

Economic Outlook

ETI ToolTech 2018

Tucson, AZ

May 1, 2018

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Senior Economist

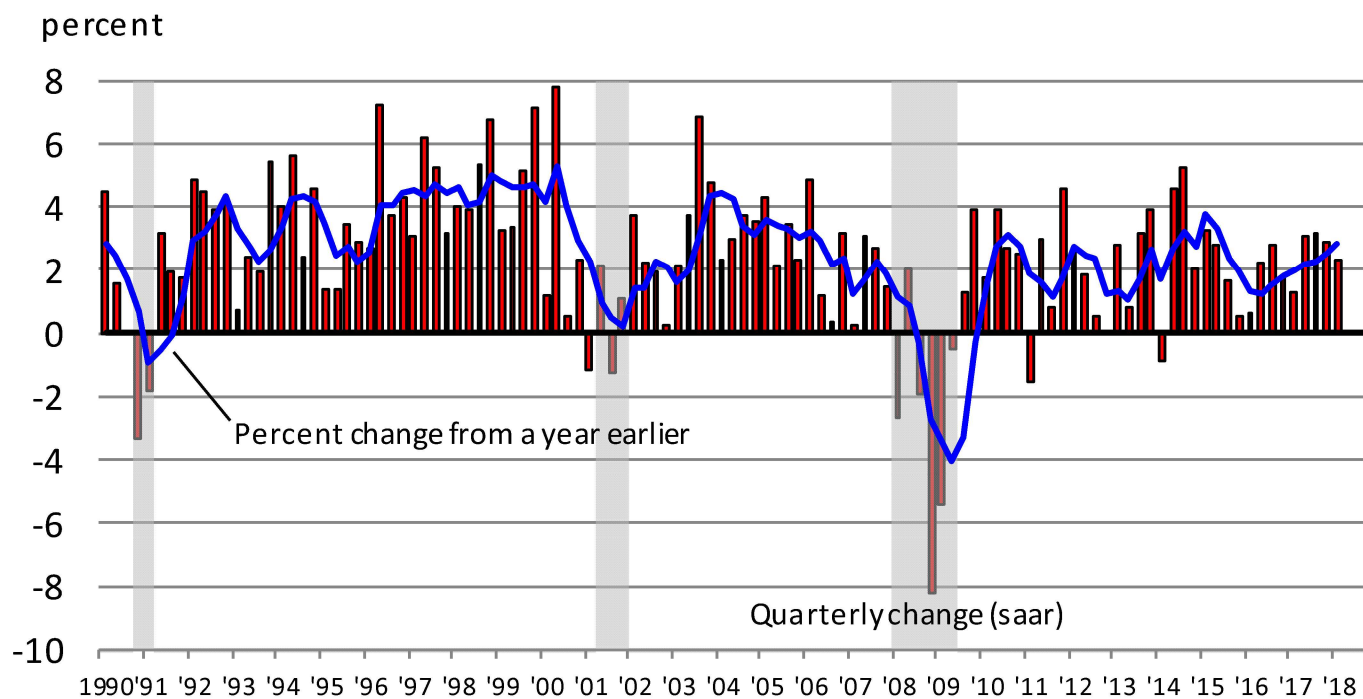
and Economic Advisor

Federal Reserve Bank of Chicago

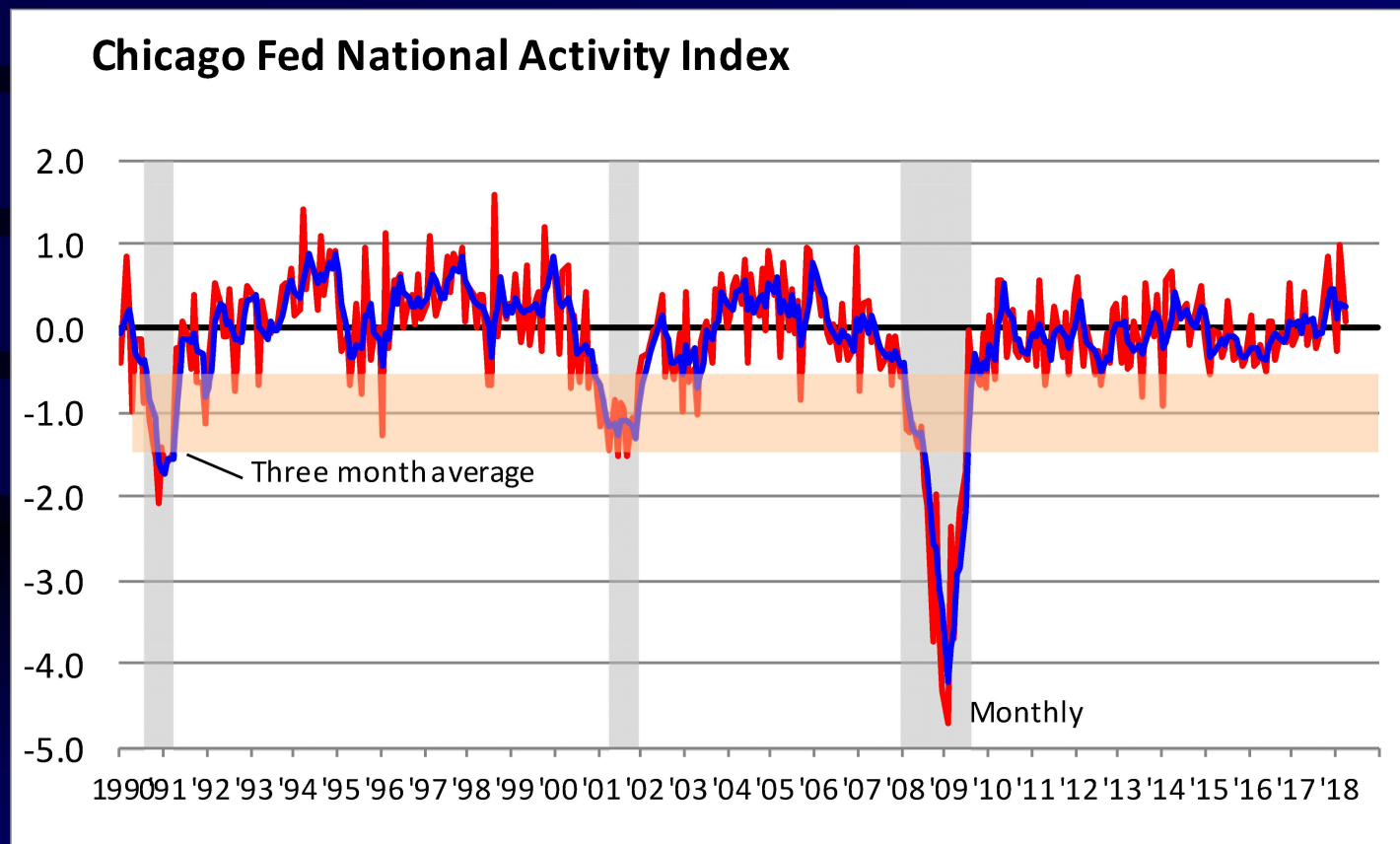


GDP expanded by 2.9% over the past year

Real gross domestic product



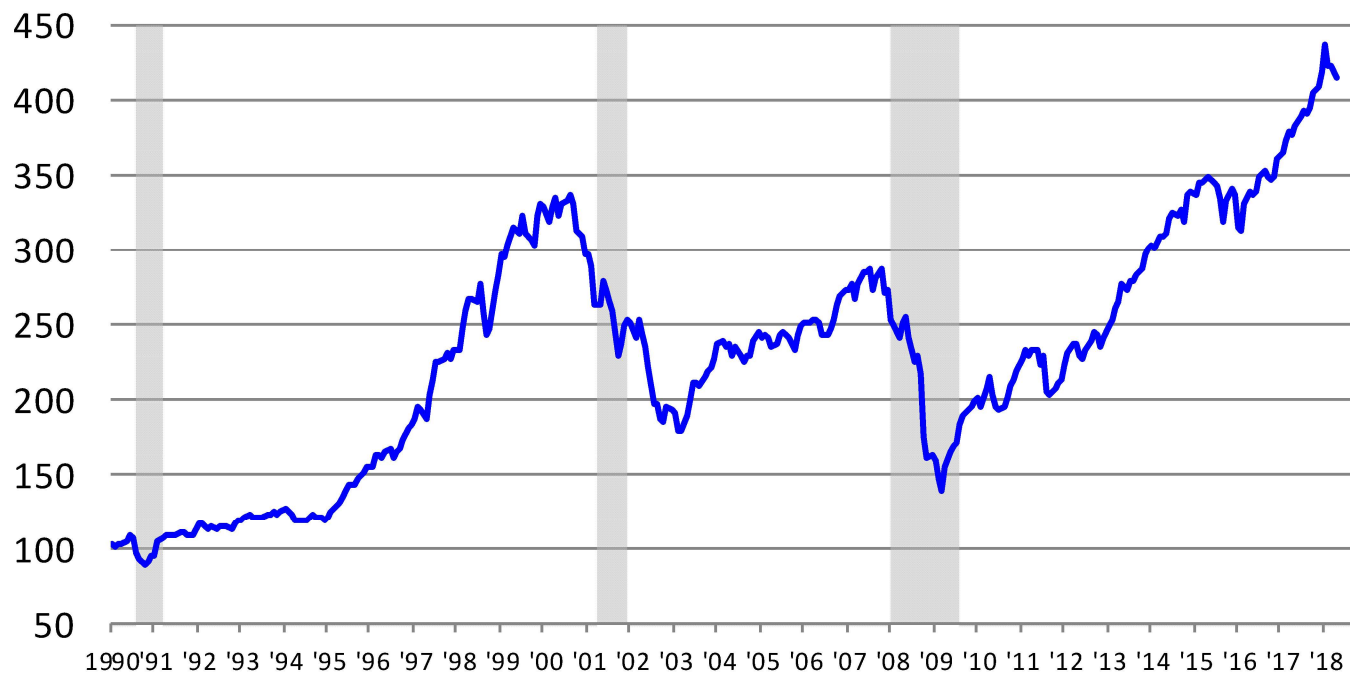
The Chicago Fed National Activity Index 3-month average is above zero



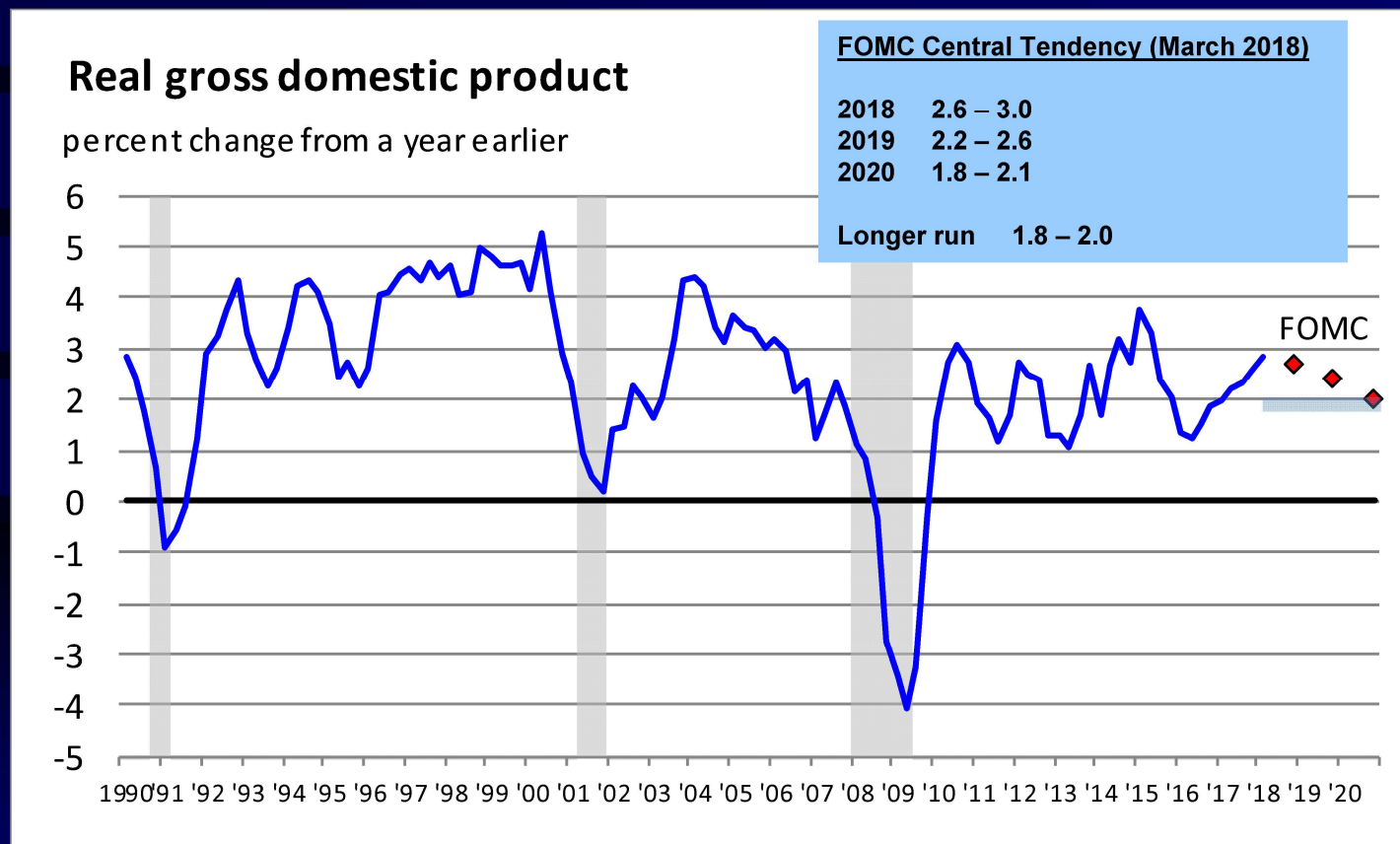
The real value of the stock market is very high

Real S&P 500 stock index

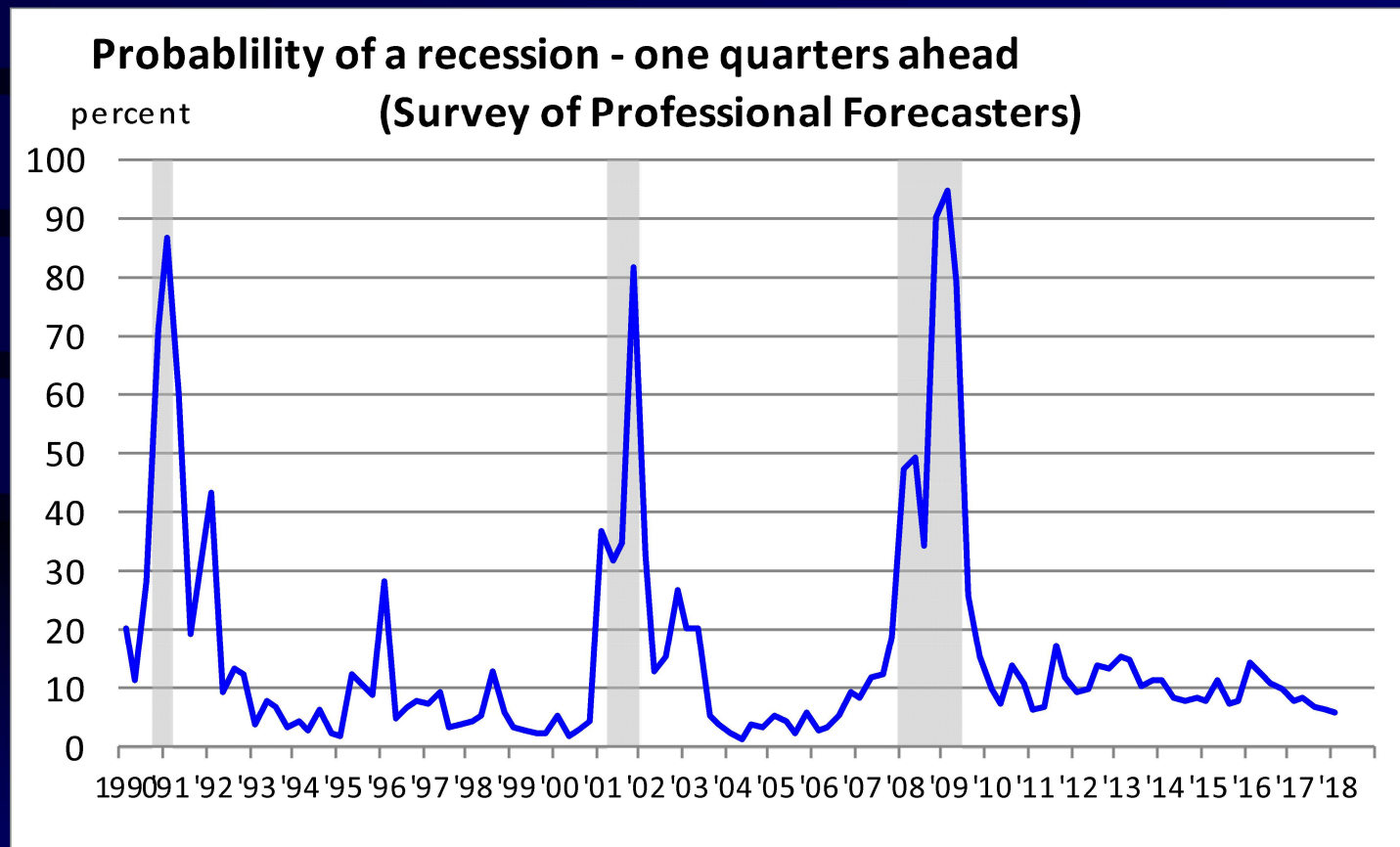
Index: 1990 = 100



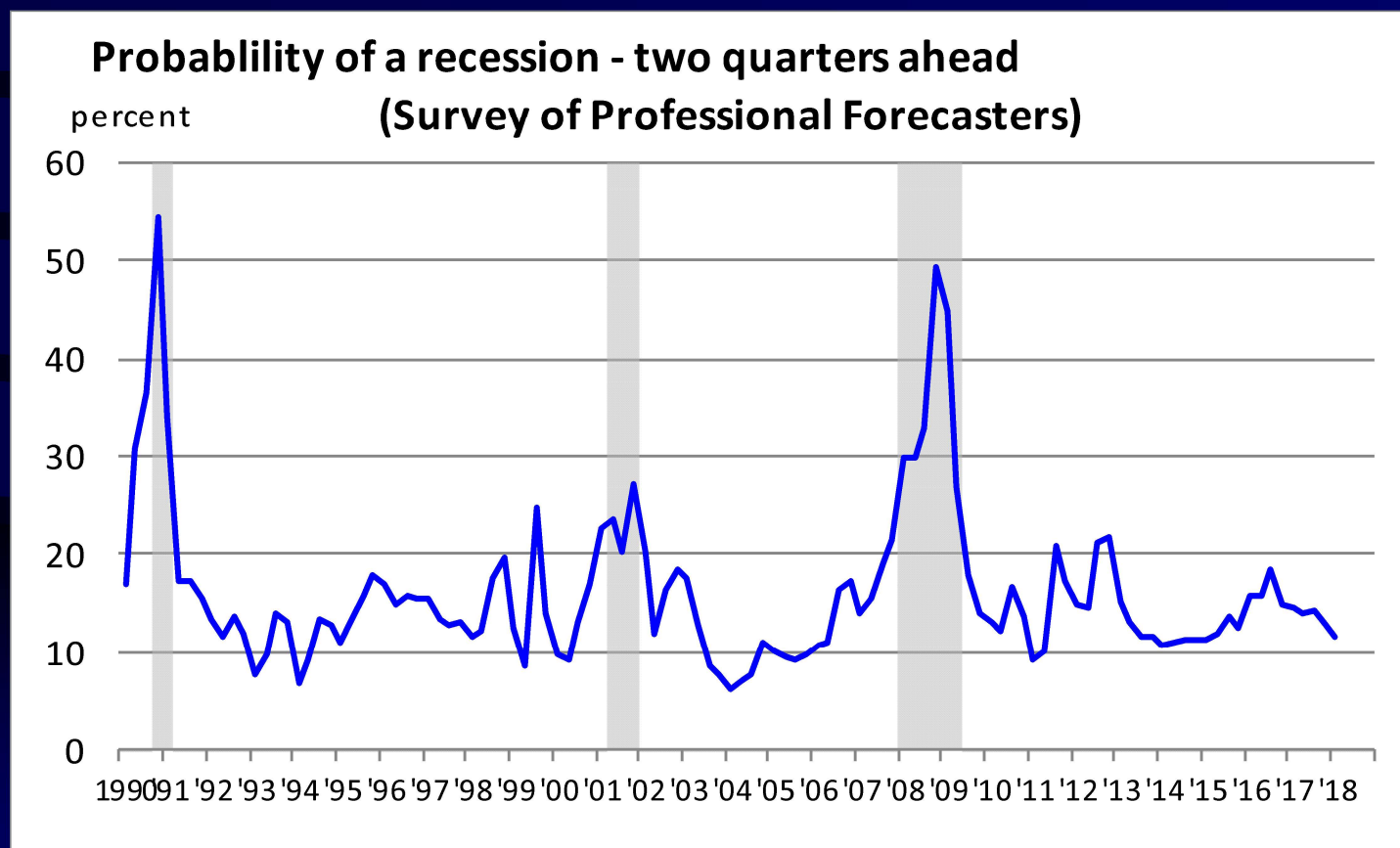
**The Federal Open Market Committee (FOMC) expects
GDP to grow above trend this year;
somewhat above trend next year; and around trend in 2020**



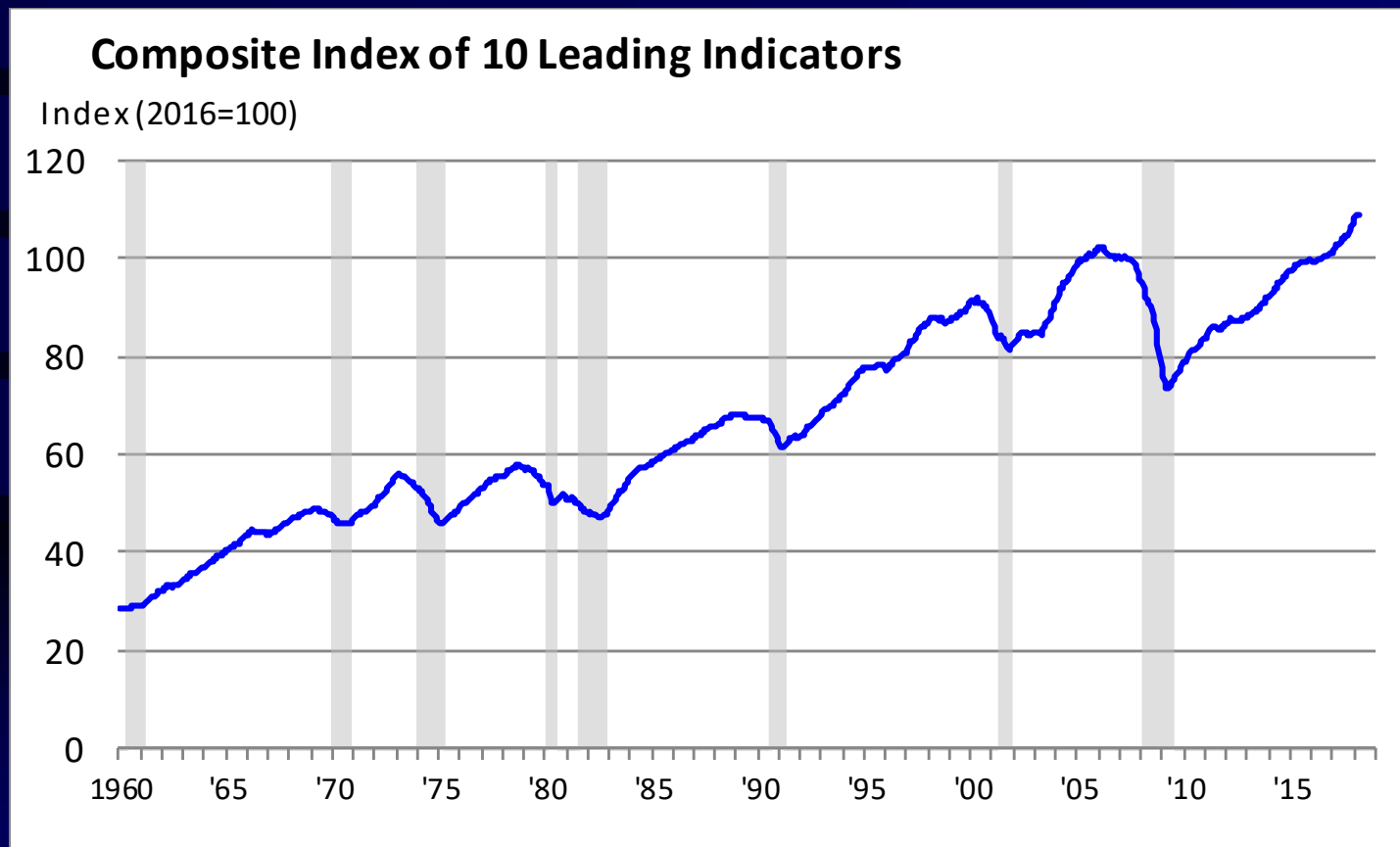
The probability of recession in the next quarter has eased



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

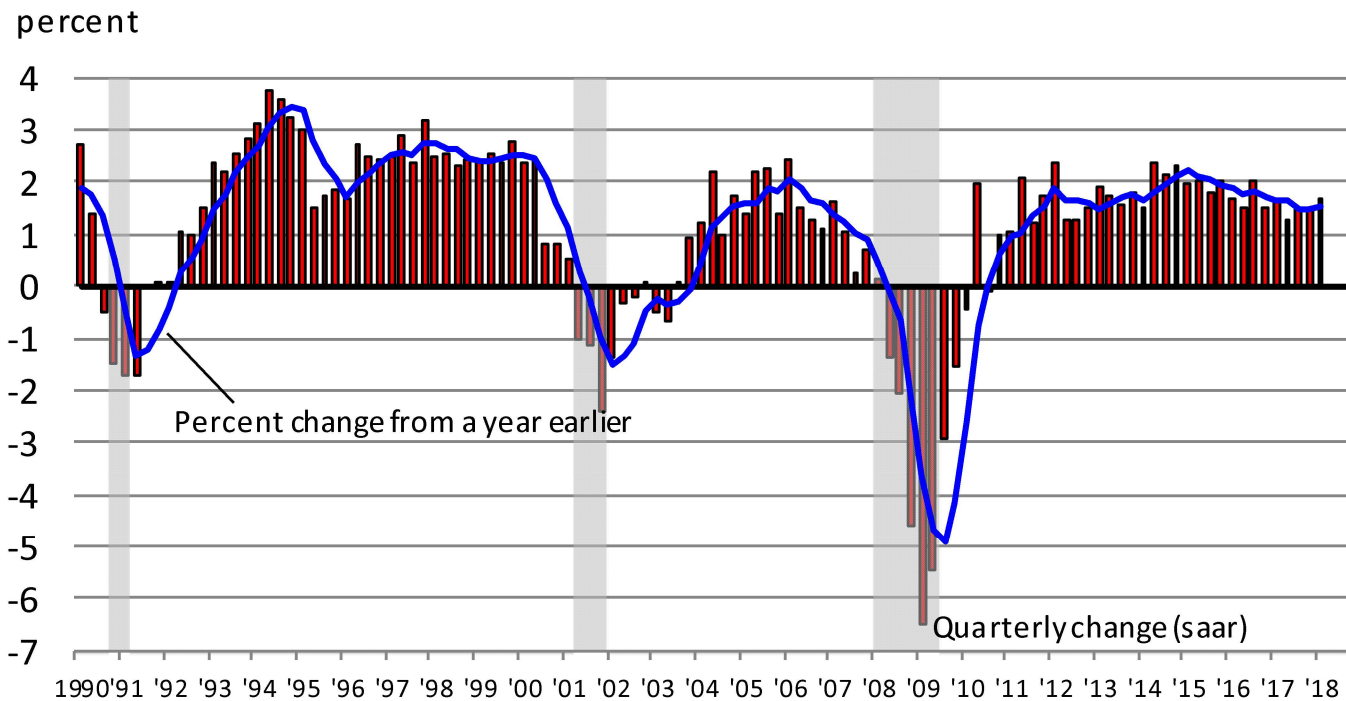


The index of leading indicators continues to rise

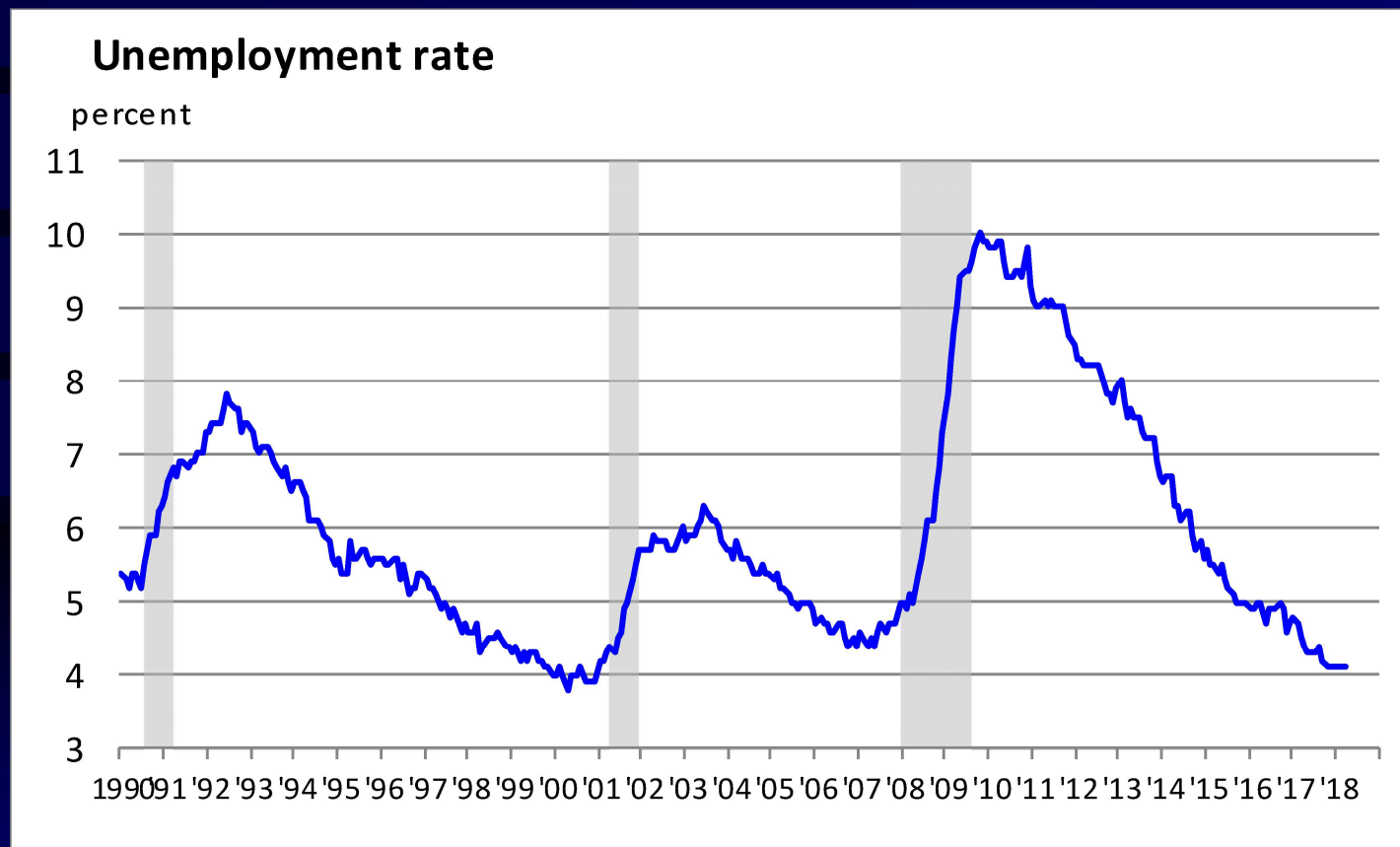


Employment increased by over 2.2 million jobs over the past 12 months

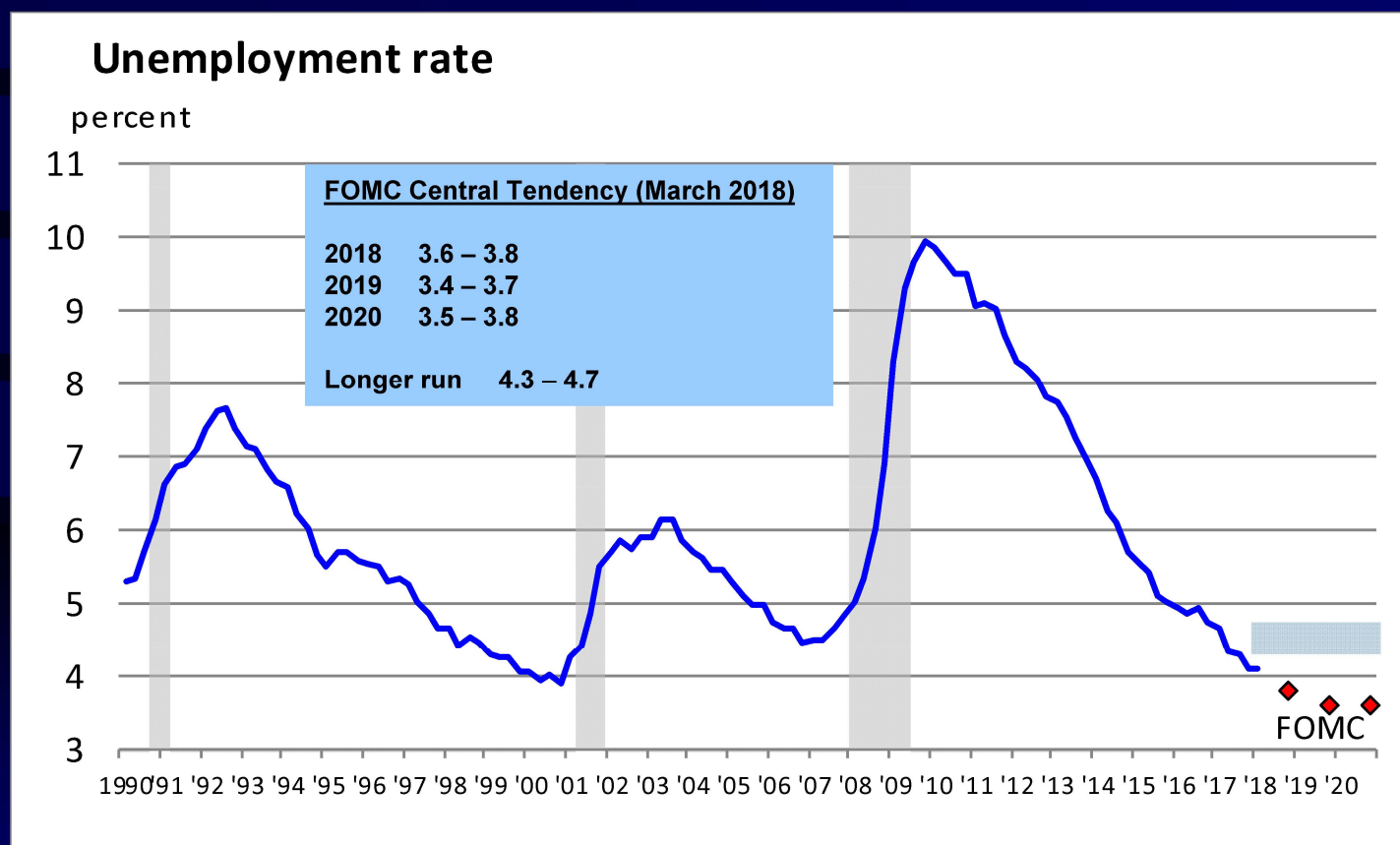
Total employment



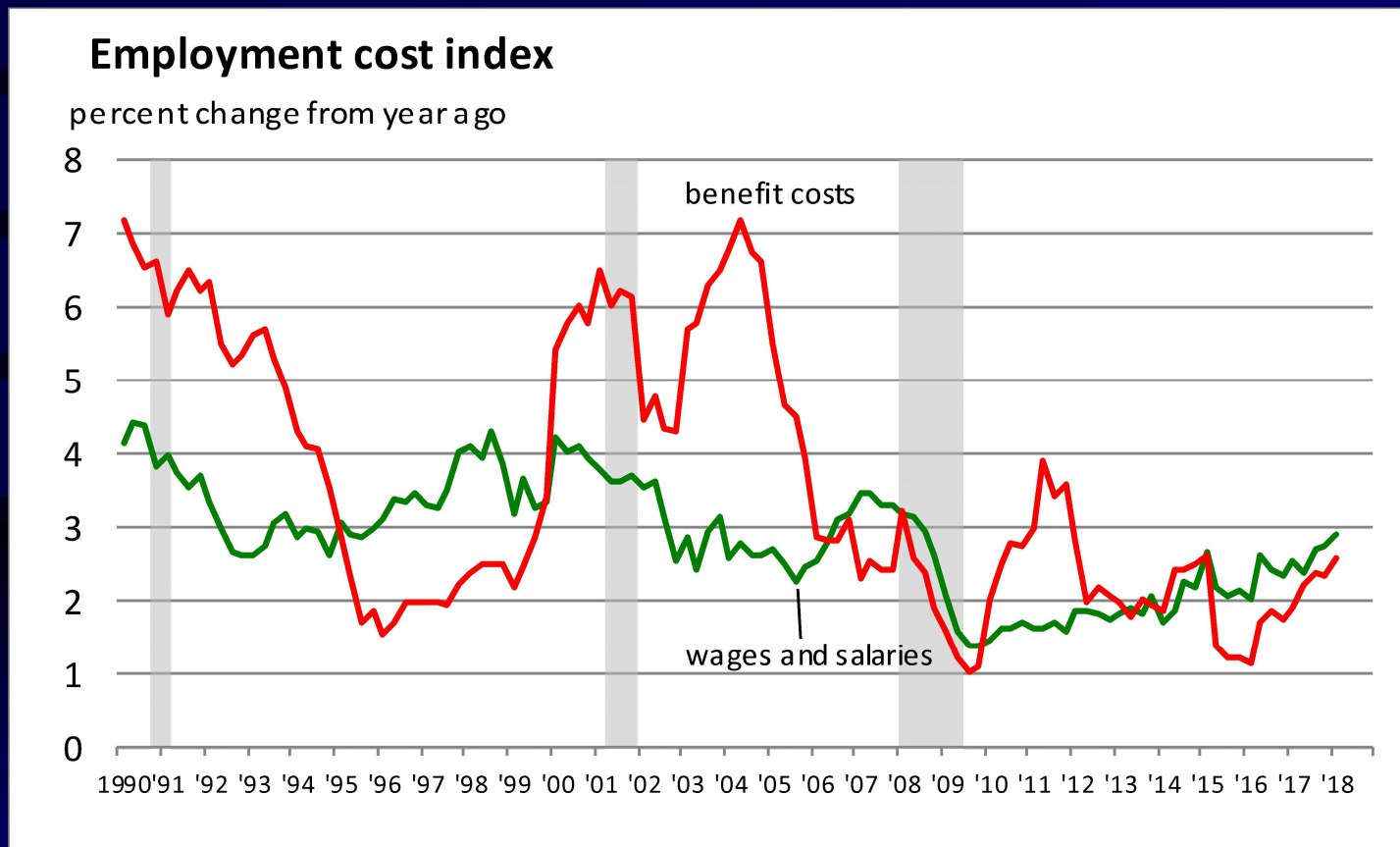
The unemployment rate has fallen to 4.1%



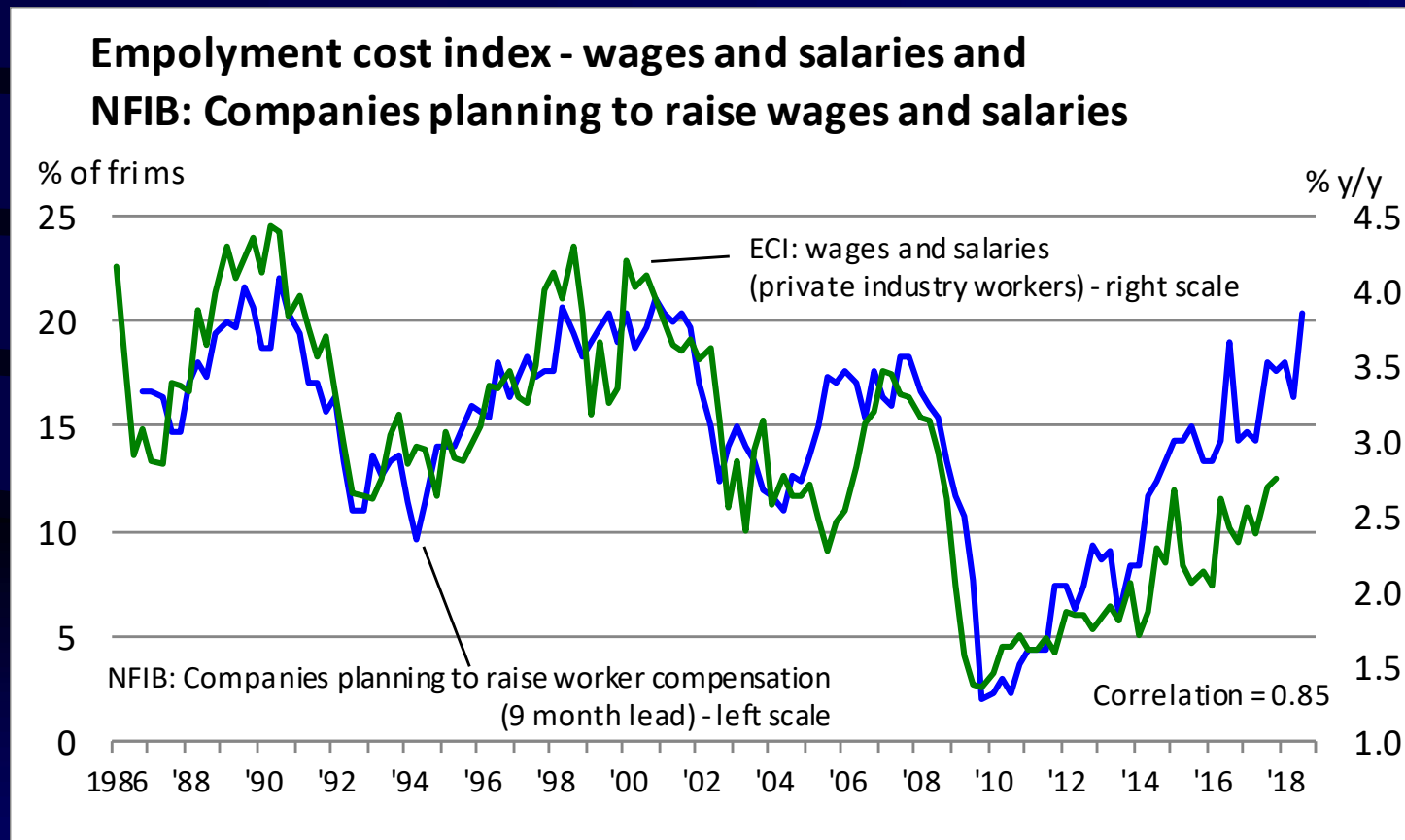
The FOMC forecasts that the unemployment rate will be well below the natural rate through 2020



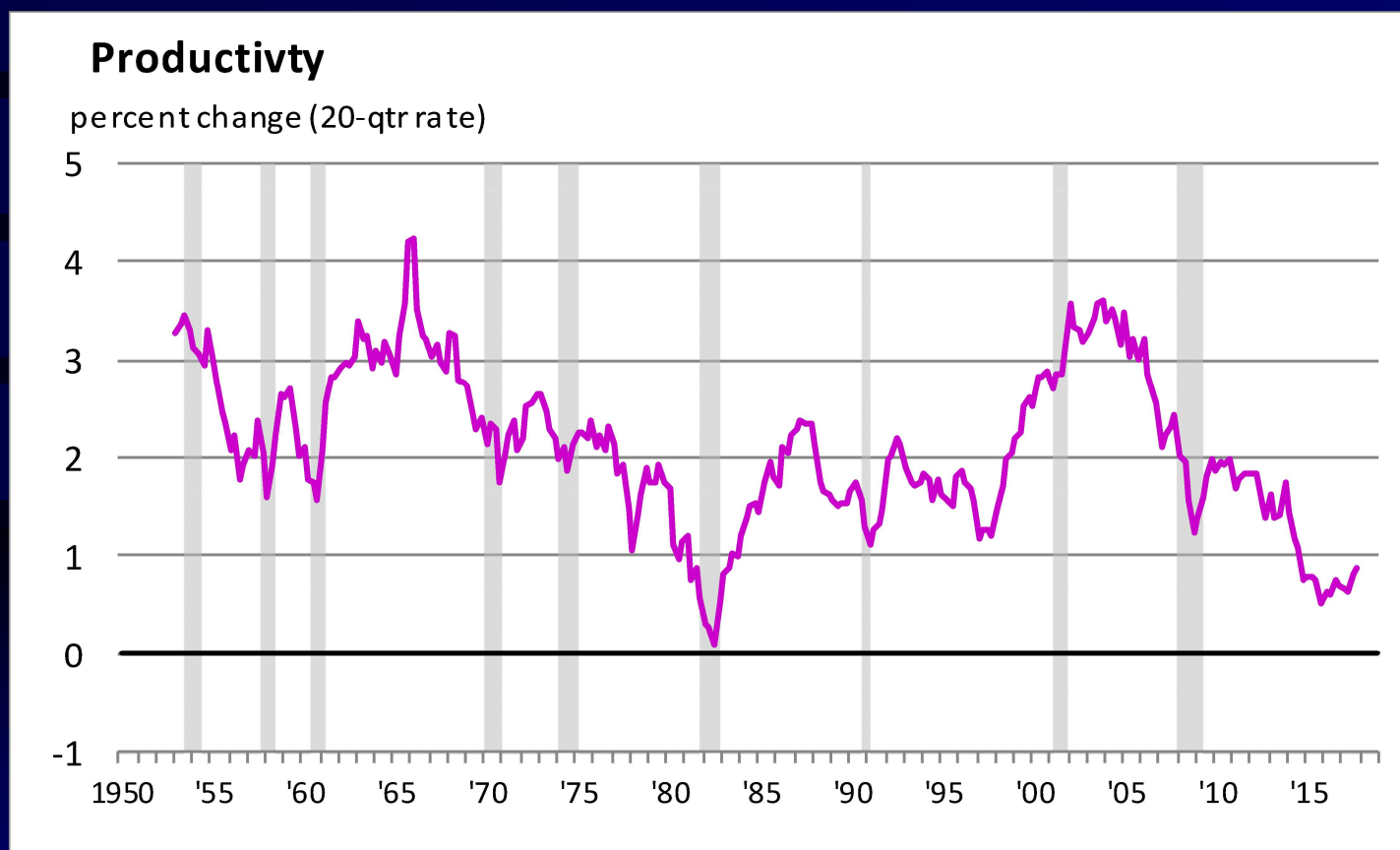
**Wages and benefit costs continue to increase
at a moderate rate,
although it may finally be picking up some its pace**



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

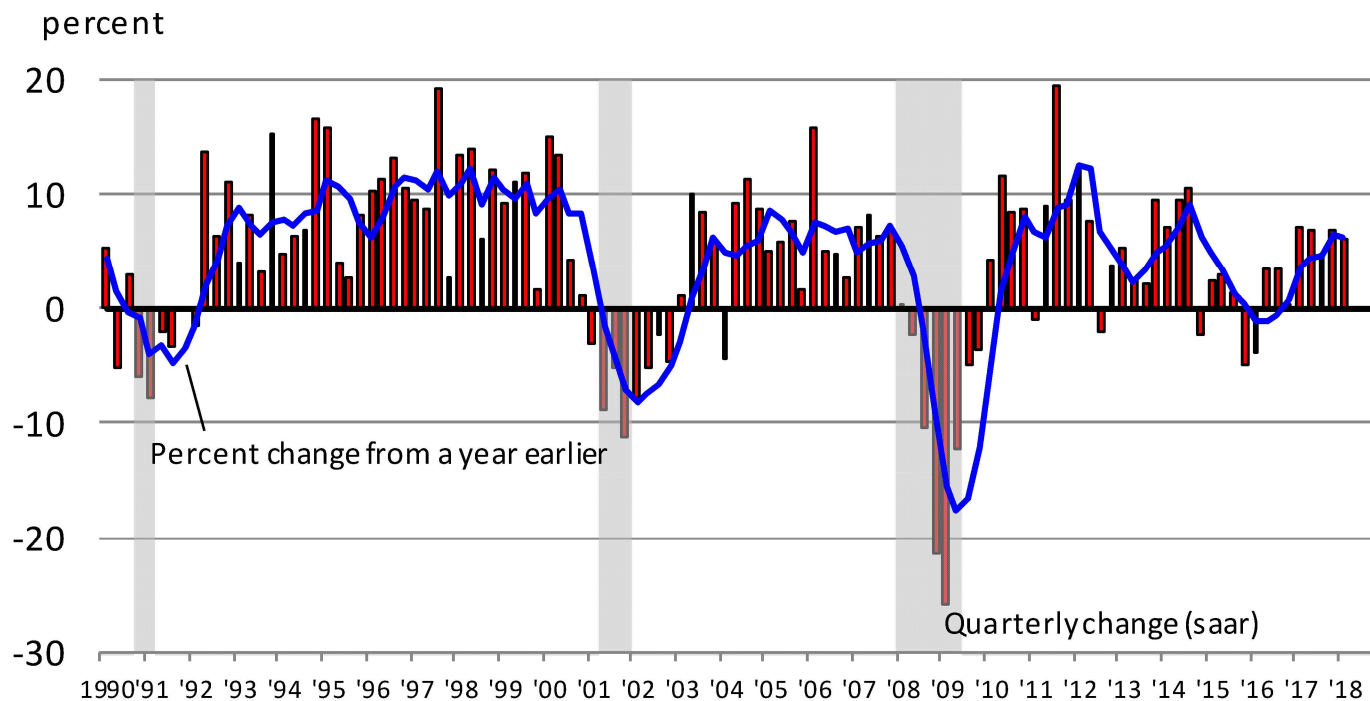


Slow productivity growth helps explain why relatively strong employment growth has not translated into higher wages



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

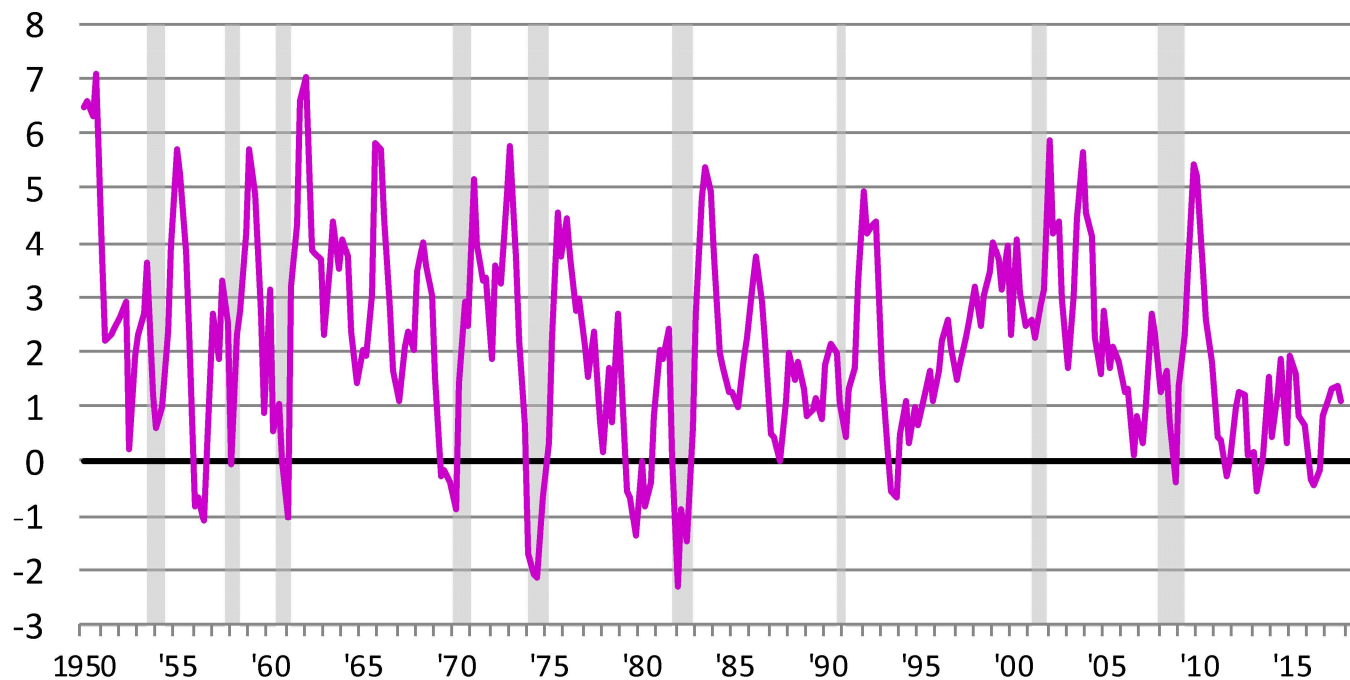
Real private nonresidential fixed investment



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

Productivity

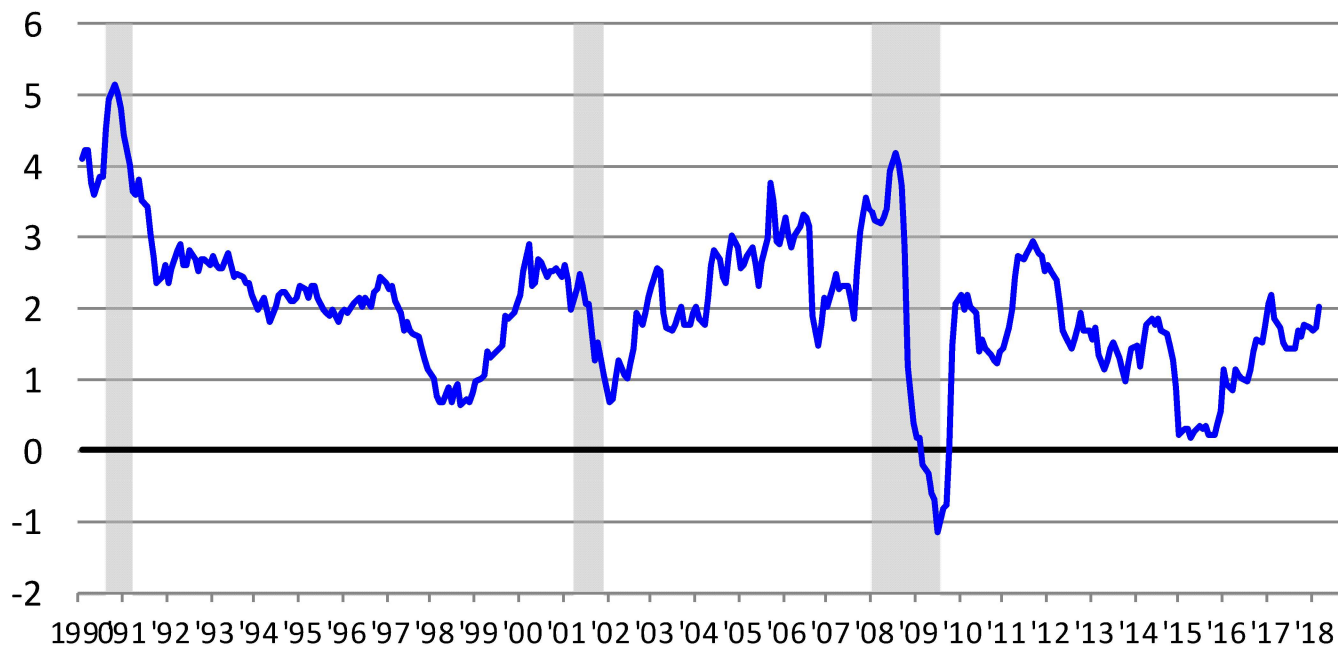
percent change from a year earlier



Inflation reached the Fed target of 2% in March

Personal consumption expenditure - chain price index

percent change from a year earlier



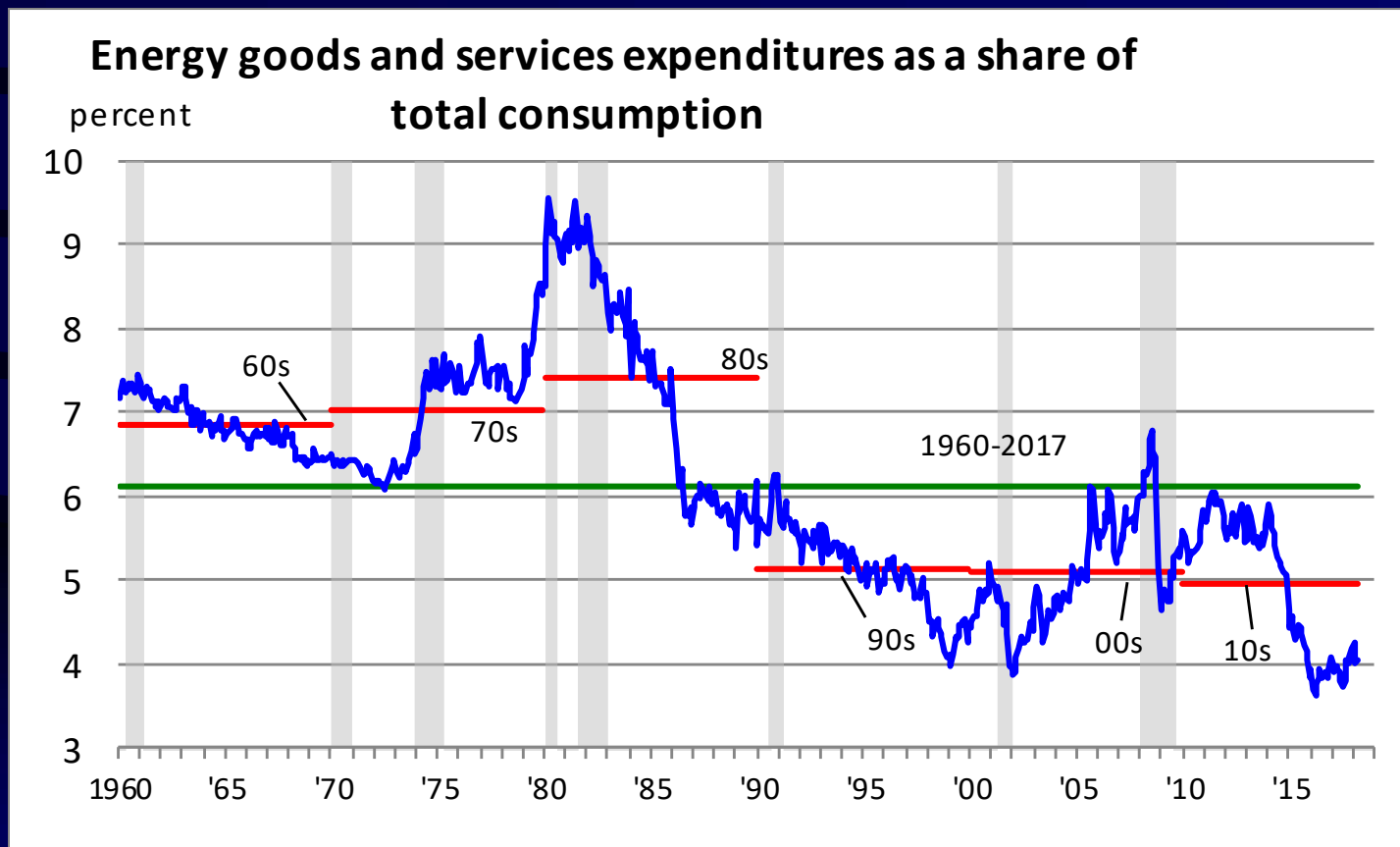
**In large part inflation has been following
the pattern of energy prices**

Real West Texas Intermediate oil price

dollars per barrel, 2016 dollars

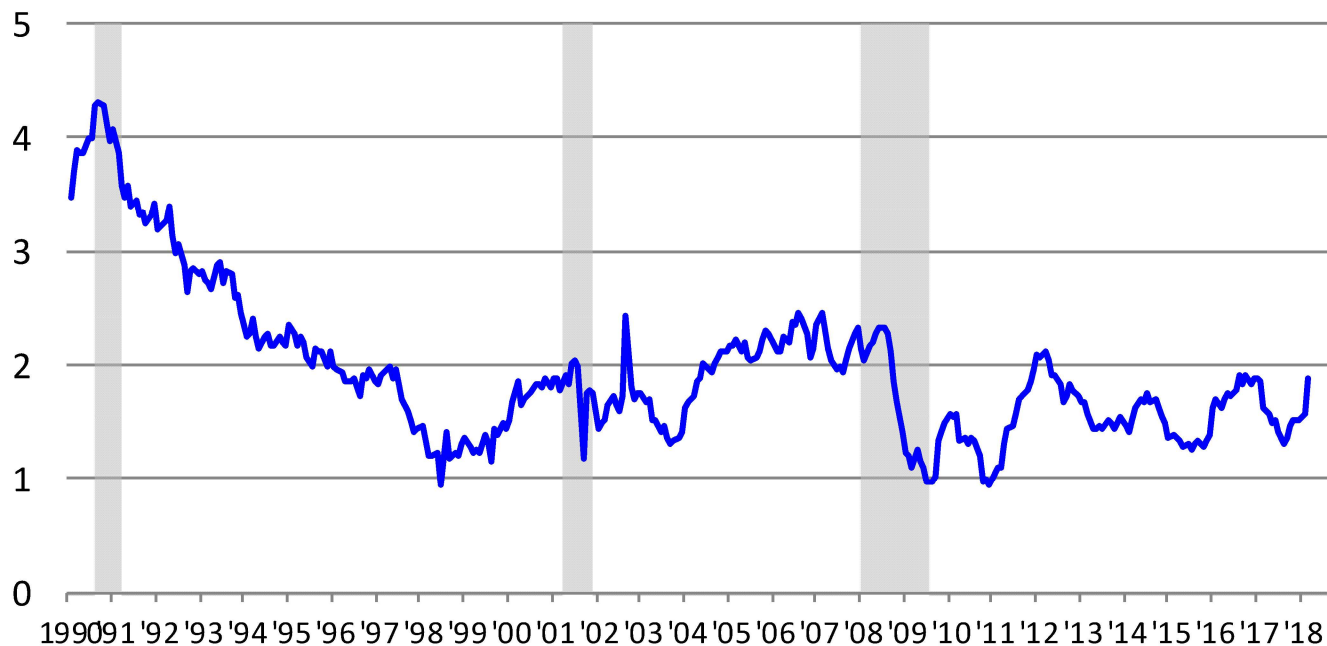


Expenditures on energy remain well below the historical average



Removing the volatile food and energy components from the PCE, “core” inflation is just below 2%

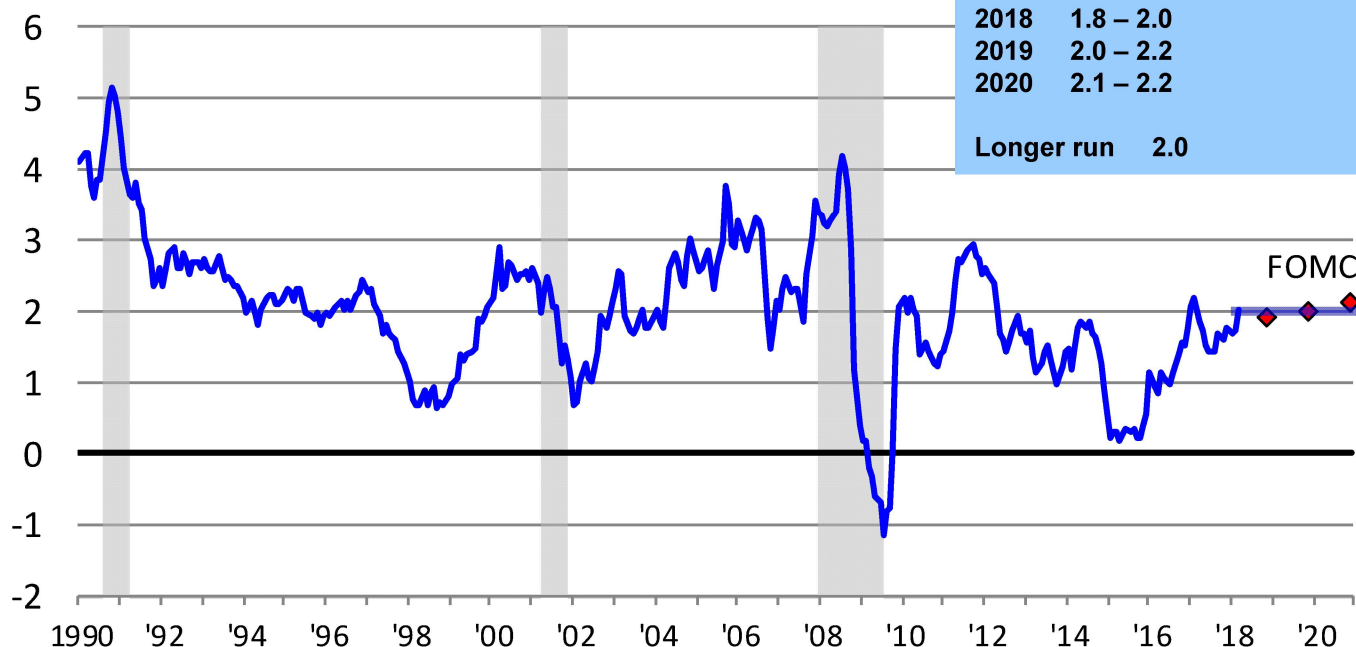
Personal consumption expenditure - less food and energy -
percent change from a year earlier chain price index



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



FOMC Central Tendency (March 2018)

2018 1.8 – 2.0

2019 2.0 – 2.2

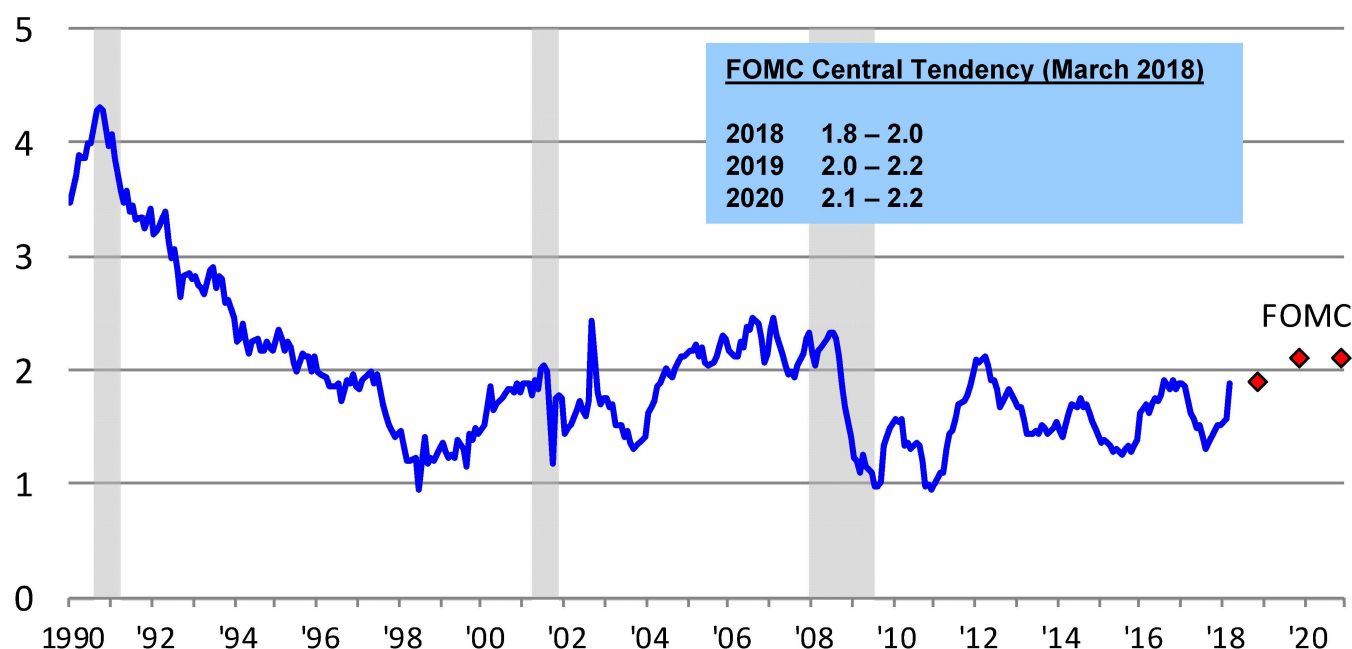
2020 2.1 – 2.2

Longer run 2.0



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



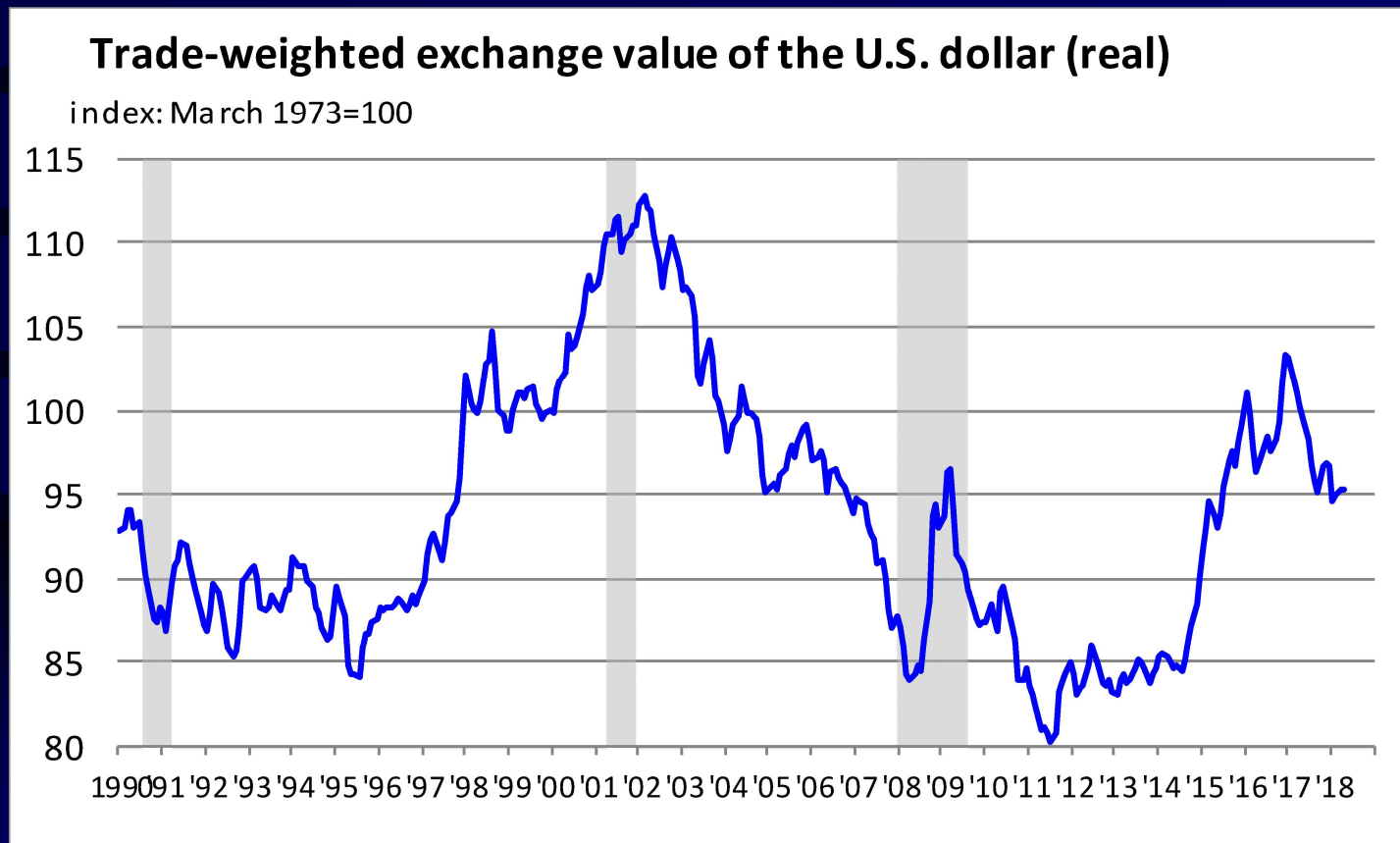
Blue Chip International Consensus Forecasts

	Real GDP % change Annual			Inflation % change Annual Consumer Prices			Exchange Rate Against US Dollar End of Year		Interest Rates 3-Month 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

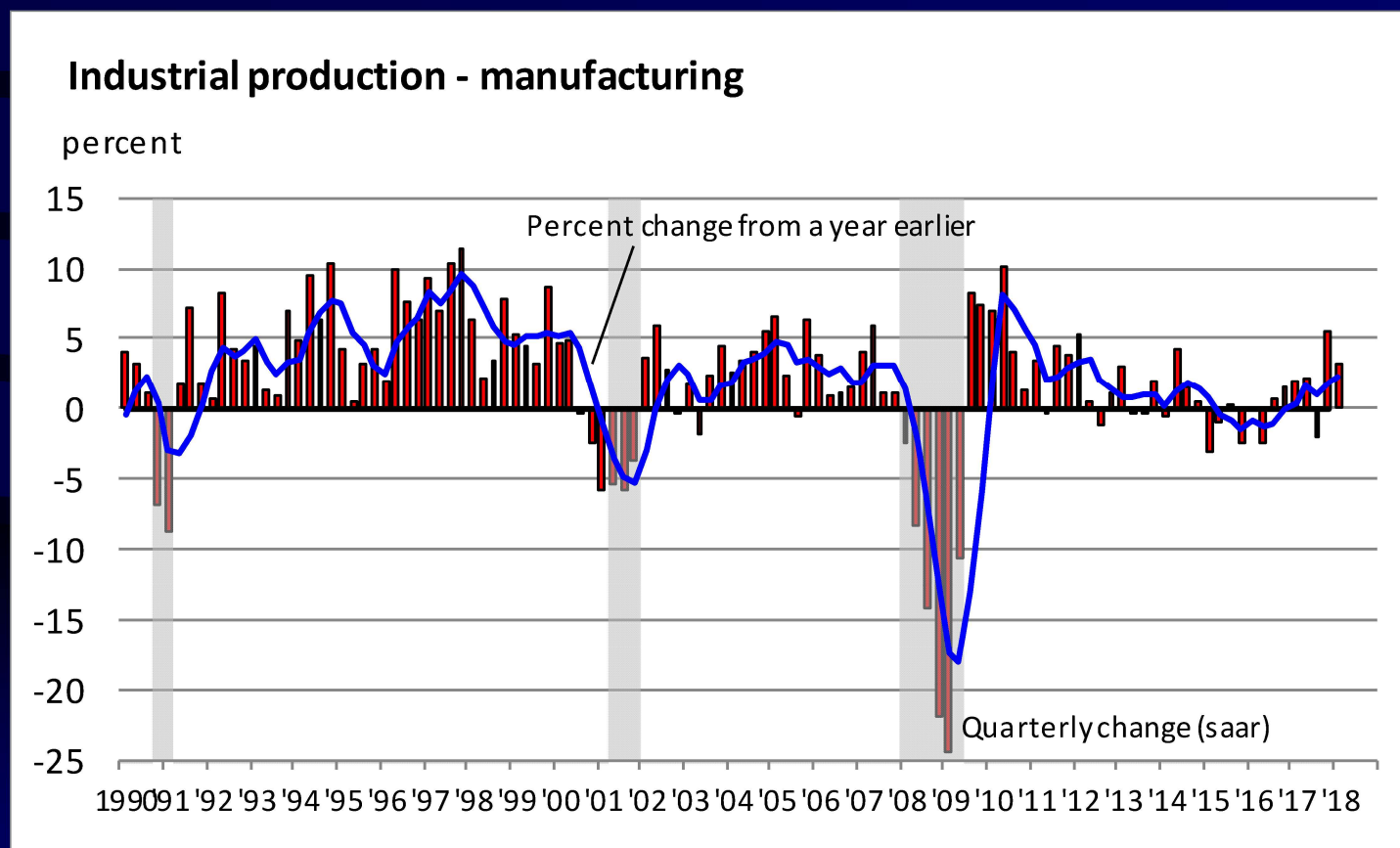
Blue Chip Economic Indicators Forecast April 10, 2018



**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%**

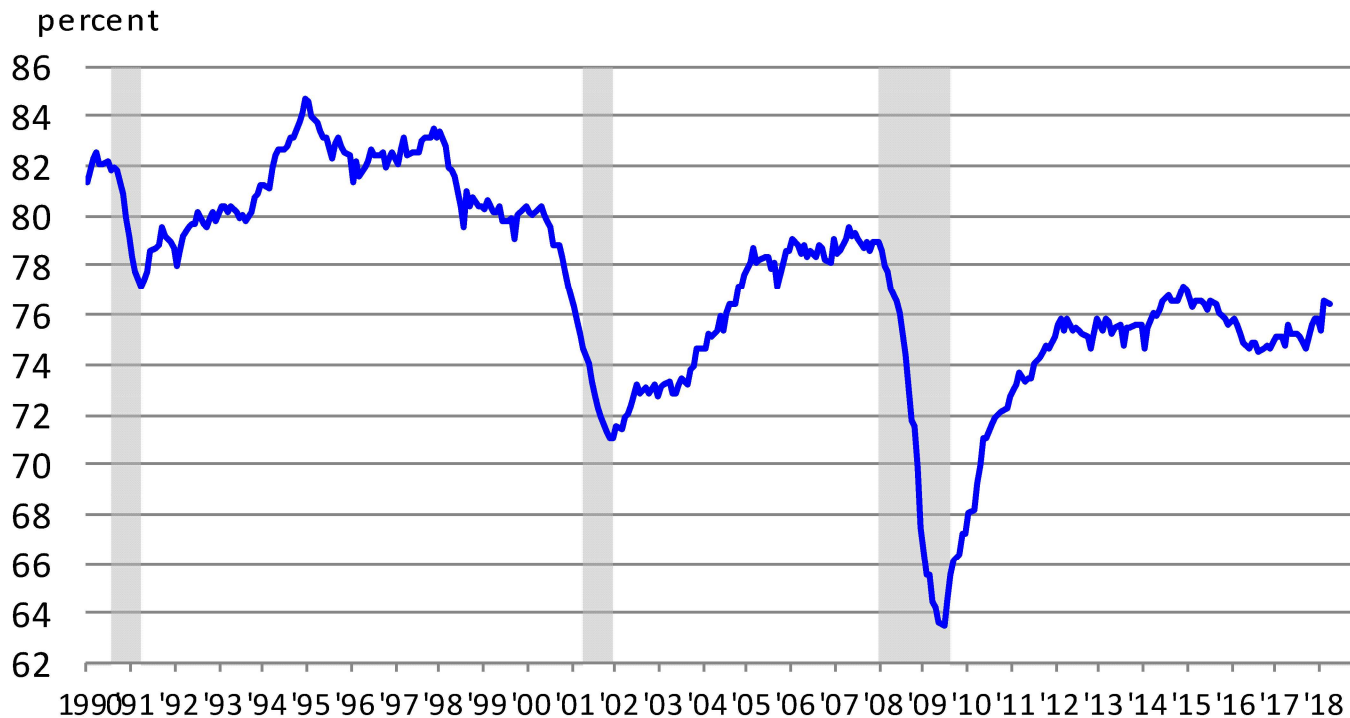


Manufacturing output is increasing after being unchanged for the past couple of years



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

Capacity utilization - manufacturing



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

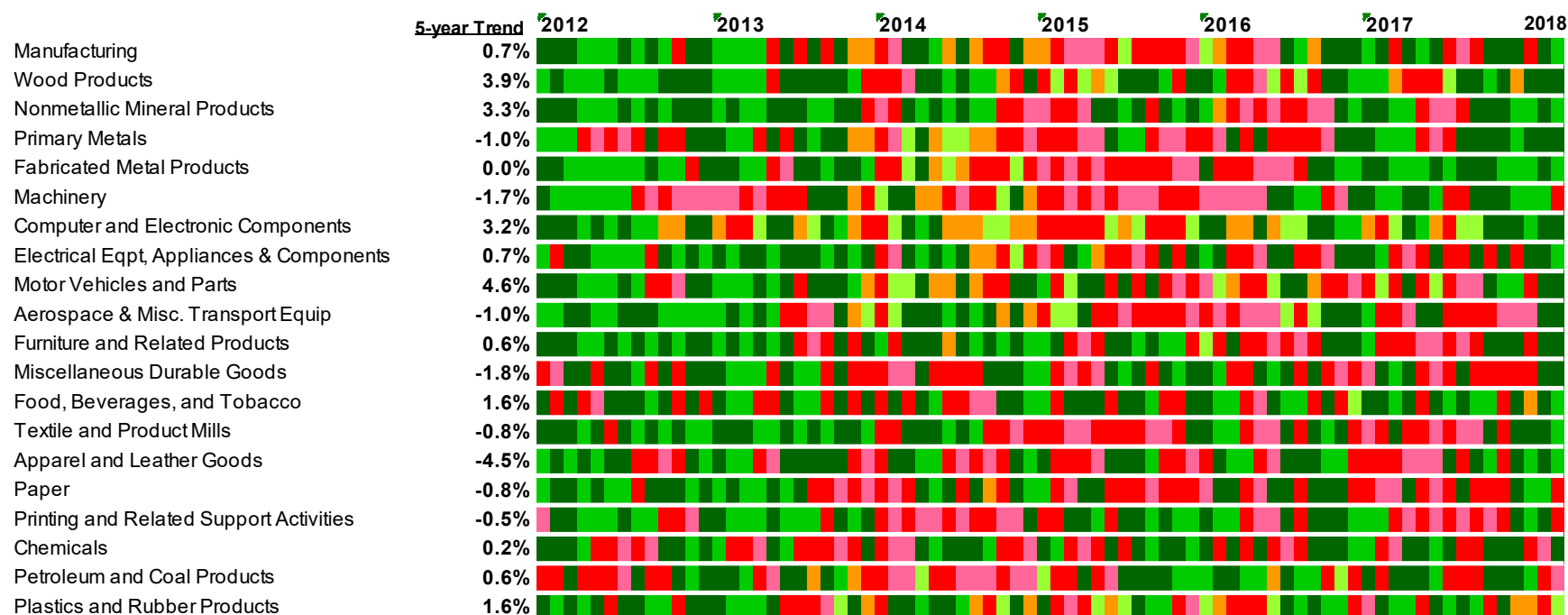


The industrial sector output growth has been strong over the past several months

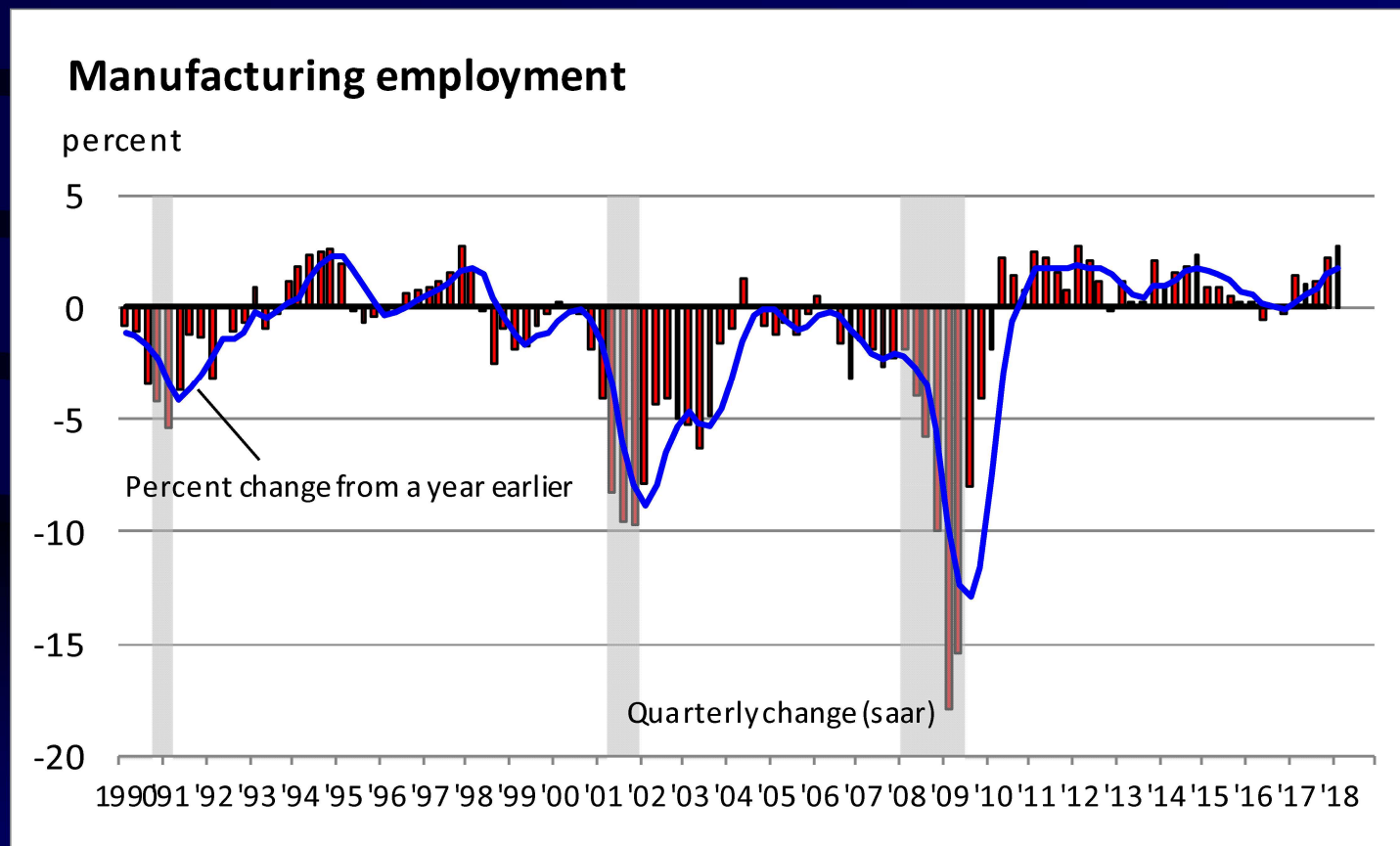
Current 3 Month Moving Average Growth is:

Above Trend and Accelerating
Above Trend and Decelerating
Below Trend and Accelerating
Below Trend and Decelerating
Contracting but Improving
Contracting and Deteriorating

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



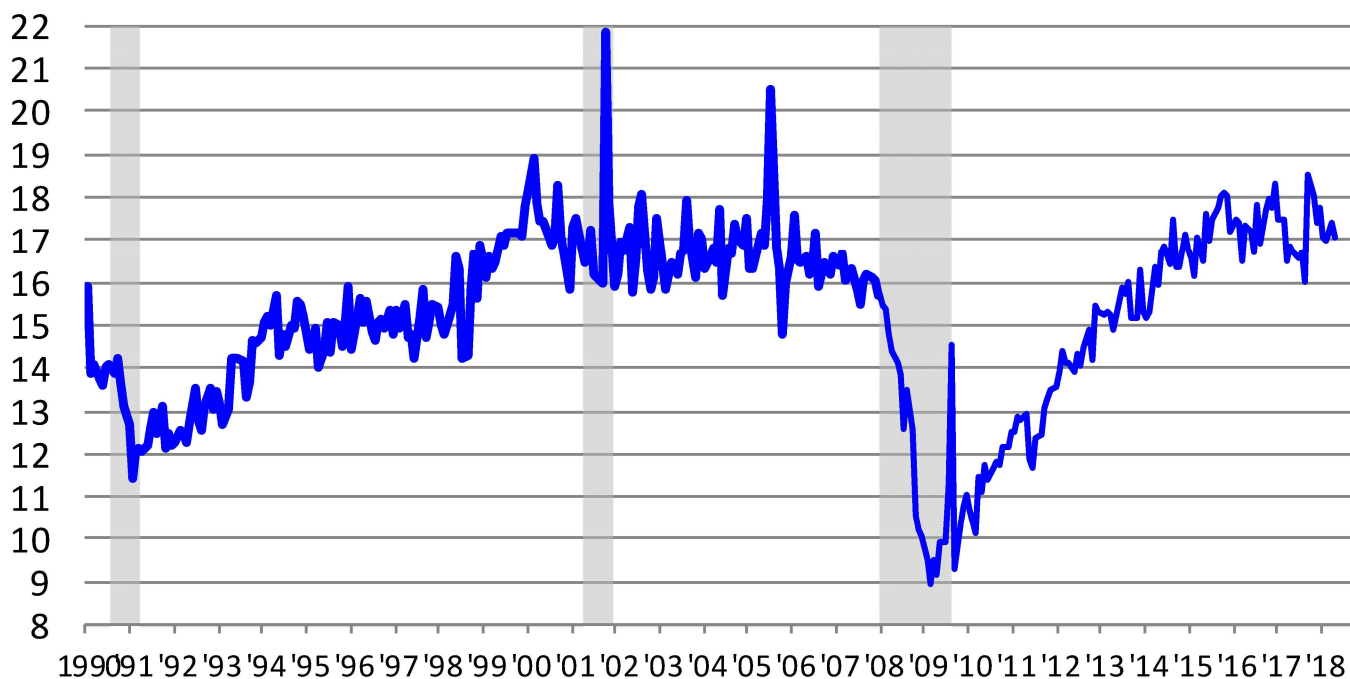
Manufacturing employment increased by 224,000 workers over the past 12 months



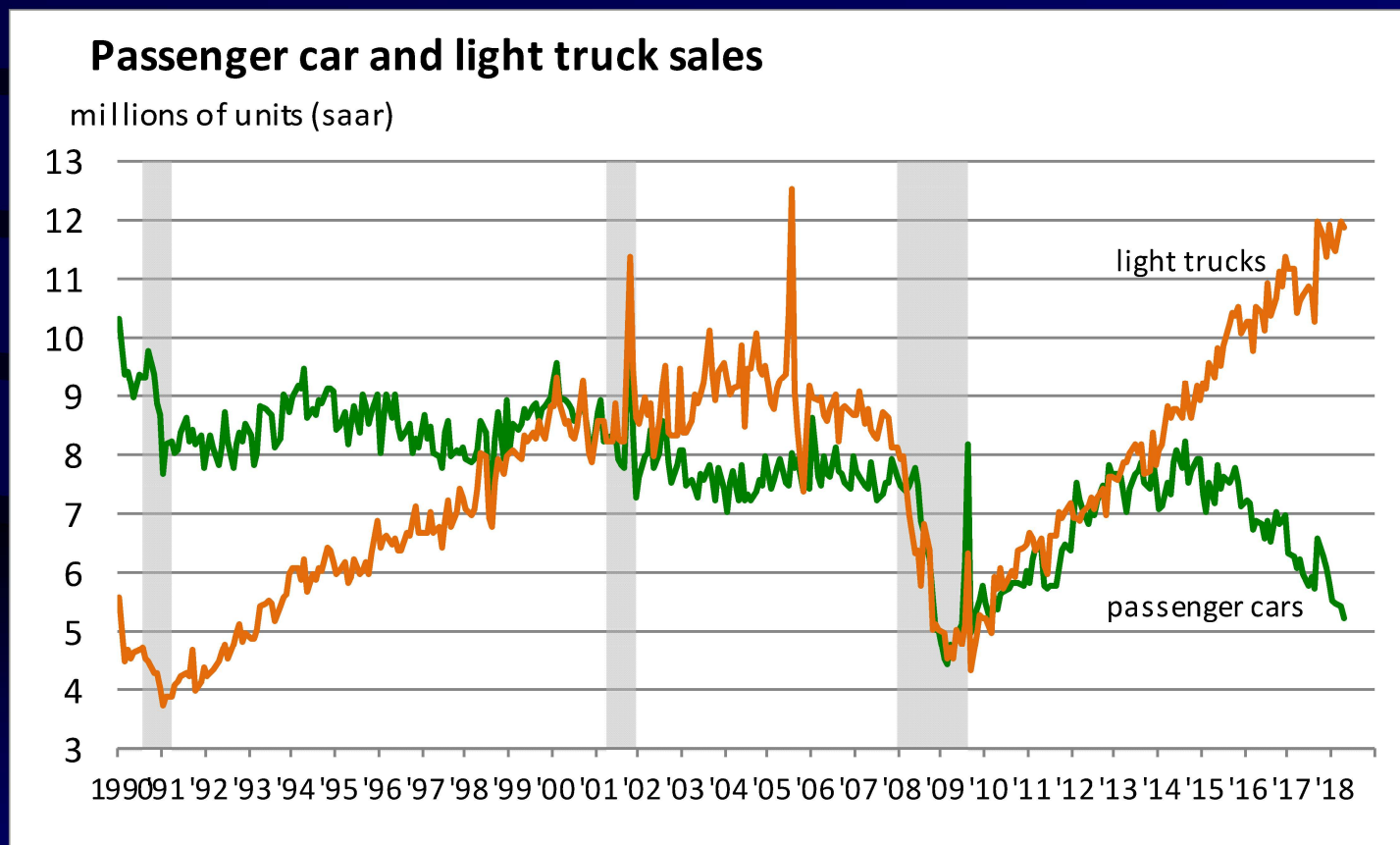
**Sales for the first four months of 2018
has averaged 17.1 million units (saar),
0.3% higher than a comparable a year earlier**

Light vehicle sales

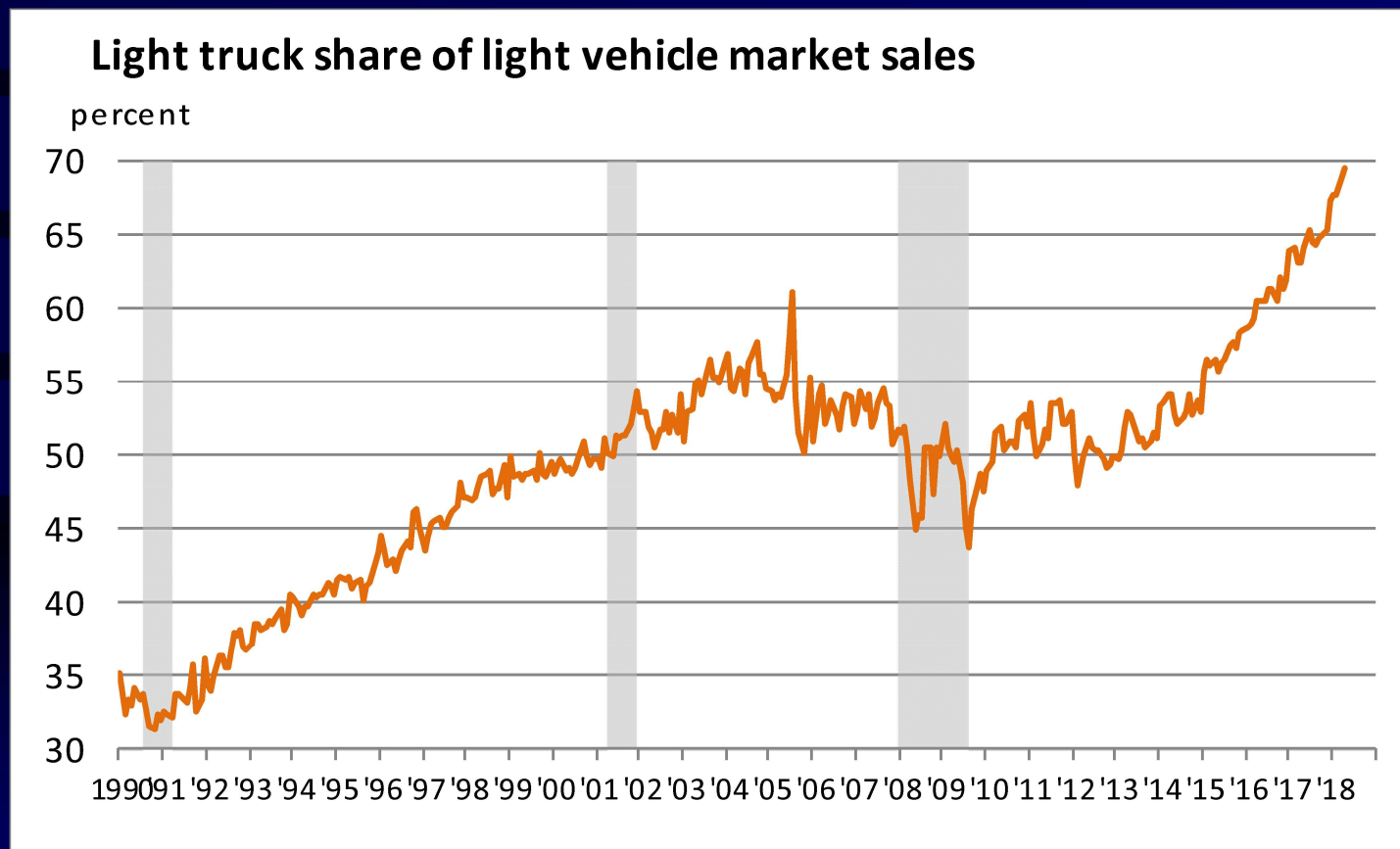
millions of units (saar)



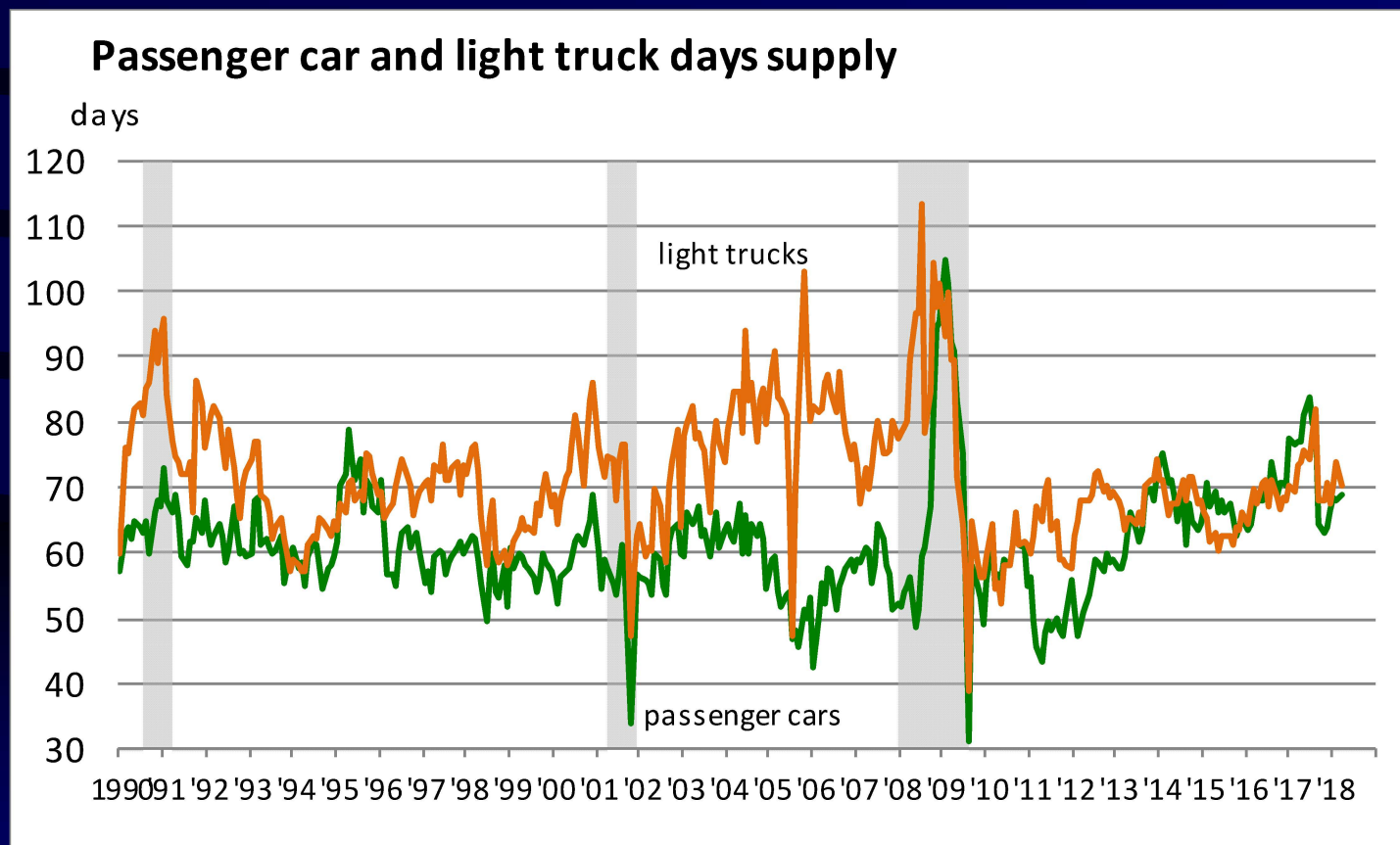
**Year-to-date light truck sales are 8.0% higher,
while year-to-date passenger car sales are 13.1% lower**



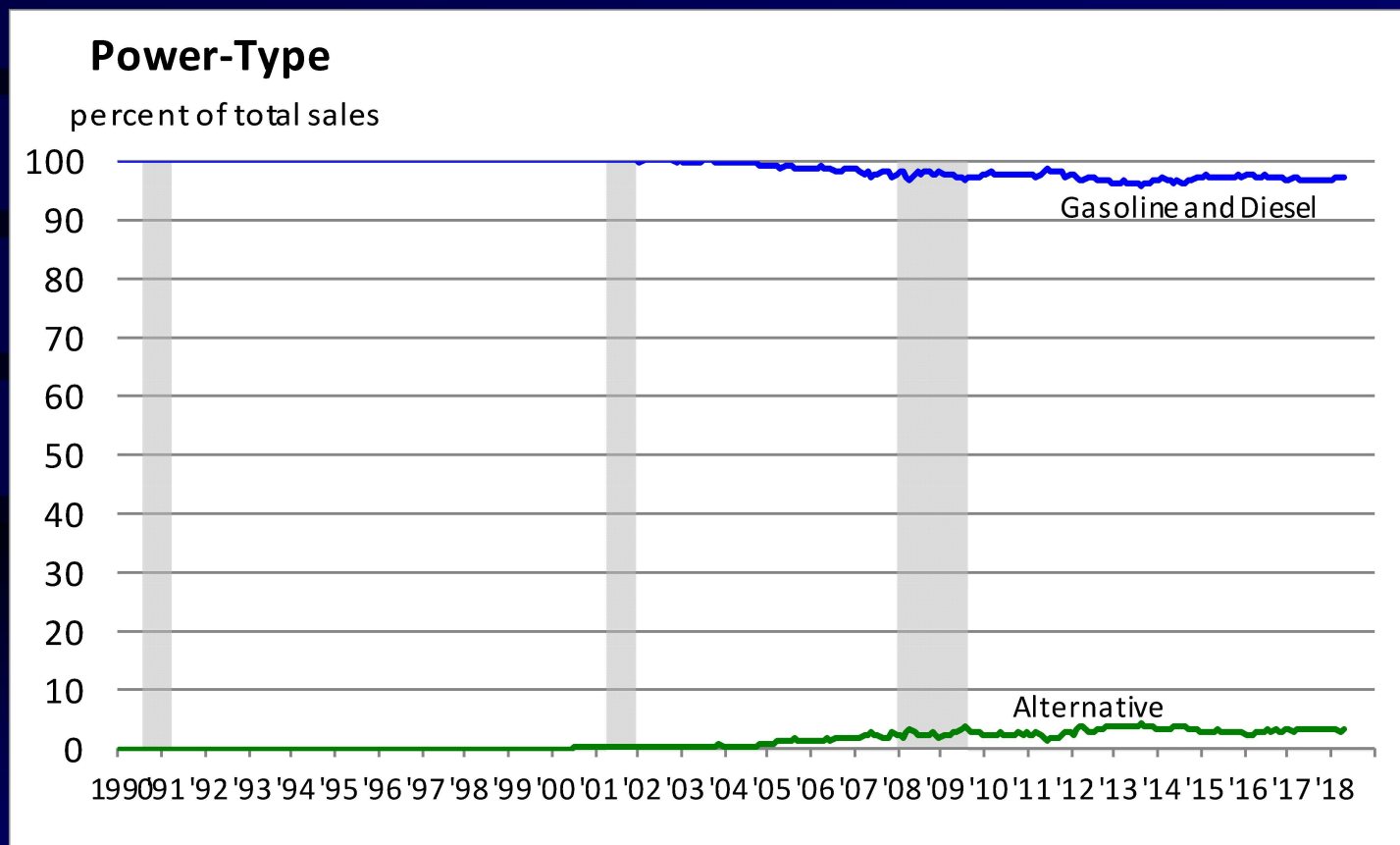
Light truck market share set a record high in April



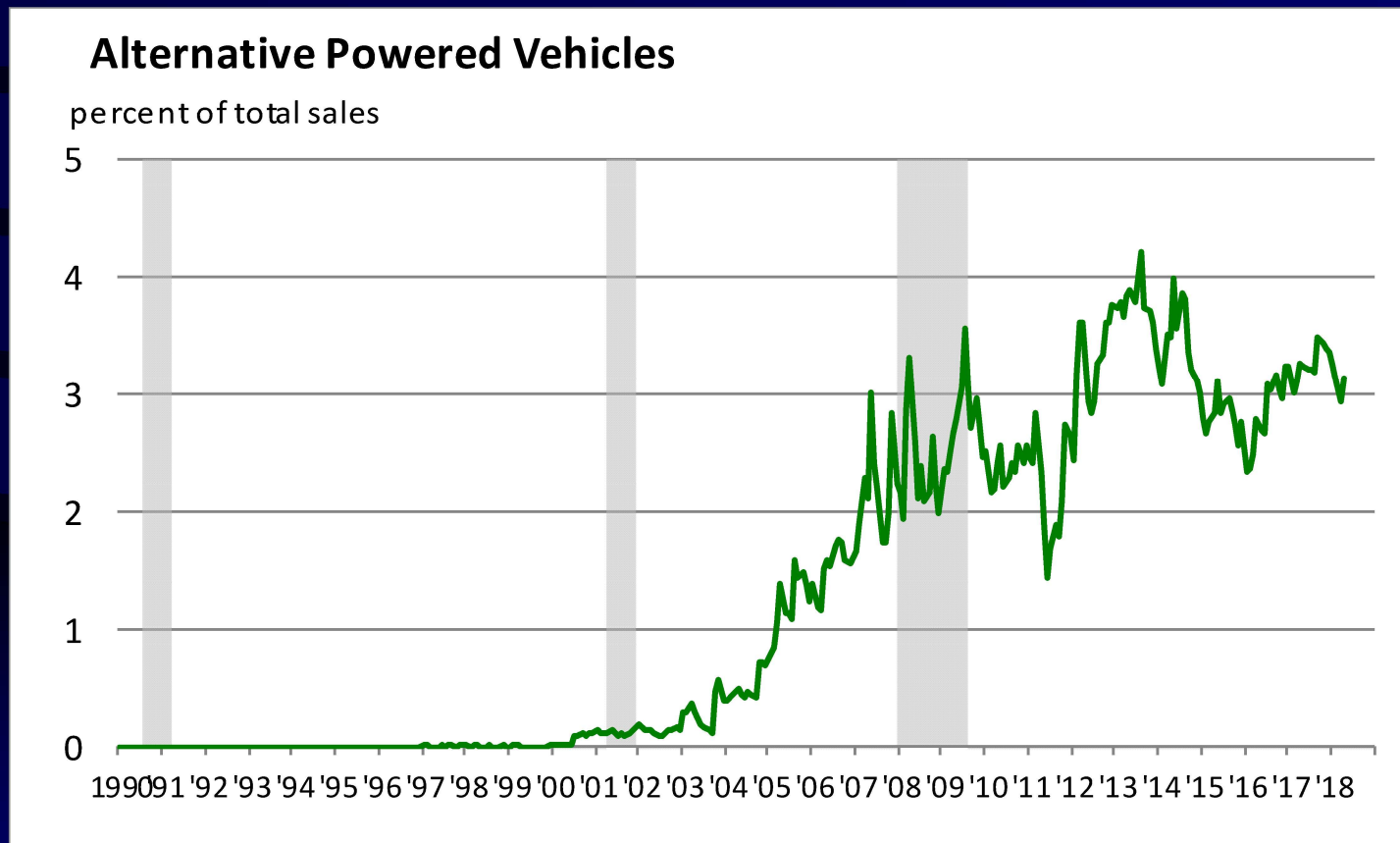
Days supply of passenger cars are a bit higher than the industry desires, but light truck inventories are right at desired levels



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



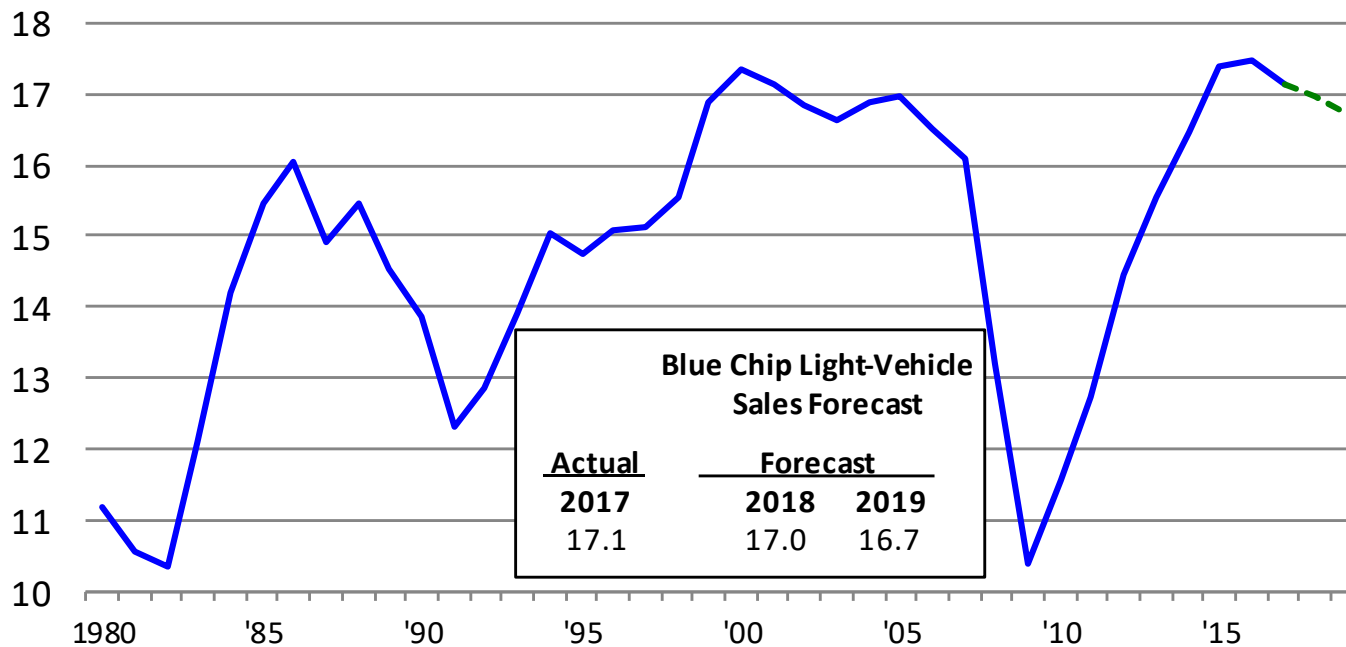
**Alternative powered vehicles (including hybrids)
market share barely exceeded 4%
and have been declining over the past two years**



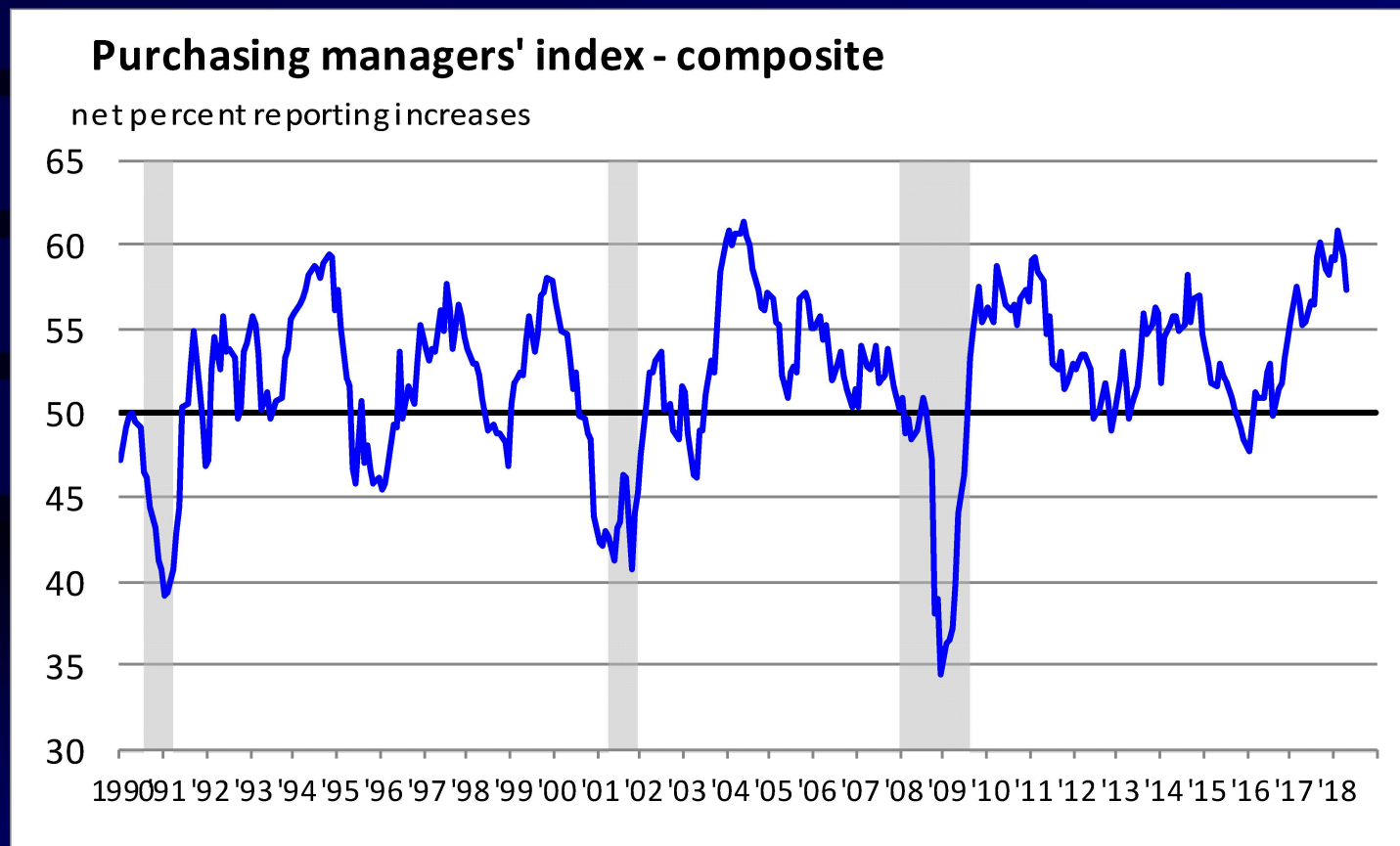
Blue Chip Forecasts vehicle sales to edge lower this year and next year

Vehicle sales

millions of units

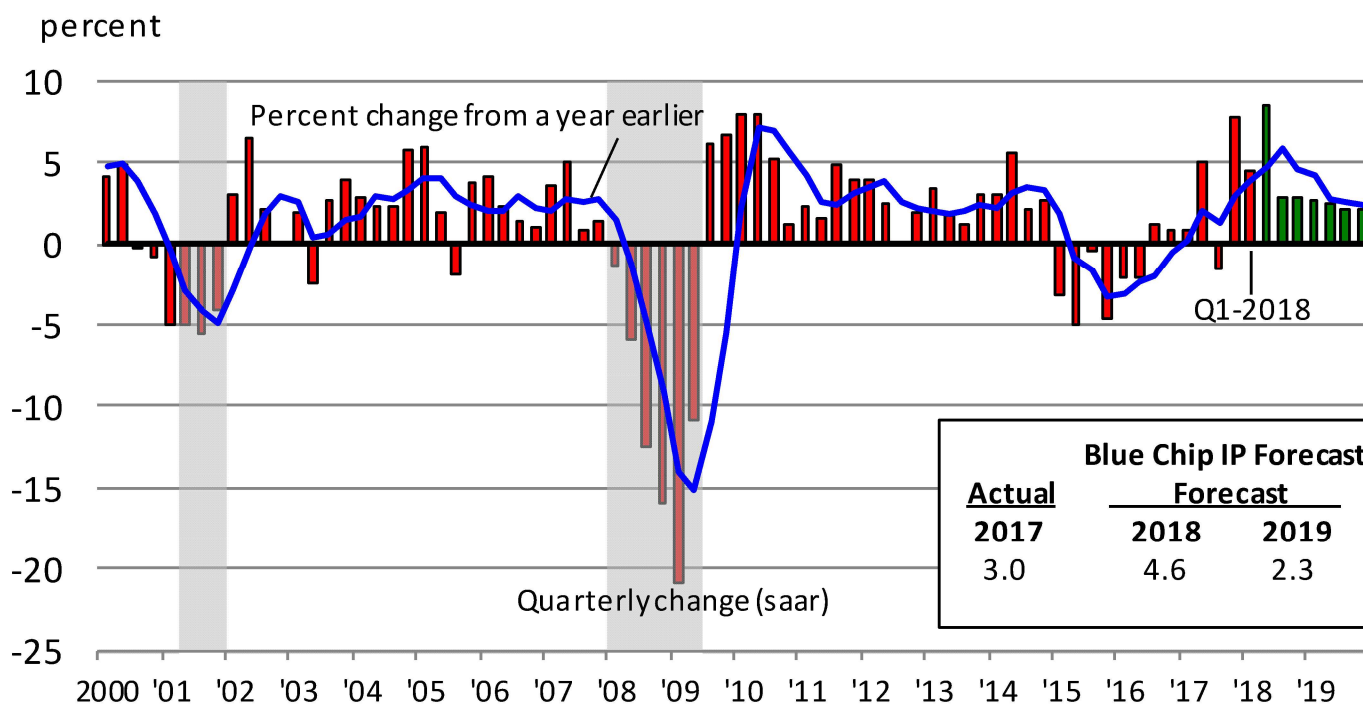


The supply managers' composite index remains at a very solid level

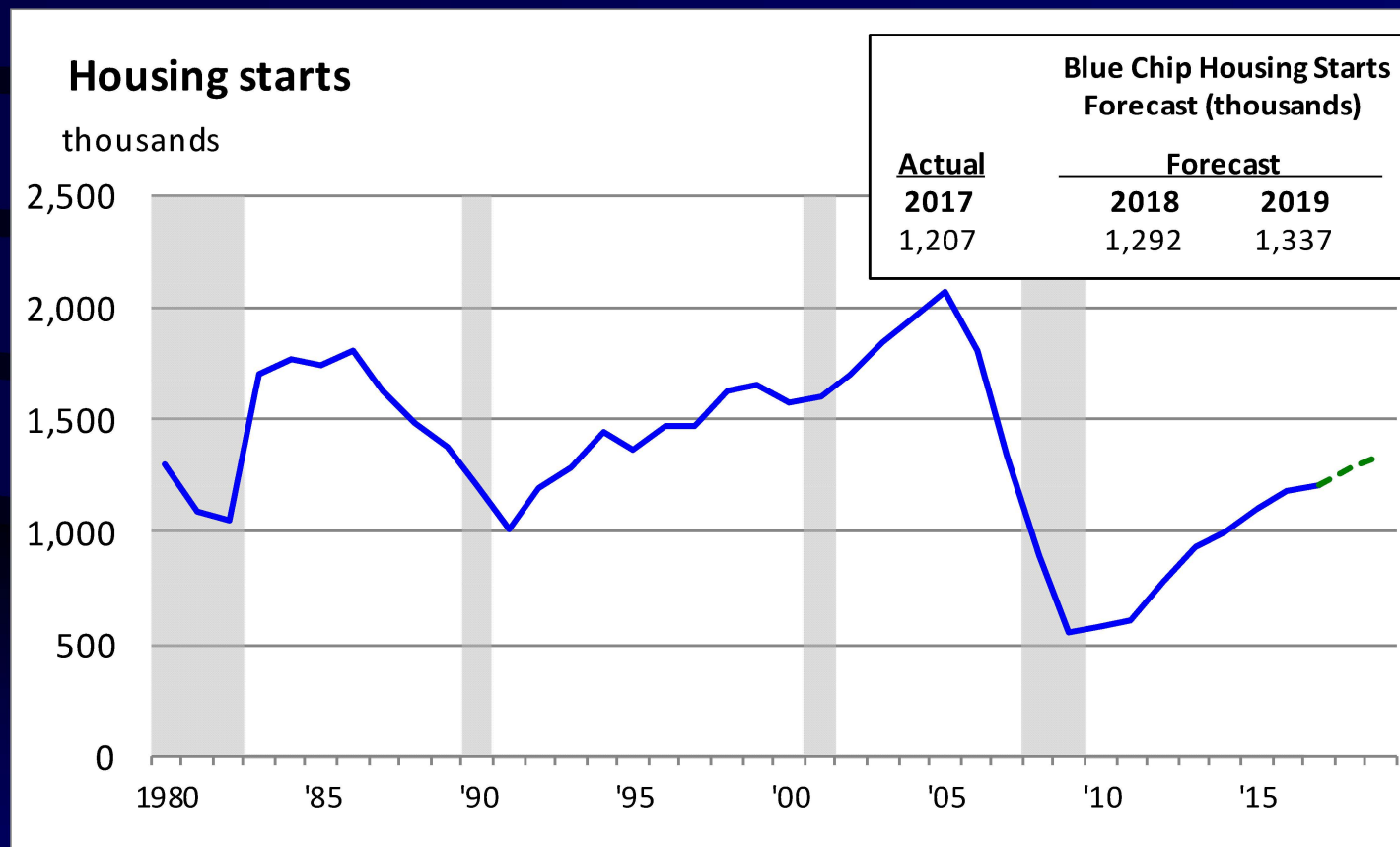


Industrial production is forecast to improve at a pace above its historical rate this year

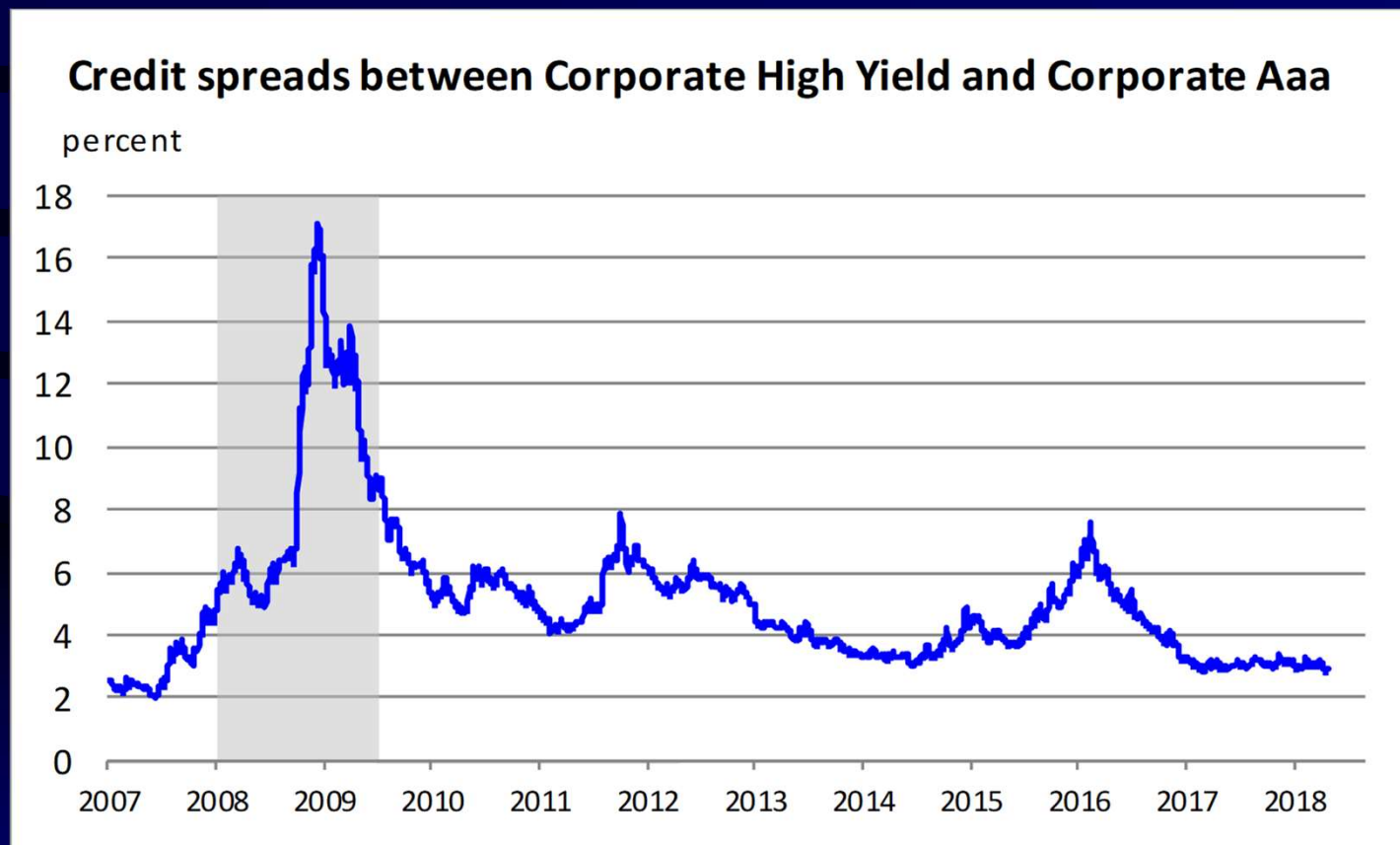
Total industrial production



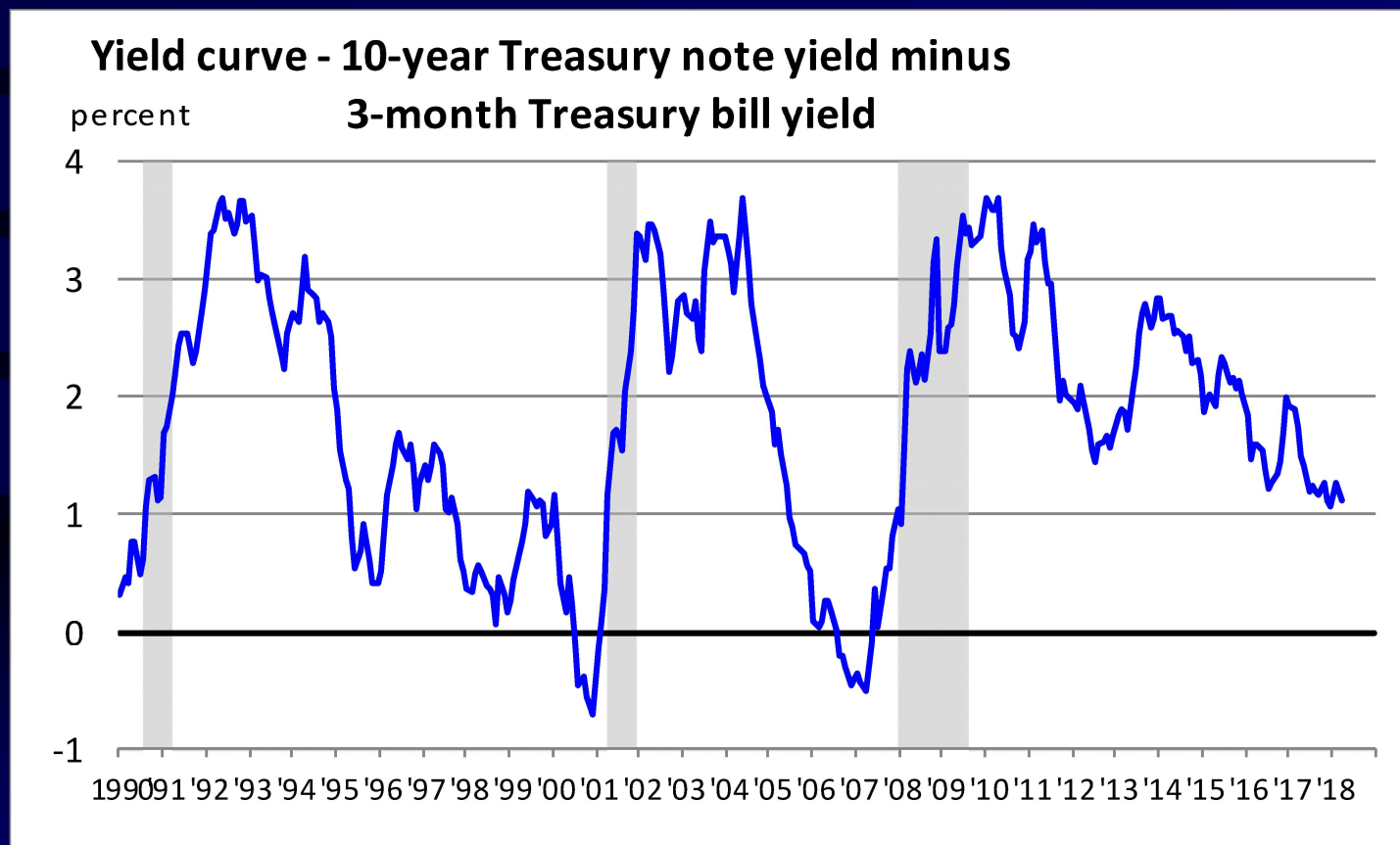
The Blue Chip Forecast calls for a continuation of the very gradual recovery in housing



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

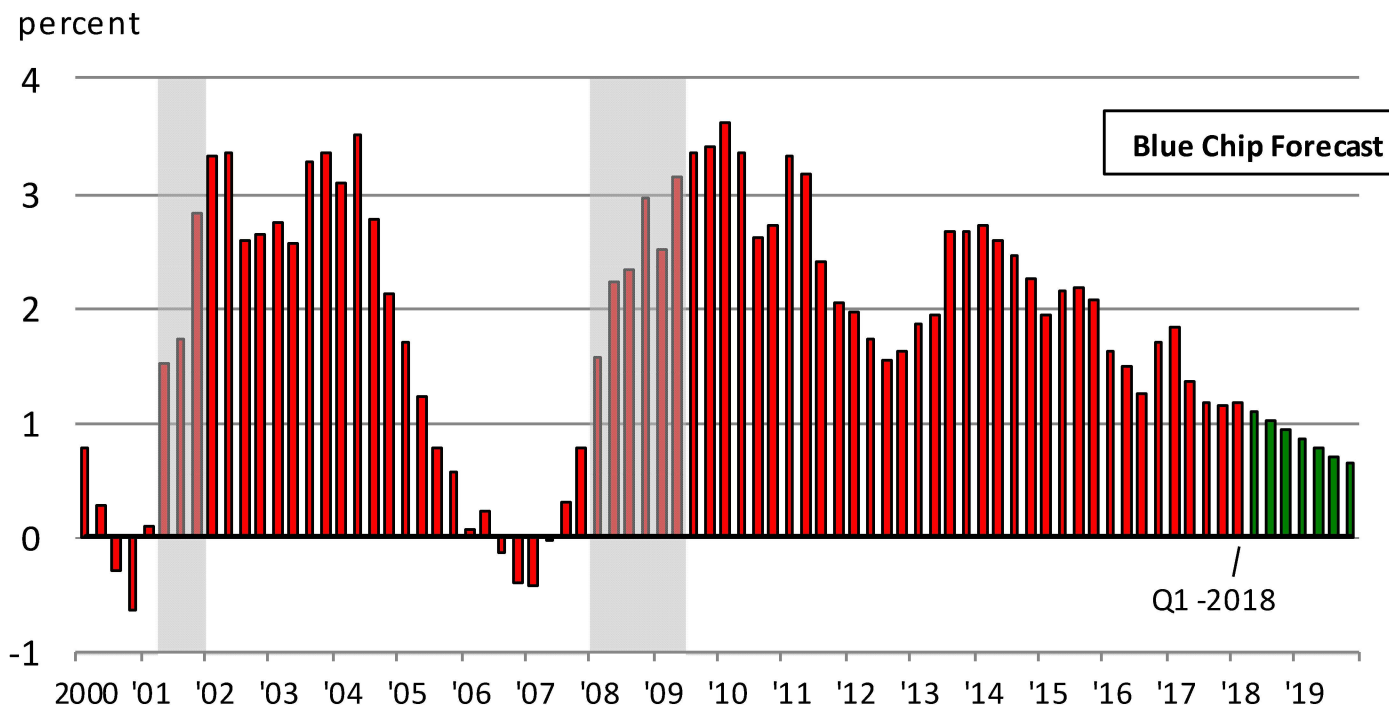


The yield curve remains well above zero

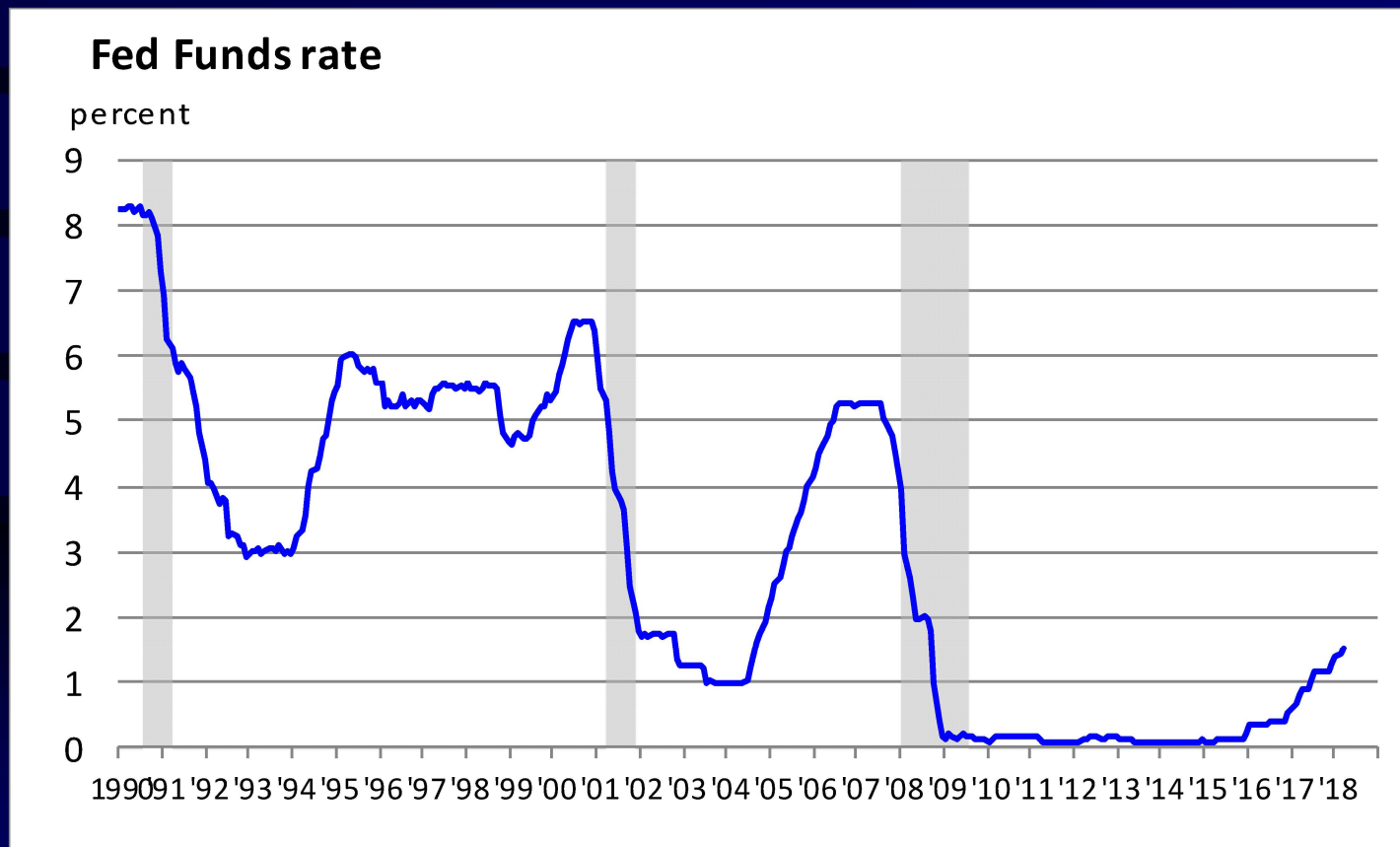


Blue Chip expects the yield curve to continue to flatten through next year, but not invert

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

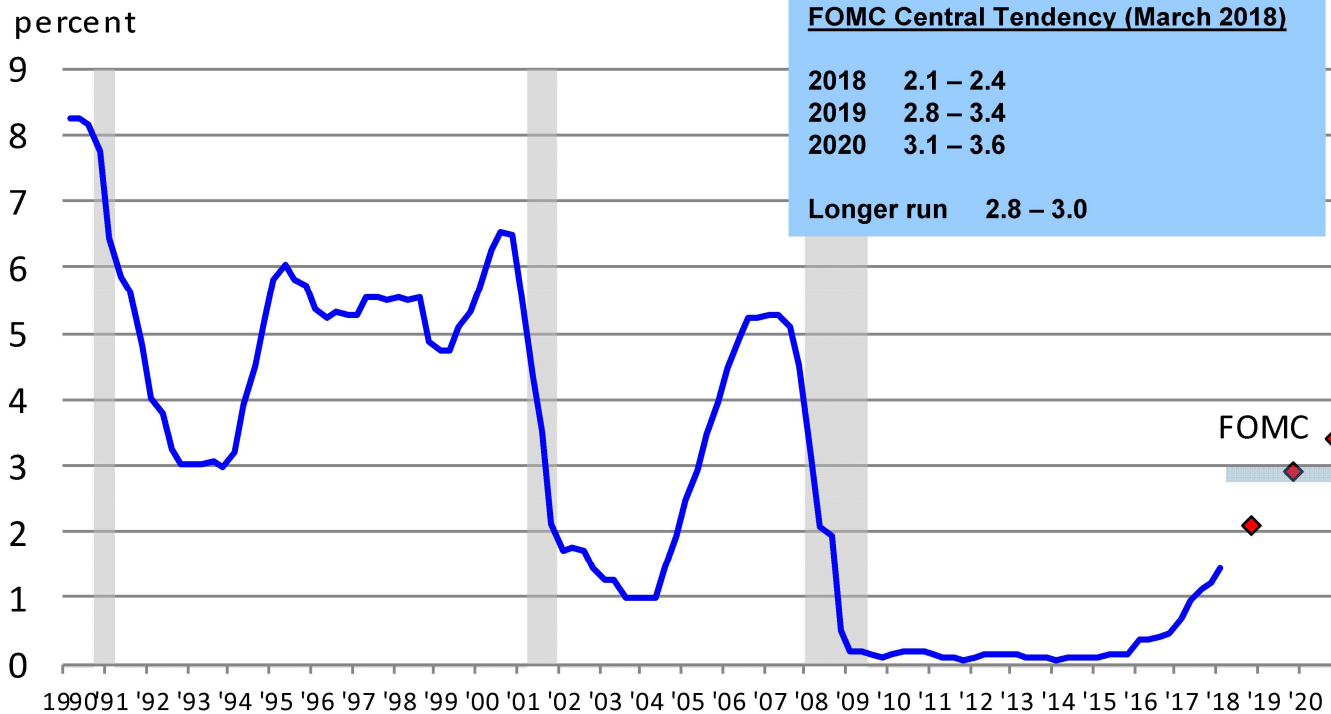


The Federal Reserve increased the Federal Funds rate by 1.25% since December 2015

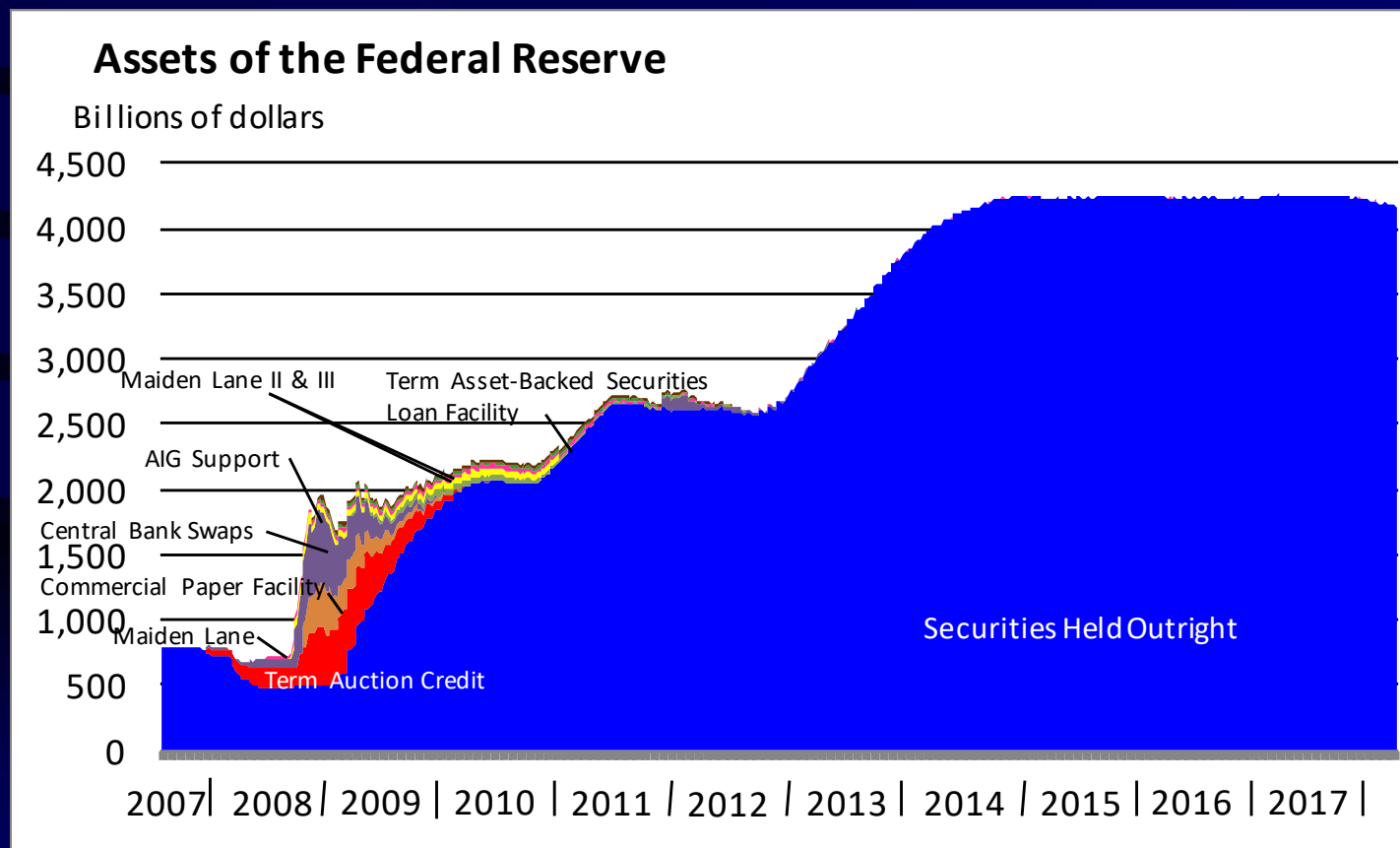


The Federal Funds Rate is expected to be around the neutral rate by the end of 2019

Target Federal Funds Rate



The Fed's balance sheet had remained flat for several years but 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

