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BANK  
*of* ATLANTA

# Changes: Our View on the US Economy in 2016\*

2016 Banking Outlook  
Conference

Atlanta, GA  
February 25, 2016

\* By “our” I mean those of yours truly and the Atlanta Fed research staff. The views expressed herein do not necessarily represent those of the Federal Reserve Bank of Atlanta or the Federal Reserve System.

# Our story and we are sticking to it: Modestly above trend growth in 2016.

	2015: q4/q4 <sup>a</sup>	2016: q4/q4	Longer- run
<u>Real GDP Growth</u>			
Preliminary Forecast	1.7 <sup>a</sup>	2.5	2.1

a: assumes 0.4% in QIV.

# GDP growth crawled out of 2015 -- what will change the storyline in 2016?

Real GDP Statistics			
	Q3	Q4 <sup>a</sup>	2015:q4/q4 <sup>b</sup>
<b>Annualized GDP Growth</b>	<b>2.0</b>	<b>0.7</b>	<b>1.7</b>

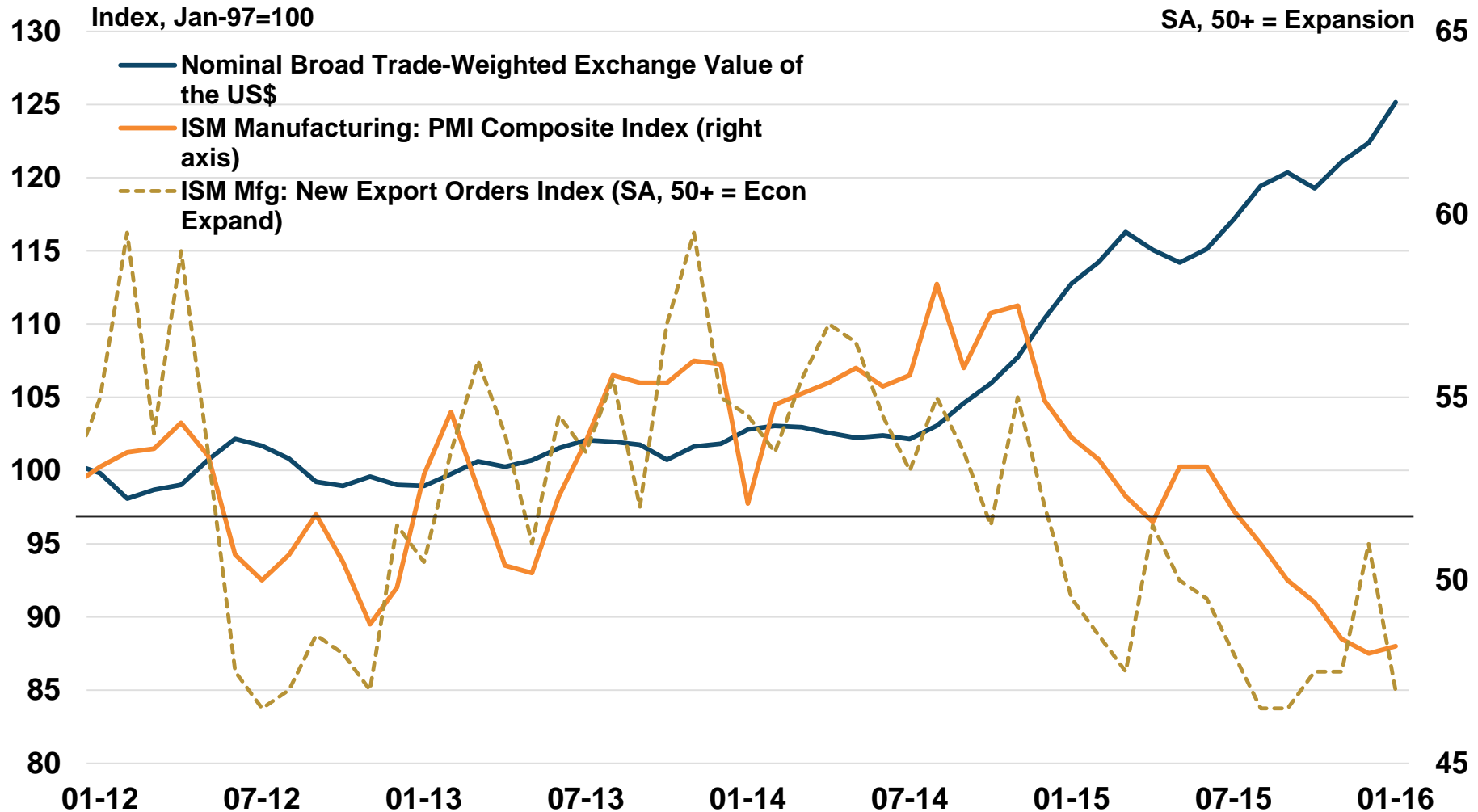
**a. BEA Estimate, Jan. 29**

**b: Atlanta Fed estimate, assumes 0.4% in QIV.**

**What probably won't change.**

# The manufacturing sector continues to struggle as the dollar has continued to appreciate.

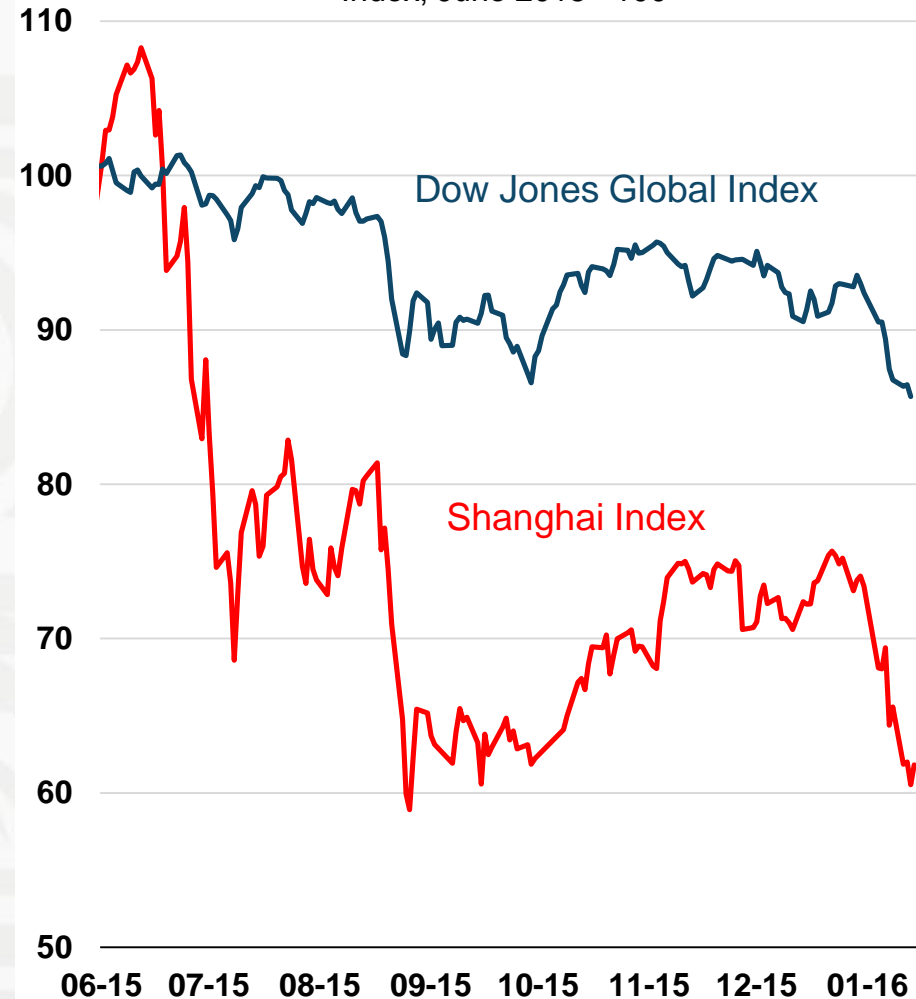
## The Dollar and the Manufacturing Sector



# Global woes: Is China to blame?

## China and Global Equities

Index, June 2015 = 100



Source: Wall Street Journal, Financial Times

through January 13, 2016

## China PMI: Manufacturing

SA, 50+=Expansion



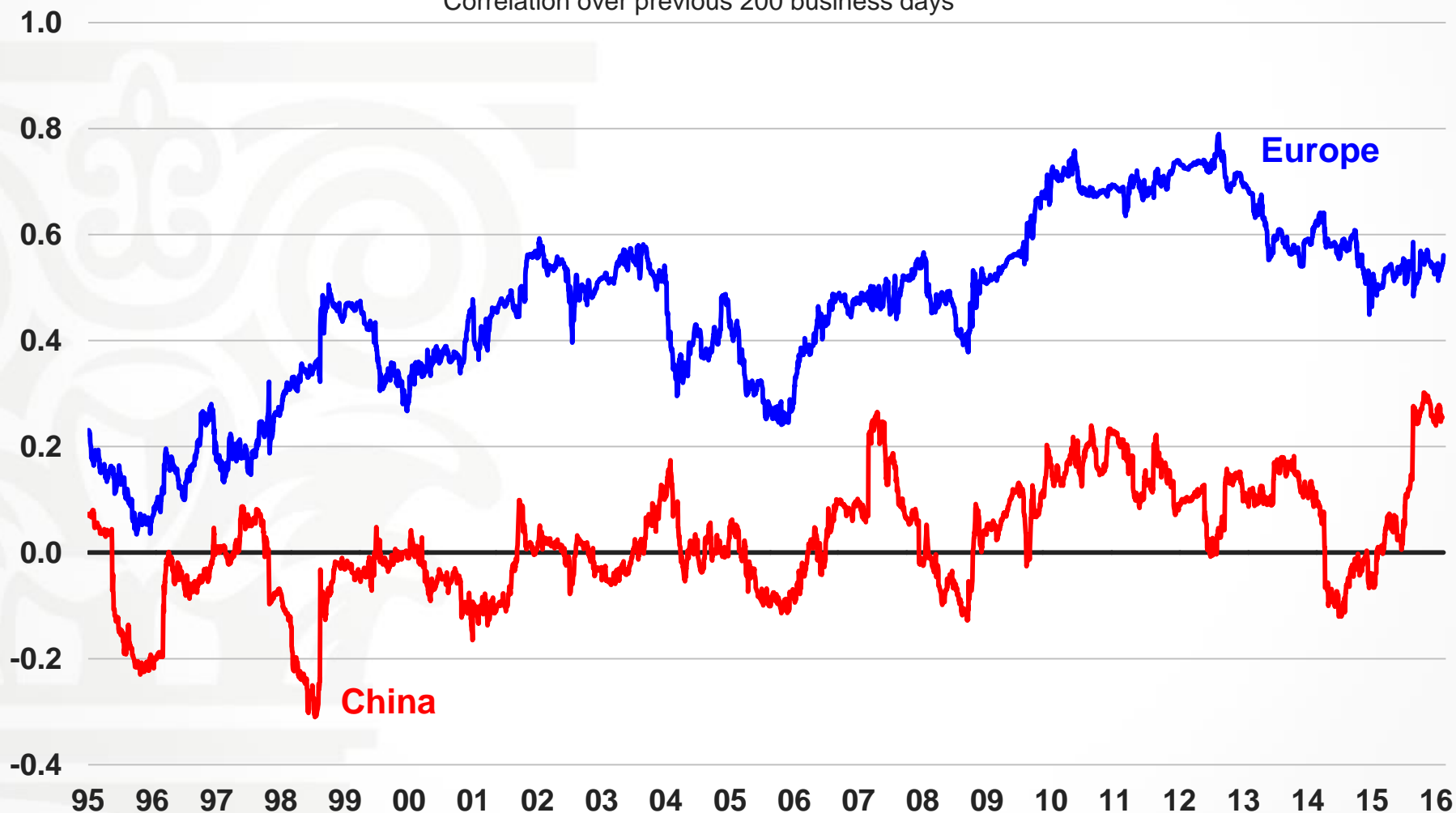
Source: China Federation of Logistics & Purchasing (CFLP)

through Dec '15

# If financial markets are your concern, Brexit should worry you more than a Chinese market meltdown.

200-day correlations of 1-day changes in logs of U.S. and foreign stock market indexes

Correlation over previous 200 business days



If your focus is the real economy, here too it could be easy to overstate the importance of China...

## From Macroeconomic Advisers:

**Suppose Chinese real GDP growth slows to 3 percent in 2016 and the yuan sustains a 10 percent devaluation against the dollar:**

- US real GDP: Typical macro model simulations suggests a  $\frac{1}{4}$  percentage point subtraction from real GDP growth over the next year.
- Unemployment Rate: A slightly (0.2 percentage point) higher path for the unemployment rate
- Inflation: Core inflation rate is a 0.1 percentage point lower for the next year.



... but don't underestimate the European connection.

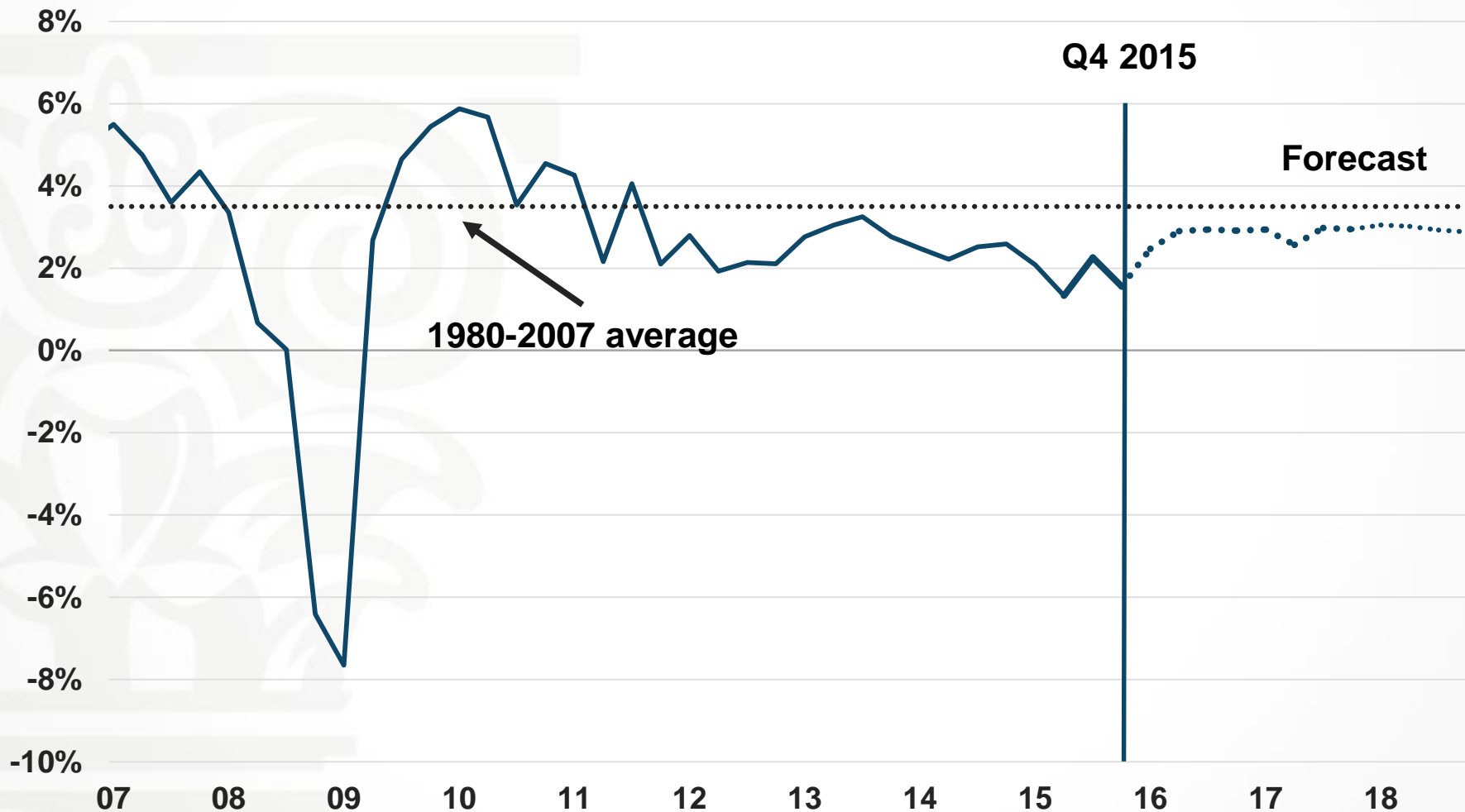
Country	Real GDP Growth correlations with United States
China	-0.05
Euro Area	0.77
Non-OECD countries*	0.09

Sources: BEA; China National Bank Statistics; Eurostat;  
Sample: 1995-2014

\*Non-OECD countries: Set of 120 countries, located in Asia, the Middle East, South America, Africa, Eastern Europe

# Some limited help: Forecasts generally predict higher, but still below trend, foreign growth over the medium term.

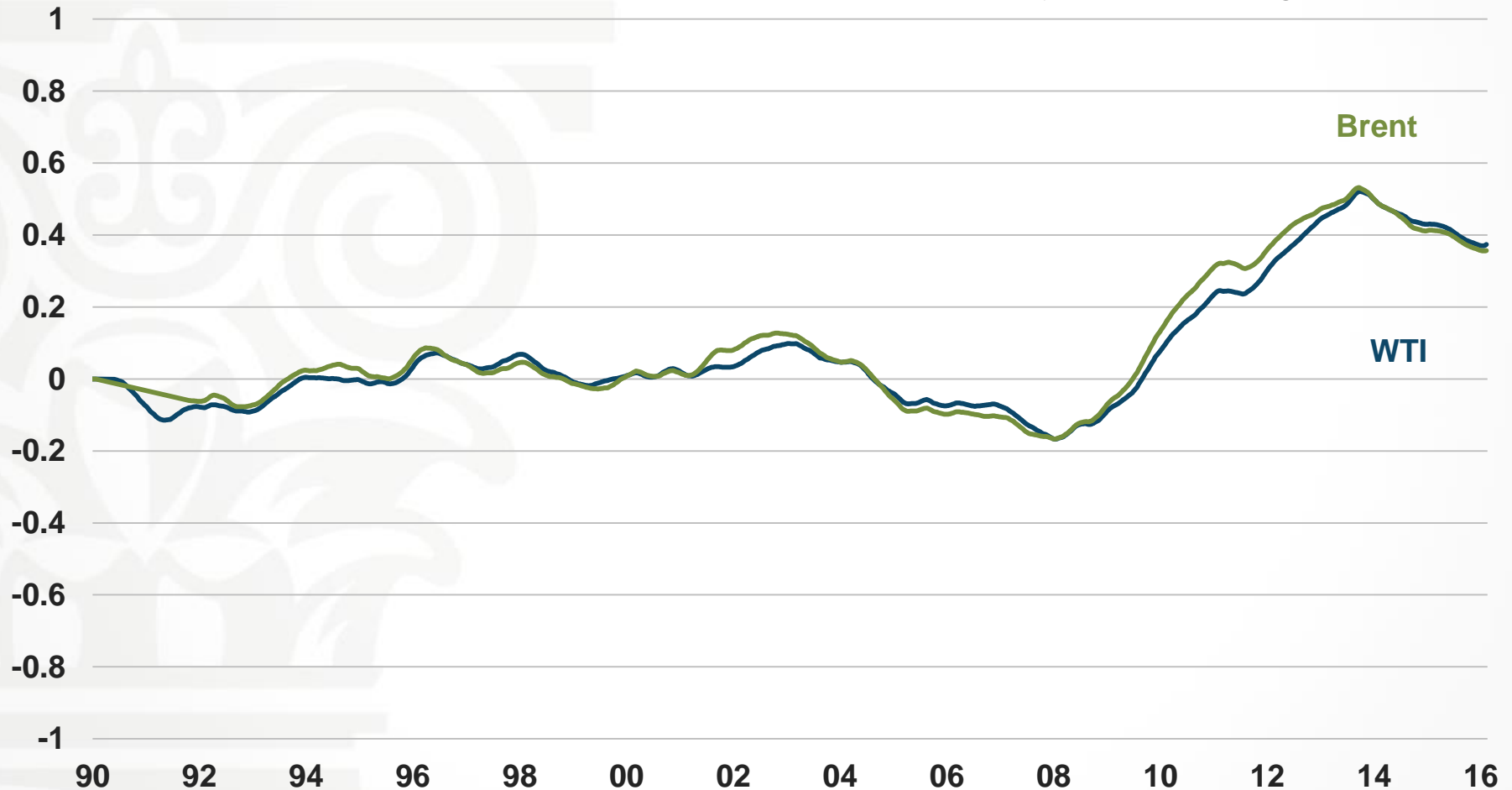
**Broad Real Foreign Gross Domestic Product Index (2005=100)**  
percent change, annualized



# The other big (unchanging) story – the surprising negative impact of lower energy prices on the U.S. economy.

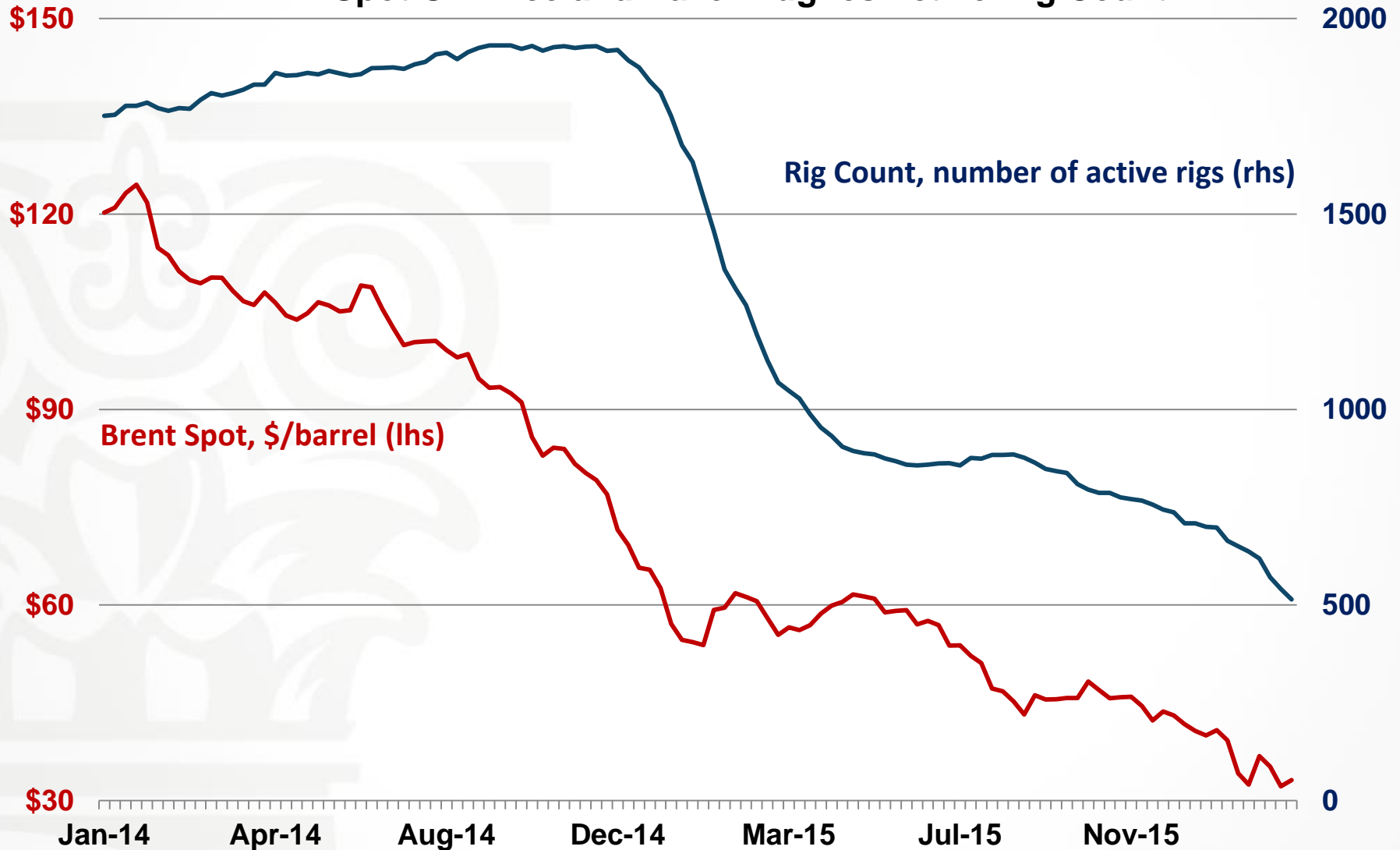
## Oil Price and Stock Market Correlations

5 year moving average of 6-month moving correlation between West Texas Intermediate (WTI), Brent and S&P500 Index weekly percent change



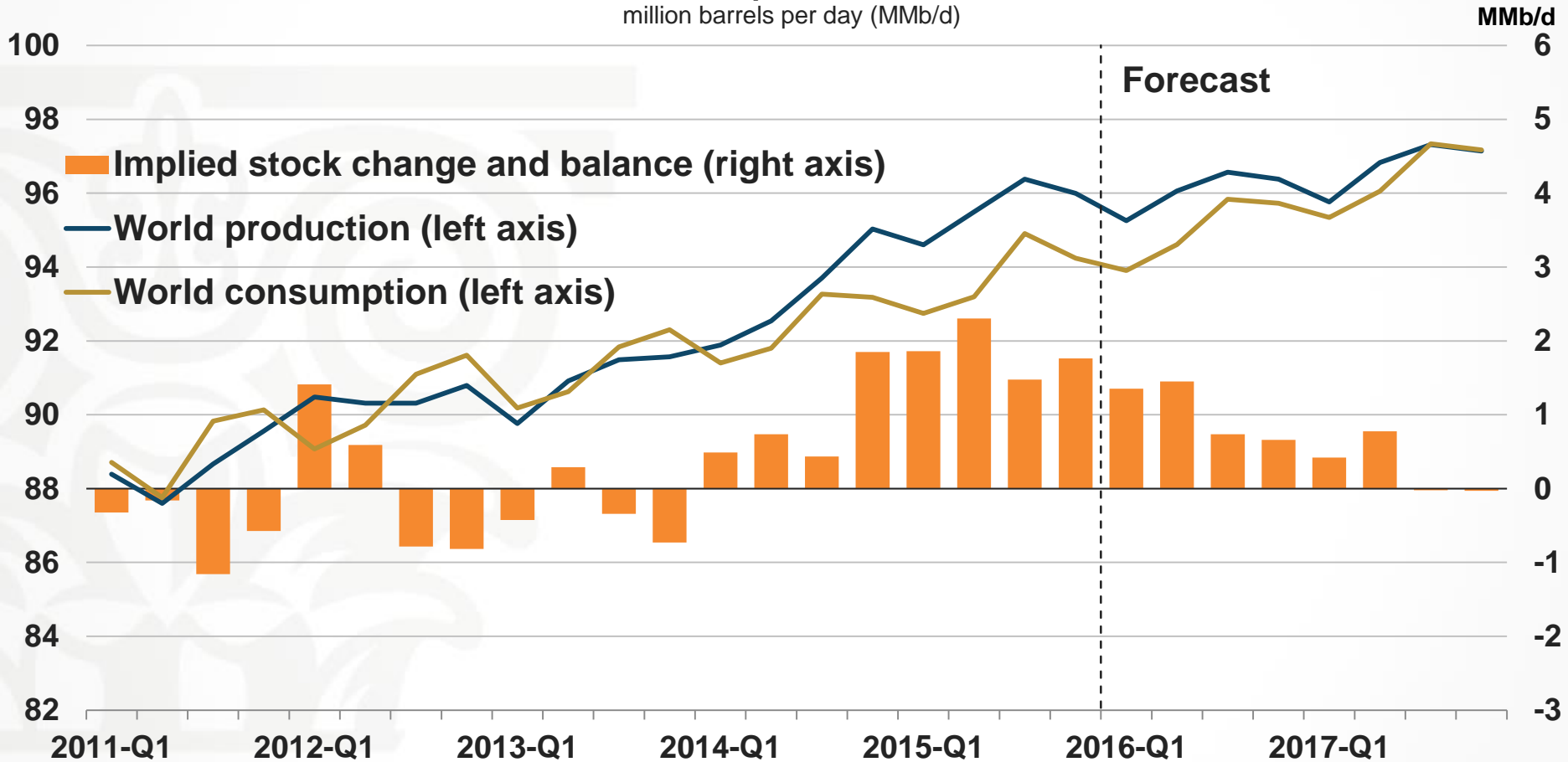
# The drag on structures investment will likely continue for awhile.

Spot Oil Price and Baker Hughes Active Rig Count



# Economics 101: Demand < Supply

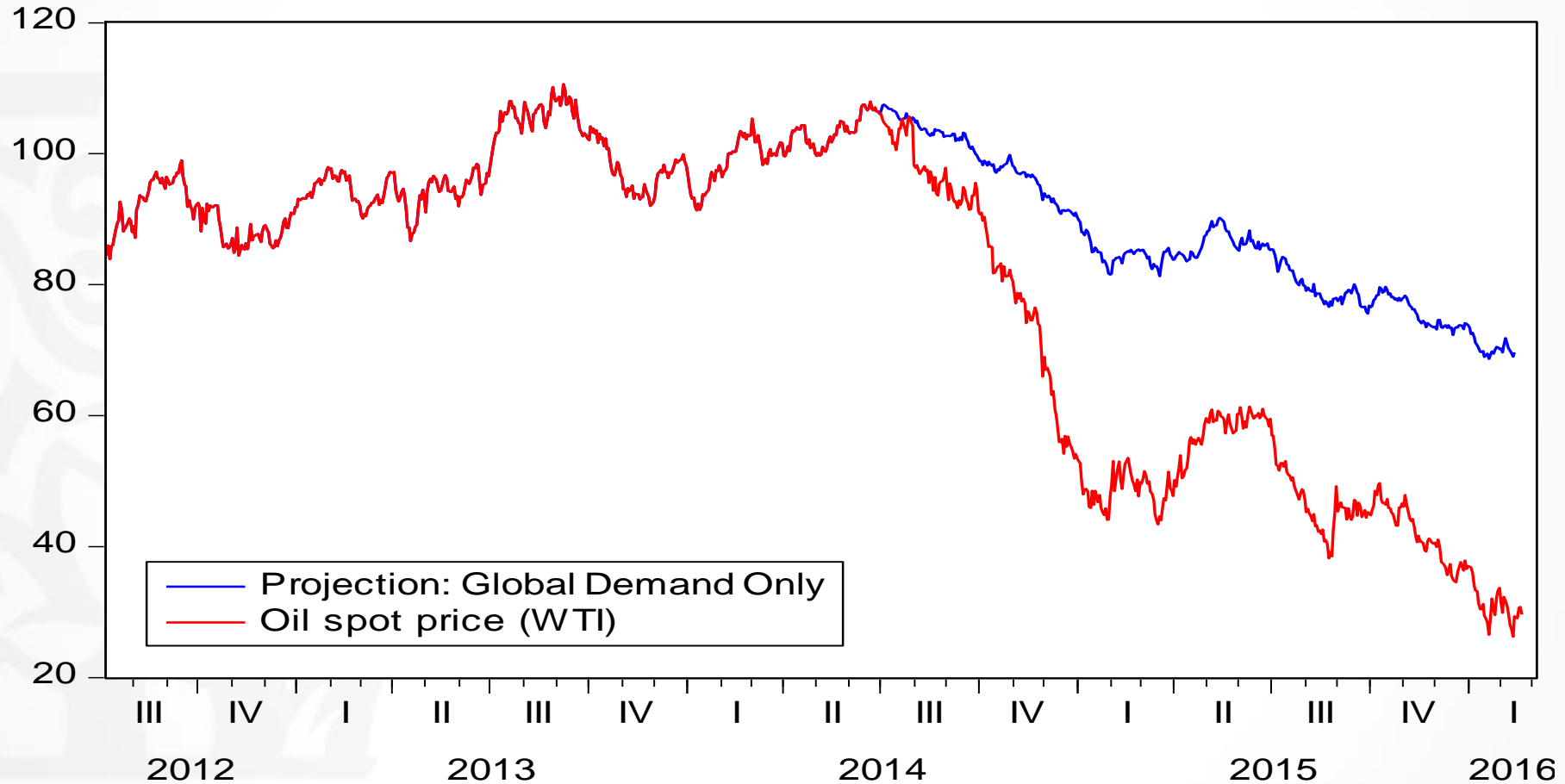
**World Liquid Fuels Production and Consumption Balance**  
million barrels per day (MMb/d)



Source: Short-Term Energy Outlook, February

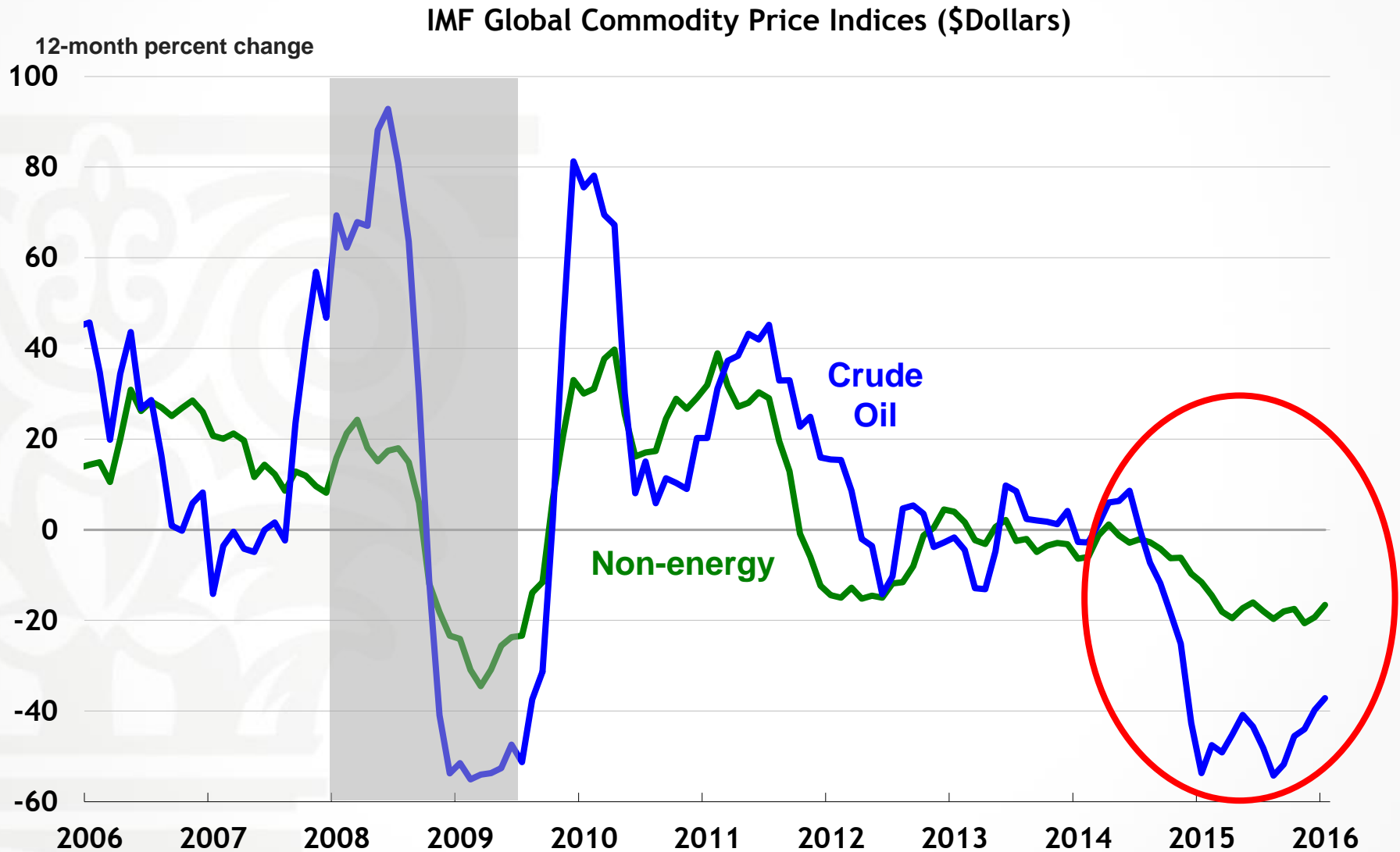
# Bernanke: Only about 45% of the decline in oil prices can be attributed to a decline in “global demand.”

## WTI Crude Oil Estimated Demand Effect



Model: log change in oil prices regressed on log changes in copper prices, broad dollar exchange rate, and the change in the 10-year yield. Daily: estimation: 6/02/11 – 6/30/14. Projection period: 7/01/14-2/12/16

# Reinforcing the “oil is a special case” theme: Oil prices have been falling more rapidly than non-energy commodities.





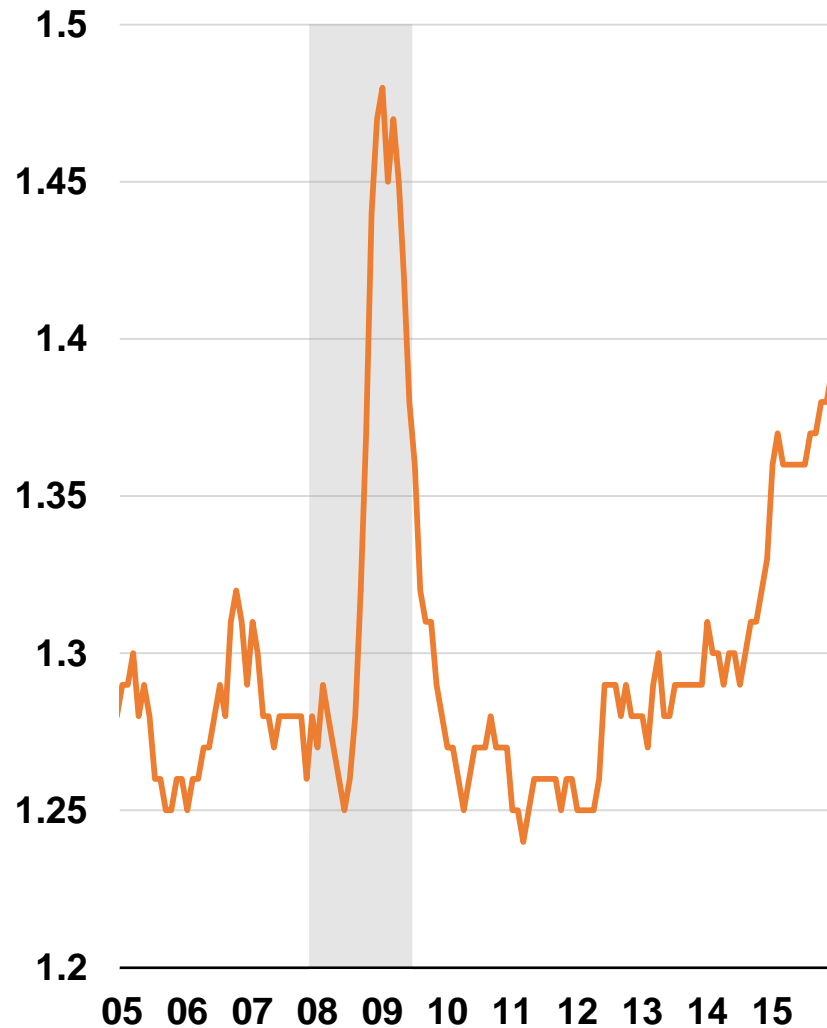
**CHANGE FOR  
THE BETTER**

**(?)**

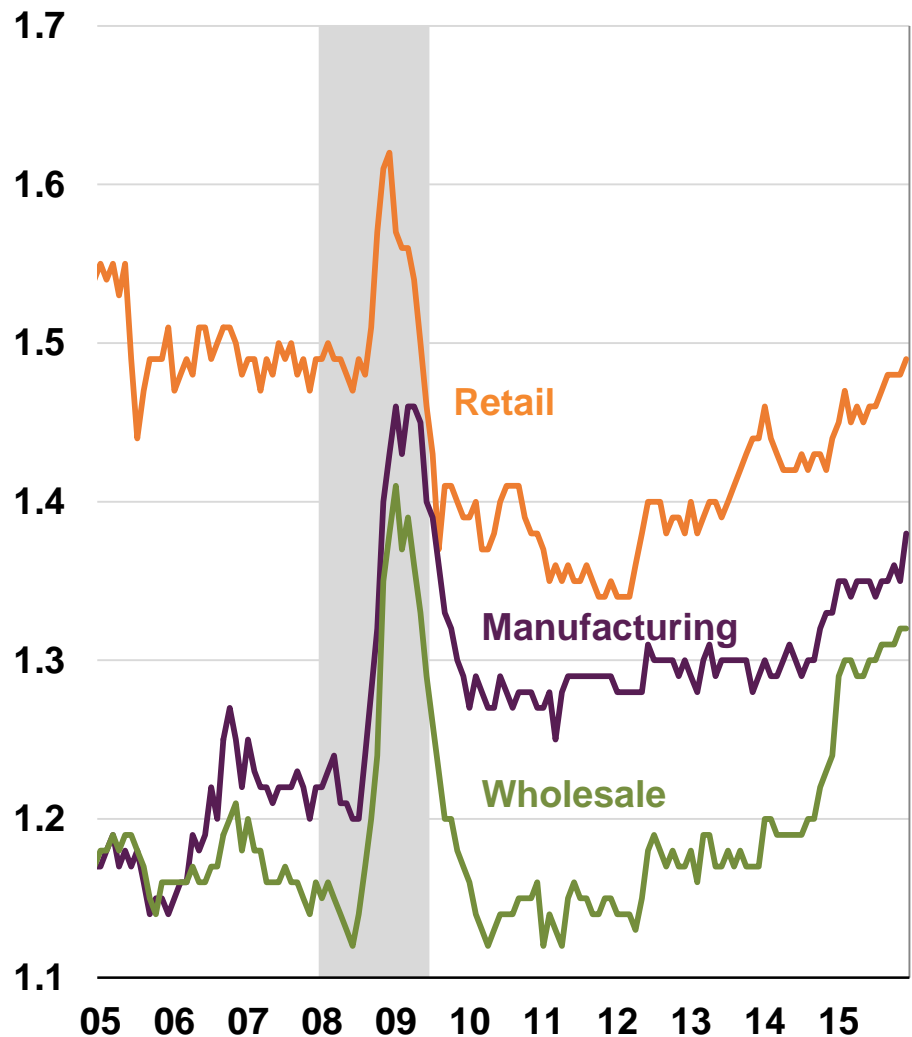


# A key unknown: Will inventories continue to weigh on near term growth?

Inventory to Sales Ratio: Total Business  
SA



Inventory to Sales Ratios  
SA



# Inventory adjustments clearly impacted 2015 growth – will that persist into 2016?

Real GDP Component and Tracking Forecasts			
	2015: Q3	2015: Q4 <sup>a</sup>	2016: Q1 <i>GDPNow</i> <sup>b</sup>
<b>Annualized GDP Growth</b>	2.0	0.7	2.6
<b>Annualized Final Sales Growth</b>	2.7	1.2	2.5

a. BEA Estimate, Jan. 29

b: Atlanta Fed estimate, Feb. 17

**Desperately in need of change.**

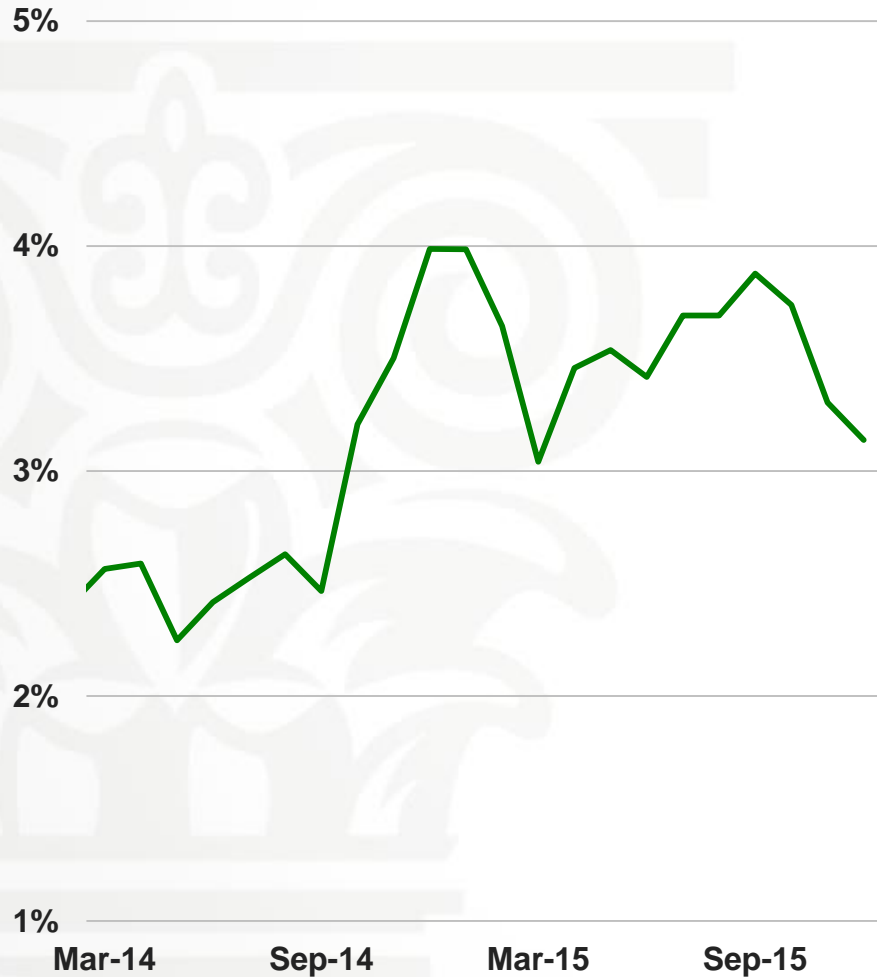
**The pace of consumer spending took a step down in the 4th quarter of last year.**

Real PCE		
	2015: Q3	2015: Q4 <sup>a</sup>
<b>Annualized Personal Consumption Expenditure Growth</b>	<b>3.0</b>	<b>2.2</b>

a. BEA Estimate, Jan. 29

# Despite the 4<sup>th</sup> quarter fall off in PCE growth, consumer income supported stronger spending than what we saw.

**Real Disposable Personal Income**  
year-over-year percent change, SA



Source: Bureau of Economic Analysis through December 2015

**Personal Savings Rate**  
percent



Source: Bureau of Economic Analysis through December 2015

**It's early, but consumers appeared to get back in the game in January.**

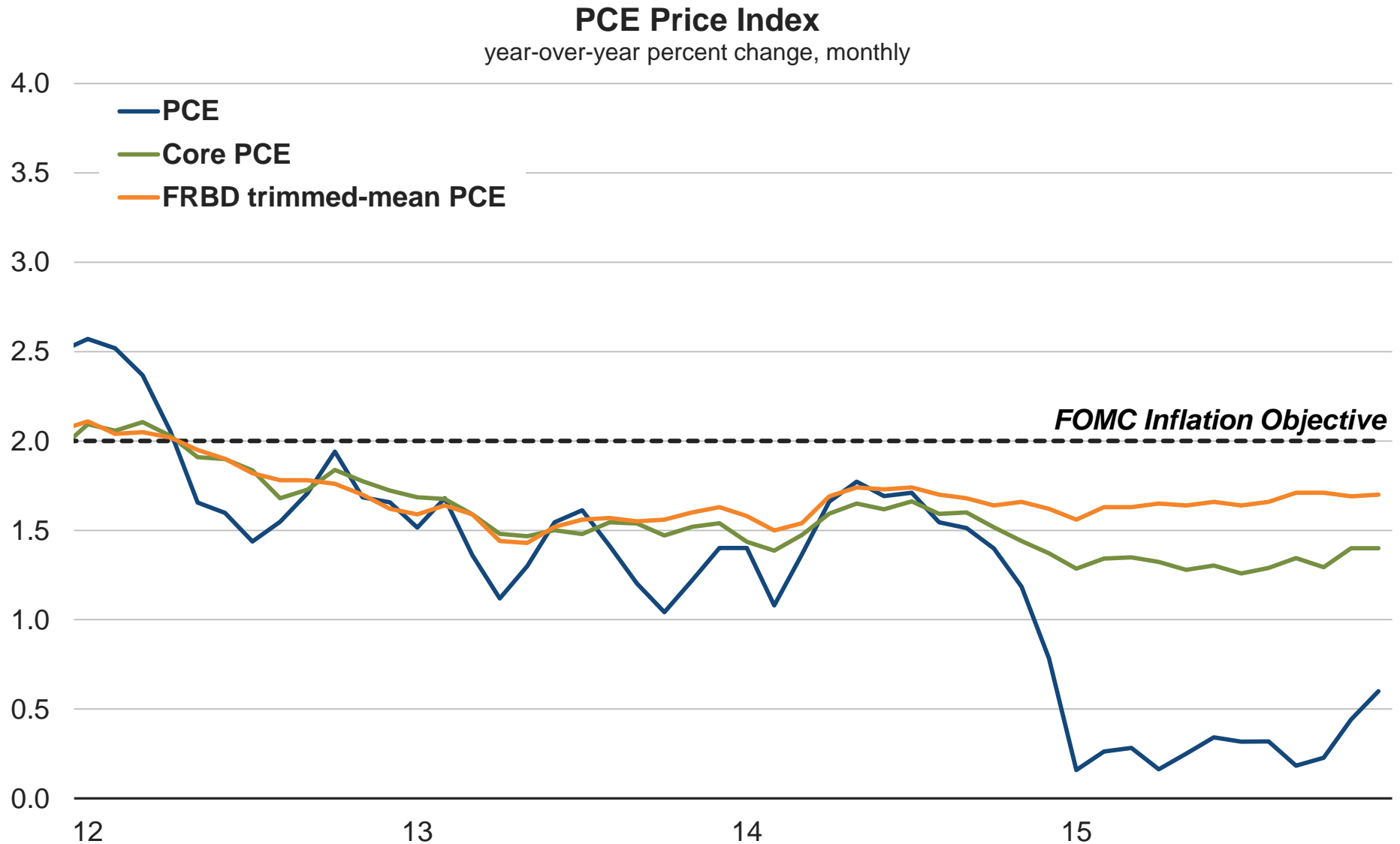
Real PCE			
	2015: Q3	2015: Q4 <sup>a</sup>	2016: Q1 <i>GDPNow</i> <sup>b</sup>
<b>Annualized Personal Consumption Expenditure Growth</b>	<b>3.0</b>	<b>2.2</b>	<b>3.3</b>

a. BEA Estimate, Jan. 29

b: Atlanta Fed estimate, Feb. 17

**Very gradual change.**

Even trend measures that “look through” temporary influence are running soft to the FOMC’s objective.





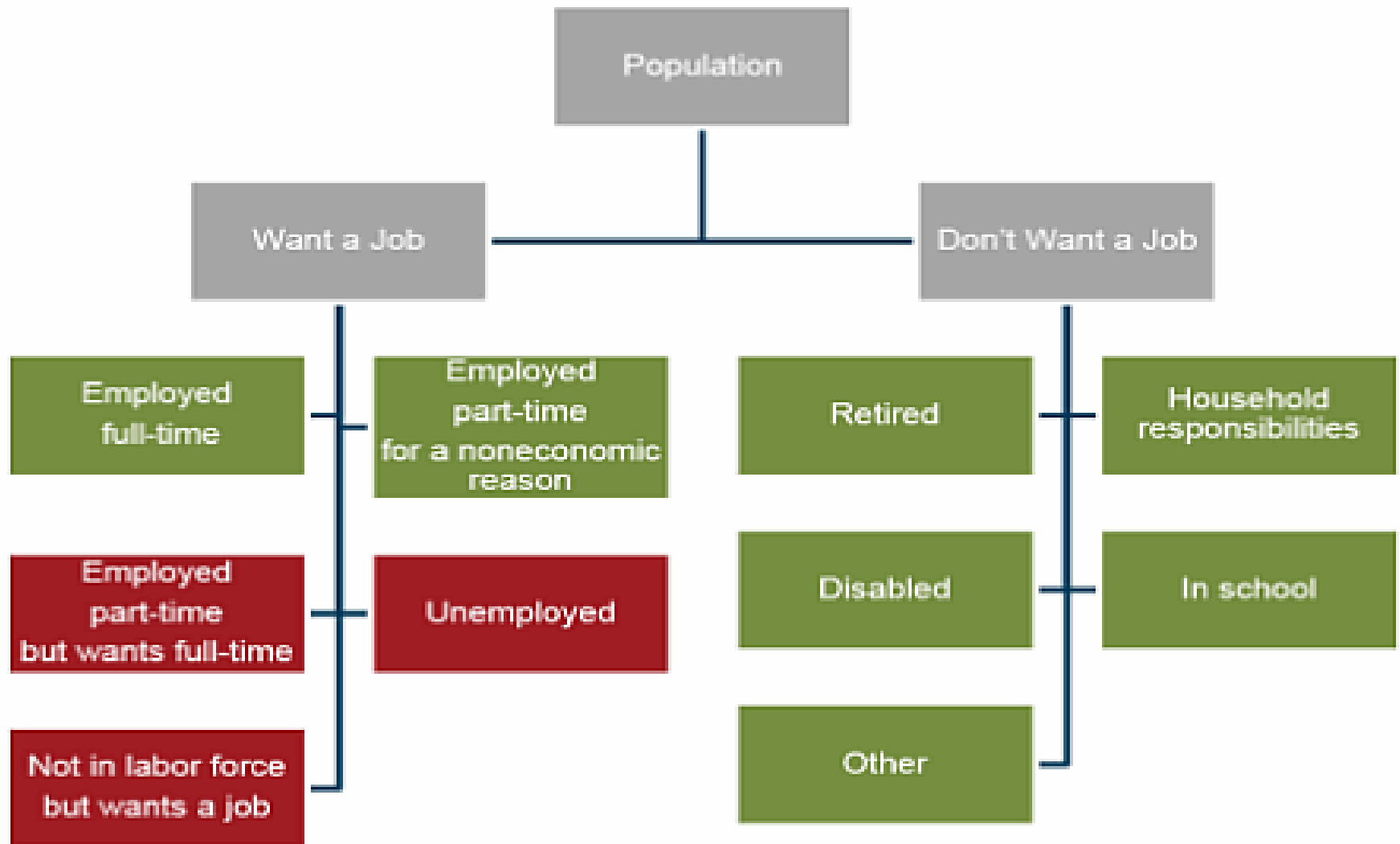
**We are still assuming some improvement in the inflation numbers as the year progresses, but still shy of the goal.**

	2015:q4/q4	2016:q4/q4
<u>PCE Inflation</u>		
Preliminary Forecast	0.4 <sup>a</sup>	1.6
<u>Core PCE Inflation</u>		
Preliminary Forecast	1.4 <sup>b</sup>	1.8

a: assumes 0% in QIV.

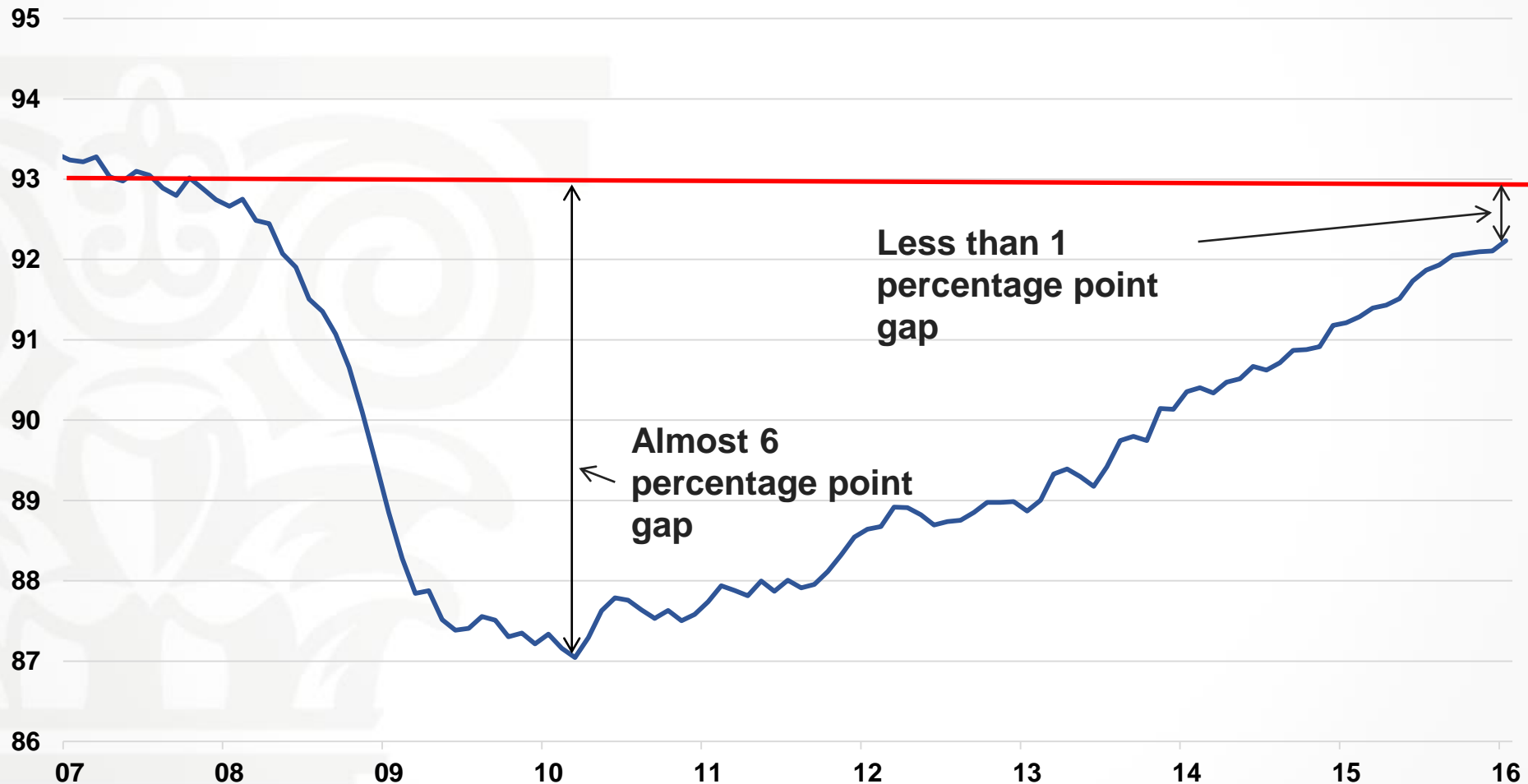
b: assumes 1.25% in QIV.

# How the world is organized, according to the unemployment statistics.

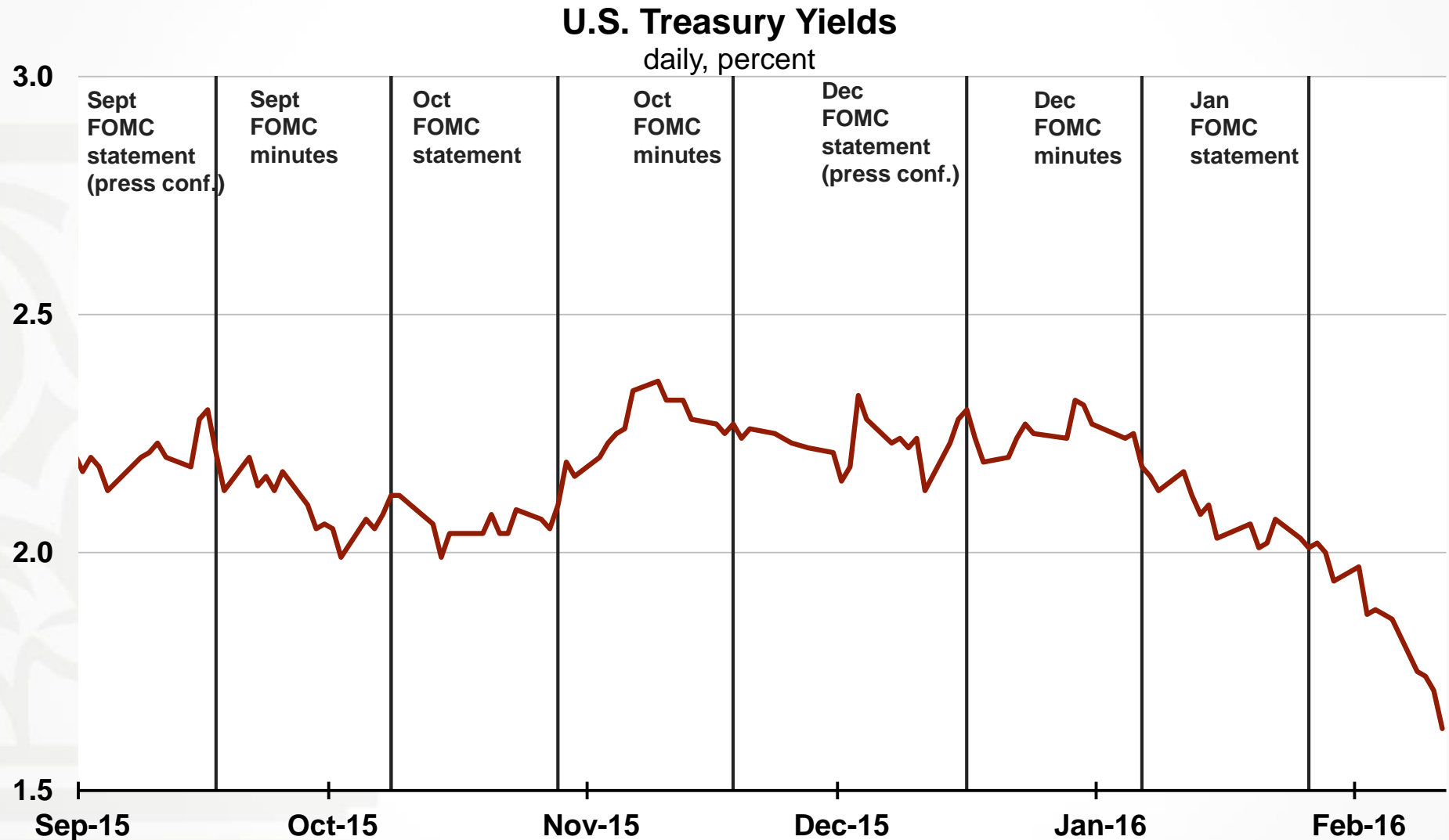


# Though we are probably close to “full employment”, we are still not quite there.

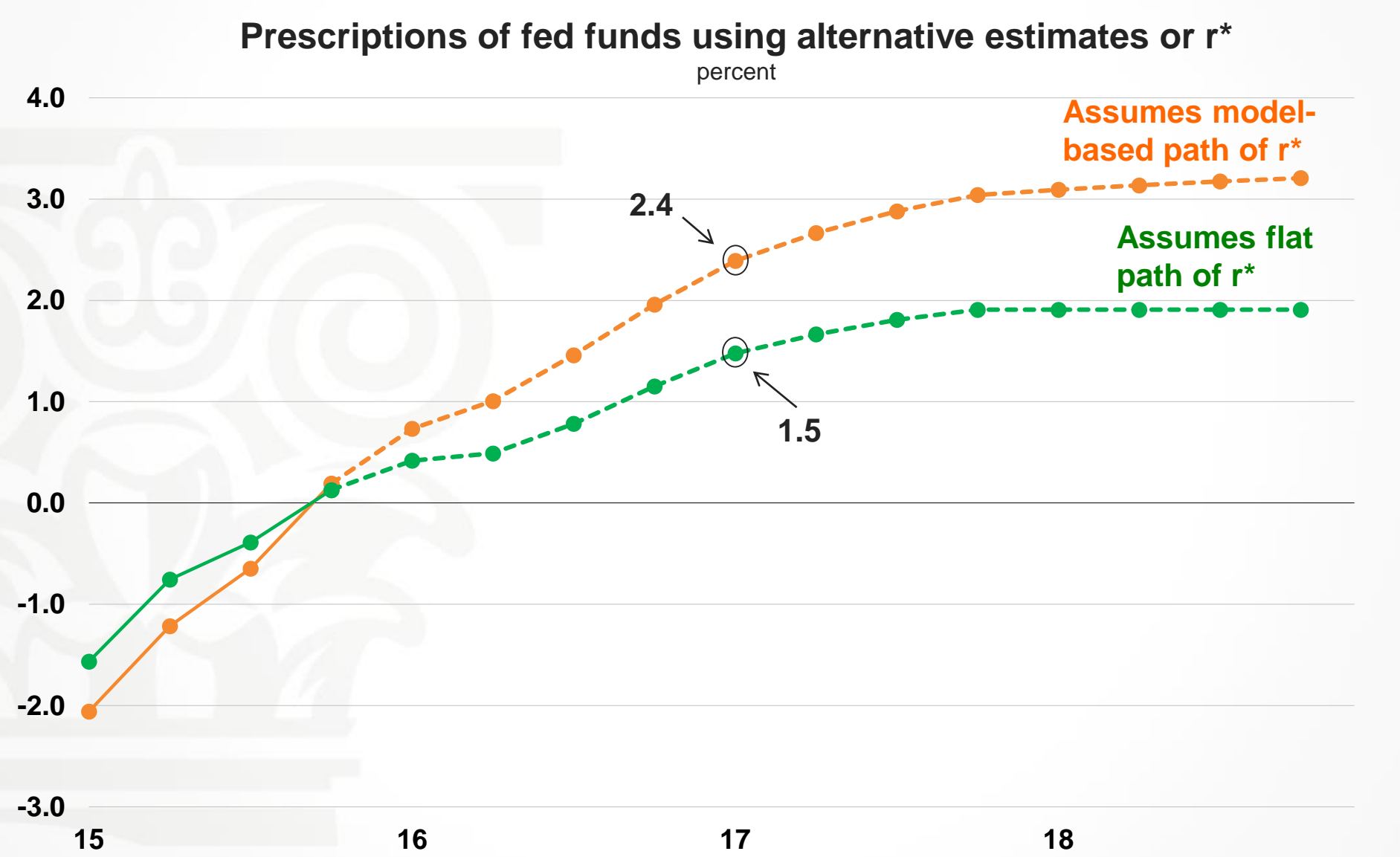
**ZPOP: The Share of the Population Fully Utilized**  
percent, seasonally-adjusted



# Interest rates are not made of Fed policy alone -- finding the “neutral rate” (or “ $r^*$ ”) is an art.



# Our *forecasts* and preferred policy benchmark imply relatively modest changes in the policy rate through 2016.





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