

# Economic Outlook

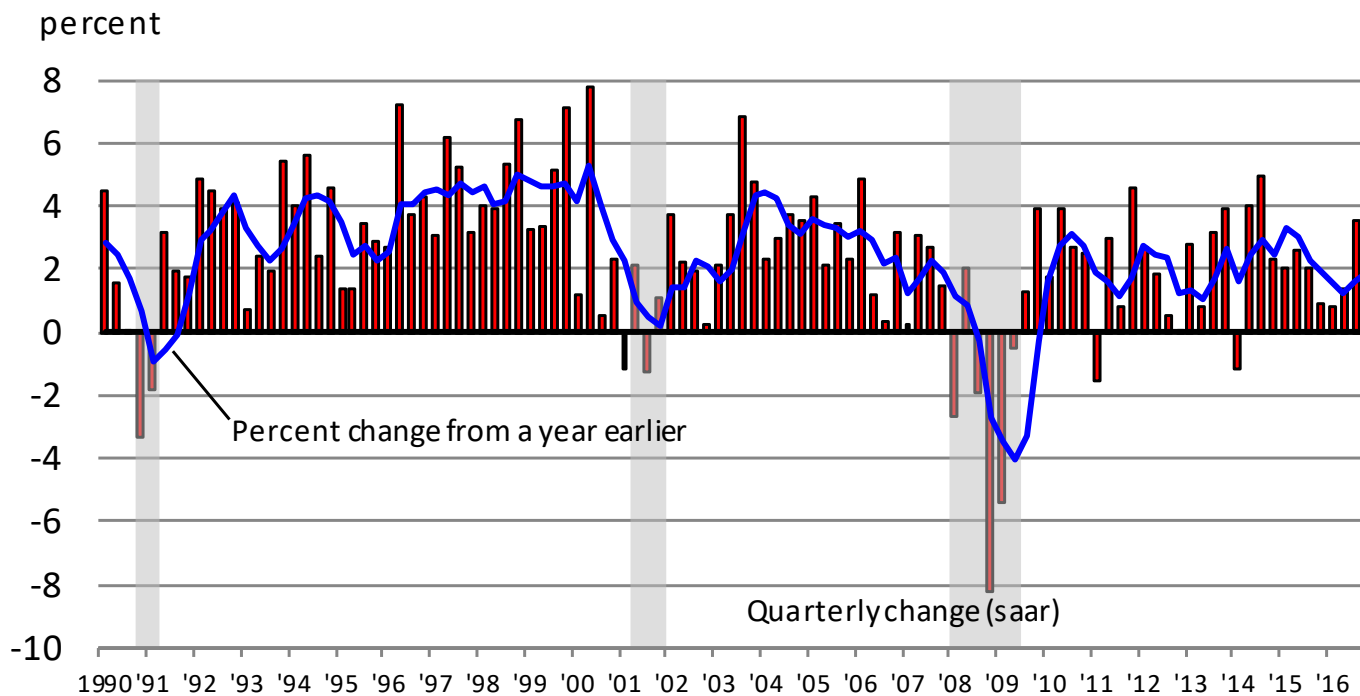
**Illinois Public Pension Fund Association**  
Hoffman Estates, IL  
February 16, 2017

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Federal Reserve Bank of Chicago

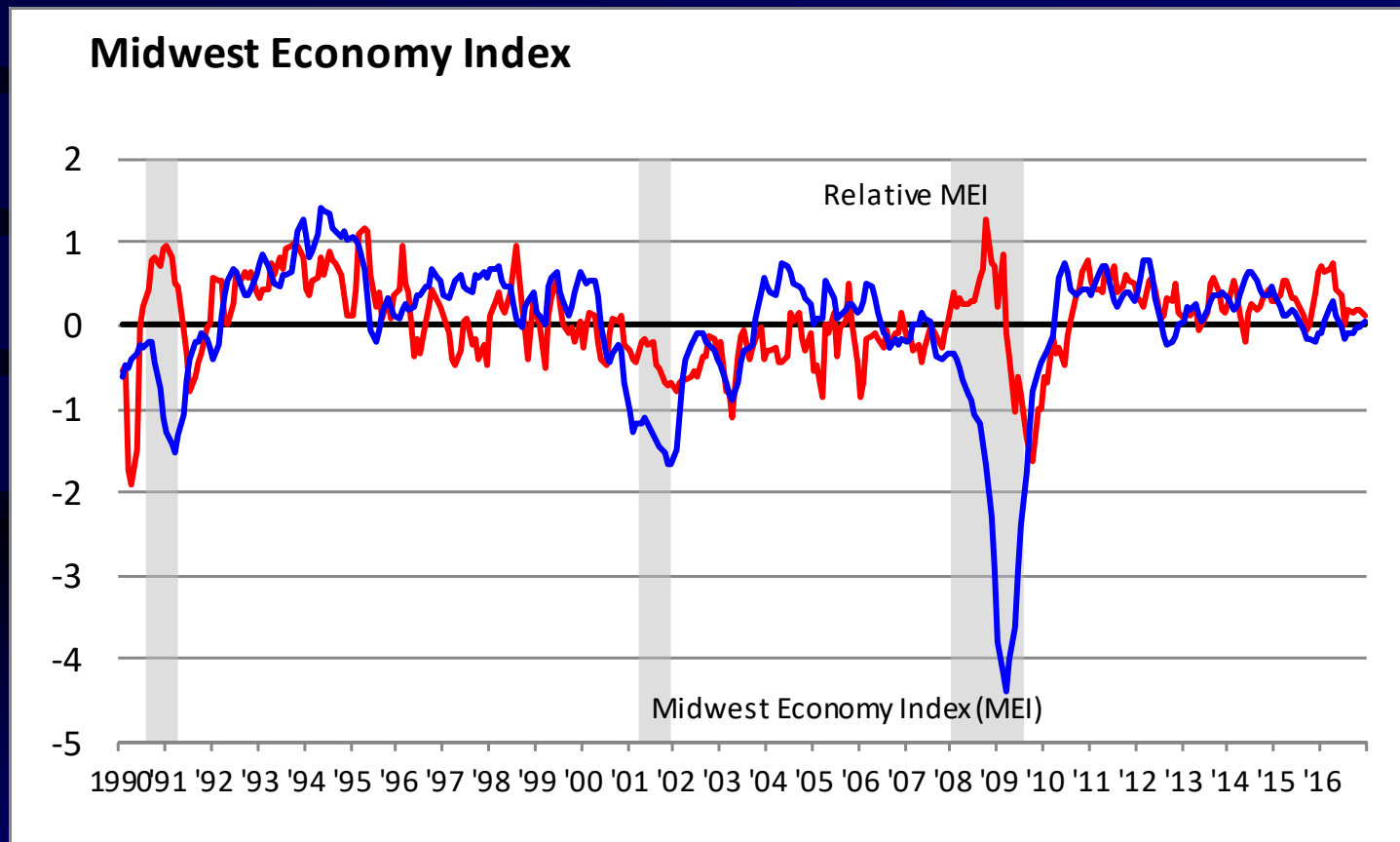


# GDP expanded by 1.9% over the past year

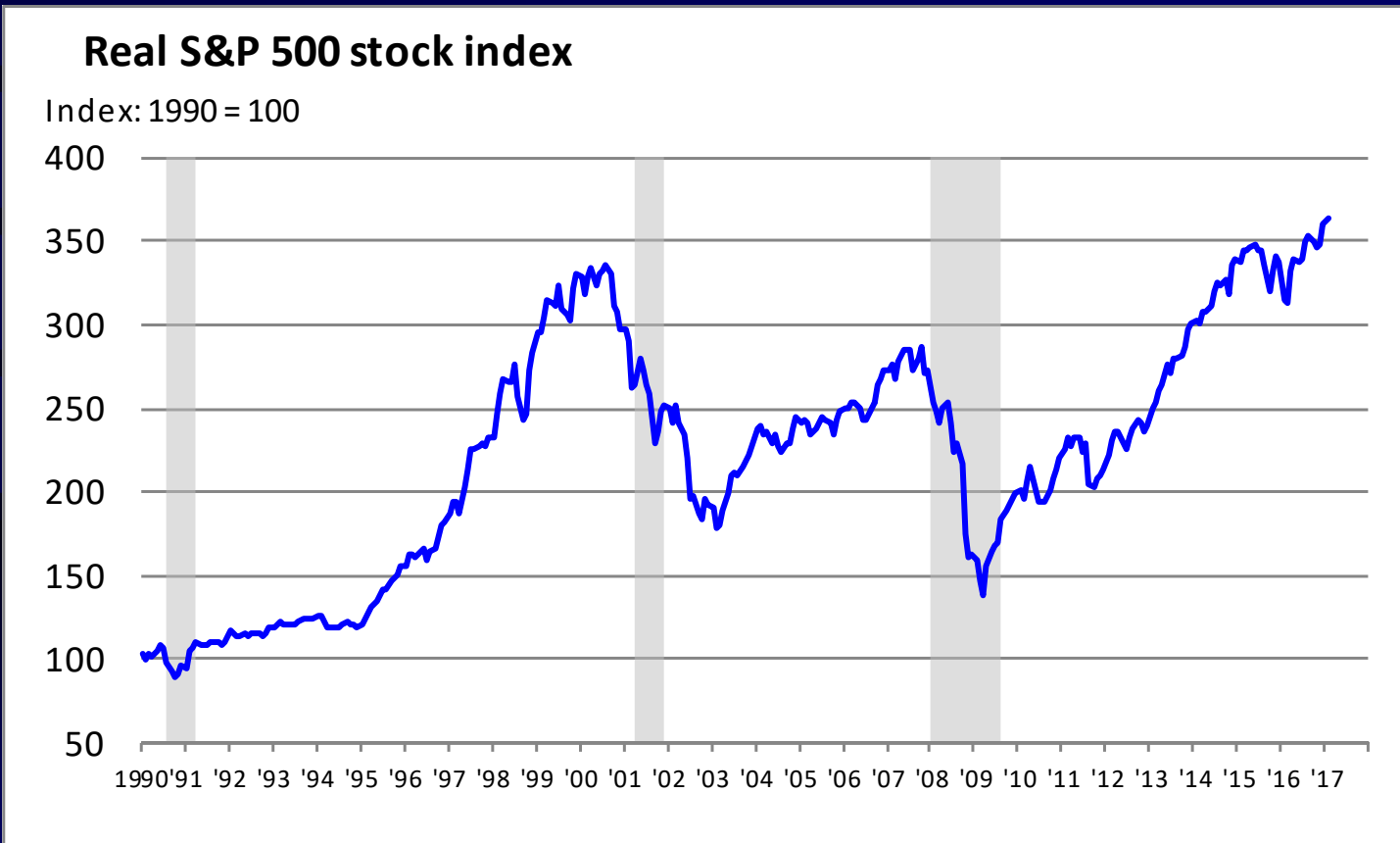
## Real gross domestic product



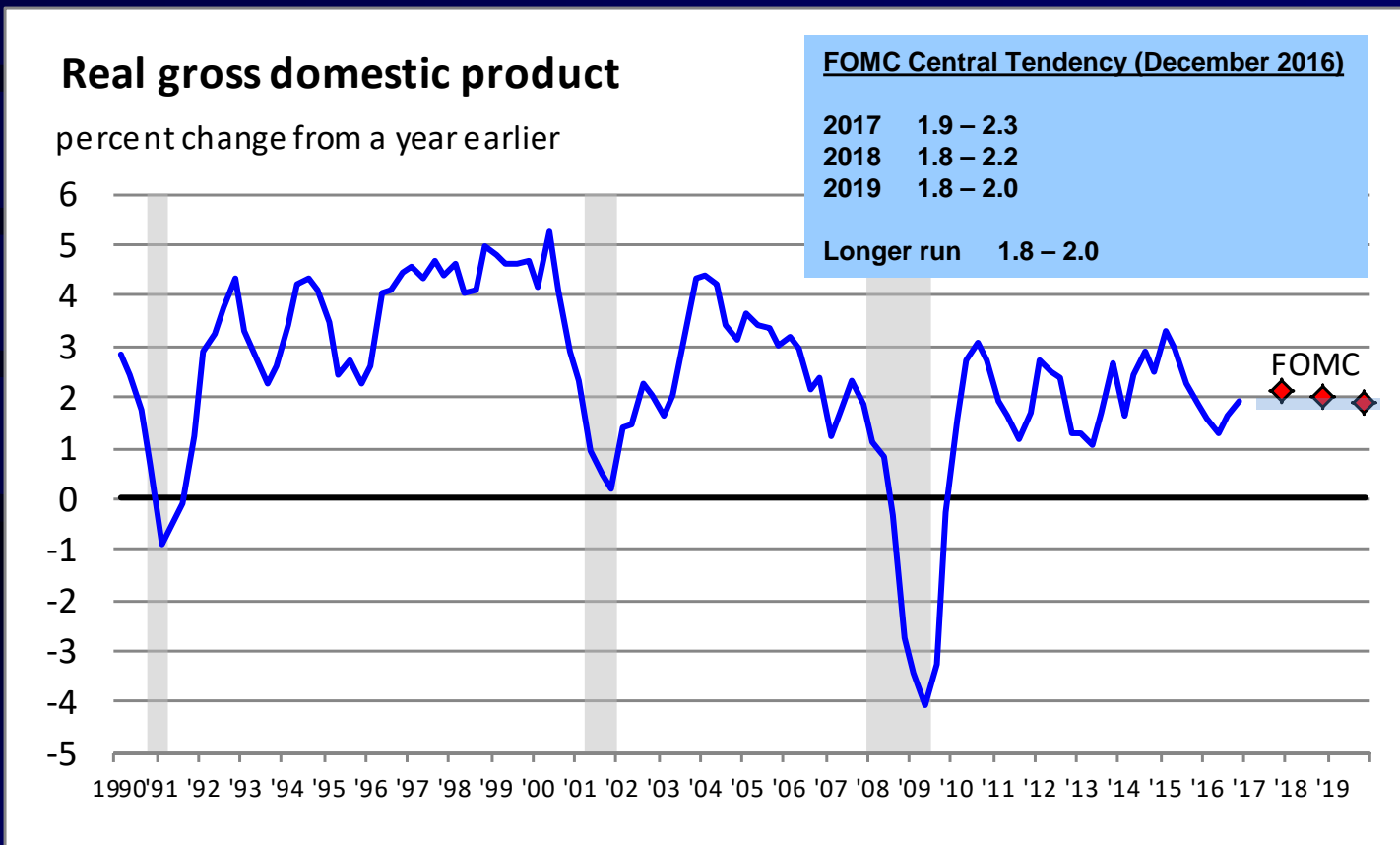
# The Midwest economy has been growing close to trend, a bit better than the national economy



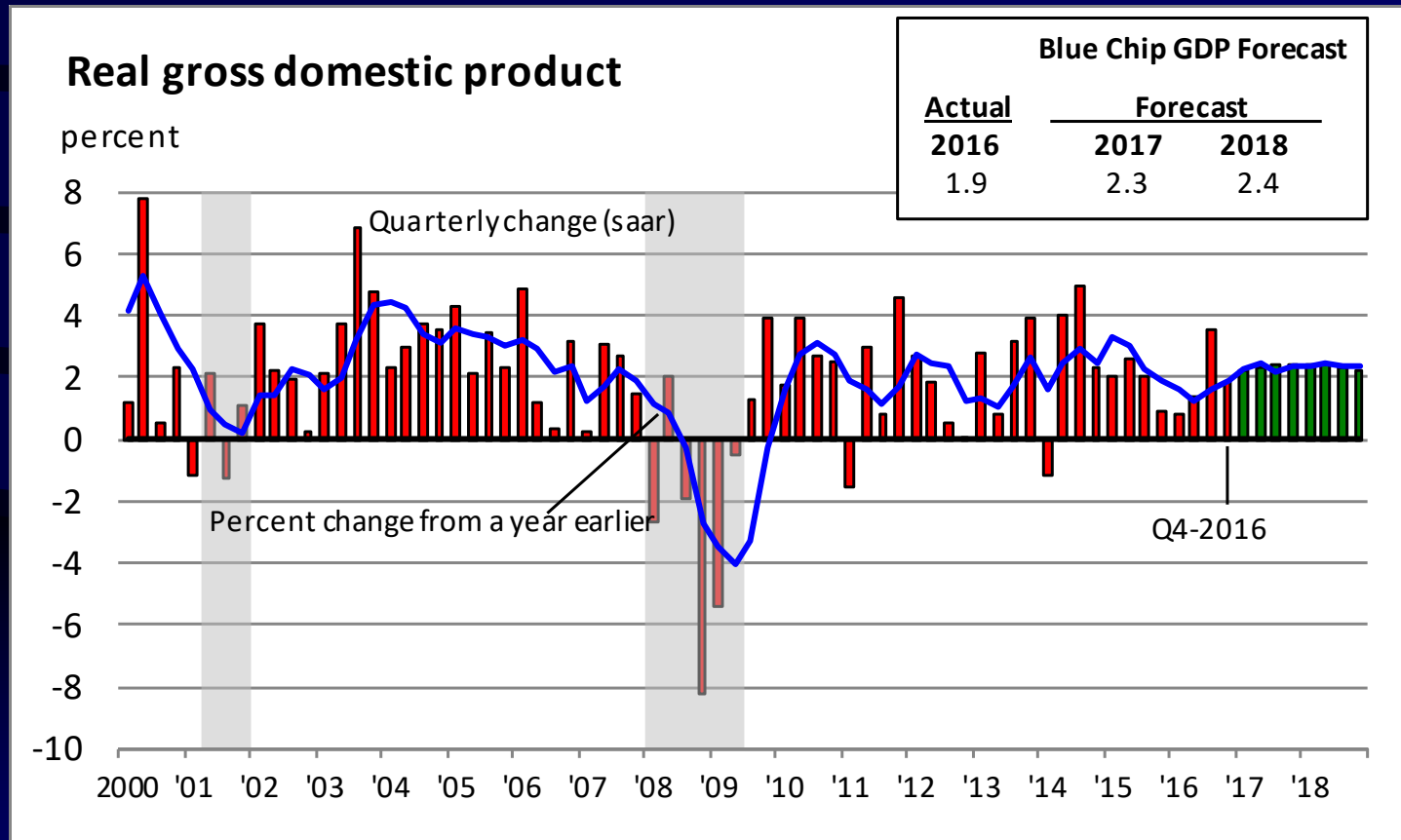
# The real value of the stock market has reached new highs



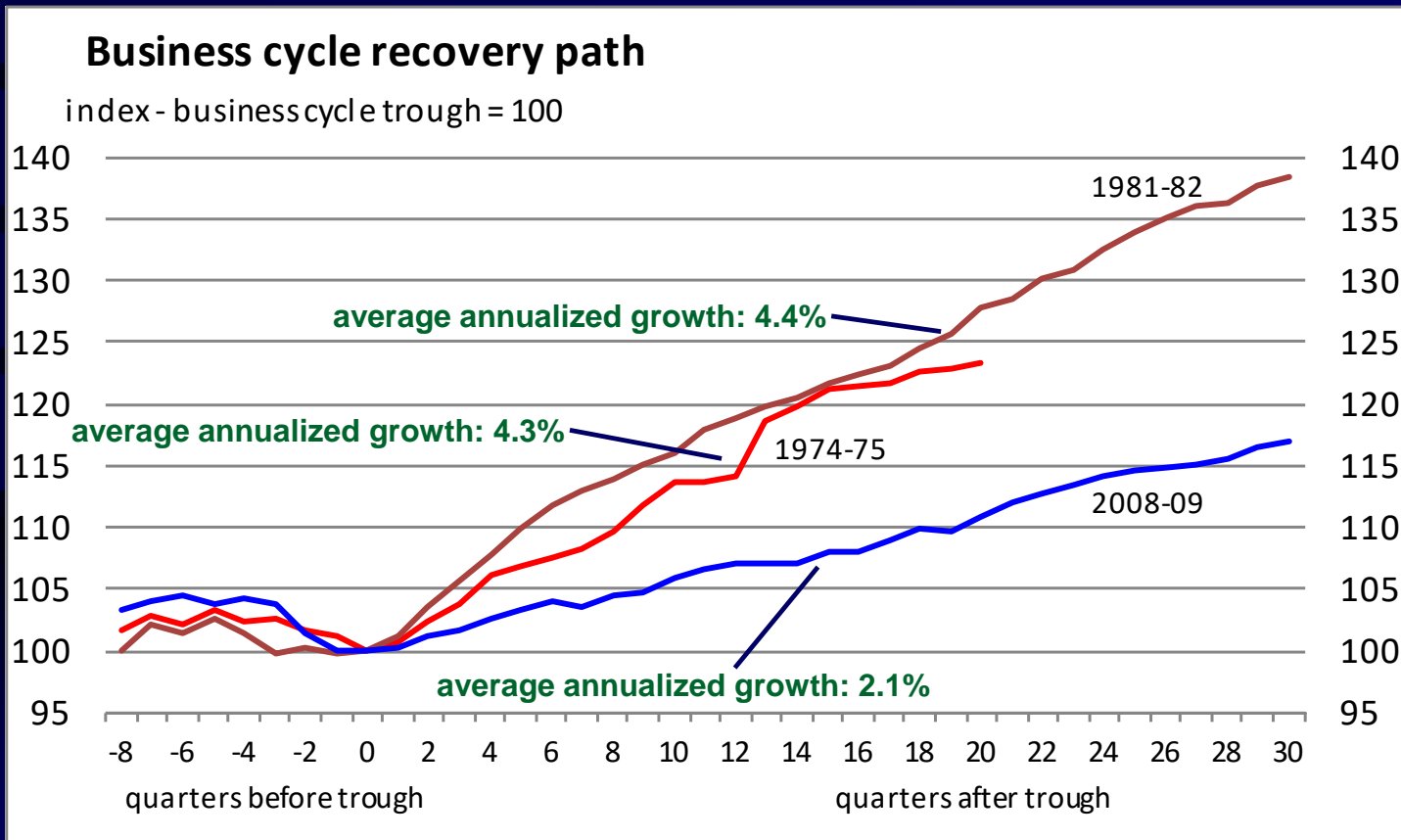
# The Federal Open Market Committee (FOMC) expects GDP to grow around trend over the next three years



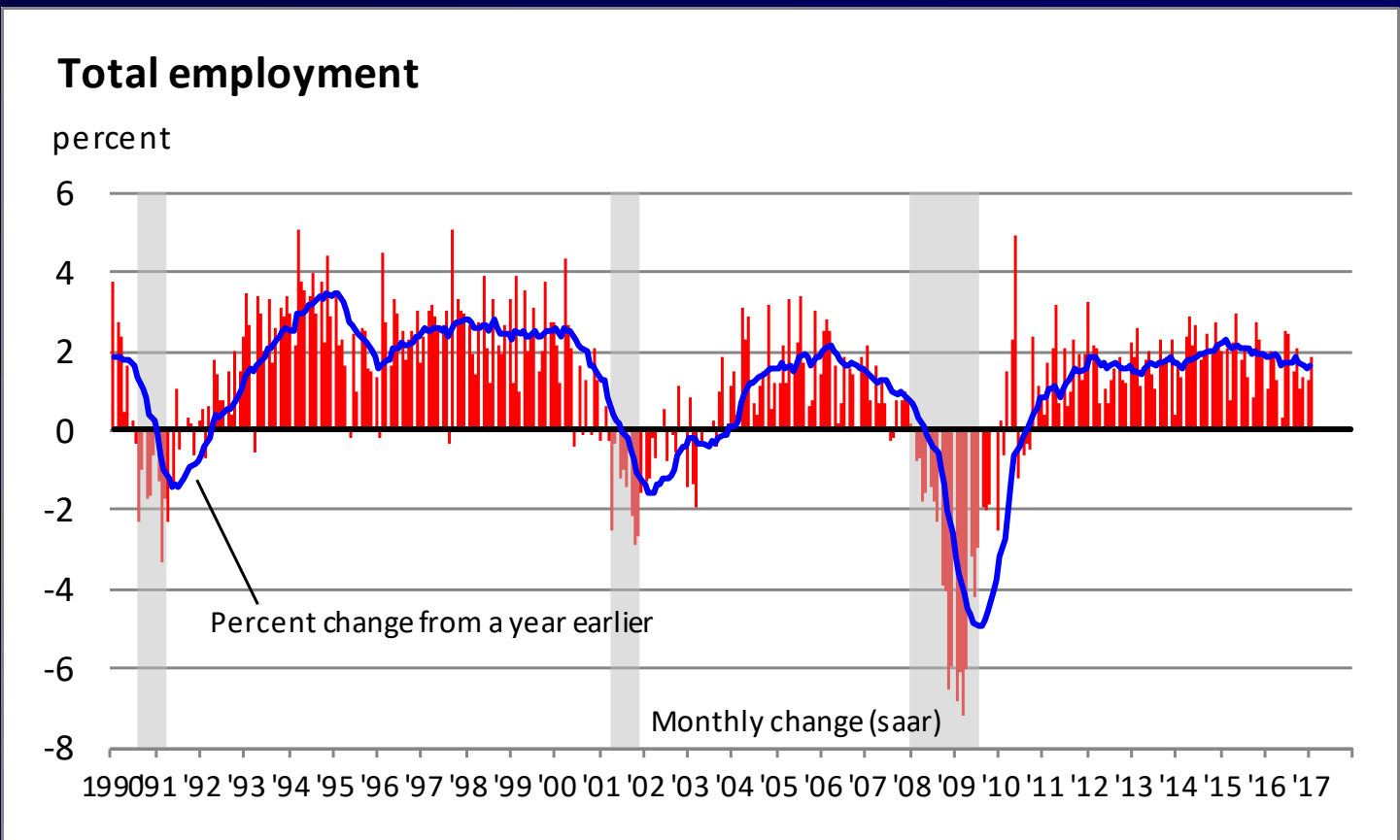
# The Blue Chip Forecast has GDP rising somewhat above trend this year and next year



# The path of the current recovery is restrained compared with past deep recession recovery cycles

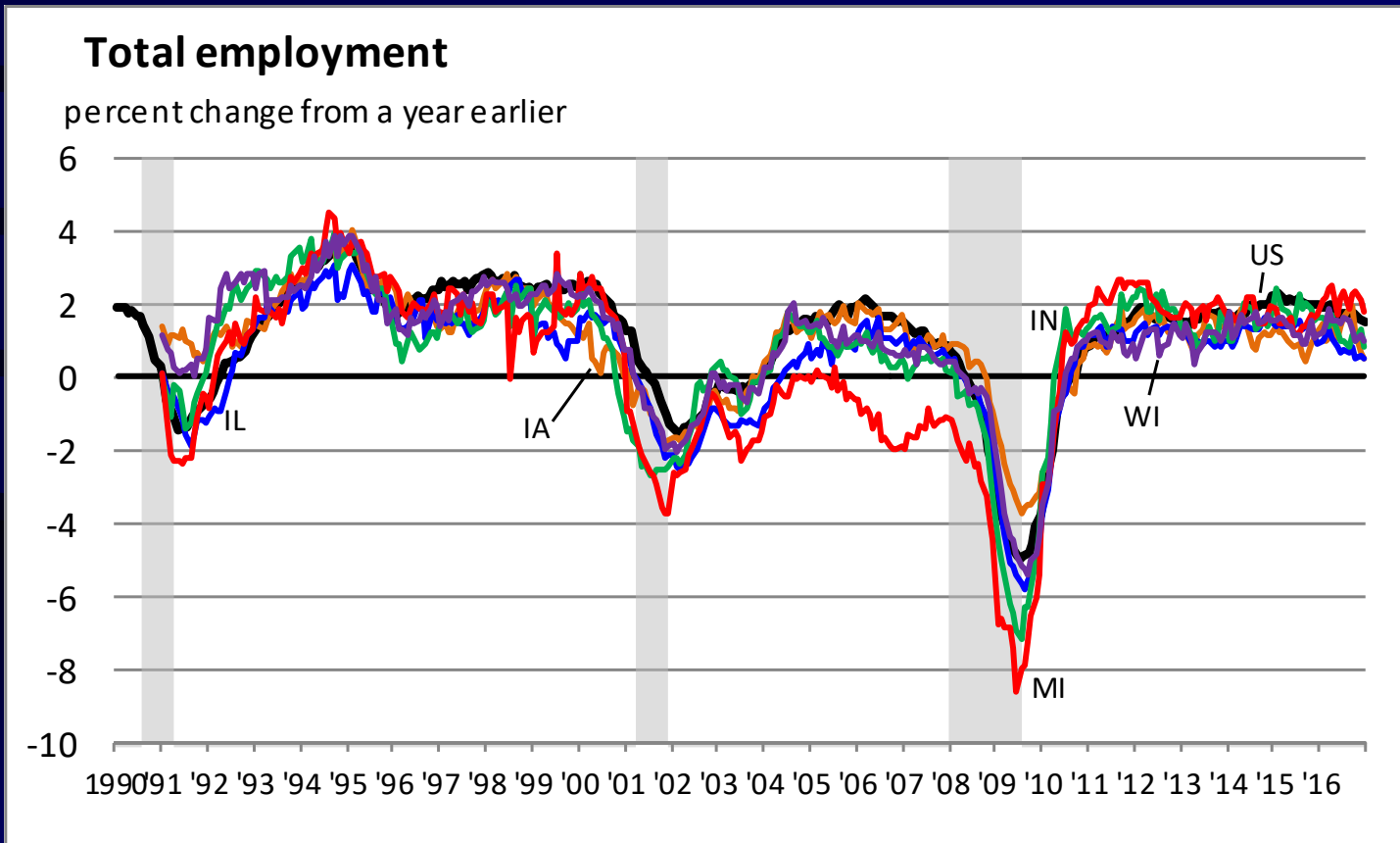


# Employment increased by over 2.3 million jobs over the past 12 months

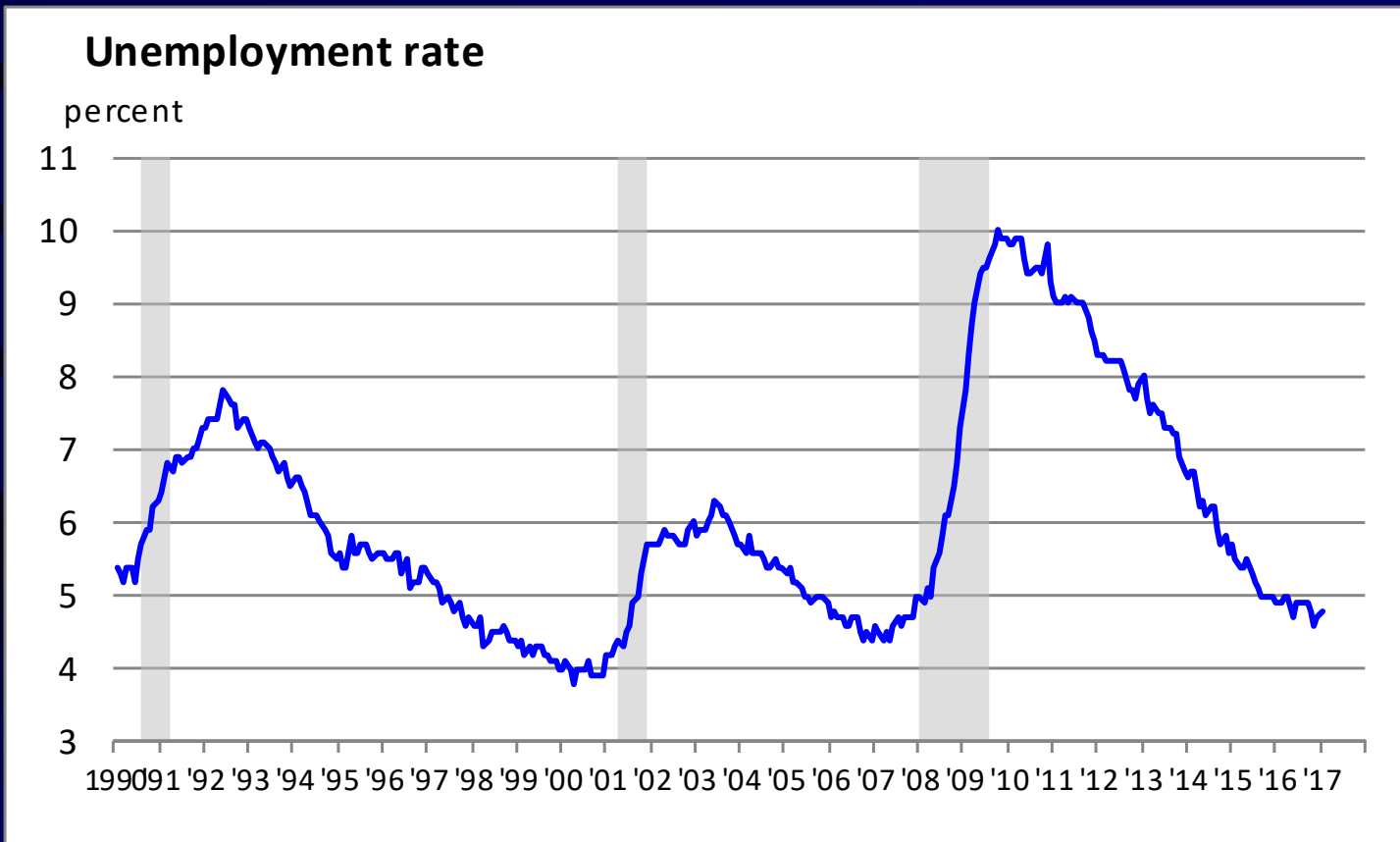




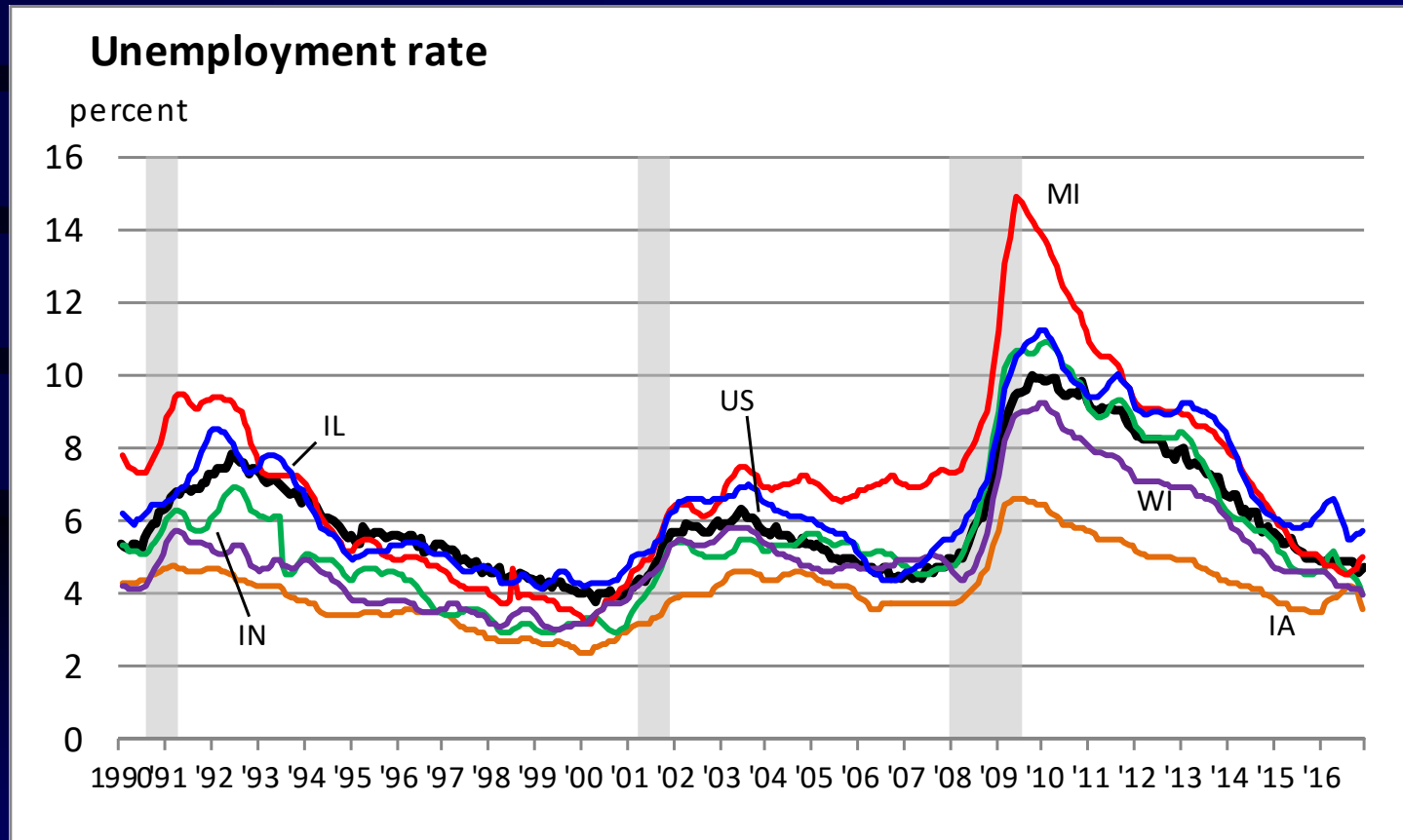
# Wisconsin's employment growth is around the middle of most Midwest states



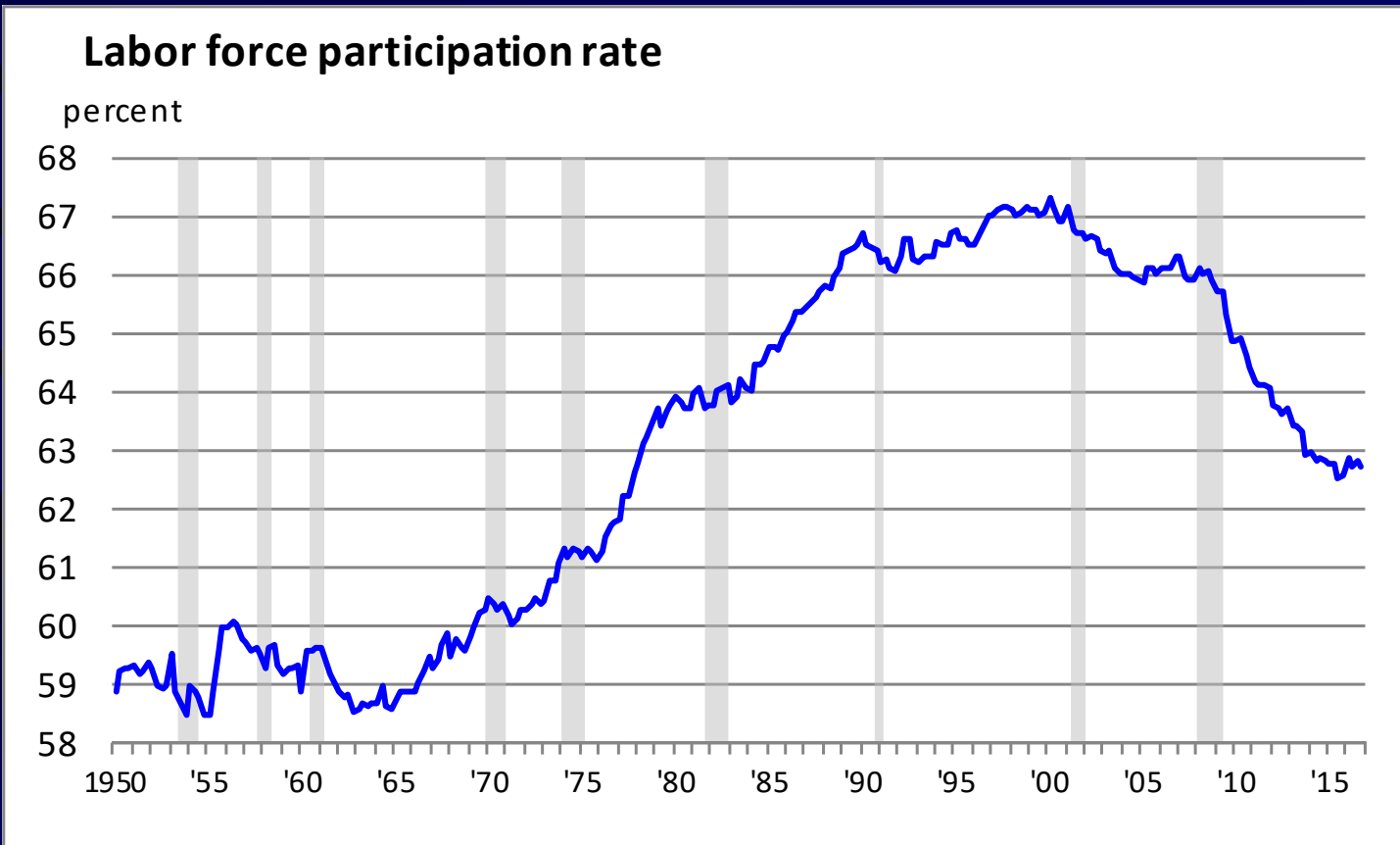
# The unemployment rate has fallen to 4.8%



# Wisconsin's unemployment rate is well below the nation's



# The labor force participation rate fell to a level last seen in 1977

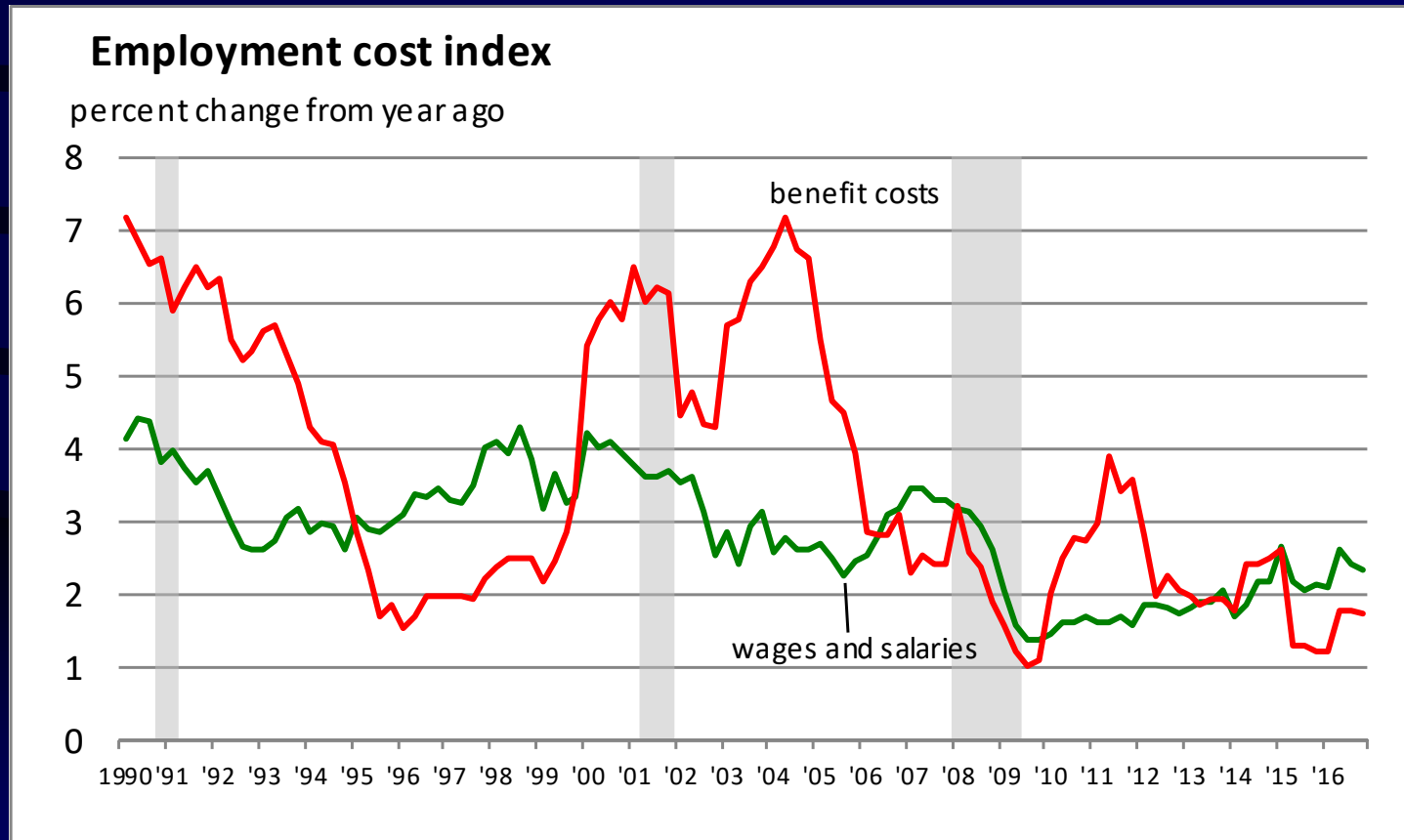


# Civilian Labor Force Participation Rate and Population Share 16 and Older by Age Category, United States, 2007 and 2016

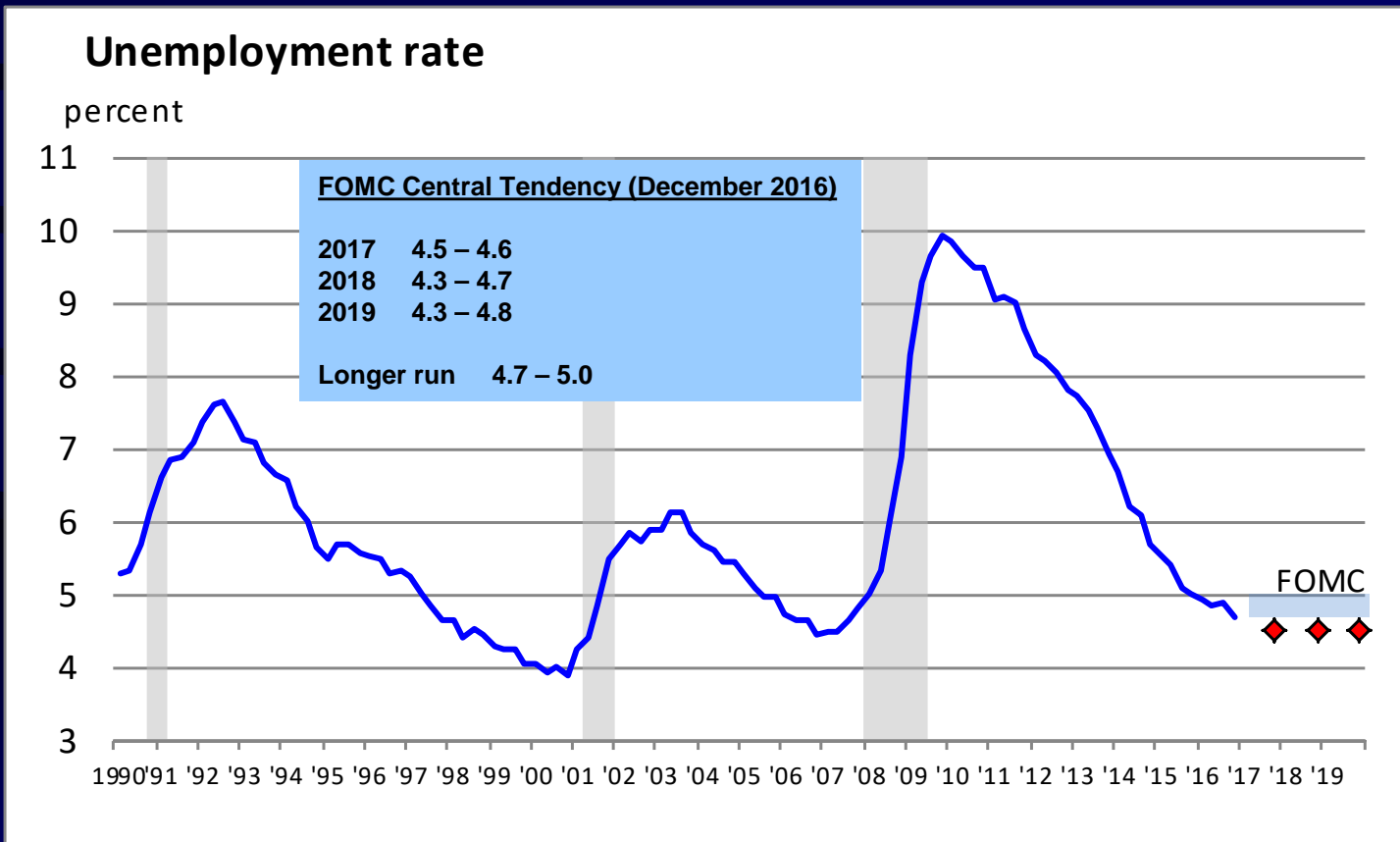
	Labor Force Participation Rate (%)			Population Share (%)		
	2016	2007	Change '07-'16	2016	2007	Change '07-'16
Population 16 and older	62.8	66.1	-3.3	100.0	100.0	0.0
16 to 24	55.2	59.4	-4.2	15.2	16.1	-1.0
25 to 34	81.6	83.3	-1.8	17.2	17.1	0.0
35 to 44	82.4	83.8	-1.3	15.7	18.3	-2.6
45 to 54	80.0	82.0	-2.0	16.7	18.8	-2.1
55 to 64	64.1	63.8	0.3	16.3	14.0	2.3
65 plus	19.3	16.0	3.3	18.9	15.6	3.3



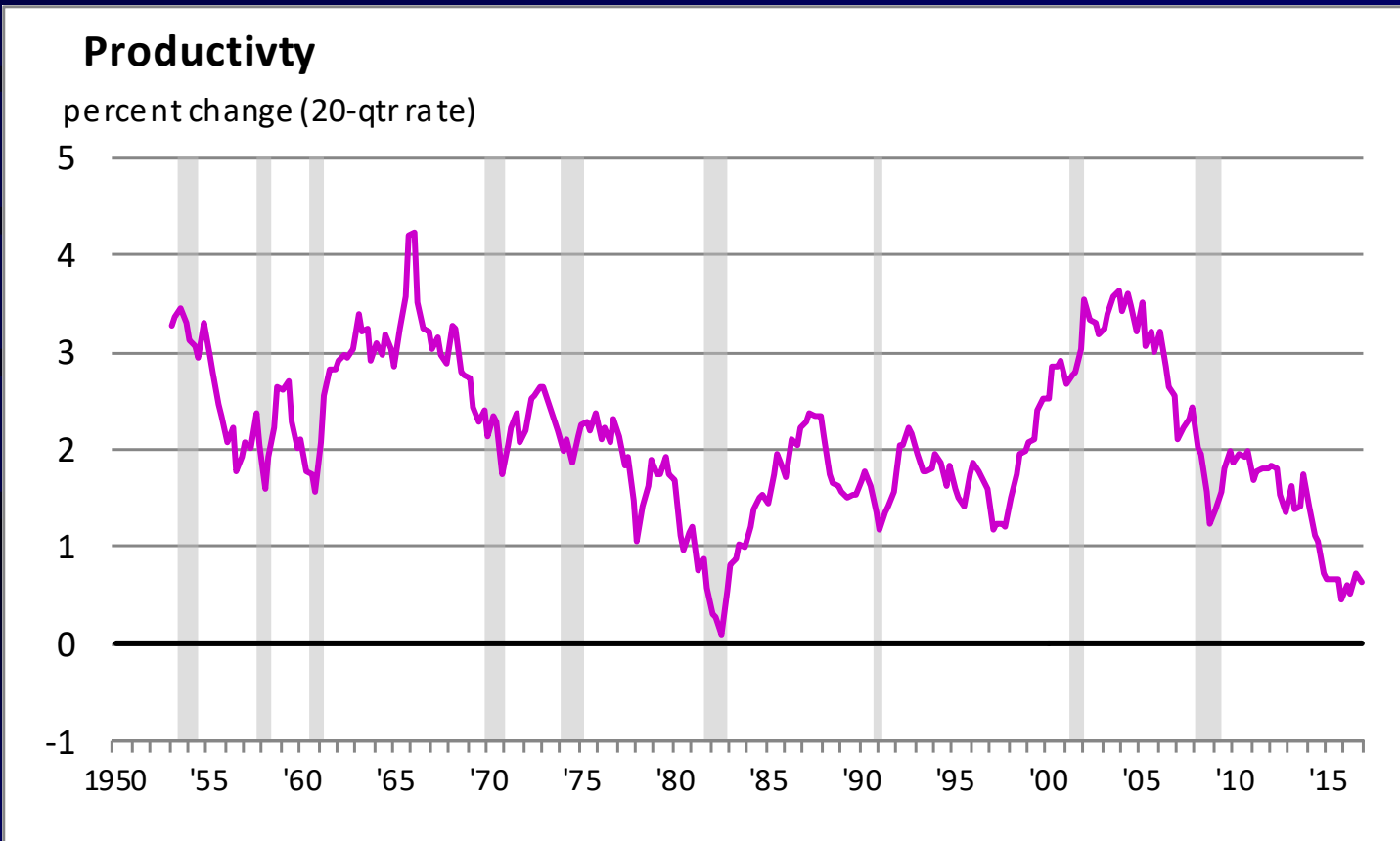
# Wages and benefit costs continue to increase at a very slow pace



# The FOMC forecasts that the unemployment rate will be just below the natural rate through 2019

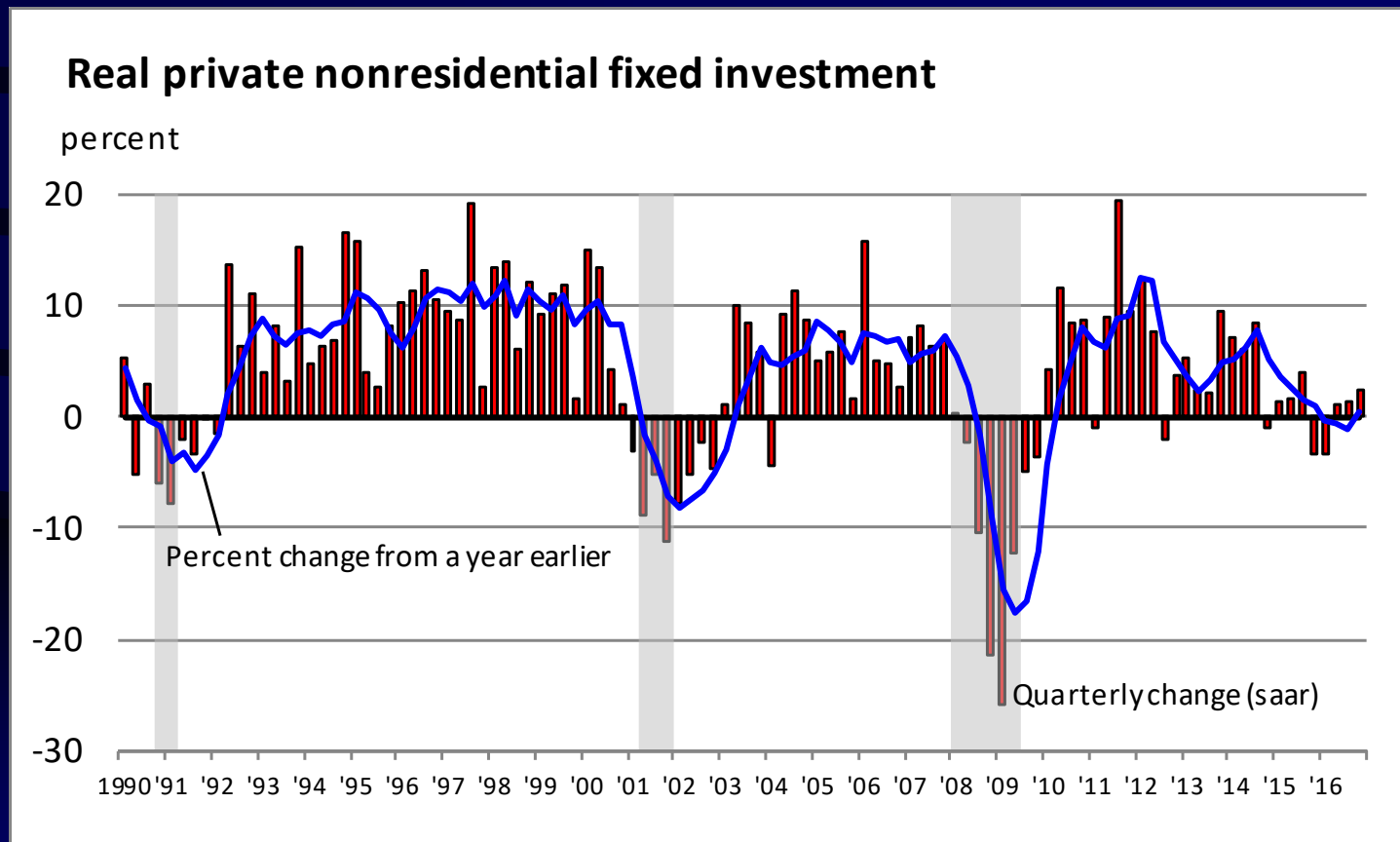


# Slow productivity growth helps explain why relatively strong employment growth has not translated into higher wages





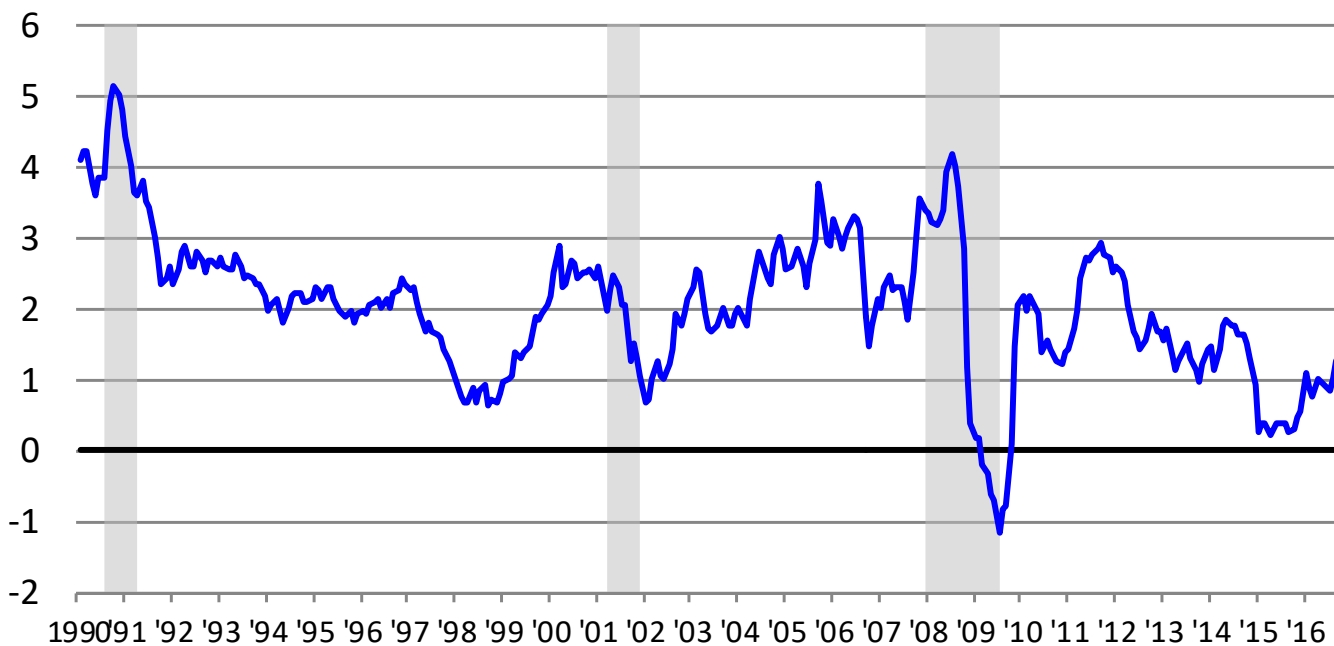
# A large part of the weakness in productivity growth has been the weak pace of investment



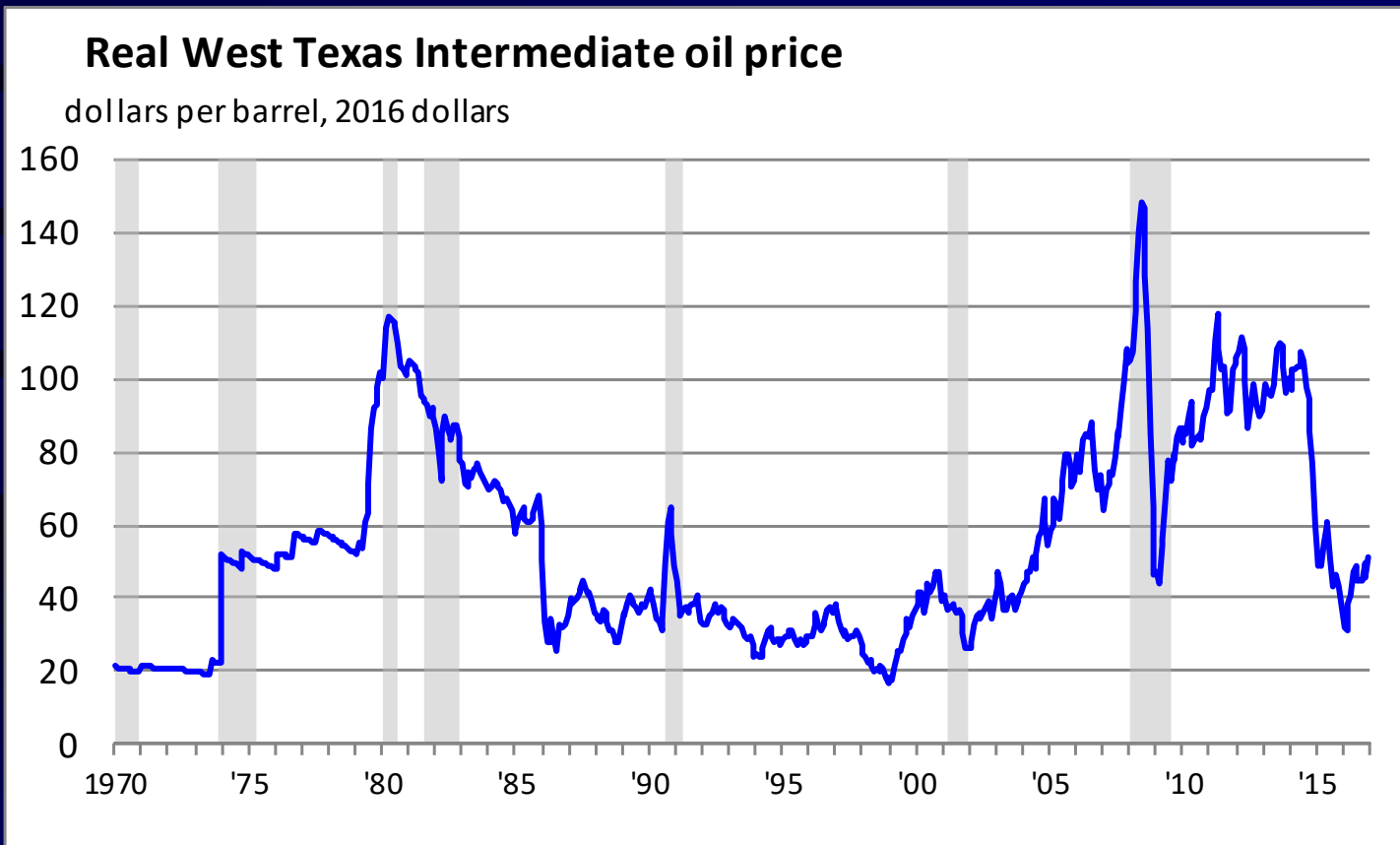
# Inflation is low, but moving higher

## Personal consumption expenditure - chain price index

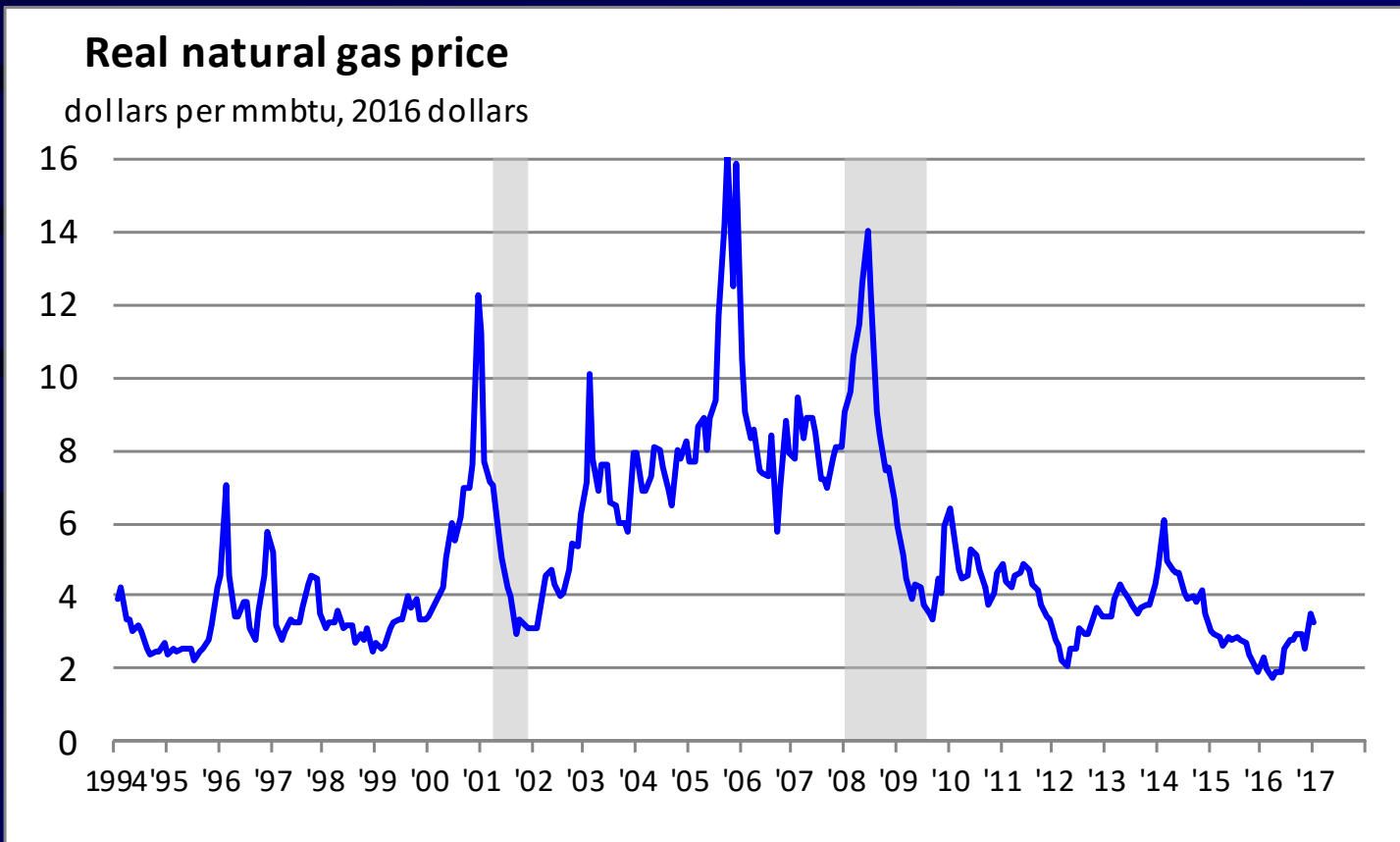
percent change from a year earlier



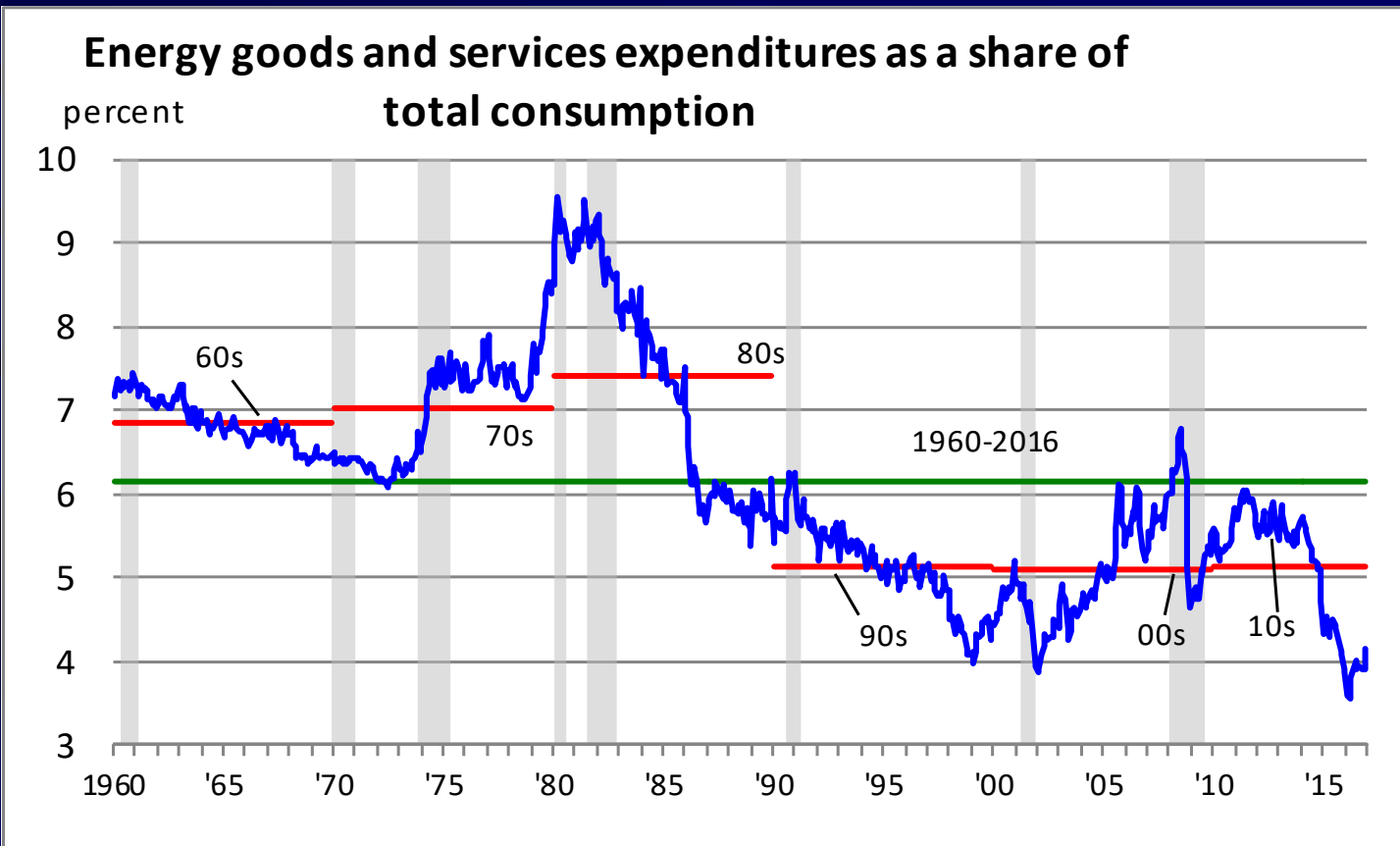
# In large part inflation has been kept low due to the collapse of energy prices



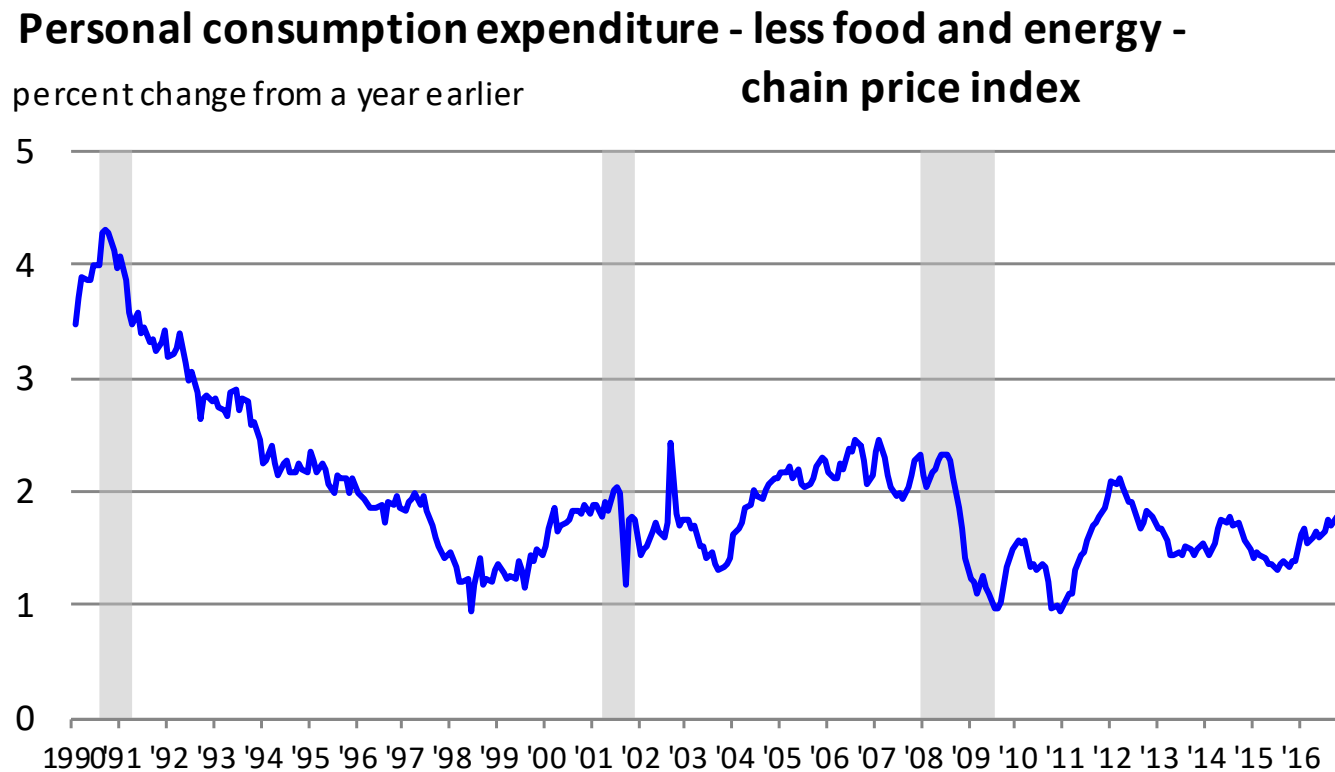
# Natural gas prices have also declined and remains low



# Expenditures on energy are well below the historical average



# Removing the volatile food and energy components from the PCE, “core” inflation remains low



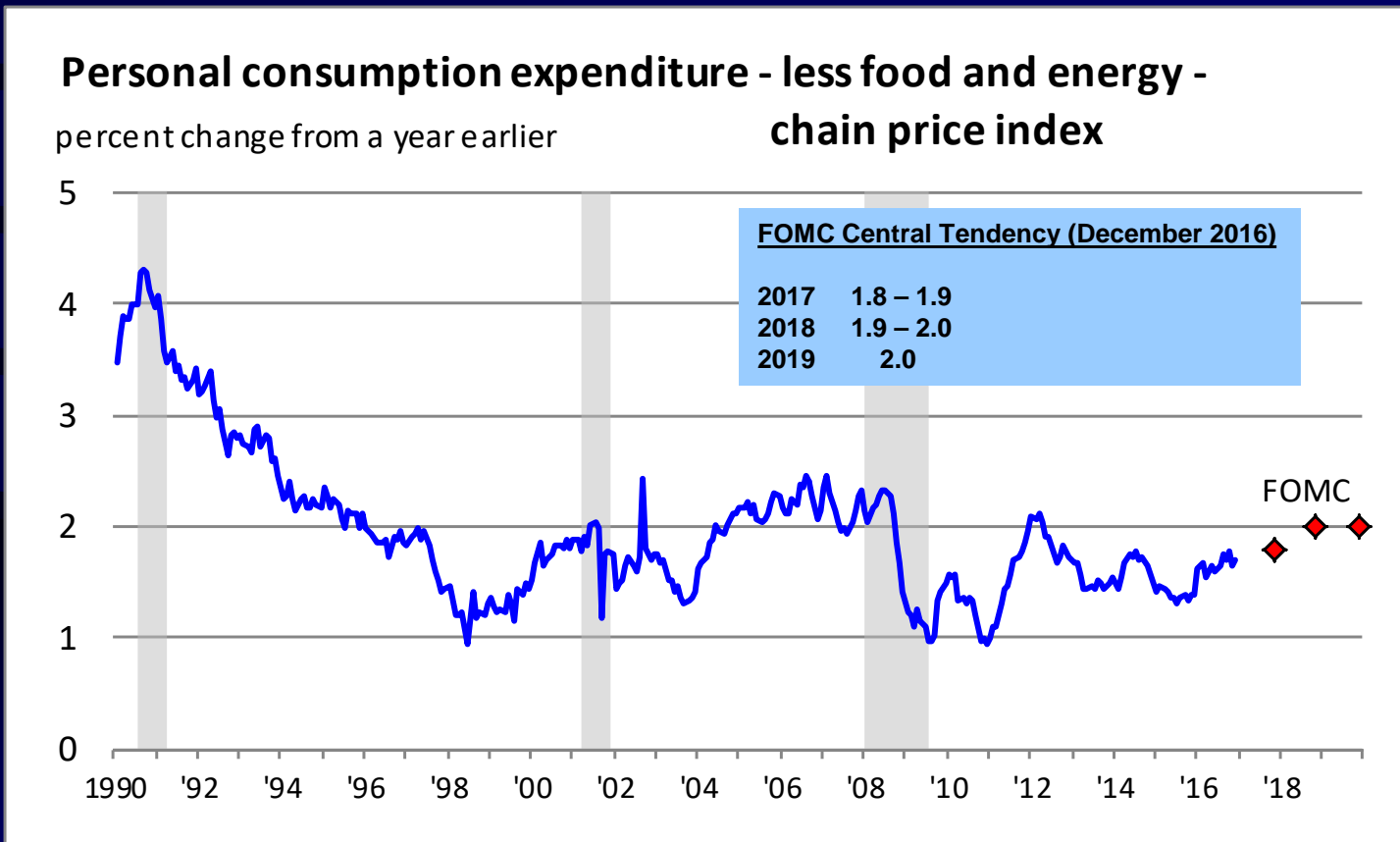
# The FOMC anticipates that PCE inflation will be around their two percent target over the next three years

## Personal consumption expenditure - chain price index

percent change from a year earlier



# The FOMC anticipates that “core” PCE inflation will reach two percent by 2018





# 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	
	2016	2017	2018	2016	2017	2018	2017	2018	2017	2018
United States	1.6	2.3	2.4	1.3	2.5	2.3	-	-	1.10	1.90
Canada	1.2	1.9	1.9	1.5	1.9	1.9	1.33	1.28	0.84	1.18
Mexico	2.1	1.6	2.2	2.9	4.5	3.7	20.94	20.50	6.38	6.13
Japan	0.7	1.1	0.9	-0.2	0.7	1.0	117.3	117.6	-0.03	-0.02
South Korea	2.8	2.6	2.5	1.0	1.7	1.8	1,203	1,202	1.37	1.49
United Kingdom	2.0	1.4	1.2	0.7	2.5	2.5	1.20	1.25	0.41	0.52
Germany	1.7	1.6	1.6	0.4	1.8	1.7	1.03	1.05	-0.21	0.15
France	1.2	1.3	1.4	0.3	1.4	1.4	1.03	1.05	-0.21	0.15
Euro Zone	1.6	1.6	1.6	0.2	1.5	1.5	1.03	1.05	-0.21	0.15
Brazil	-3.4	0.7	2.2	8.7	5.2	5.1	3.43	3.55	11.27	10.06
Russia	-0.6	1.0	1.6	7.2	4.8	4.4	63.0	63.7	9.60	8.33
China	6.7	6.4	6.0	2.0	2.1	2.2	7.15	7.28	3.20	3.55
India	7.3	7.1	7.7	5.1	4.9	5.3	69.3	69.6	6.28	6.28

Blue Chip Economic Indicators Forecast February 10, 2017



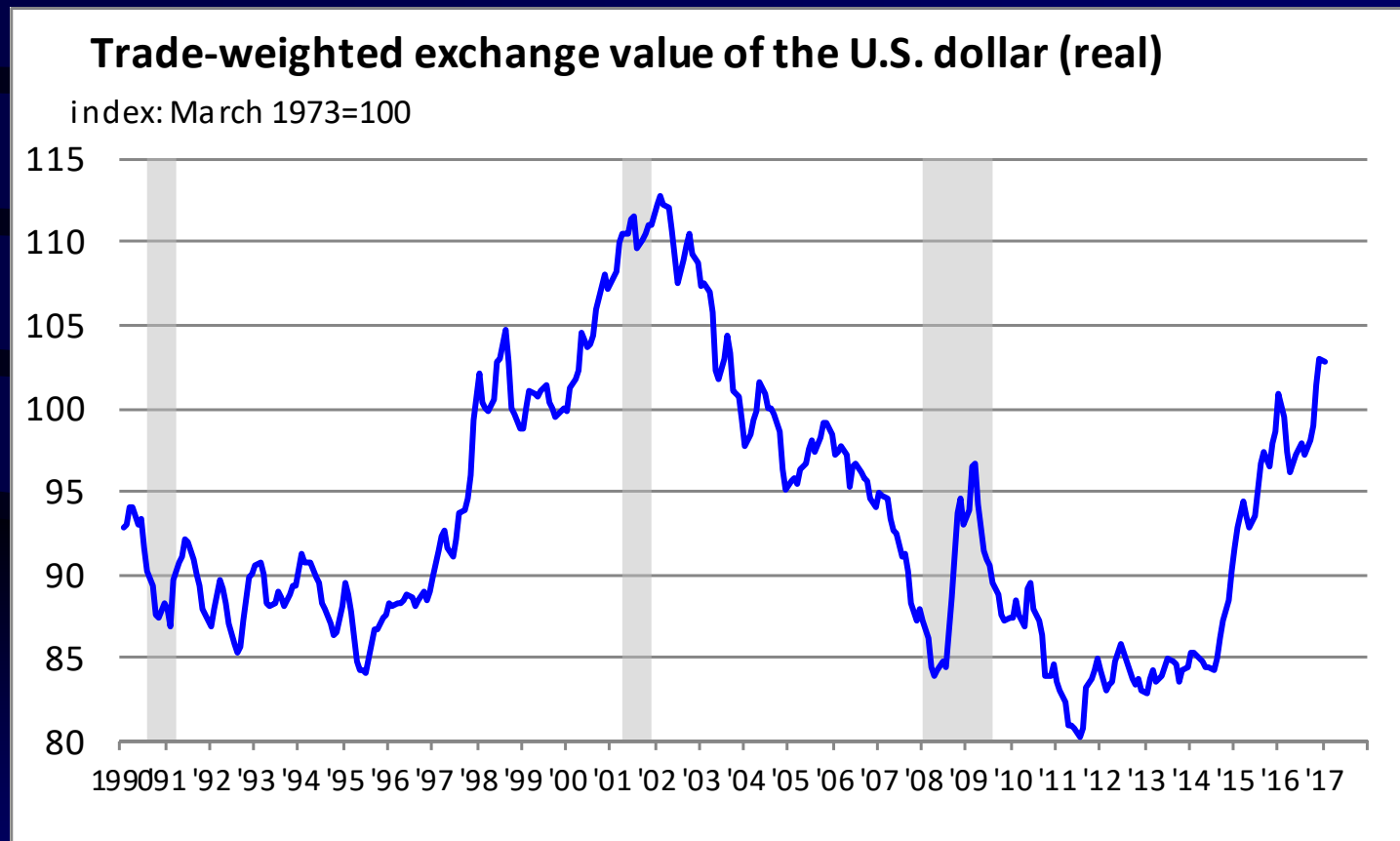
# Manufacturers' Purchasing Managers Indexes

	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17
Global	50.0	50.5	50.1	50.0	50.4	51.0	50.8	51.0	52.0	52.1	52.7	52.7
United States	51.3	51.5	50.8	50.7	51.3	52.9	52.0	51.5	53.4	54.1	54.3	55.0
Canada	49.4	51.5	52.2	52.1	51.8	51.9	51.1	50.3	51.1	51.5	51.8	53.5
Mexico	53.1	53.2	52.4	53.6	51.1	50.6	50.9	51.9	51.8	51.1	50.2	50.8
Eurozone	51.2	51.6	51.7	51.5	52.8	52.0	51.7	52.6	53.5	53.7	54.9	55.2
Germany	50.5	50.7	51.8	52.1	54.5	53.8	53.6	54.3	55.0	54.3	55.6	56.4
France	50.2	49.6	48.0	48.4	49.6	48.6	48.3	49.7	51.8	51.7	53.5	53.6
Italy	52.2	53.5	53.9	52.4	53.5	51.2	49.8	51.0	50.9	52.2	53.2	53.0
Spain	54.1	53.4	53.5	51.8	52.2	51.0	51.0	52.3	53.3	54.5	55.3	55.6
UK	50.8	50.7	49.4	50.4	52.4	48.2	53.3	55.4	54.2	53.6	56.1	55.9
Russia	49.3	48.3	48.0	49.6	51.5	49.5	50.8	51.1	52.4	53.6	53.7	54.7
Japan	50.1	49.1	48.2	47.7	48.1	49.3	49.5	50.4	51.4	51.3	52.4	52.7
China	48.0	49.7	49.4	49.2	48.6	50.6	50.0	50.1	51.2	50.9	51.9	51.0
India	51.1	52.4	50.5	50.7	51.7	51.8	52.6	52.1	54.4	52.3	49.6	50.4
Brazil	44.5	46.0	42.6	41.6	43.2	46.0	45.7	46.0	46.3	46.2	45.2	44.0

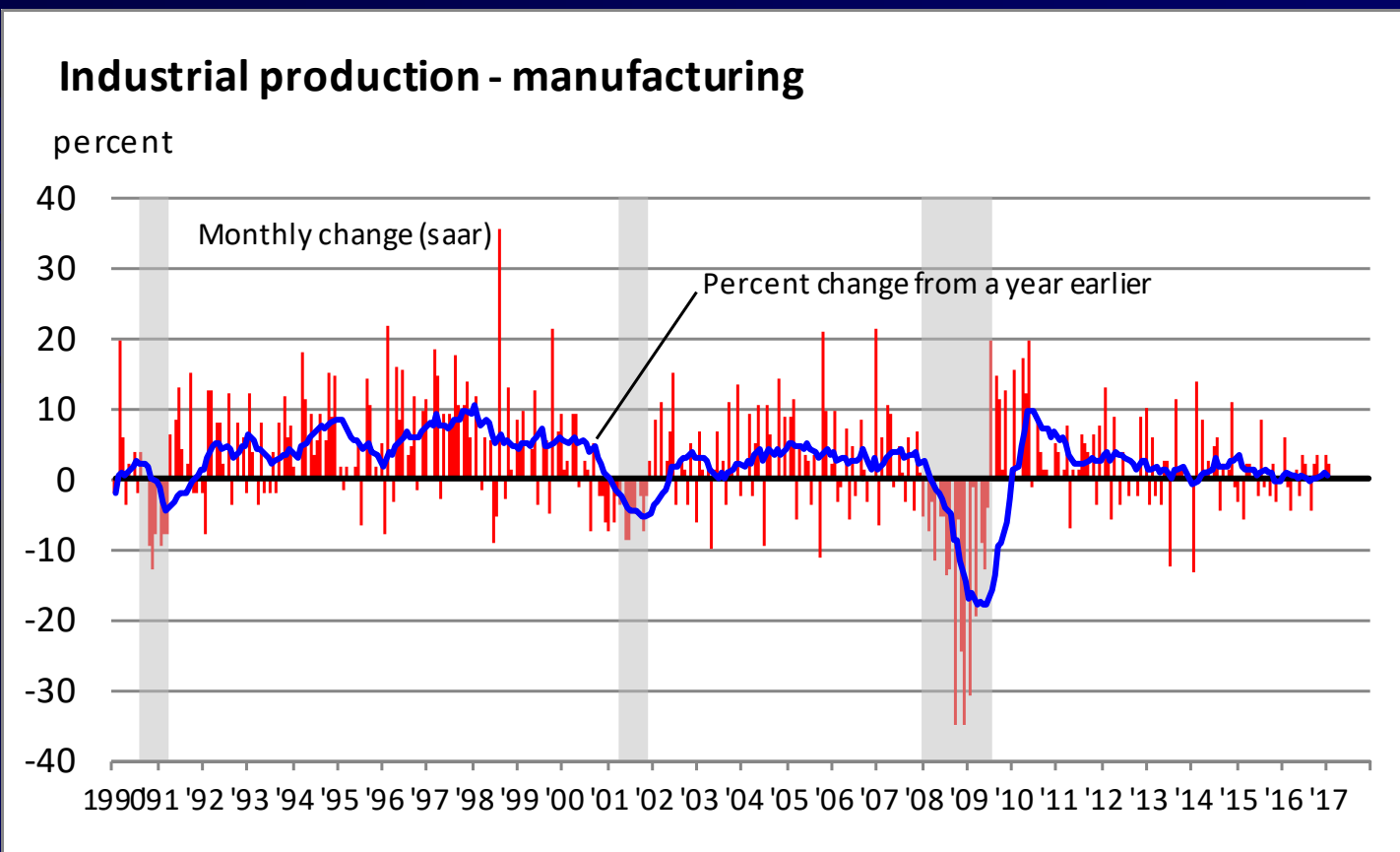
>54	51-54	45-51	<45
Above Trend	Trend	Flat	Recession



**Over the past couple of years,  
the real trade-weighted dollar increased by 22%**



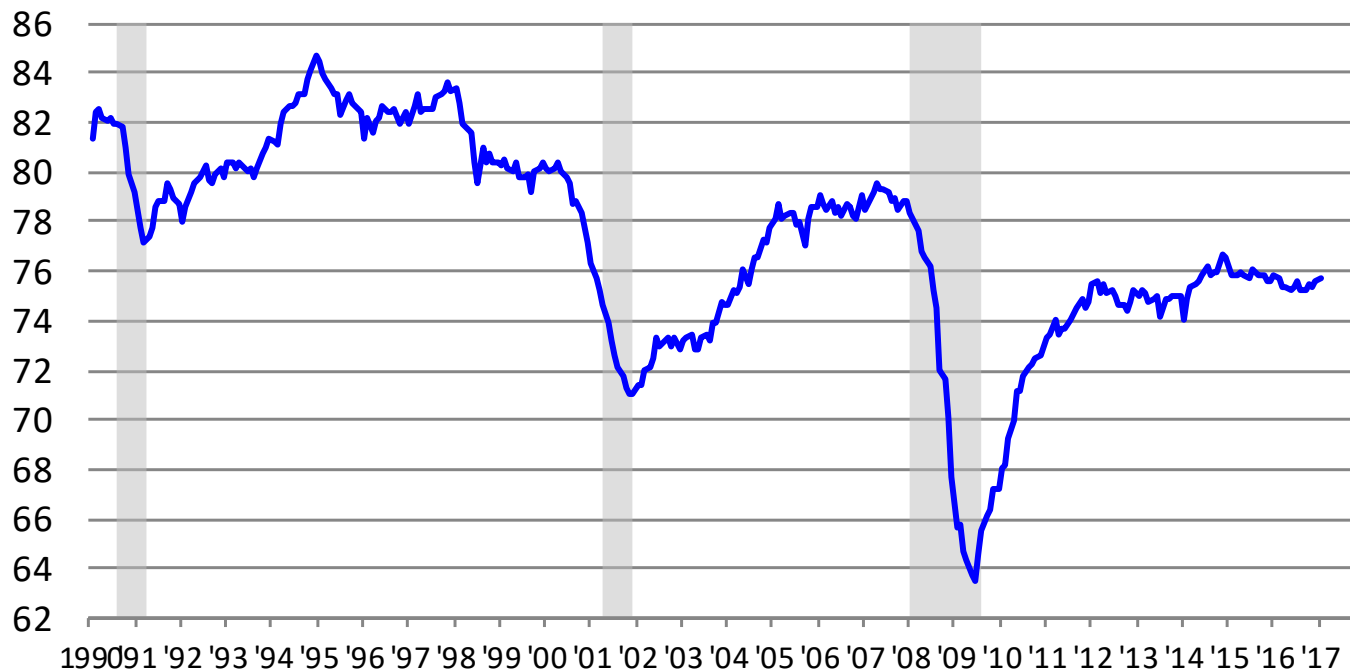
# Manufacturing output is flat compared with a year earlier



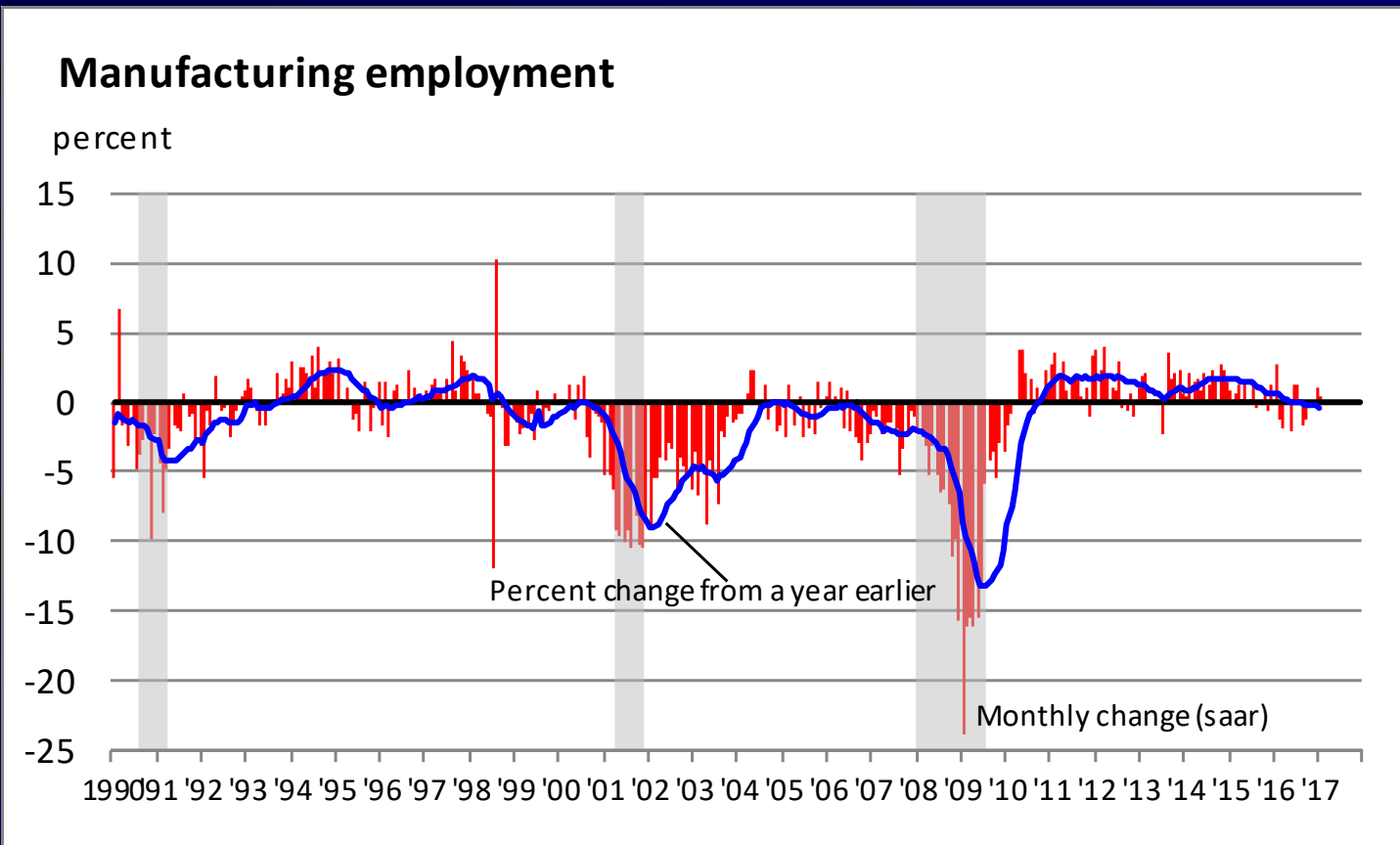
# Capacity utilization has been edging lower

## Capacity utilization - manufacturing

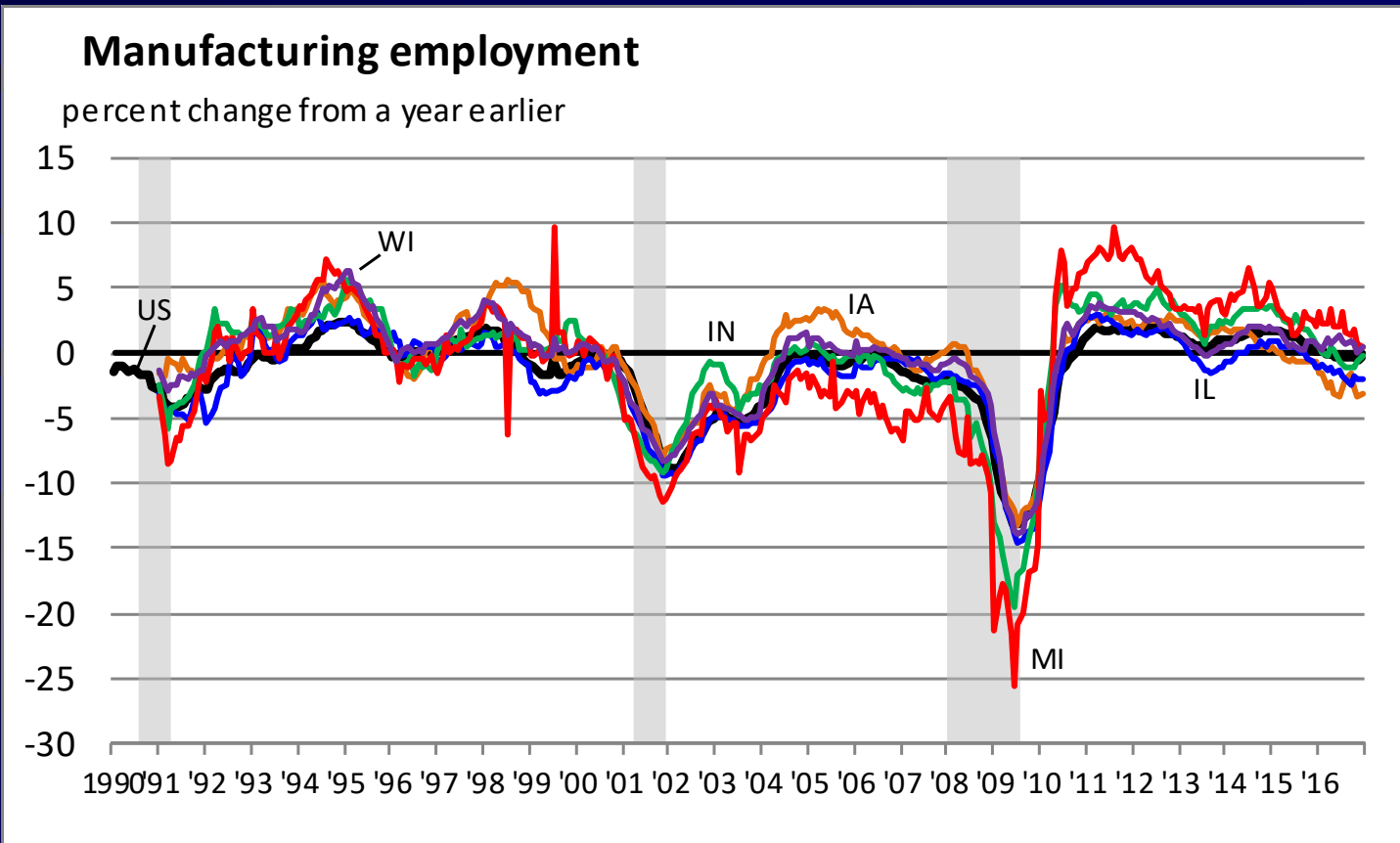
percent



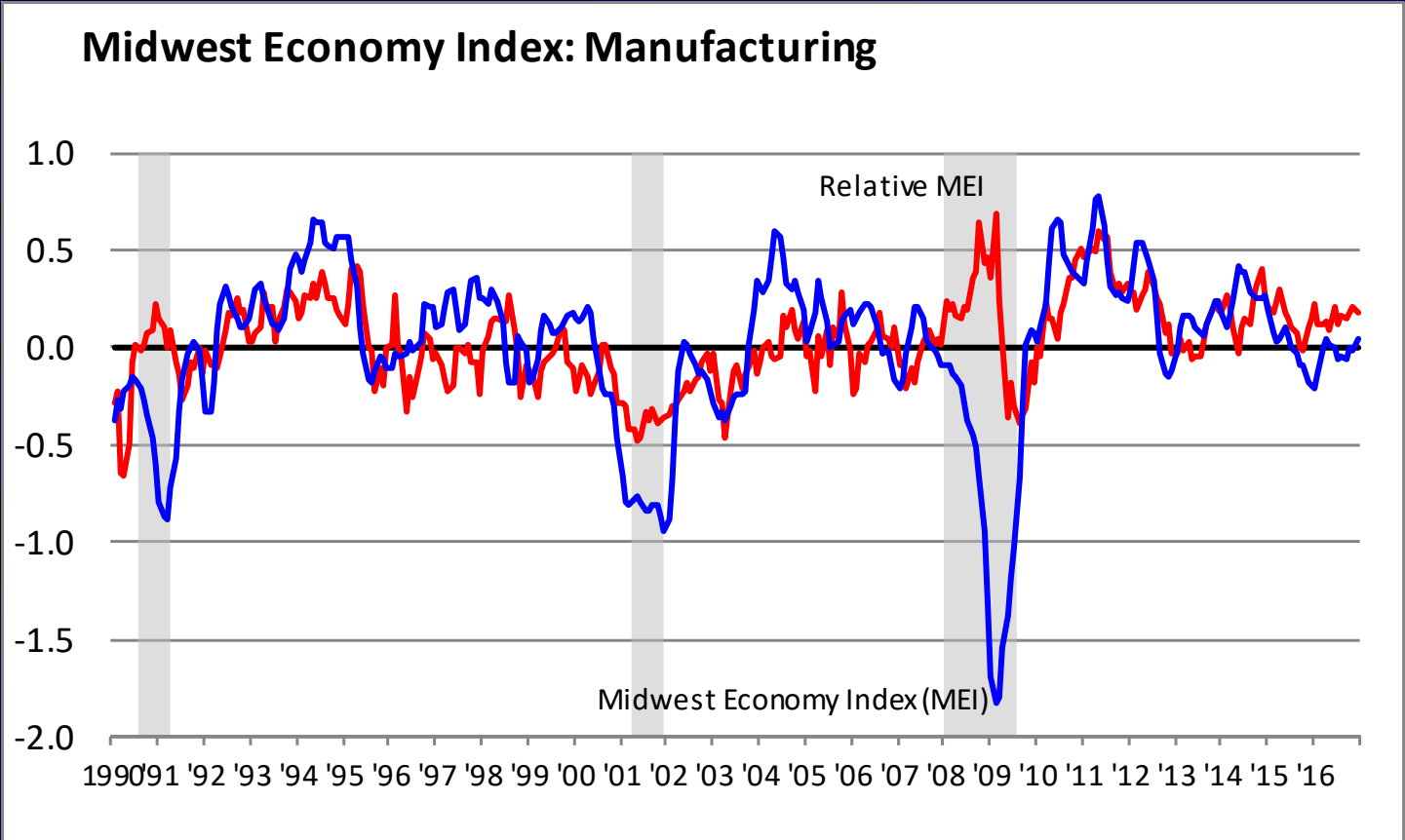
# Manufacturing has lost jobs over the past year



# Manufacturing jobs were added in Michigan and Wisconsin and lost in Indiana, Illinois and Iowa

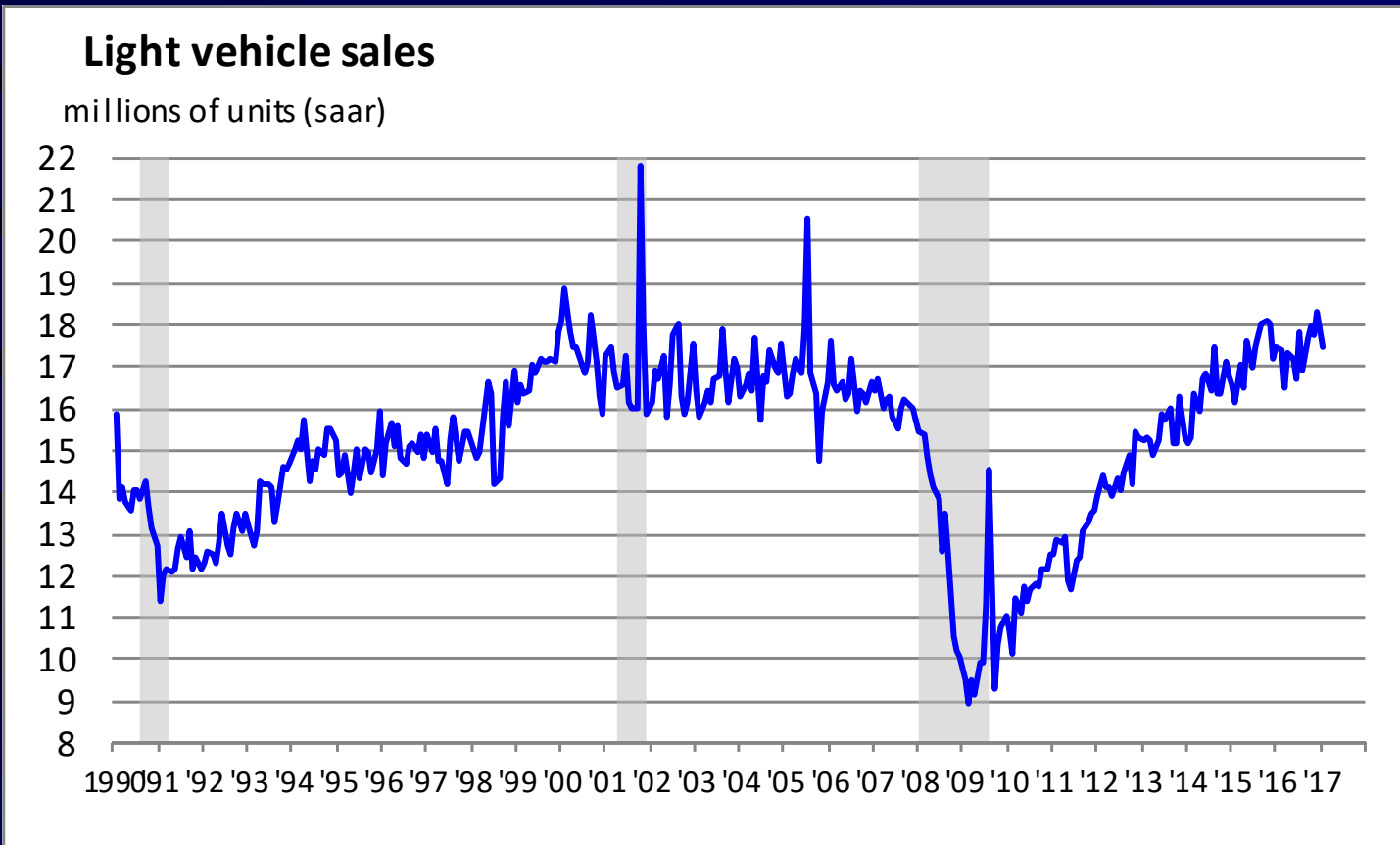


# The Midwest Economy Indexes manufacturing component is near its trend and doing relatively better than the nation





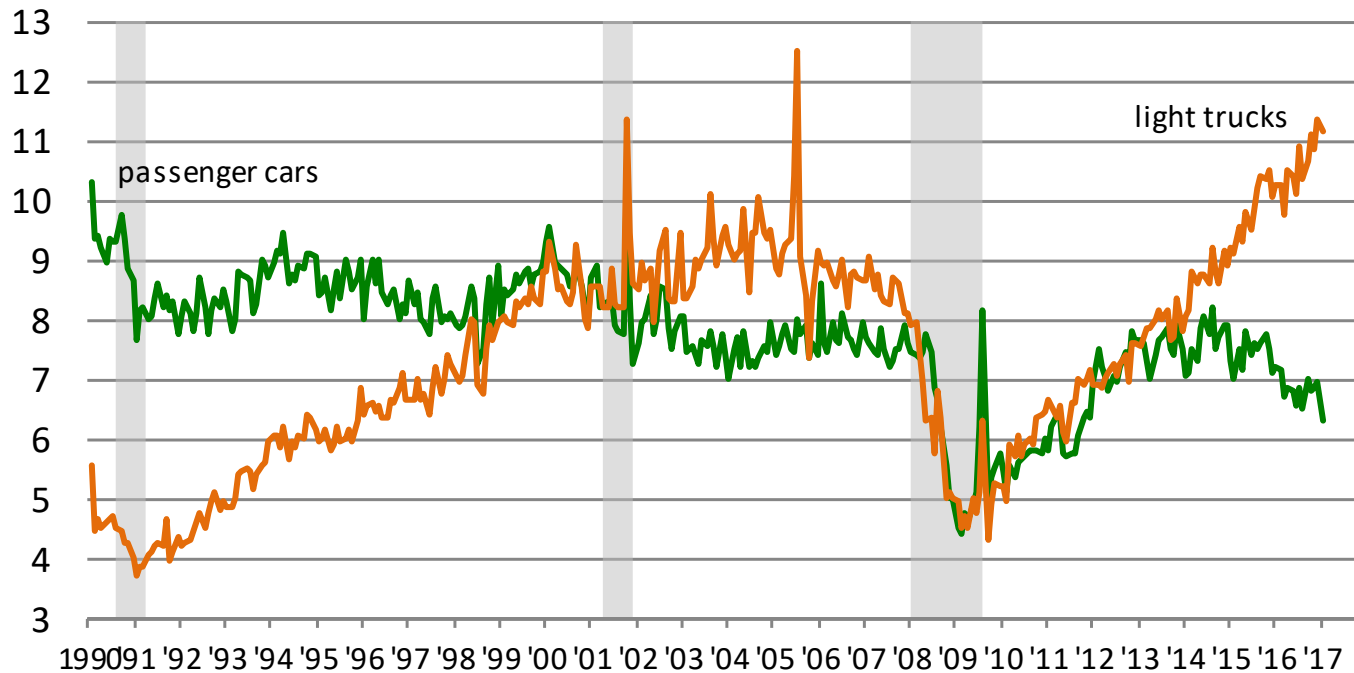
# Light vehicles sales set a record in 2016 edging up 0.4% from 2015



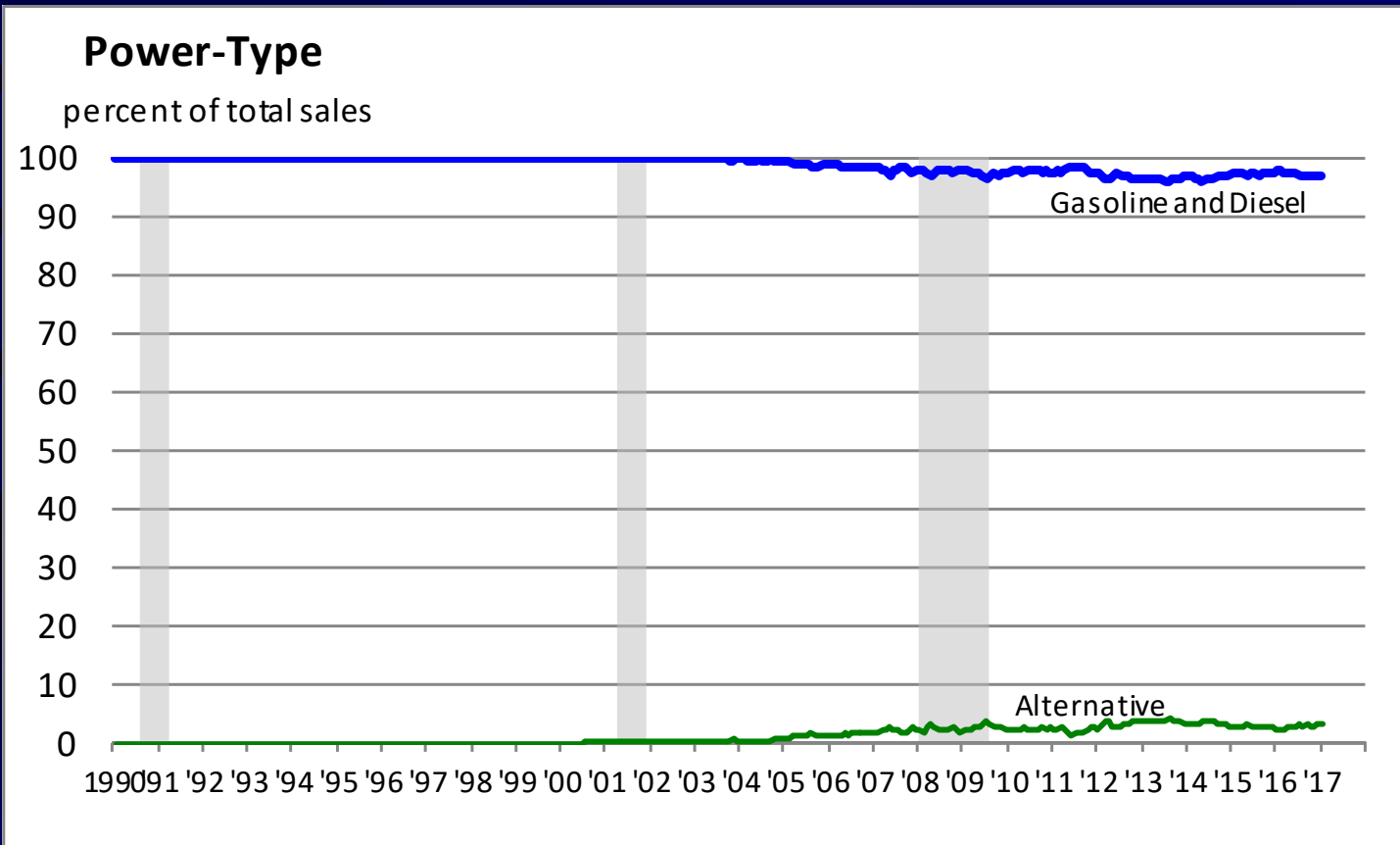
# 2016 light truck sales were 7.3% higher while passenger car sales were 7.9% lower

## Passenger car and light truck sales

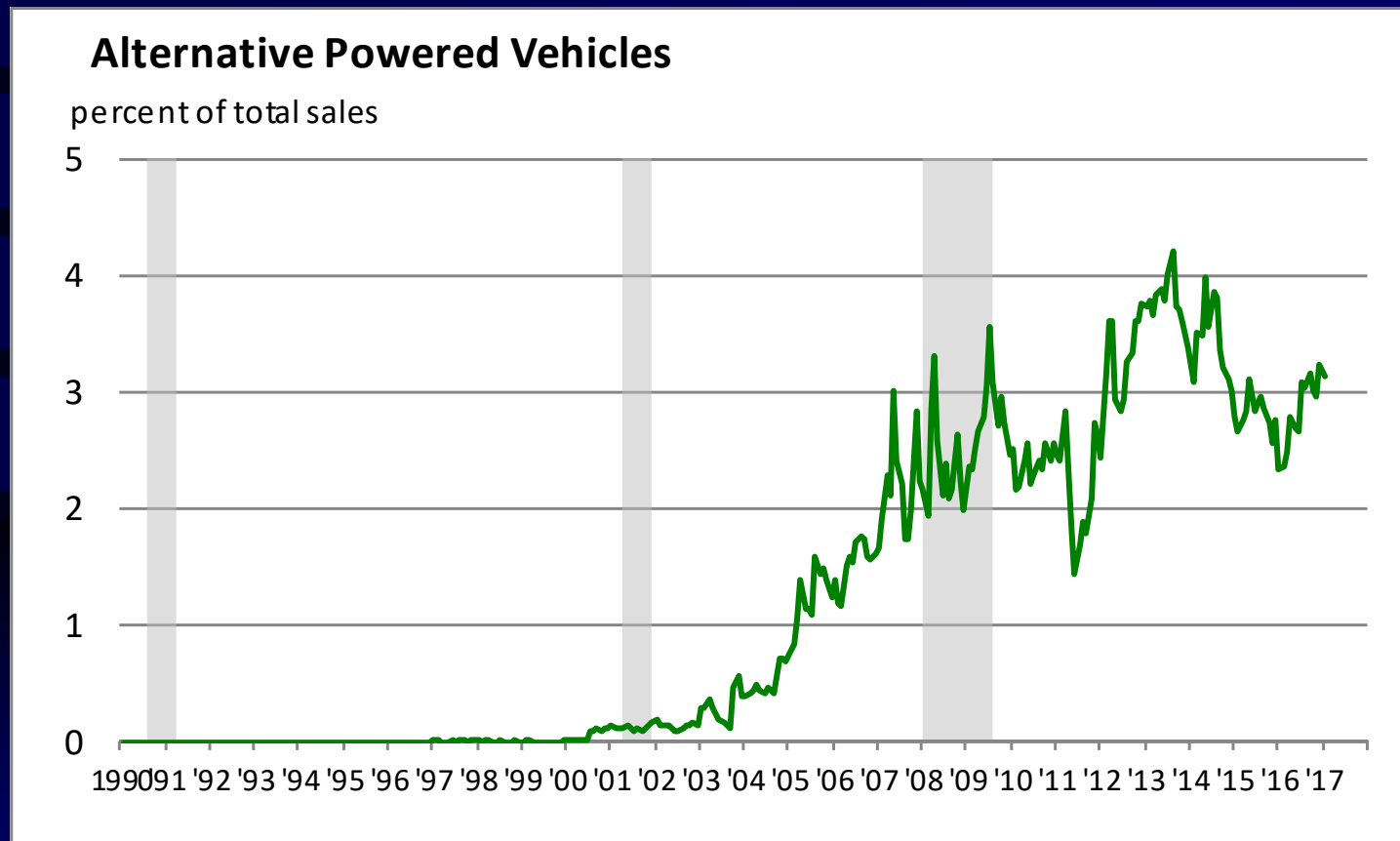
millions of units (saar)



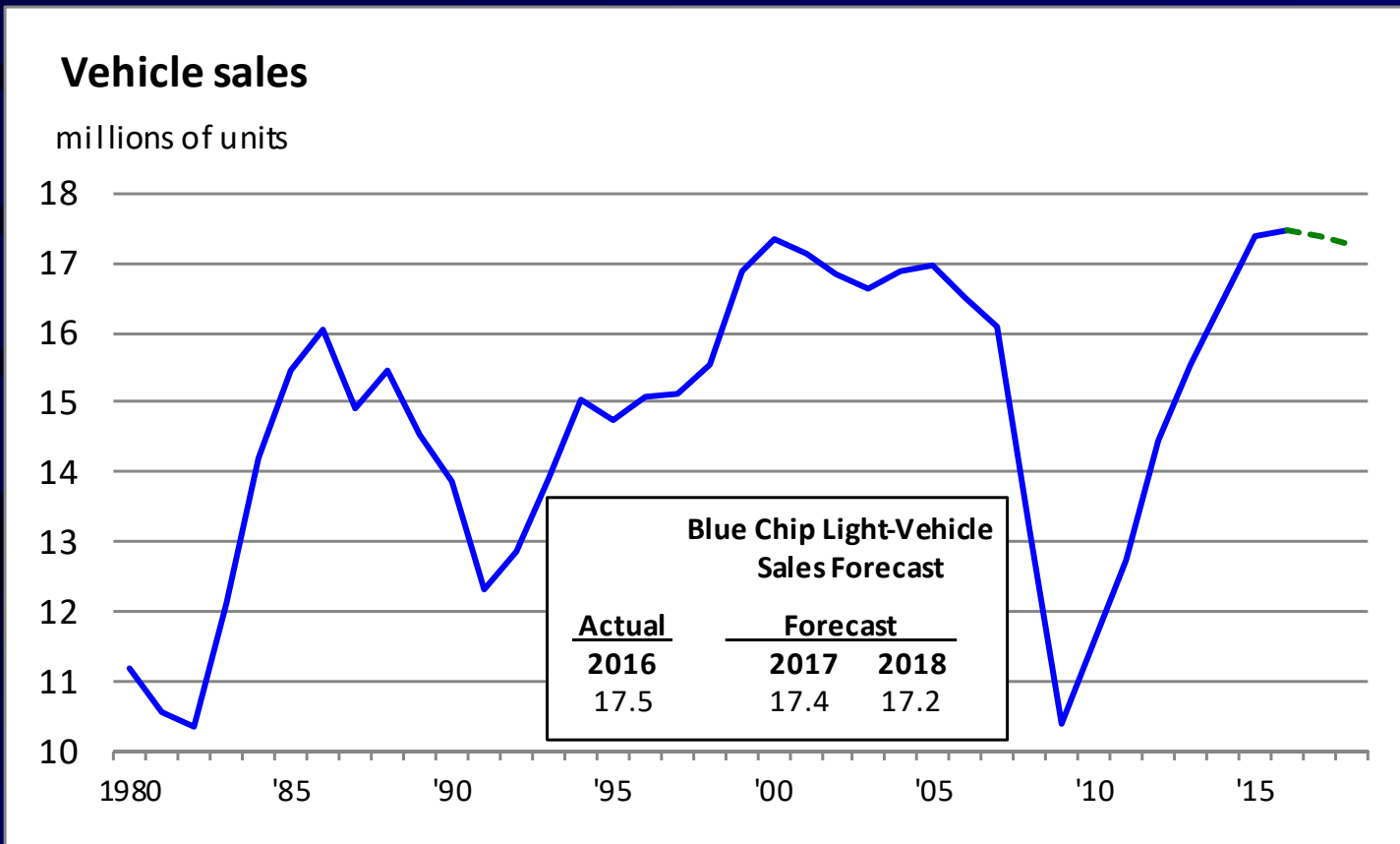
# Alternative powered vehicles (including hybrids) are a very small fraction of total vehicle sales



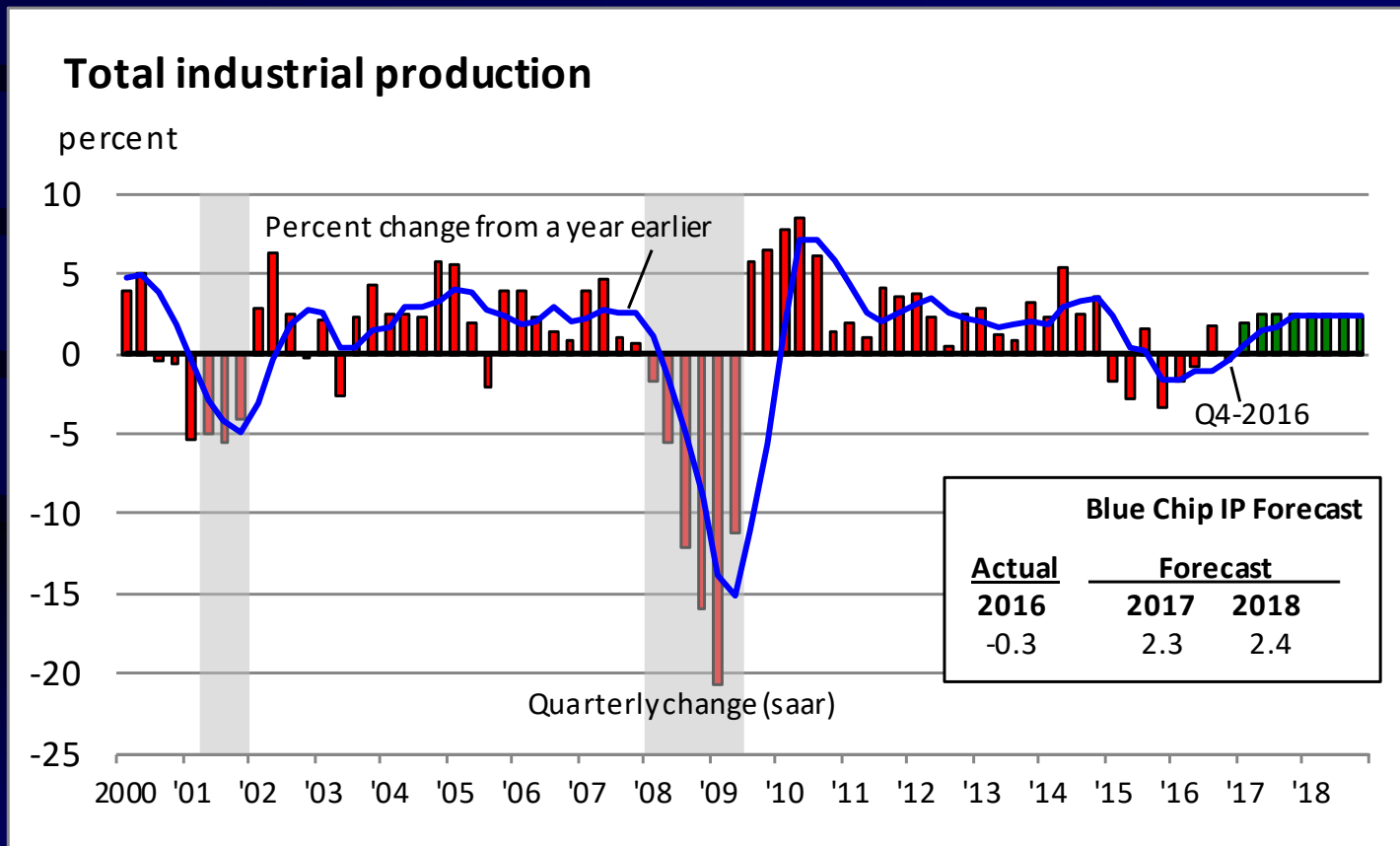
**Alternative powered vehicles (including hybrids)  
market share barely exceeded 4%  
and have been declining over the past two years**



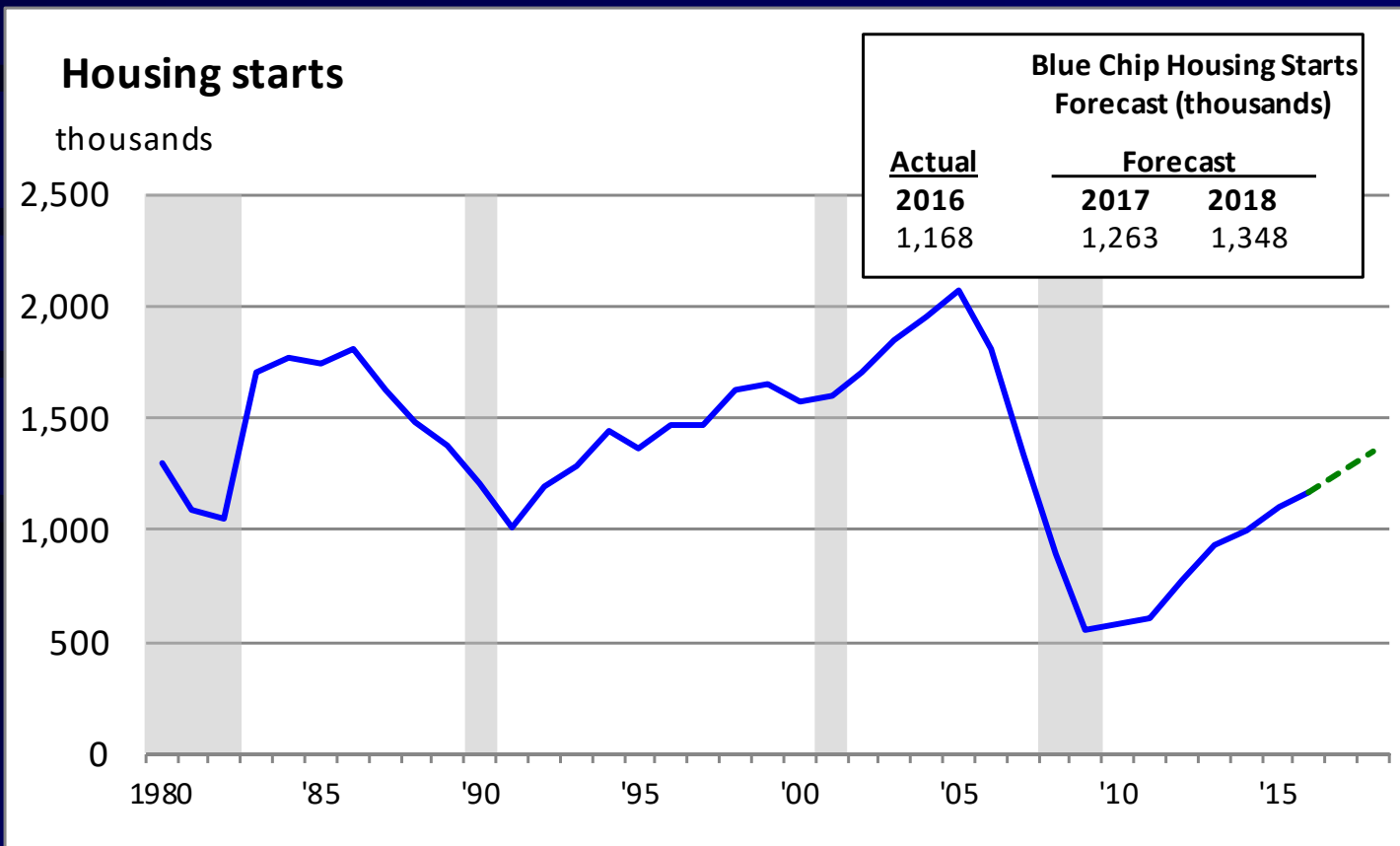
# Vehicle sales are anticipated to edge lower over the next two years



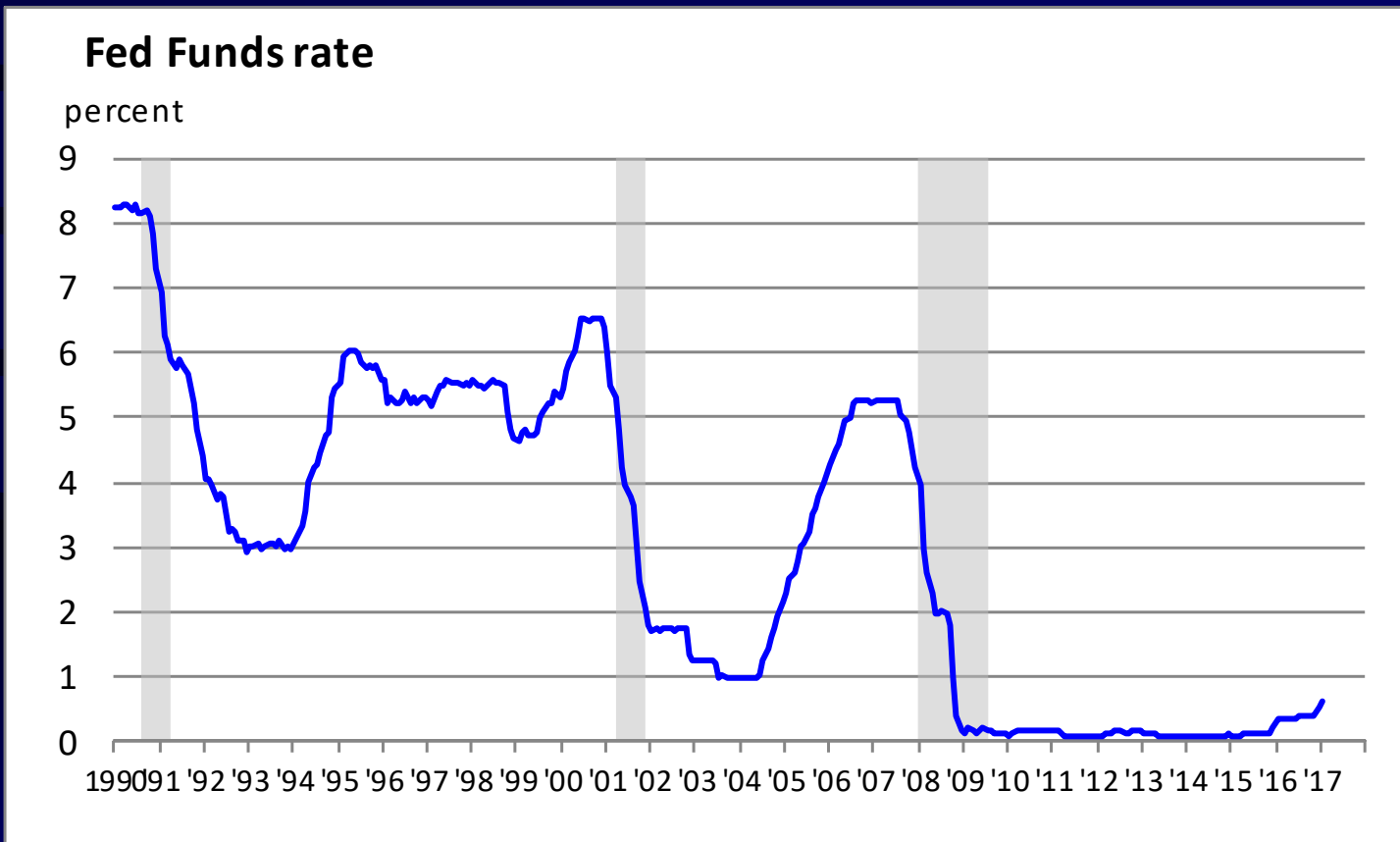
# Industrial production is forecast to improve but expand at a pace below its historical rate



# The forecast calls for a very gradual recovery in housing



**Monetary policy has been very aggressive, keeping the Fed Funds near zero since December 2008**

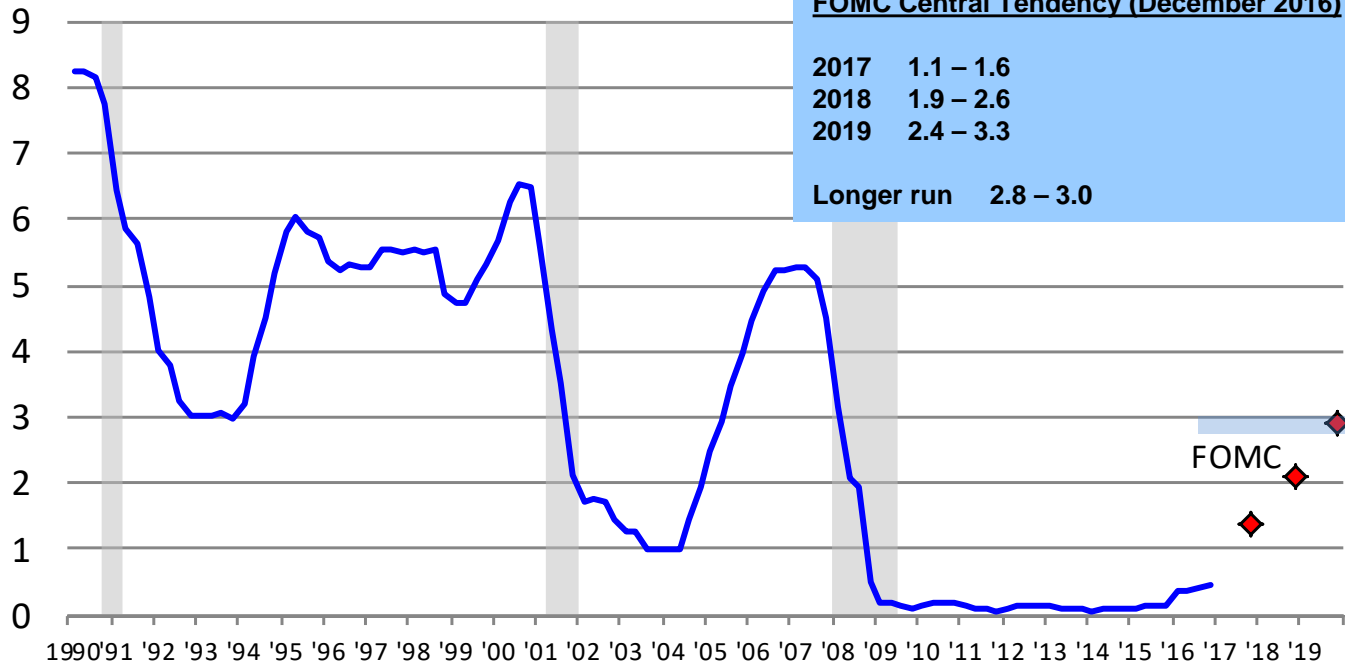




# The Federal Funds Rate is expected to reach the neutral rate at the end of 2019

## Target Federal Funds Rate

percent



# Summary

- The outlook is for the U.S. economy to expand at a pace around trend through 2019
- Employment growth is expected to slow with the unemployment rate remaining below the natural rate
- Disappearing slack in the economy will lead to a gradual rising inflation rate
- Manufacturing output is expected to increase at a rate below its trend in 2017 and 2018
- The housing market is expected to continue improving through 2018



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