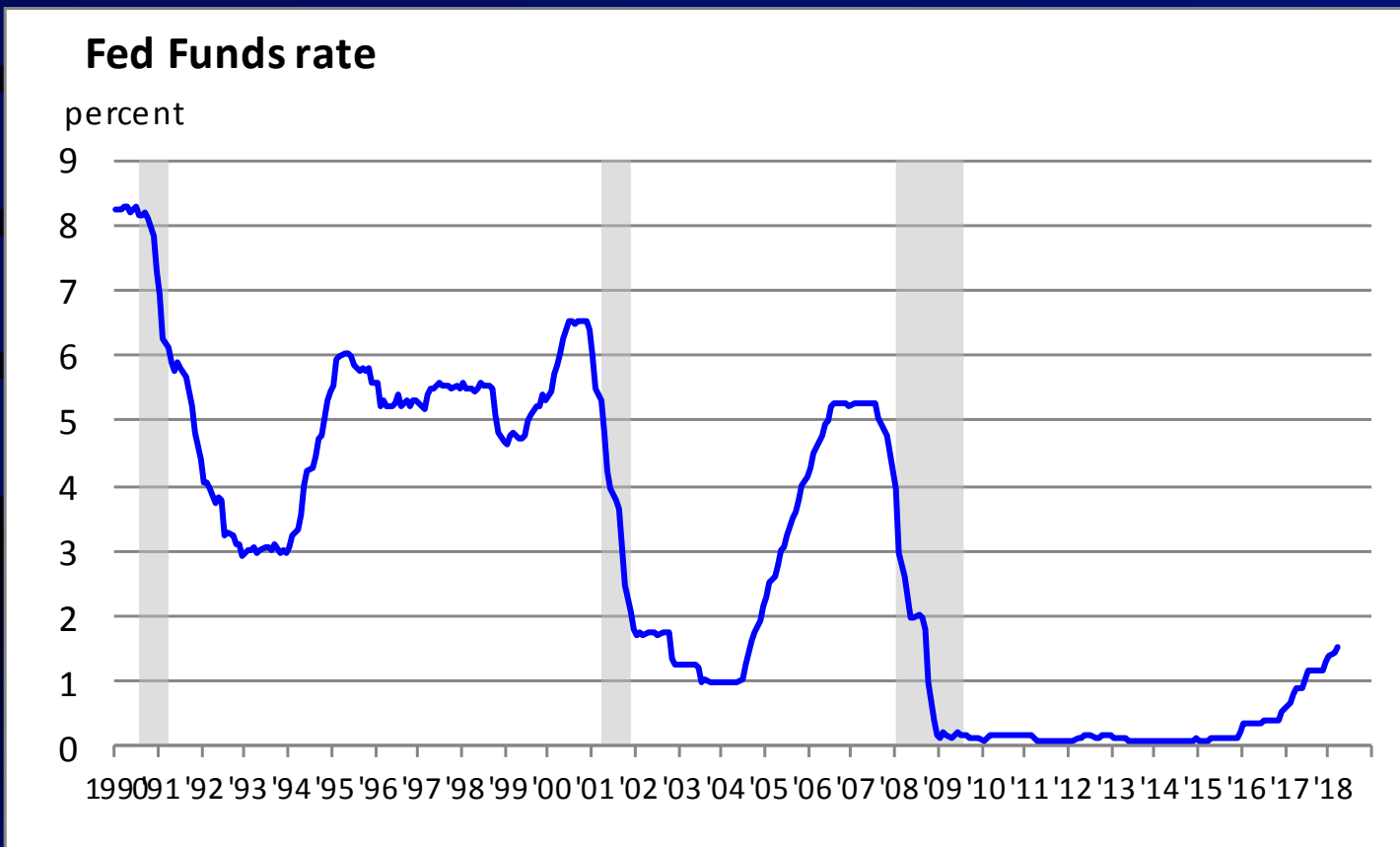
Blue Chip expects the yield curve to continue to flatten through next year, but not invert

10-year T-Note to 3-month T-Bill spread

percent

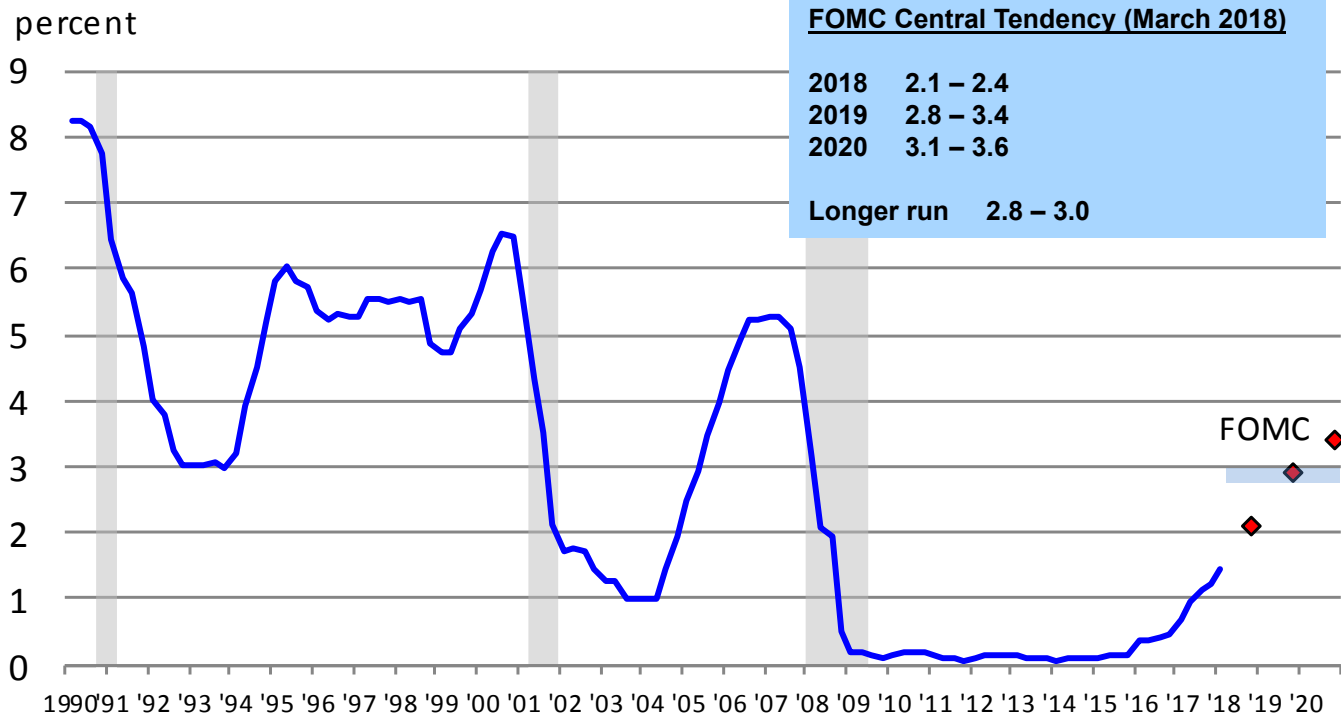


The Federal Reserve increased the Federal Funds rate by 1.50% since December 2015

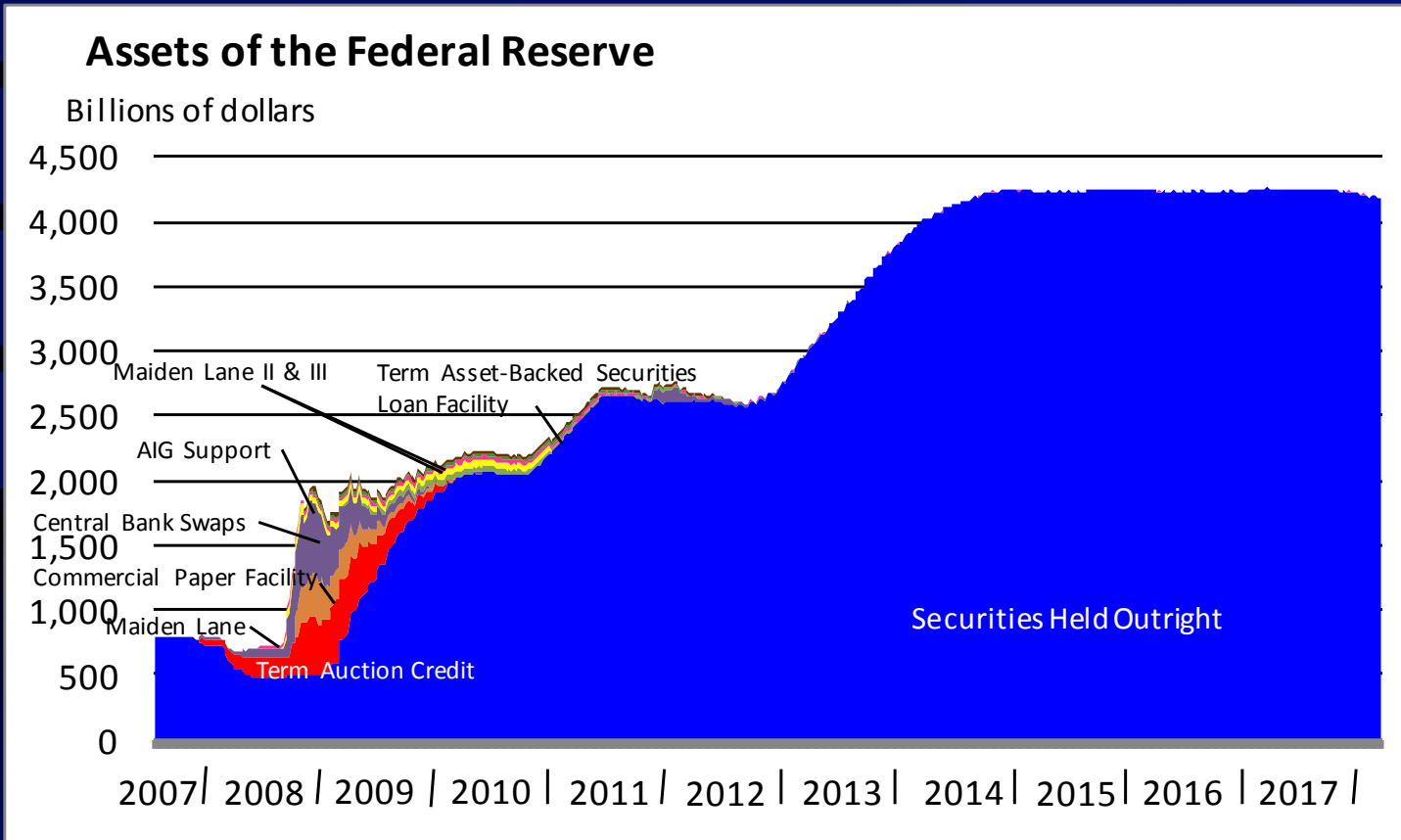


The Federal Funds Rate is expected to be around the neutral rate by the end of 2019

Target Federal Funds Rate



The Fed's balance sheet has remained flat for several years and the Fed began reducing it in October 2017



Summary

- The outlook is for the U.S. economy to expand at a pace above trend in 2018 and 2019 and close to trend in 2020
- Employment is expected to rise moderately with the unemployment rate remaining very low
- Inflation is forecast rise to the Fed's Inflation target this year
- Housing is predicted to improve at a modest pace
- Vehicle sales are anticipated to edge lower this year and in 2019
- Manufacturing output is expected to increase at a rate above trend in 2018



www.chicagofed.org

www.federalreserve.gov

