

# Warren County Office of Economic Development



## Ahead of the Curve 2015-2017

ITR Economics

[itreconomics.com](http://itreconomics.com)

Brian L Beaulieu

# 2014 Forecast Results

	Duration	Forecast	Result	Accuracy
US GDP	15	\$16.098 Trillion	\$16.317 Trillion	98.7%
US Ind. Prod.	13	101.5 (12MMA)	104.1	97.4%
EU Ind. Prod.	14	100.6 (12MMA)	101.5	99.1%
Canada Ind Prod	9	350.1 (12MMA)	C\$357.1	98.0%
China Ind Prod	21	564.9 (12MMA)	563.6	99.8%
US Housing	12	955 Ths. Units	1.0 mils. Units	94.7%
US Retail Sales	16	\$2.751 Trillion	\$2.808 Trillion	98.0%
US Employment	13	144.9 Million	146.3 Million	99.0%

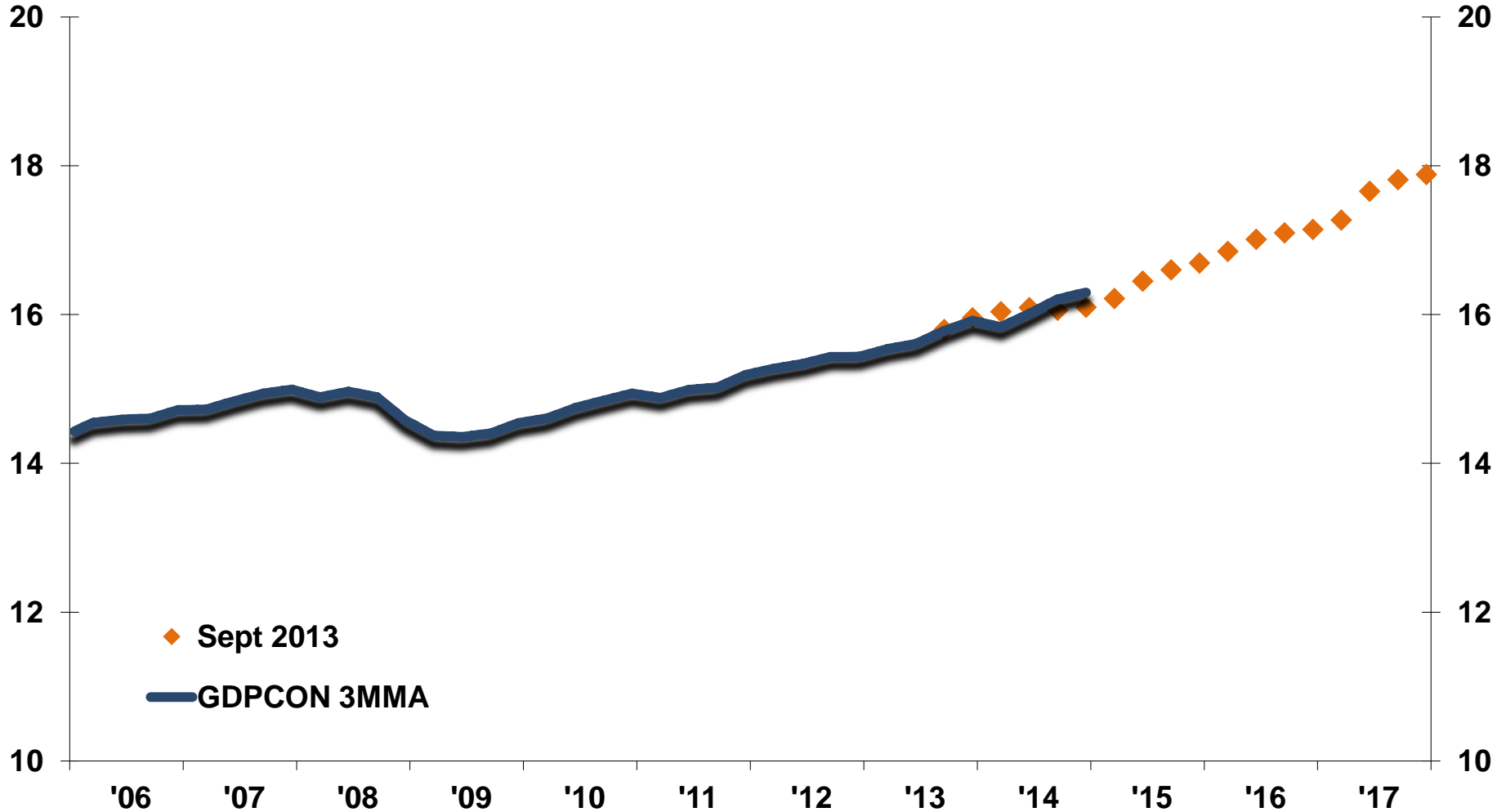
\*Denotes year-end estimate based on most recent data available

***ITR Economics provides the best economic intelligence to reduce risk and drive practical and profitable business decisions.***

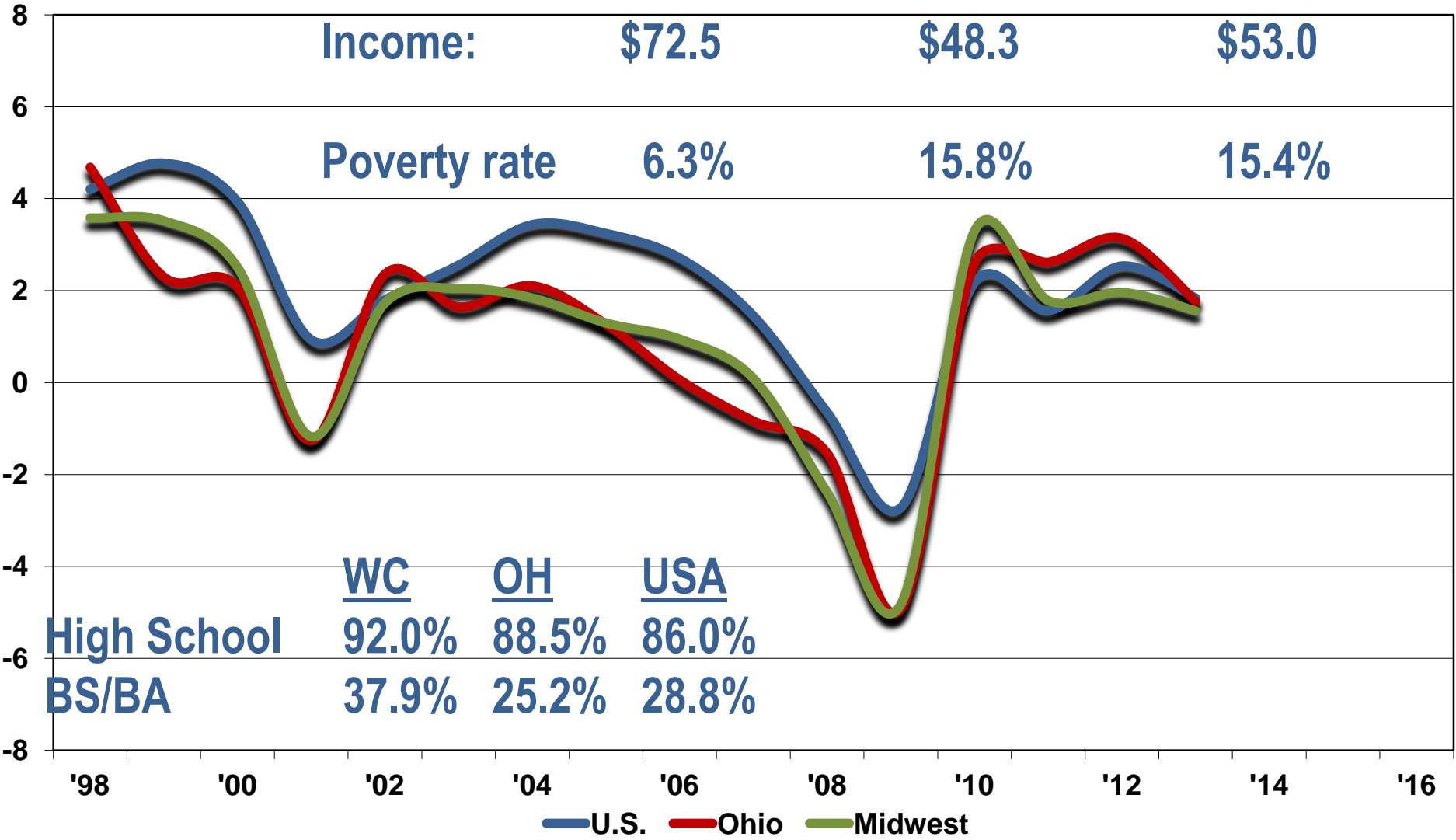
# Real Gross Domestic Product

Sept 2013

June 2013

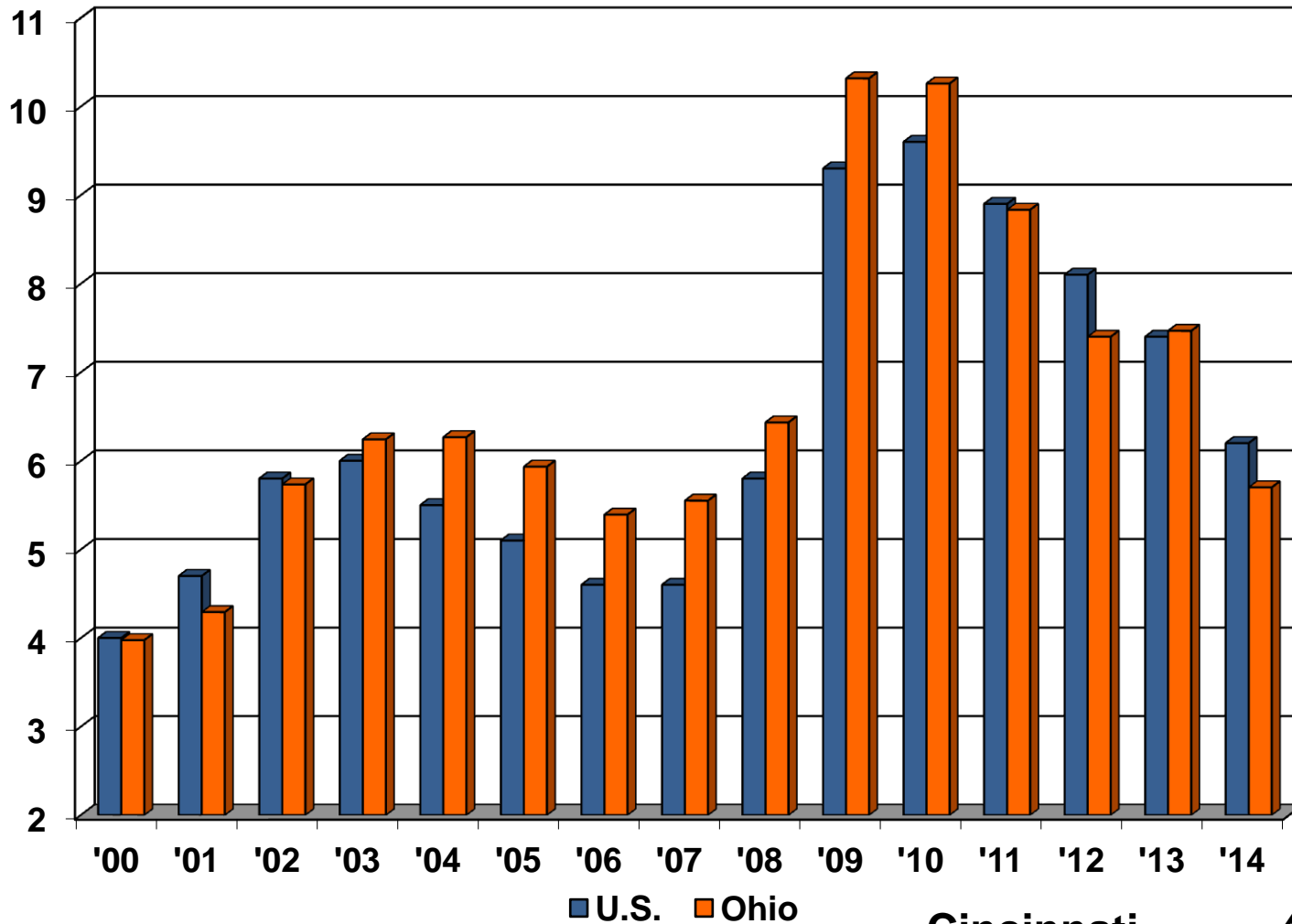


# US, Ohio & the Midwest Annual GSP Growth Rate





# Unemployment Rates



**Feb 2015**

**OH 5.1%**

**US 5.5%**

**Cincinnati 4.1%**

**Dayton 6.1%**

# Data Preparation

	<u>Raw</u>	<u>3MMT</u>	<u>3/12</u>	<u>12MMT</u>	<u>12/12</u>
May-13	1.4				
Jun-13	1.5				
Jul-13	1.5	4.4			
Aug-13	1.4	4.4			
Sep-13	1.5	4.4			
Oct-13	1.3	4.2			
Nov-13	1.3	4.1			
Dec-13	1.6	4.2			
Jan-14	1.6	4.5			
Feb-14	1.5	4.7			
Mar-14	1.7	4.8			
Apr-14	1.6	4.8		18.0	
May-14	1.7	5.0		18.2	
Jun-14	1.7	5.0		18.4	
Jul-14	1.7	5.1	15.9%	18.6	
Aug-14	1.6	5.0	13.6%	18.8	
Sep-14	1.7	5.0	13.6%	19.0	26.7%
Oct-14	1.5	4.8	14.3%	19.2	25.5%
Nov-14	1.5	4.7	14.6%	19.4	25.2%
Dec-14	1.9	4.9	16.7%	19.7	22.4%
Jan-15	1.7	5.1	13.3%	19.8	20.0%
Feb-15	1.7	5.3	12.8%	20.0	18.3%
Mar-15	1.9	5.3	10.4%	20.2	15.4%
Apr-15	1.7	5.3	10.4%	20.3	12.7%

## 3/12 Rate-of-Change

$$= \frac{\text{April 2015 3MMT}}{\text{April 2014 3MMT}} \times 100 - 100$$

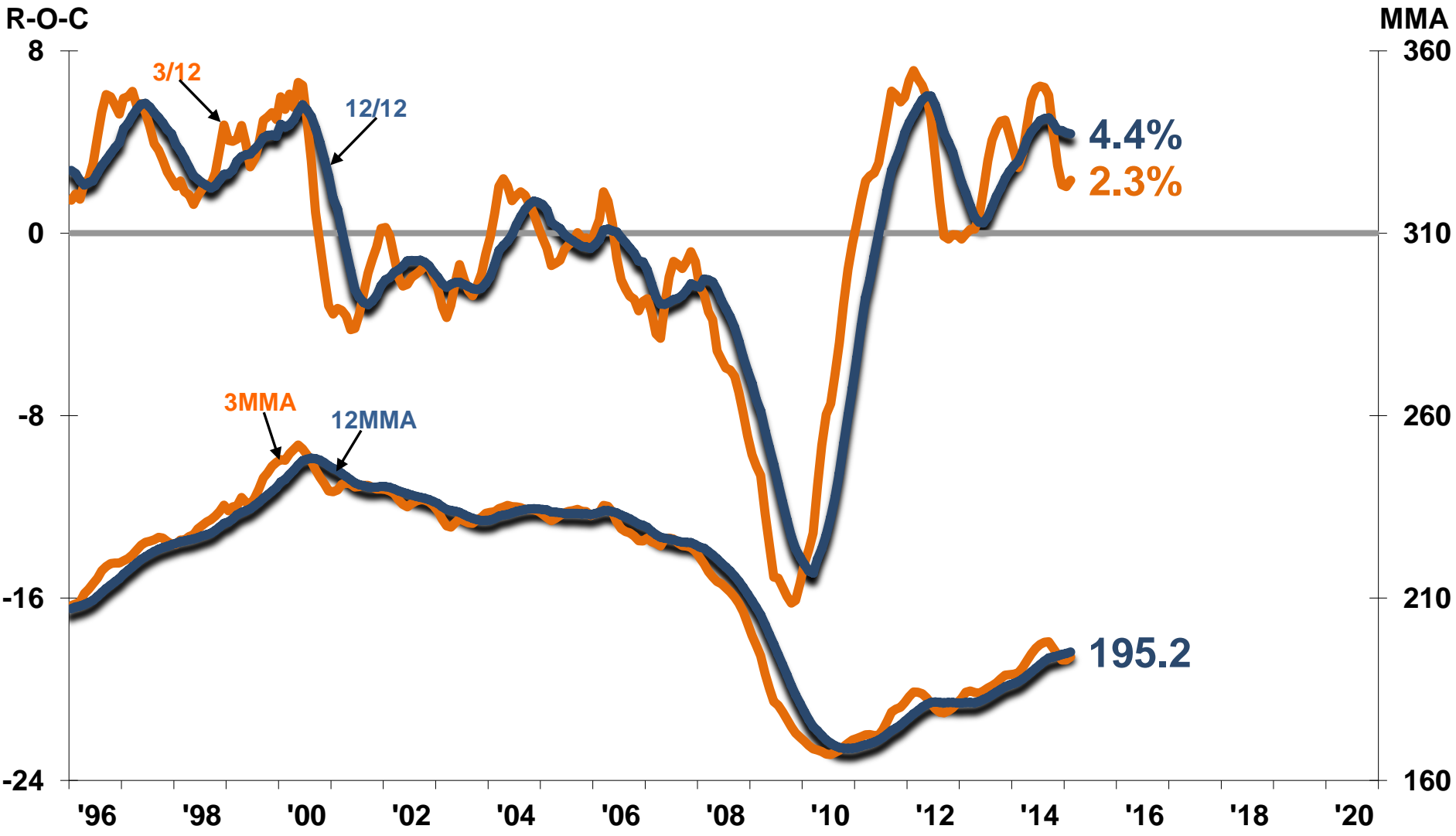
$$= \frac{5.3}{4.8} \times 100 - 100 = 10.4\%$$

## 12/12 Rate-of-Change

$$= \frac{\text{April 2015 12MMT}}{\text{April 2014 12MMT}} \times 100 - 100$$

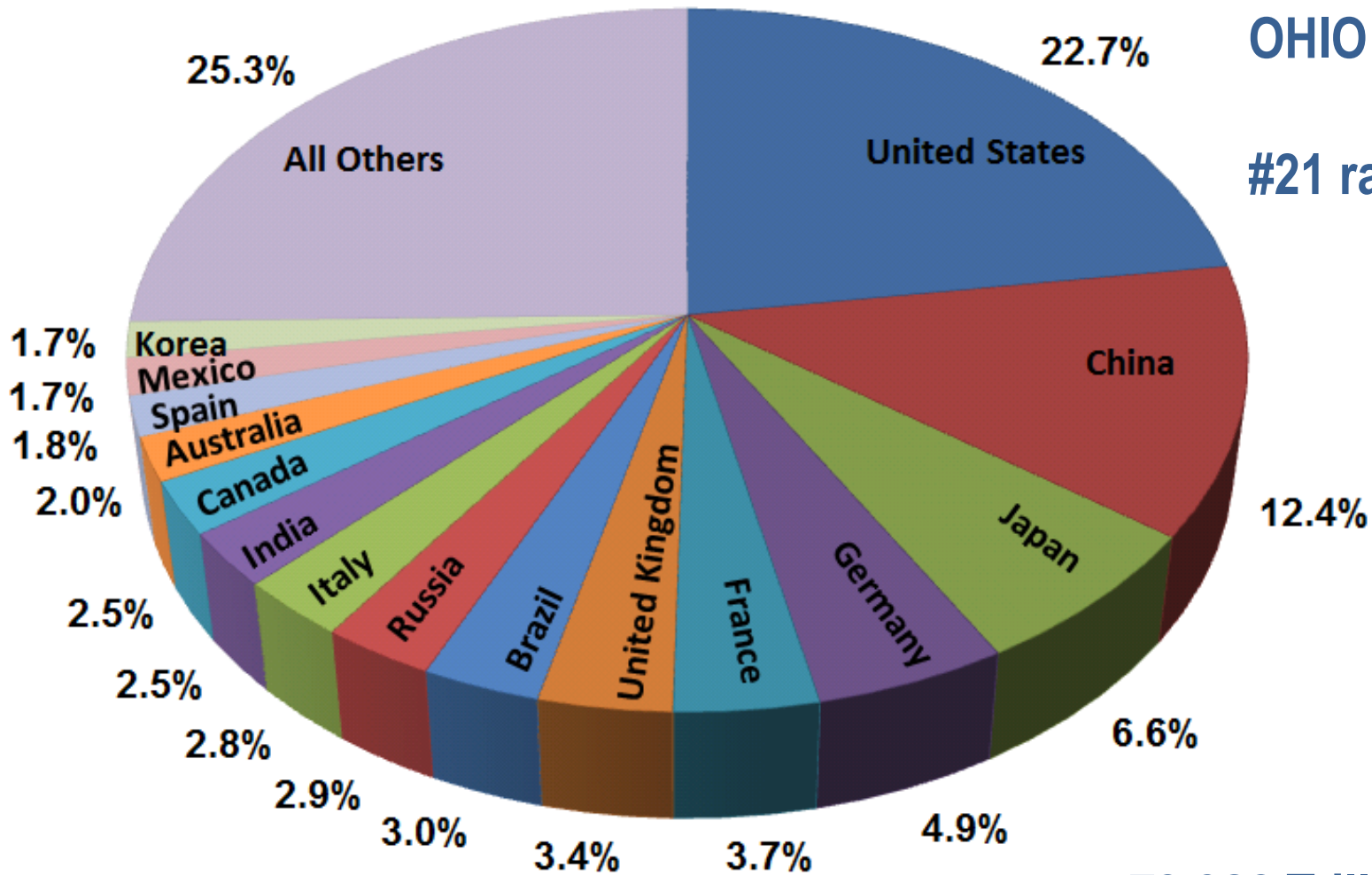
$$= \frac{20.3}{18.0} \times 100 - 100 = 12.7\%$$

# Ohio Construction Industry Employment



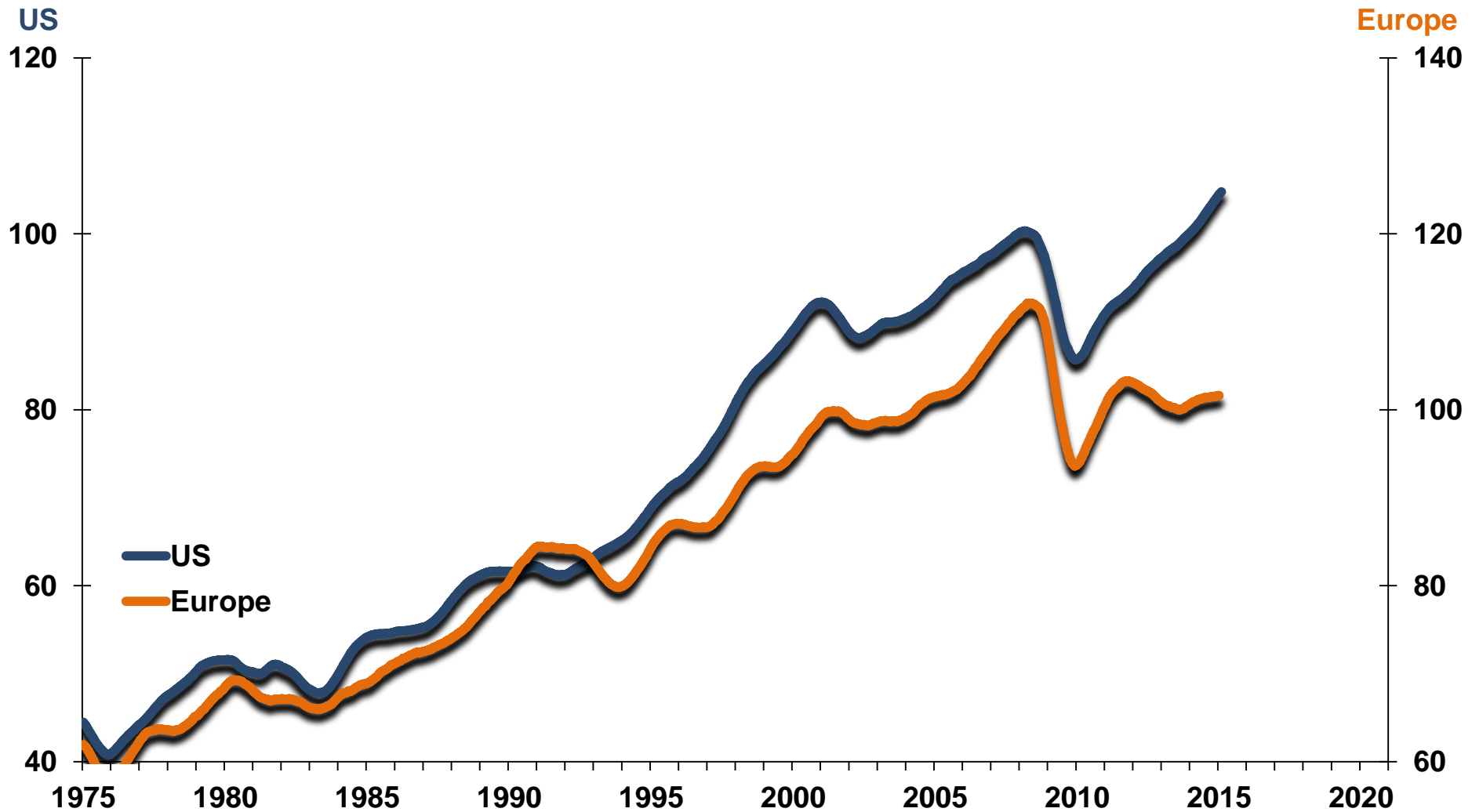
# World GDP, Trillions of US \$, Current Prices

**OHIO / IRAN**  
**#21 ranking**

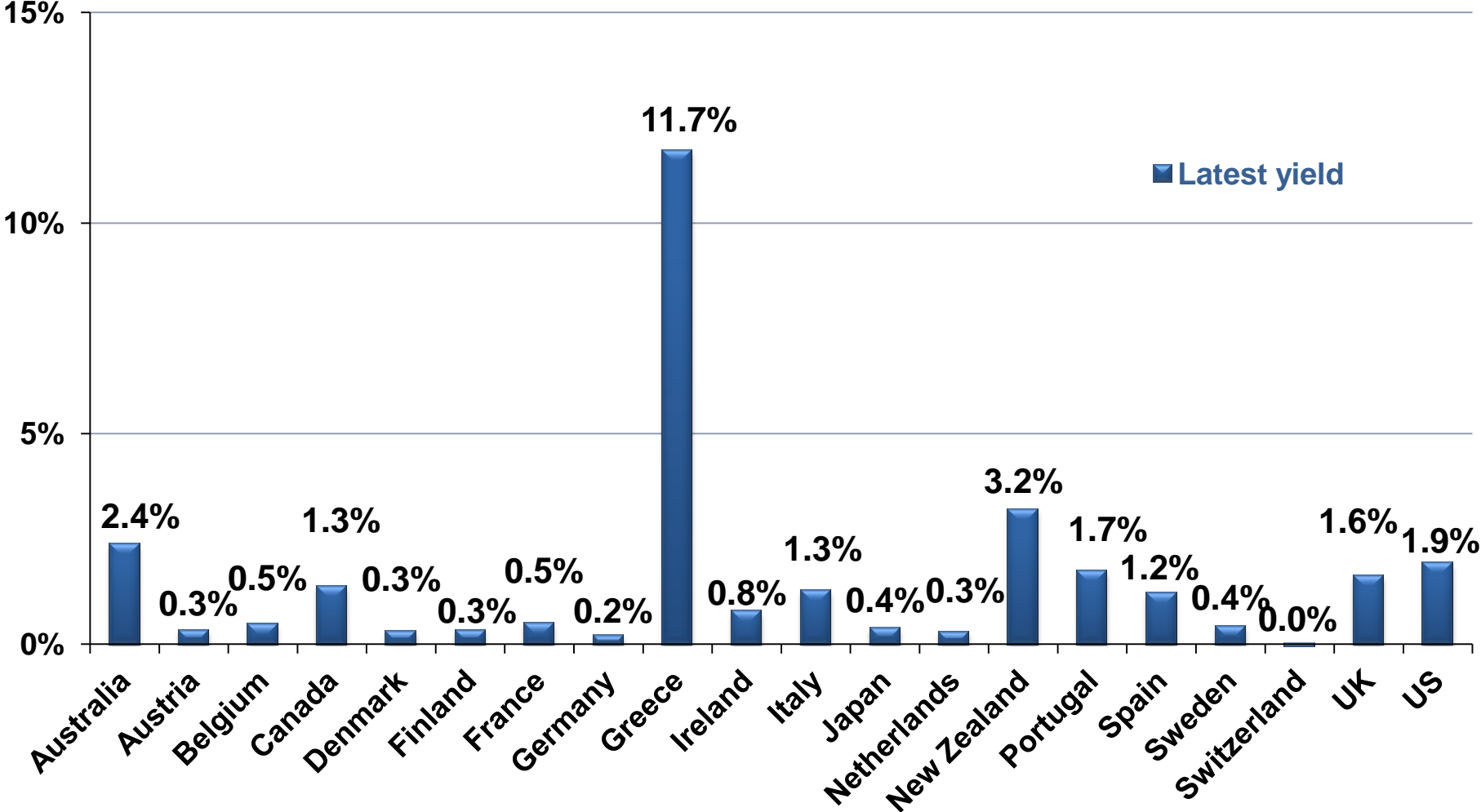


**73.982 Trillion US\$**  
**Percent of 2013 World GDP**

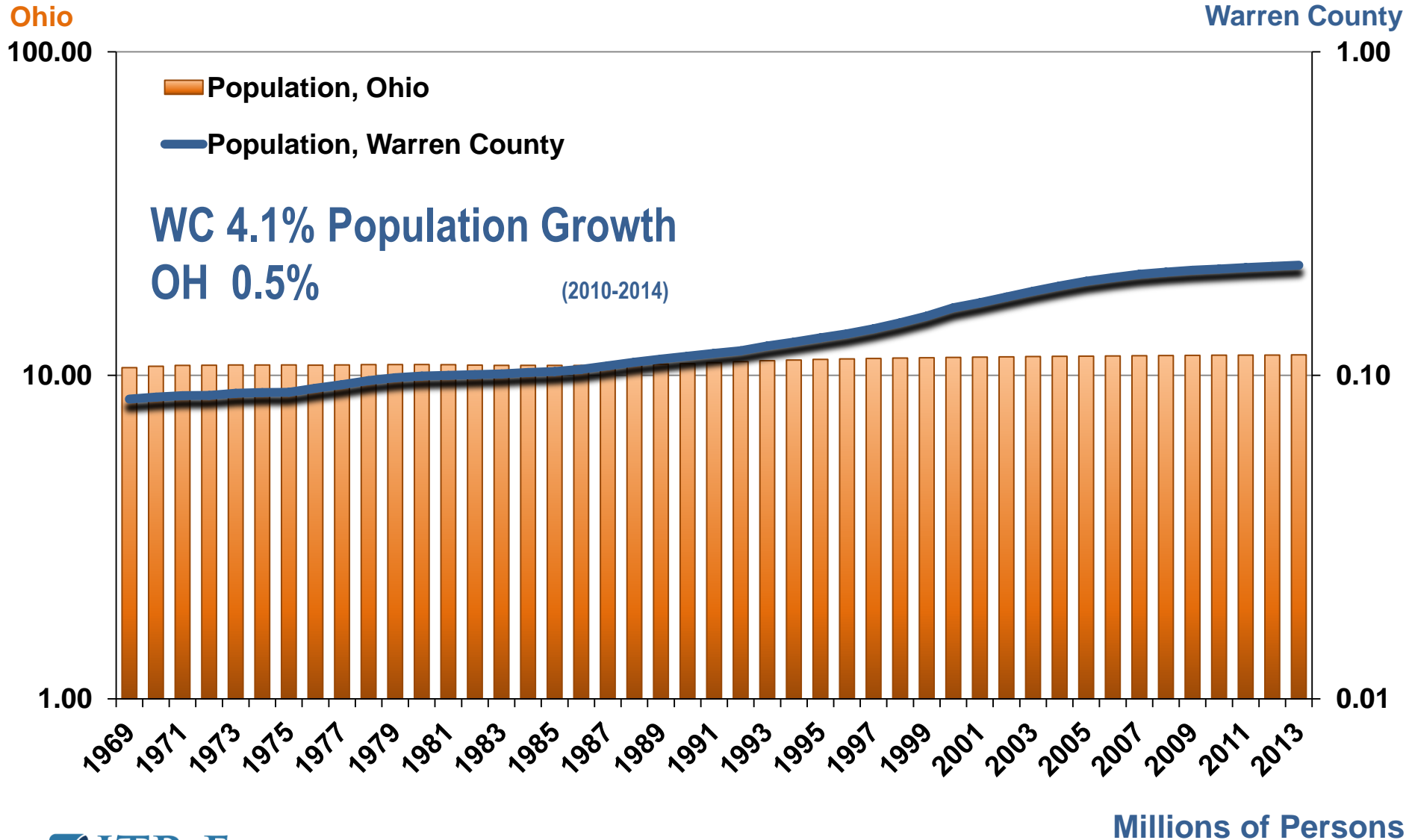
# US to Europe Industrial Production



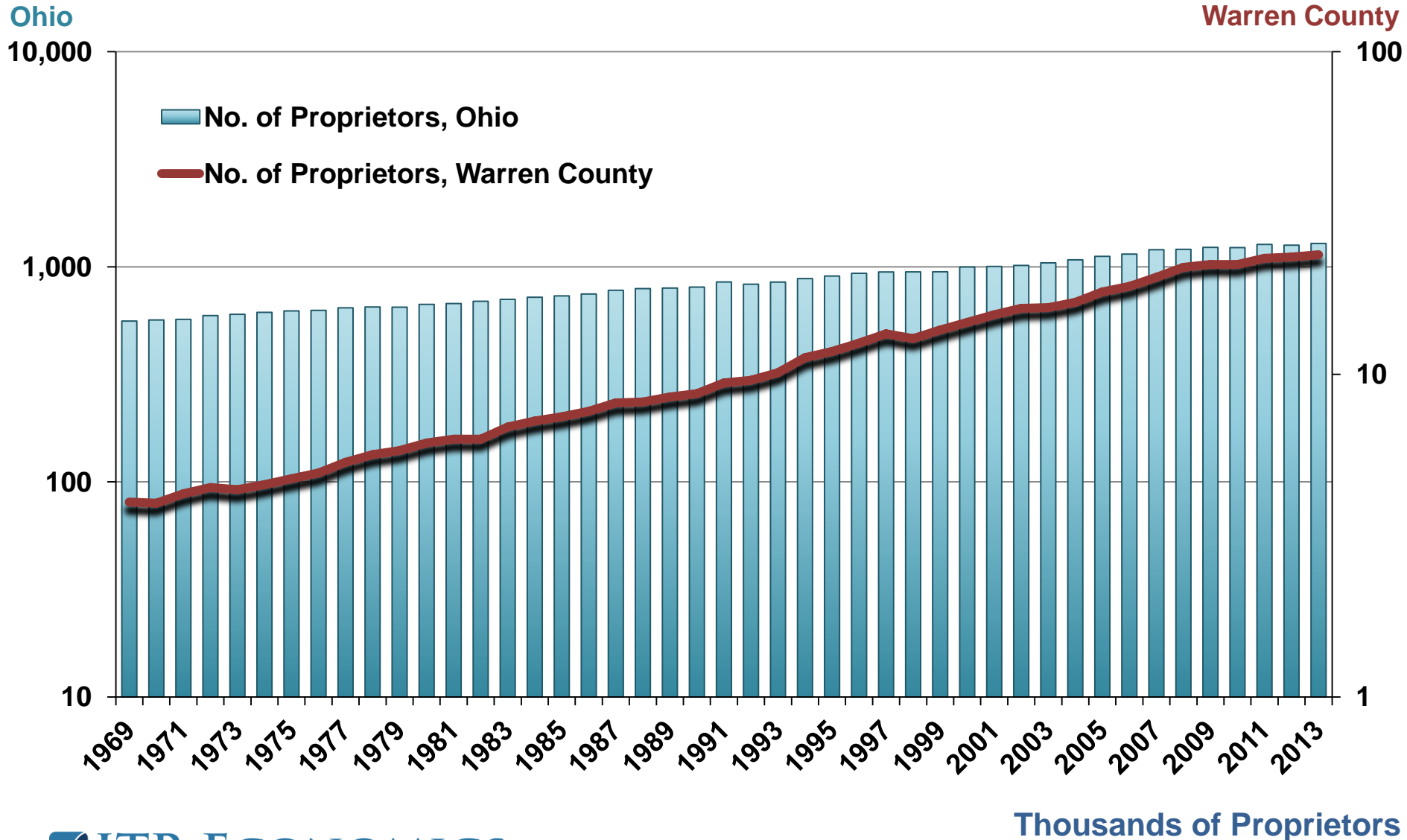
# Interest Rates for Long-Term Government Bonds



# Ohio to Warren County Population

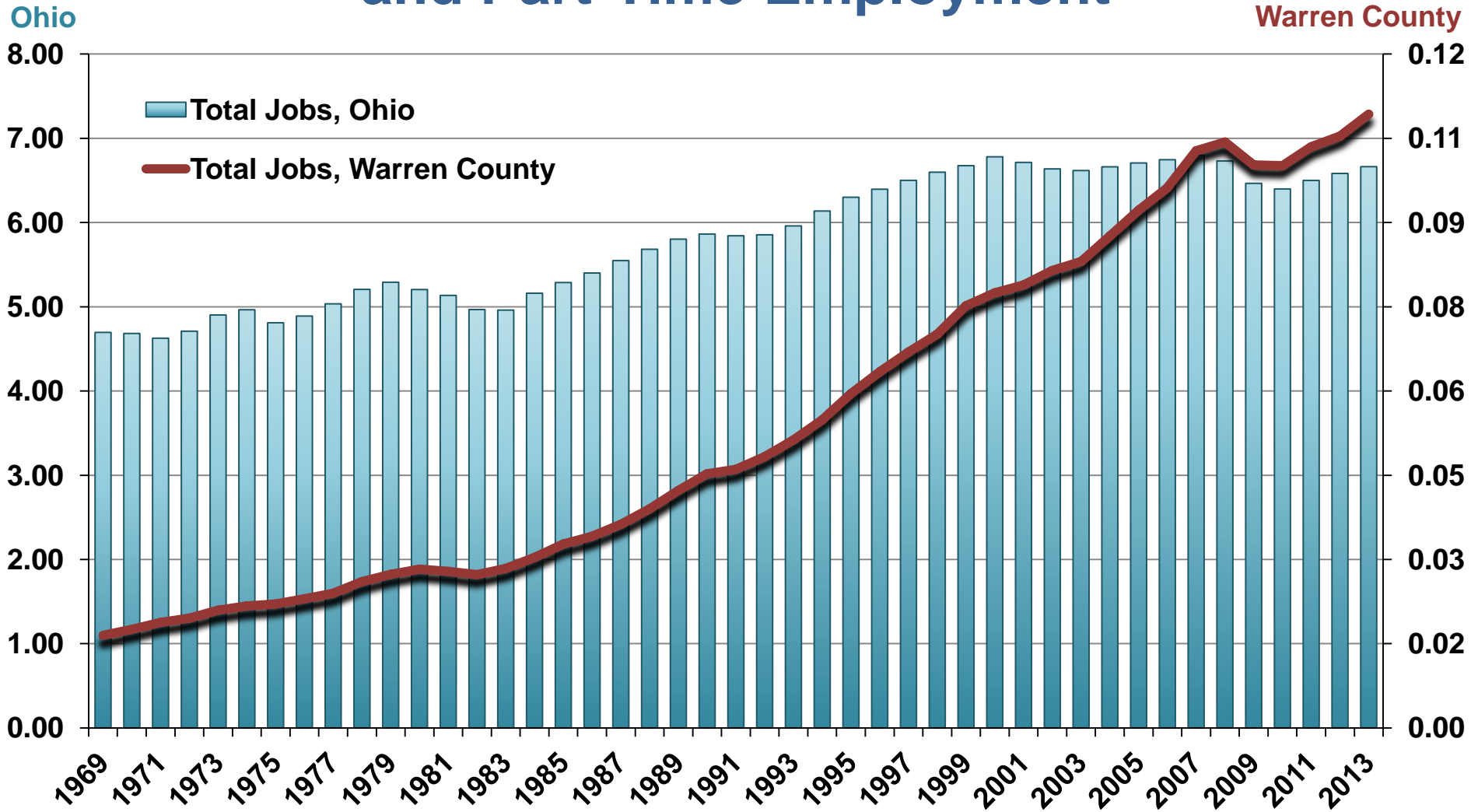


# Ohio to Warren County Number of Proprietors





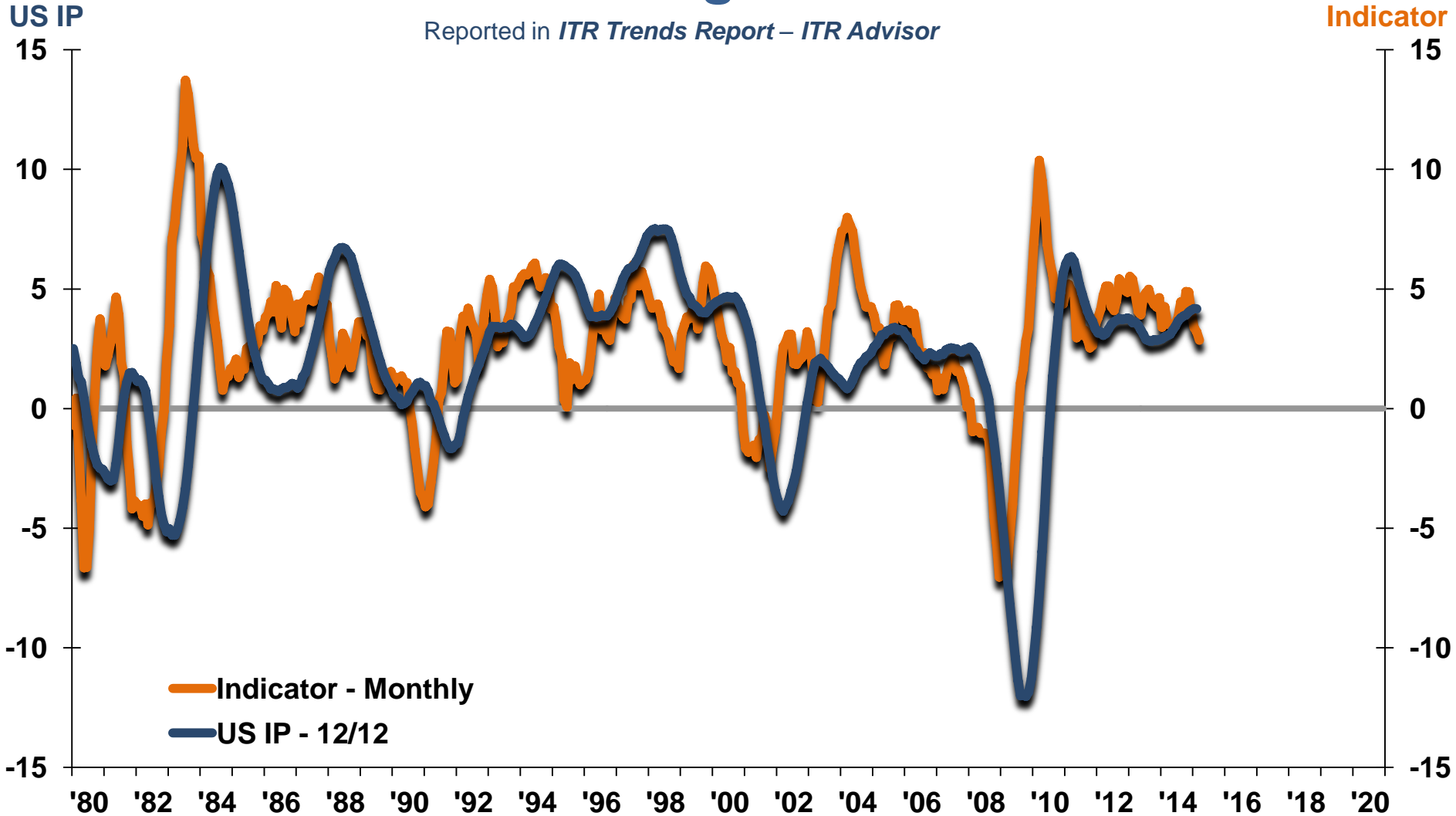
# Ohio to Warren County Total Full-Time and Part-Time Employment



# US Industrial Production to ITR Leading Indicator™

Reported in *ITR Trends Report – ITR Advisor*

Indicator

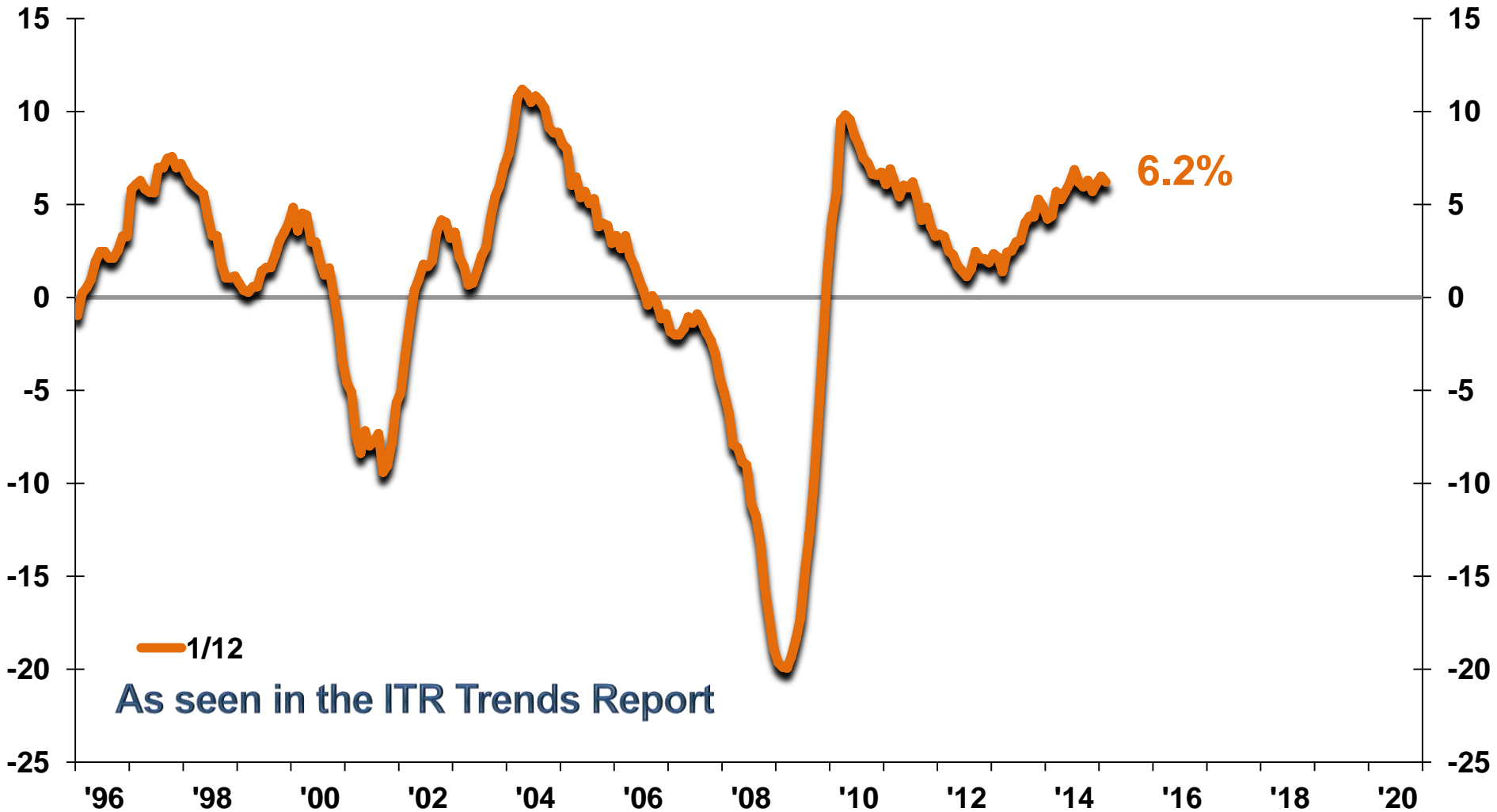


Indicator - Monthly

US IP - 12/12

USIP – 12/12 Indicator - Monthly

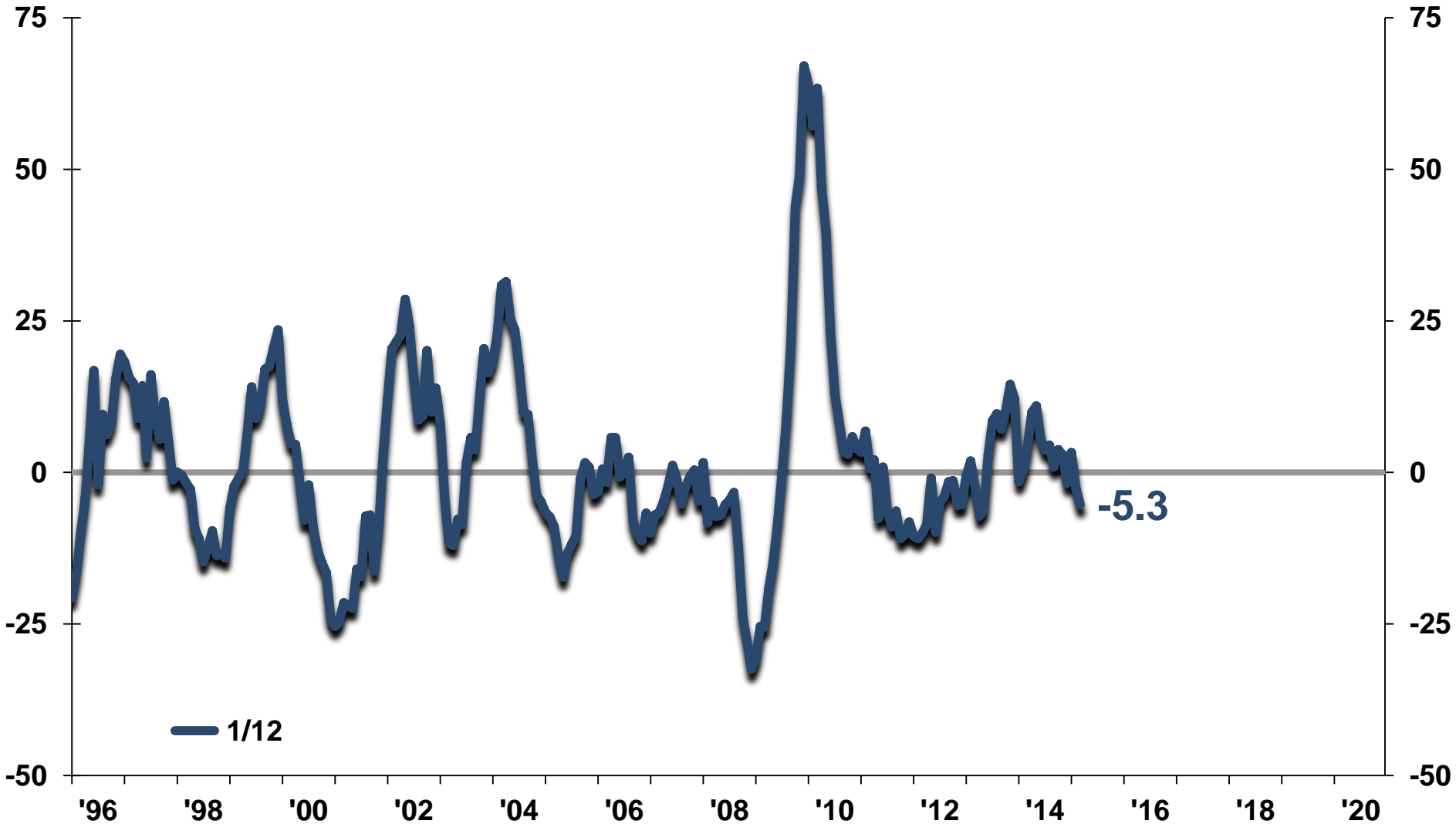
# US Leading Indicator



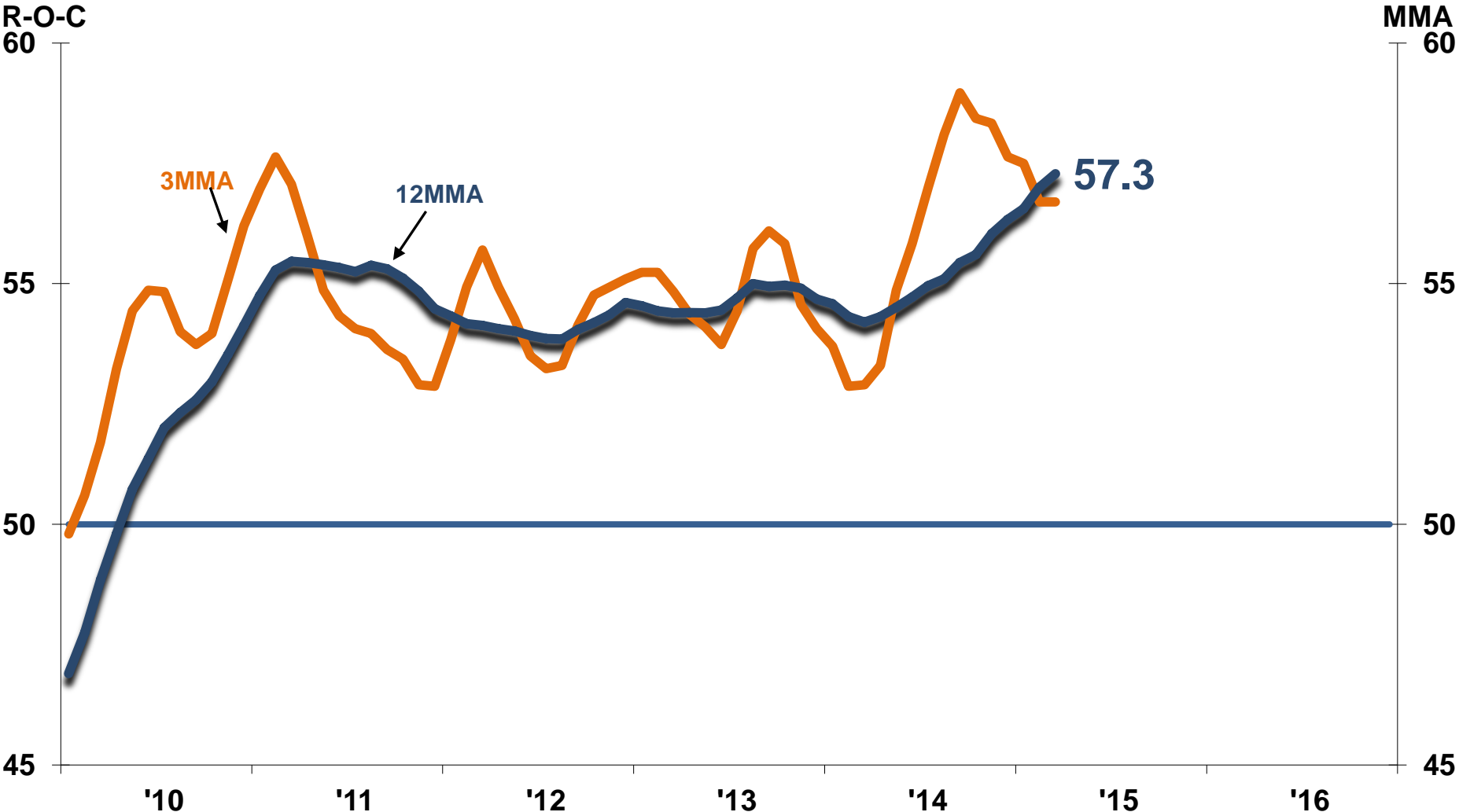
— 1/12  
As seen in the ITR Trends Report

2010 = 100

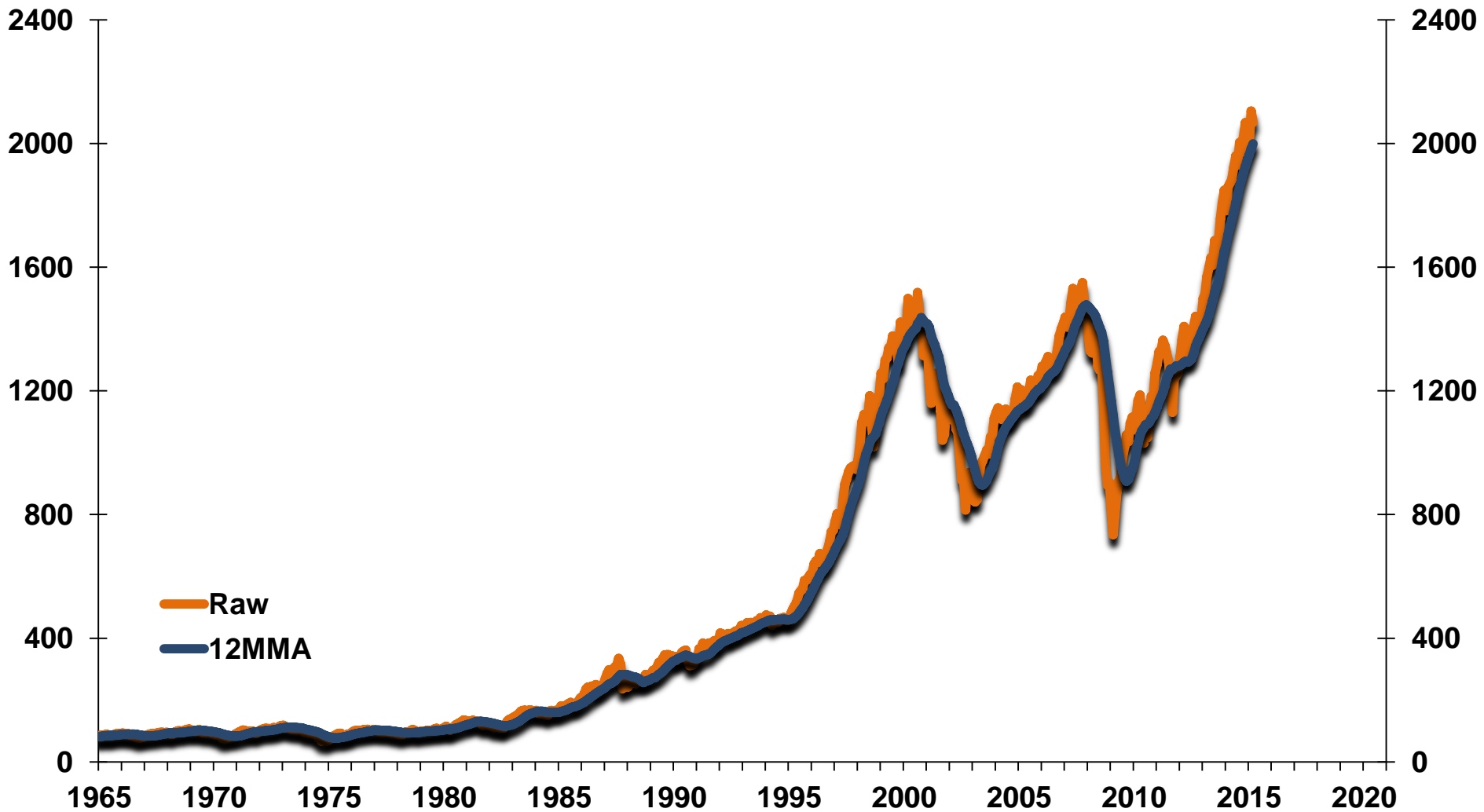
# Purchasing Managers Index



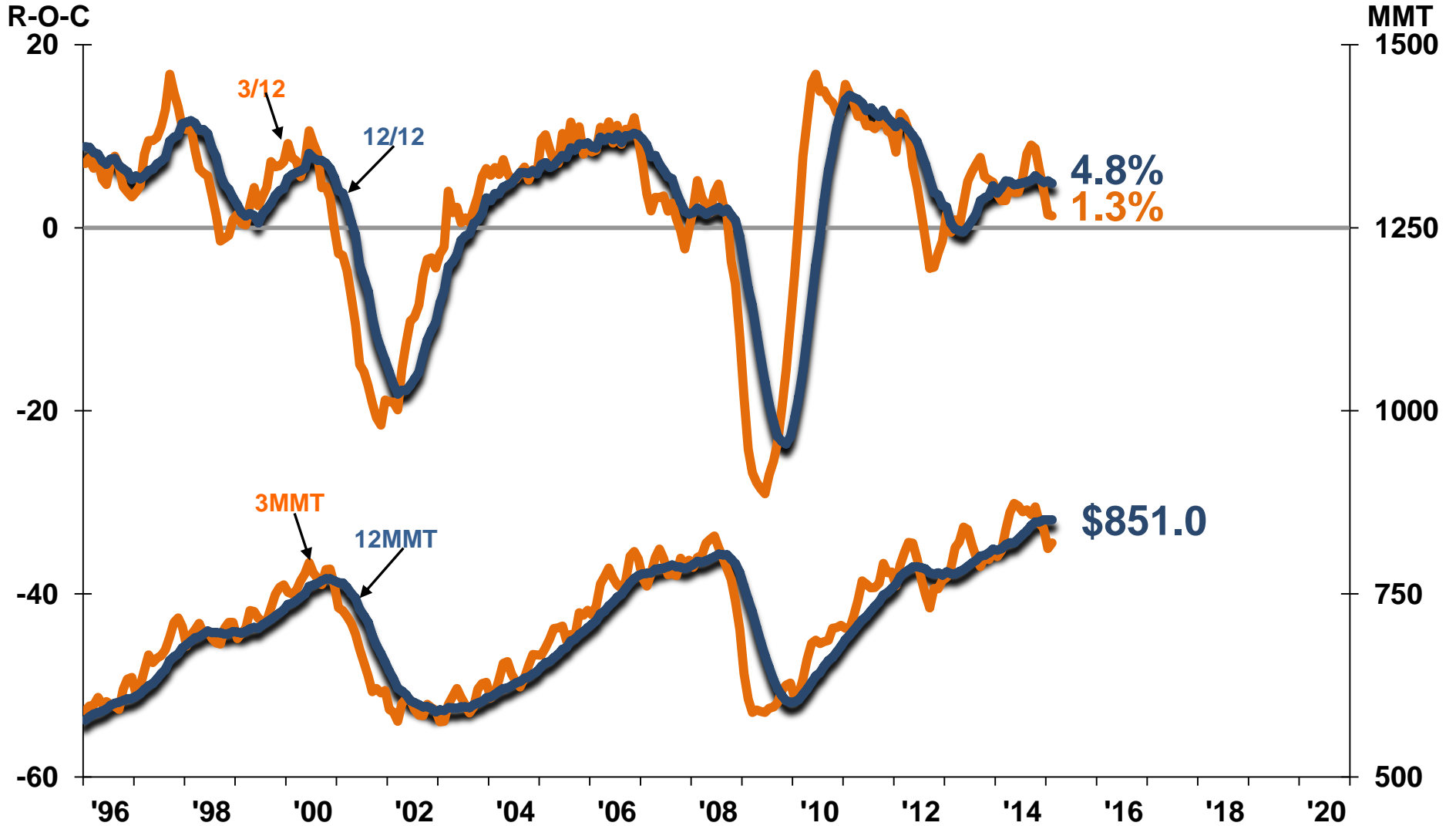
# Non-Manufacturing Purchasing Managers Index



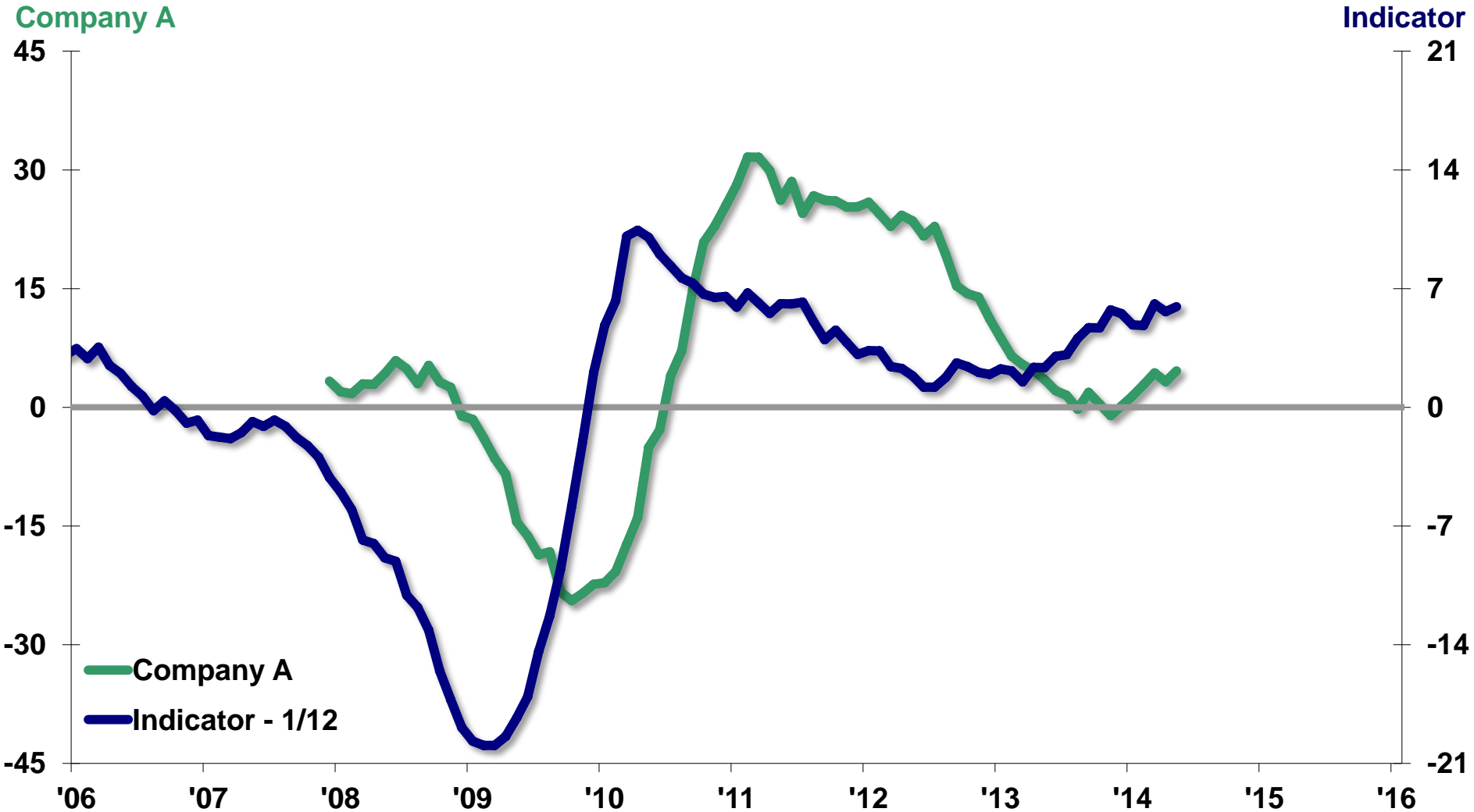
# S&P500 Stock Prices Index



# Nondefense Capital Goods New Orders w/o Aircraft



# Executive Vantage Point (EVP) for Companies



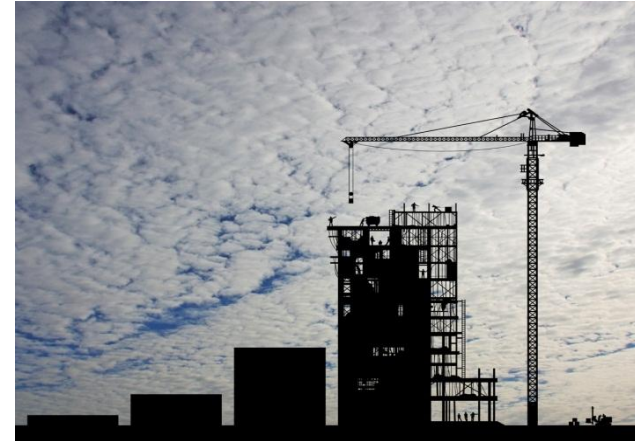


# Generating the Quantitative Forecast

## Internal Trends



## Leading Economic Indicators



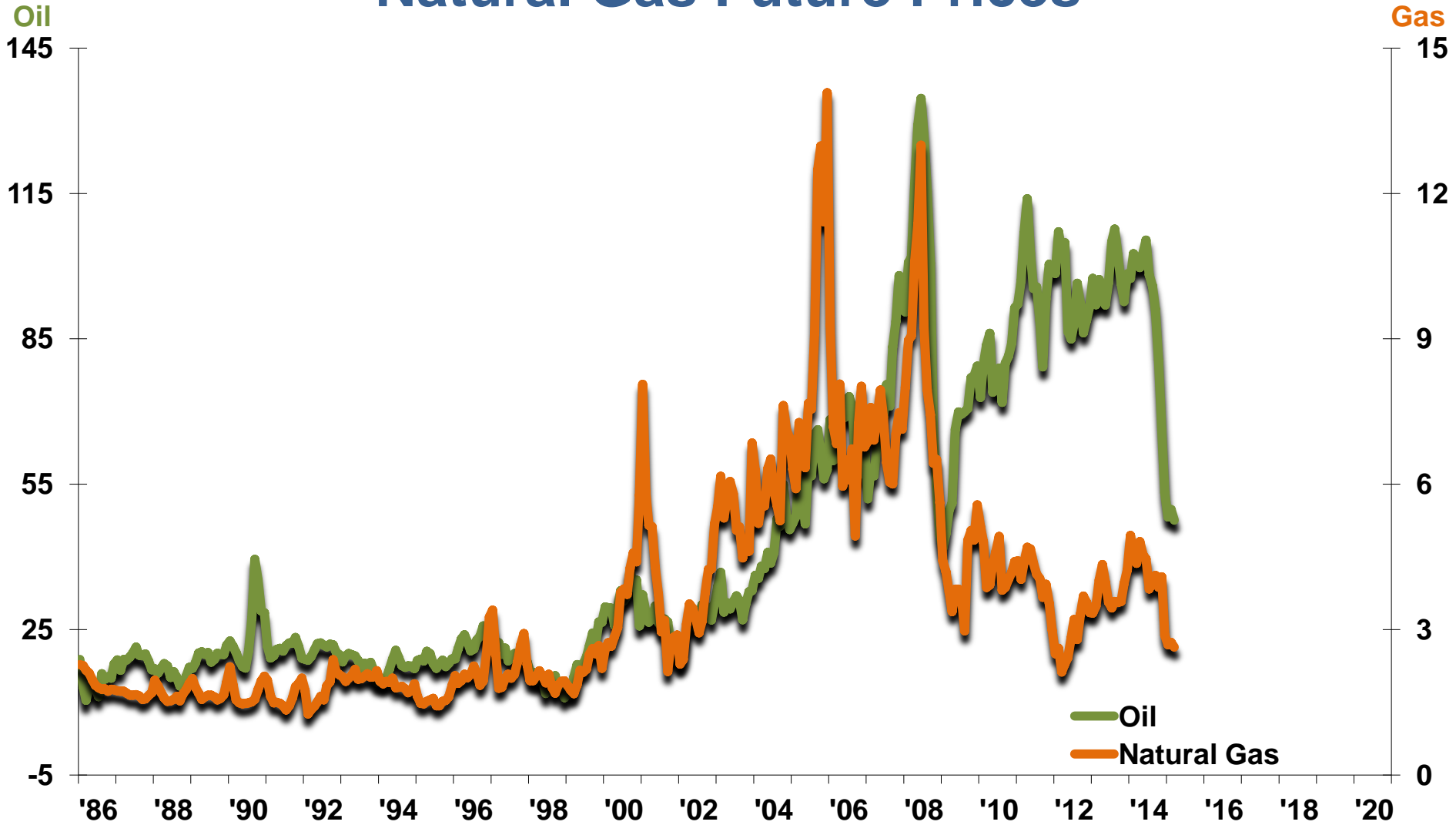
## ITR Long Term Business Cycle Theory



## News and Market Observations



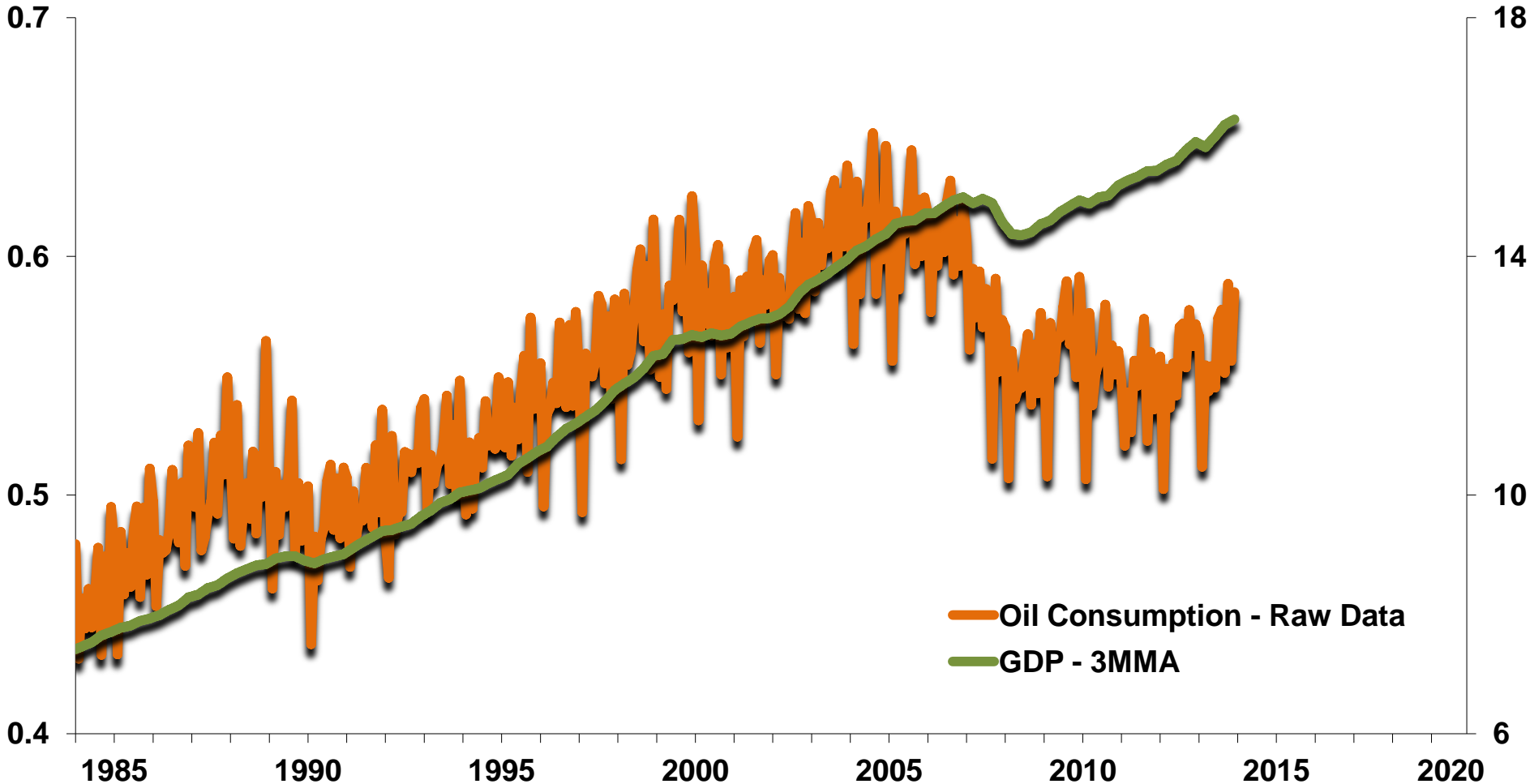
# Crude Oil Futures Prices to Natural Gas Future Prices



# US Consumption of Crude Oil & Petroleum Products to Real Gross Domestic Product

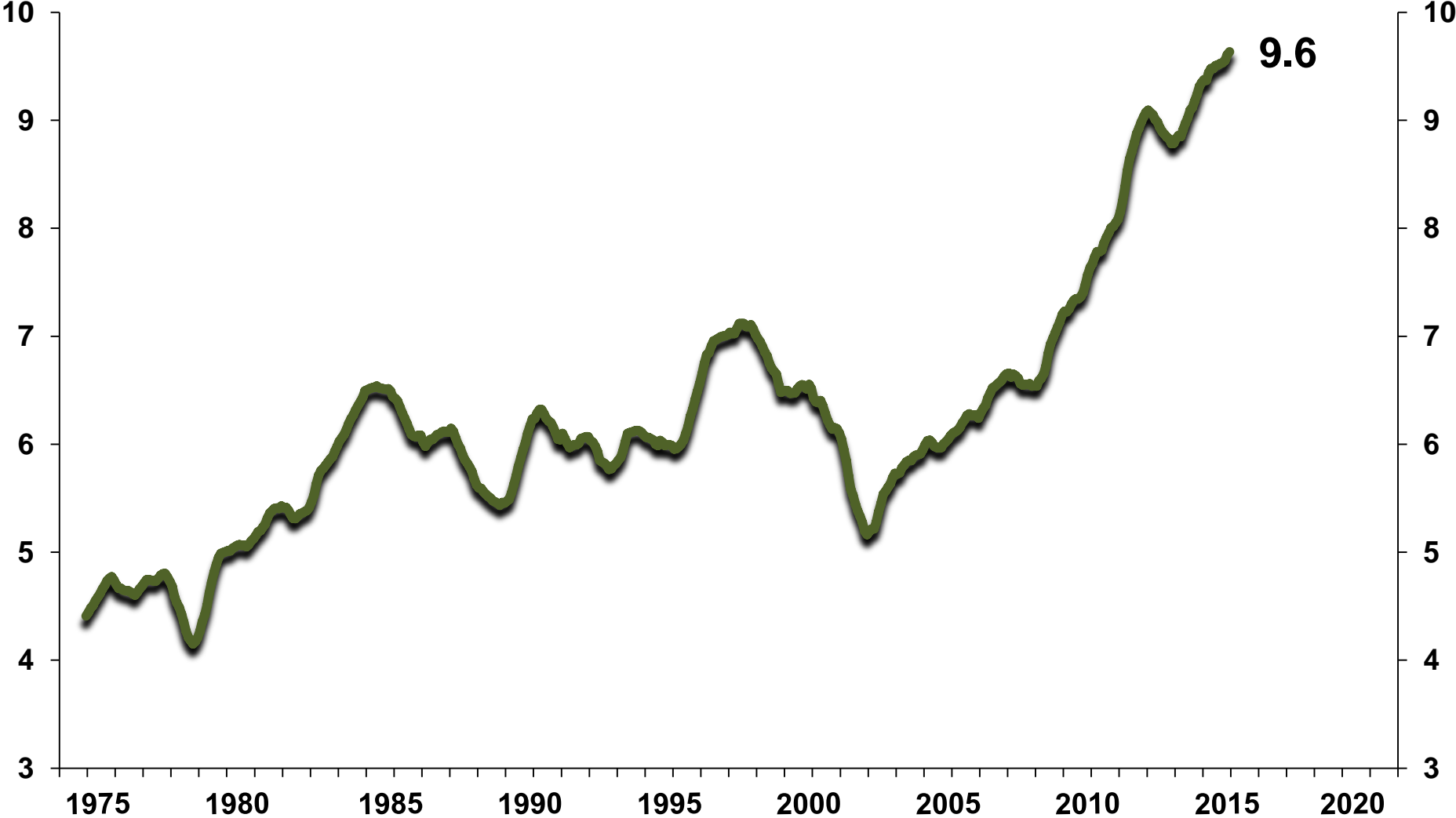
Oil  
Bils Barrels

GDP  
Trils C2009\$



Oil Consumption - Raw Data  
GDP - 3MMA

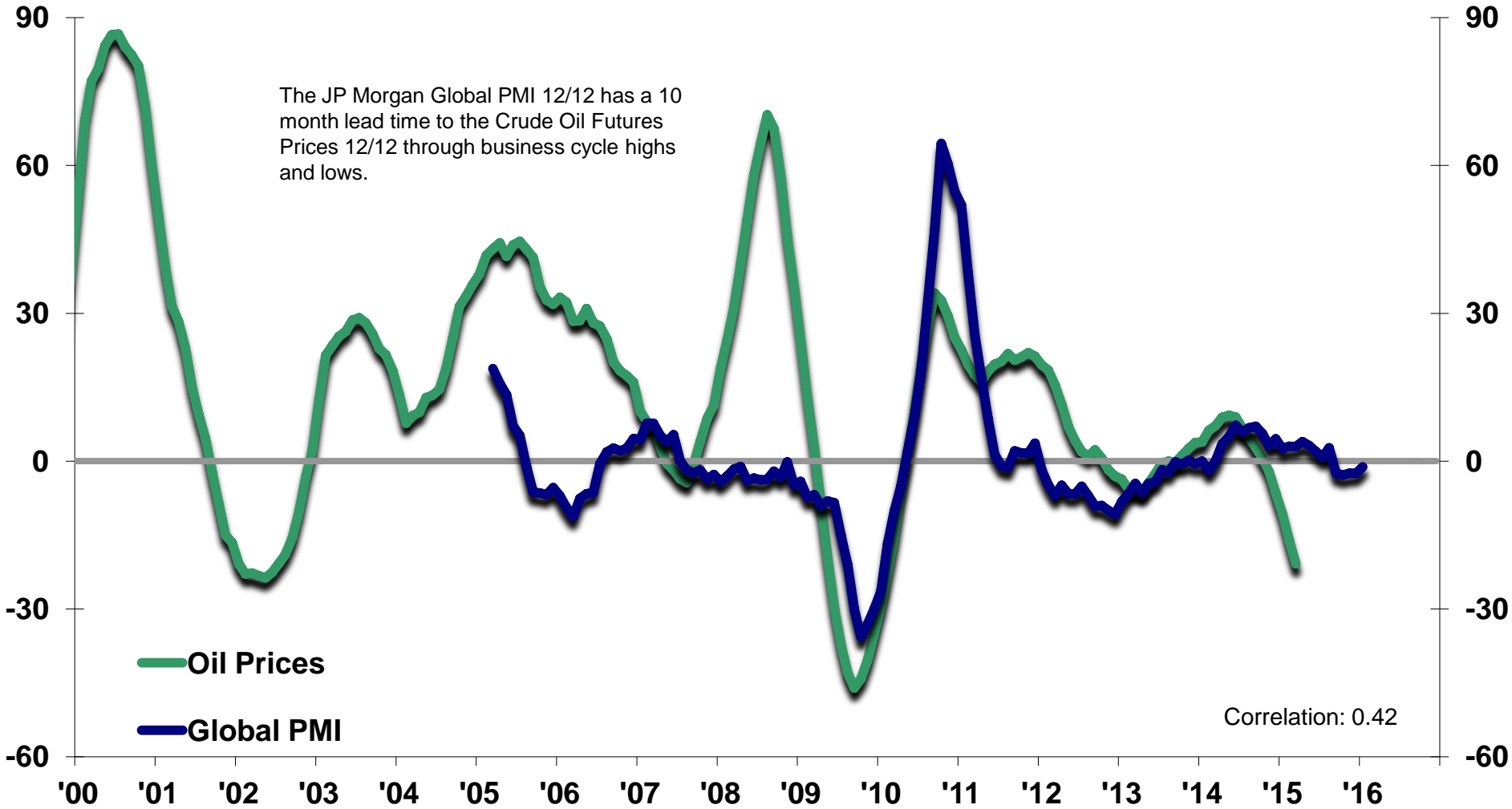
# US Total Renewable Energy Consumption



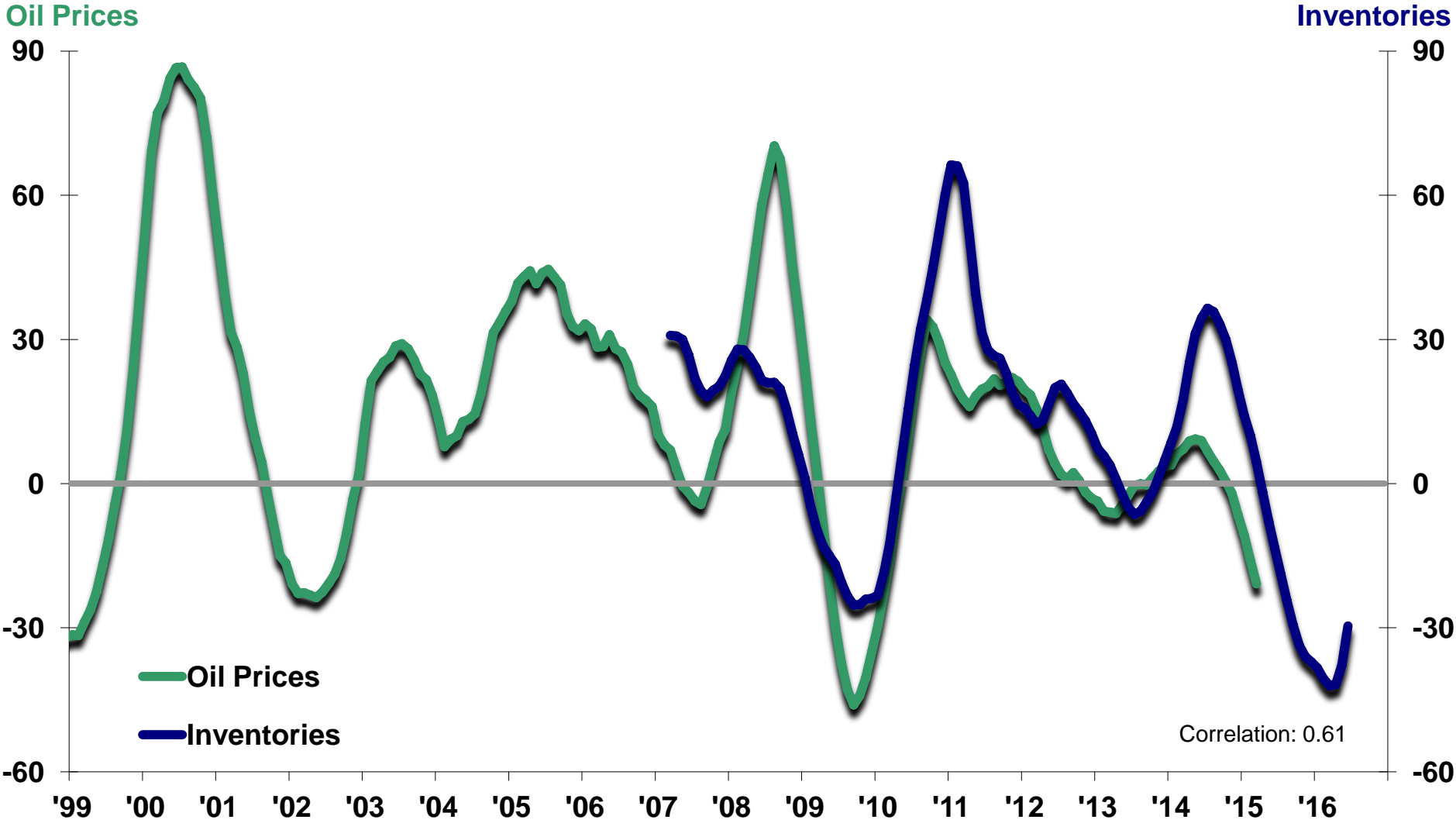
# Crude Oil Futures Prices to JP Morgan Global PMI

Oil Prices

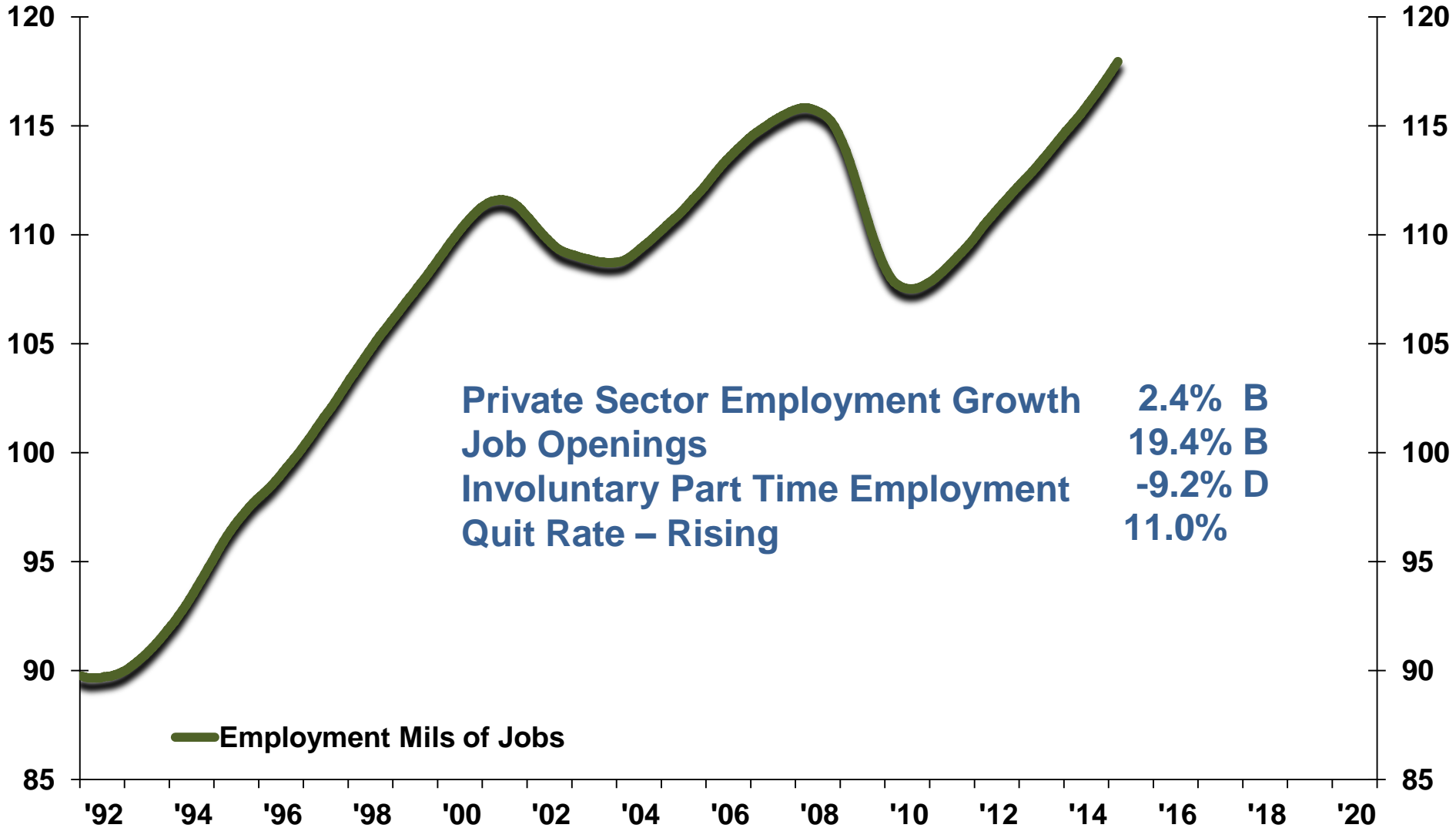
Global PMI



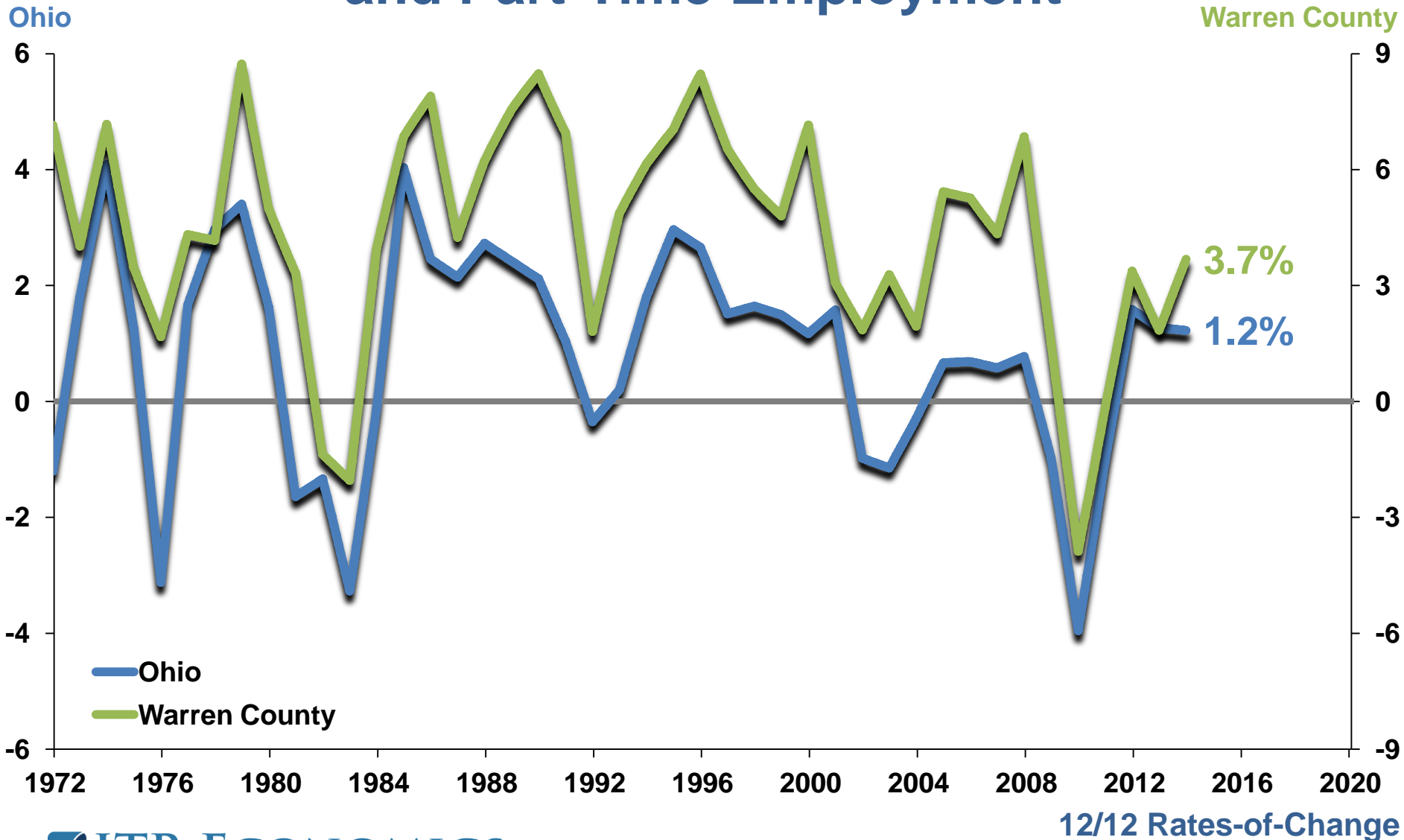
# Crude Oil Futures Prices to Cushing Hub Inventories



# Employment – Private Sector

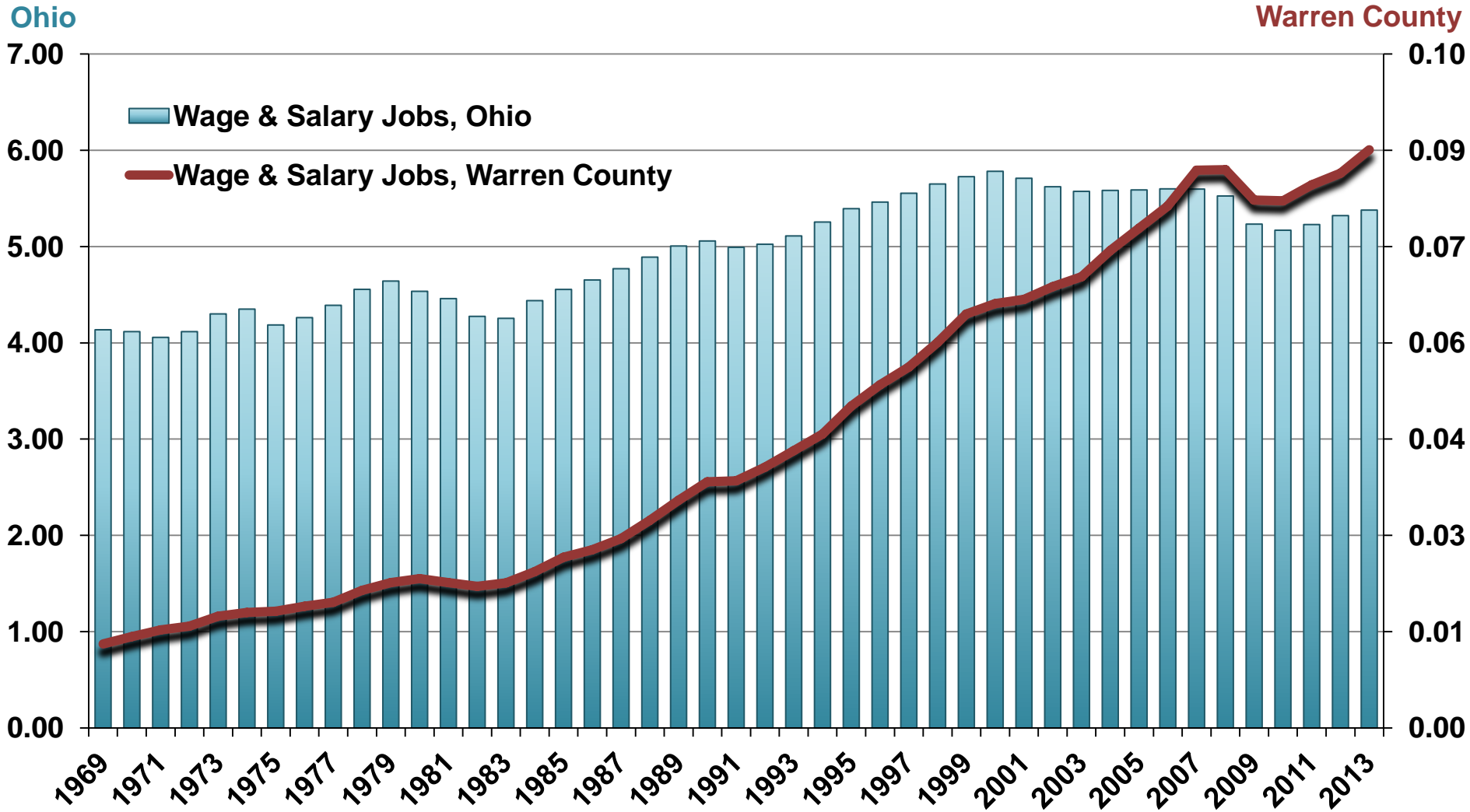


# Ohio to Warren County Total Full-Time and Part-Time Employment

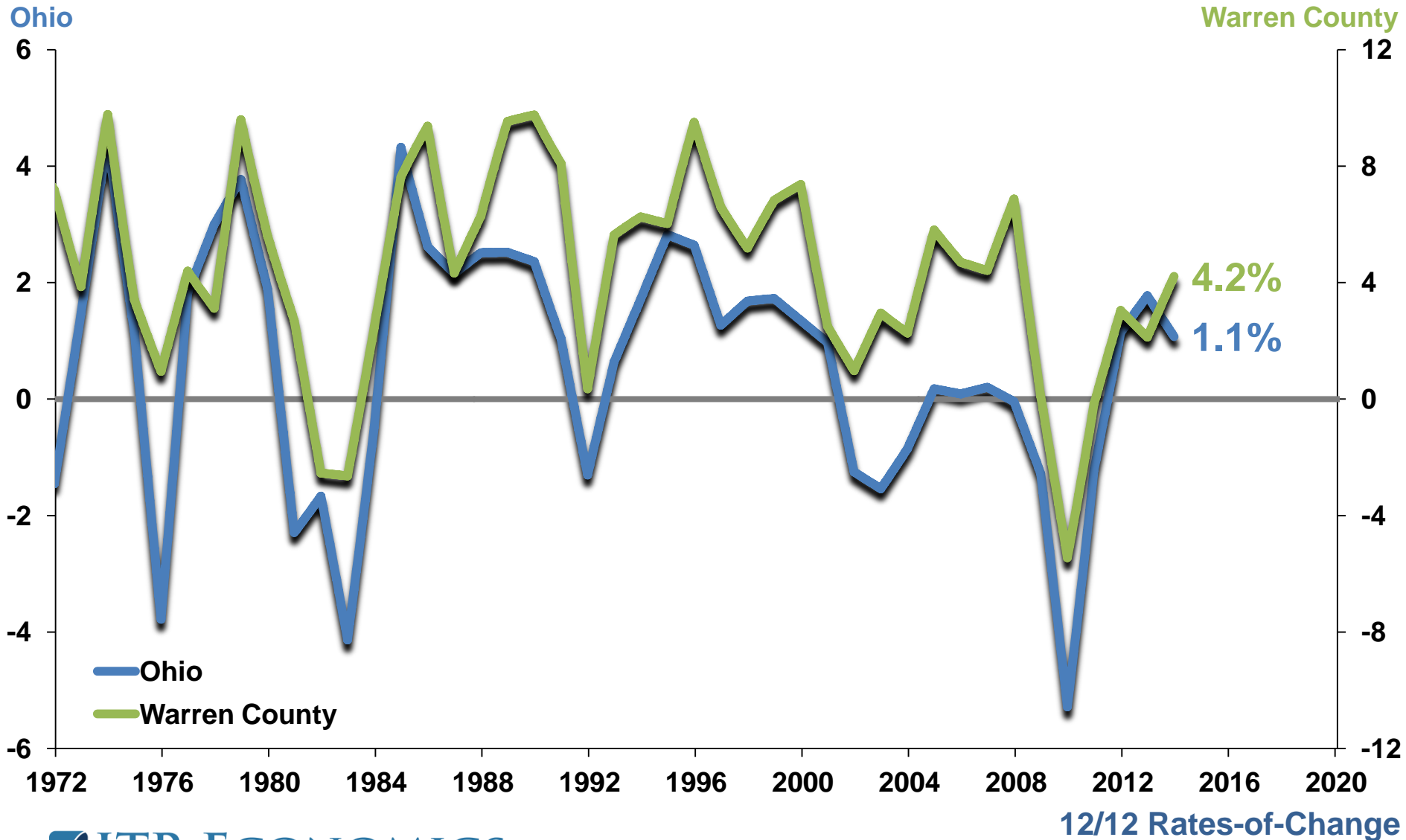




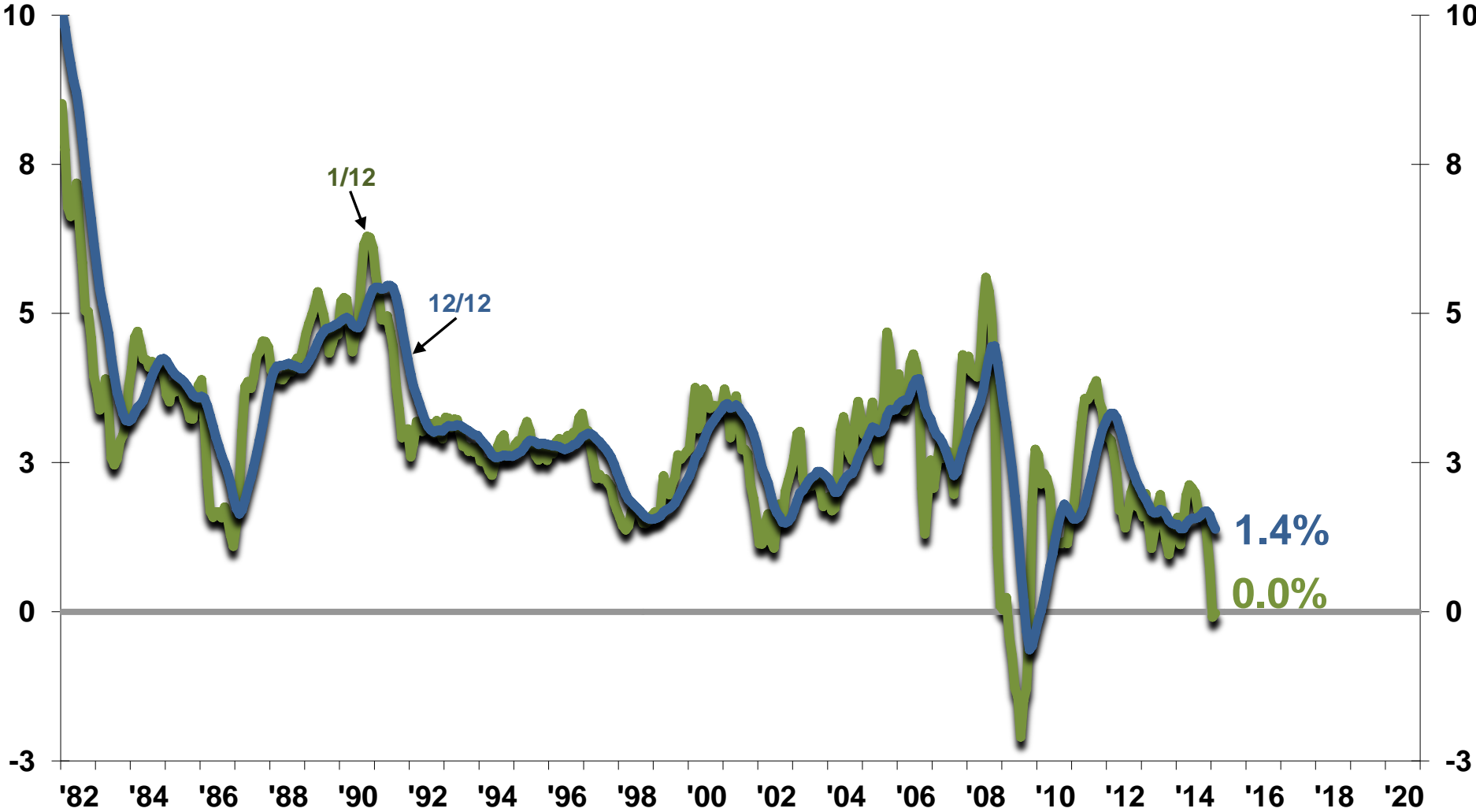
# Ohio to Warren County Wage & Salary Jobs



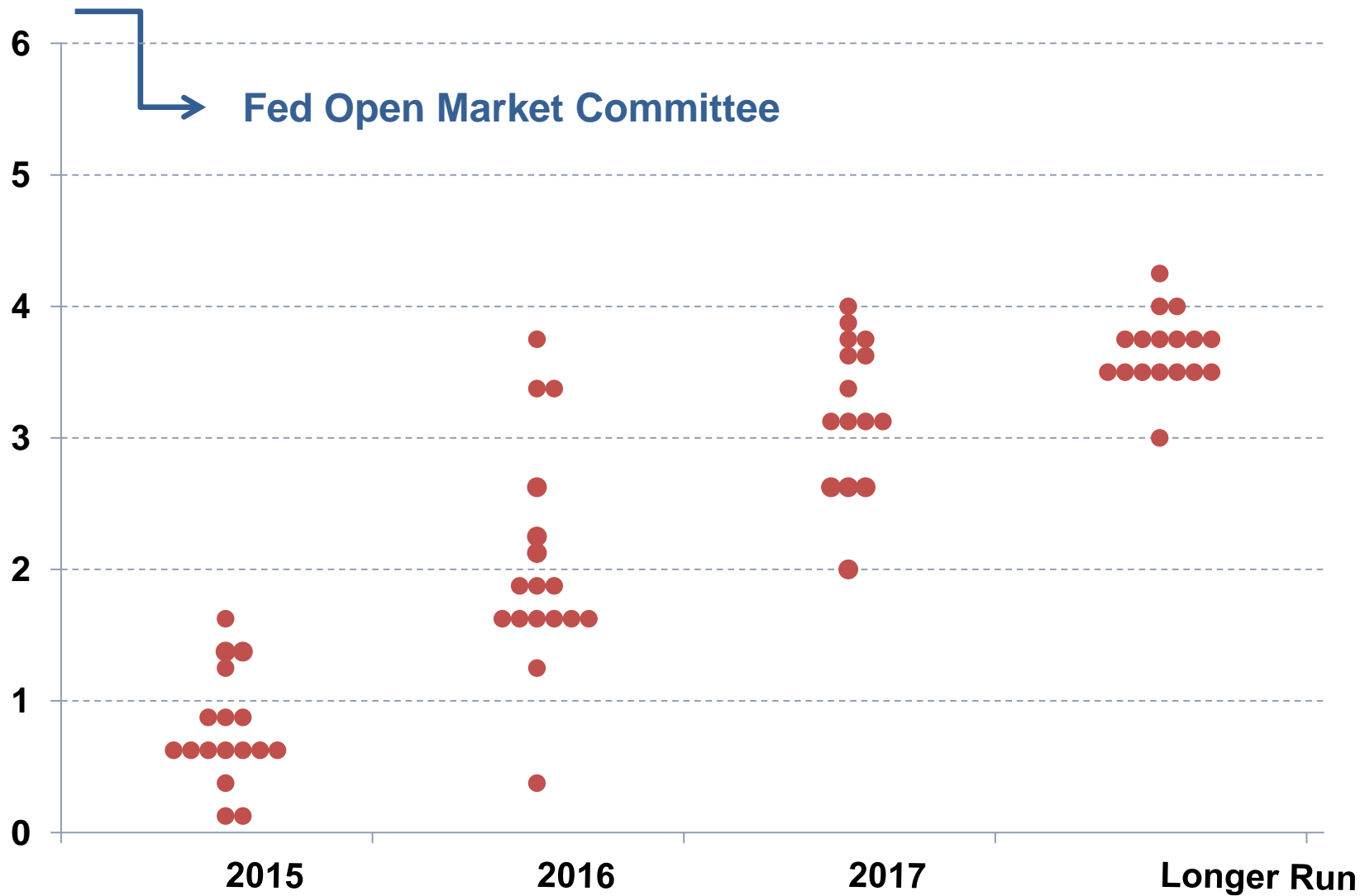
# Ohio to Warren County Wage & Salary Jobs

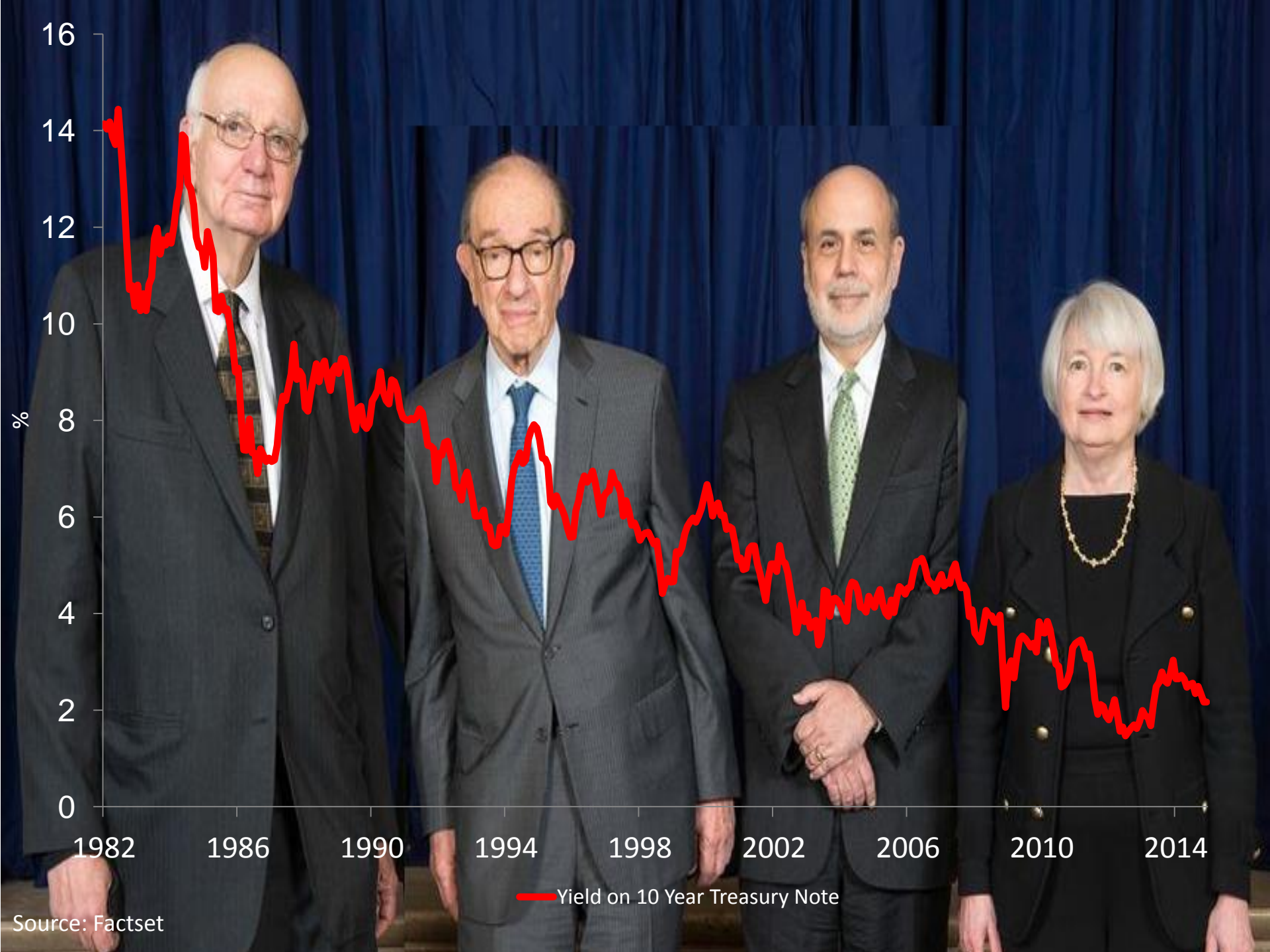


# Consumer Price Index



# FOMC Member Interest Rate Projections

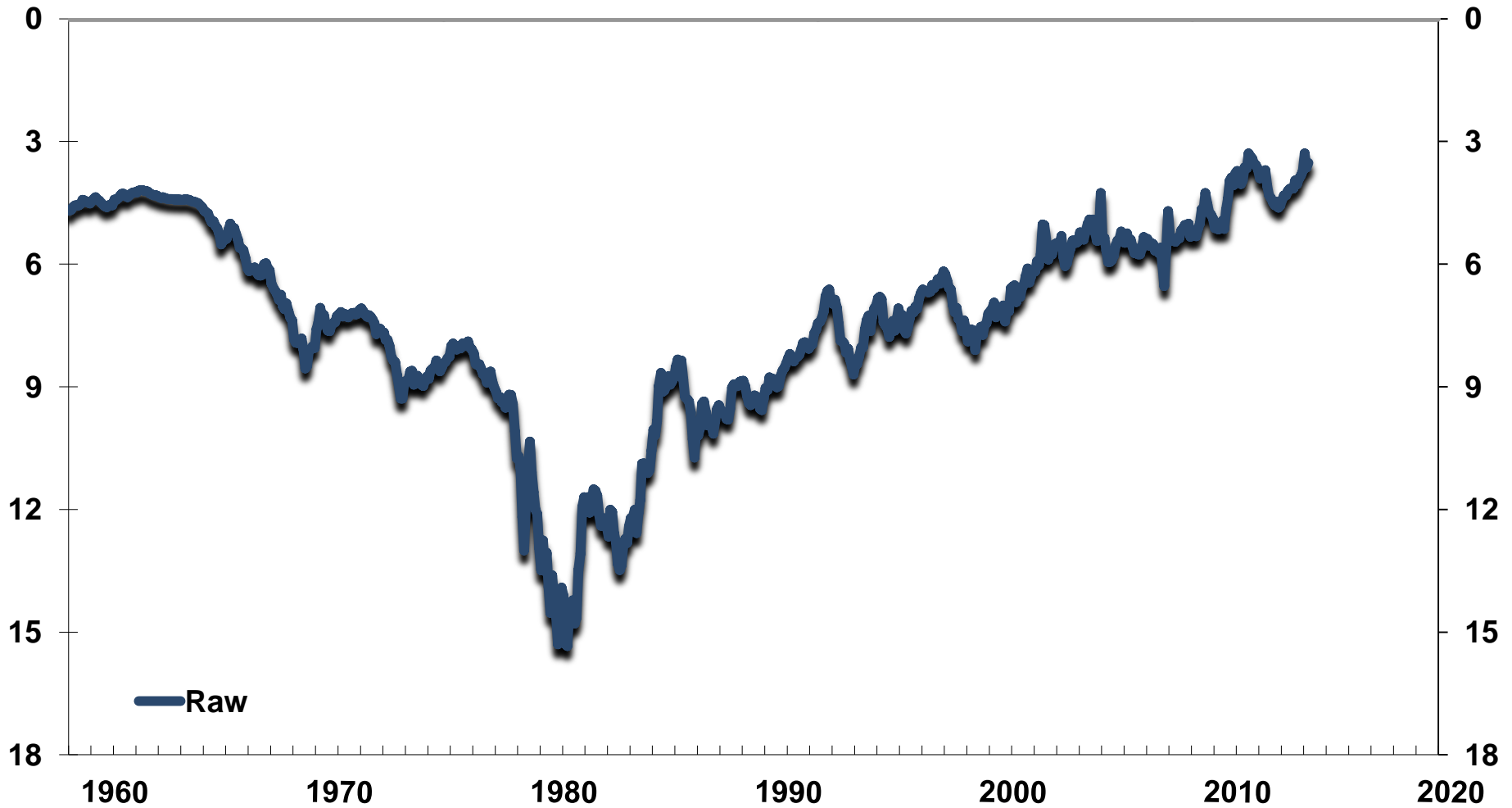




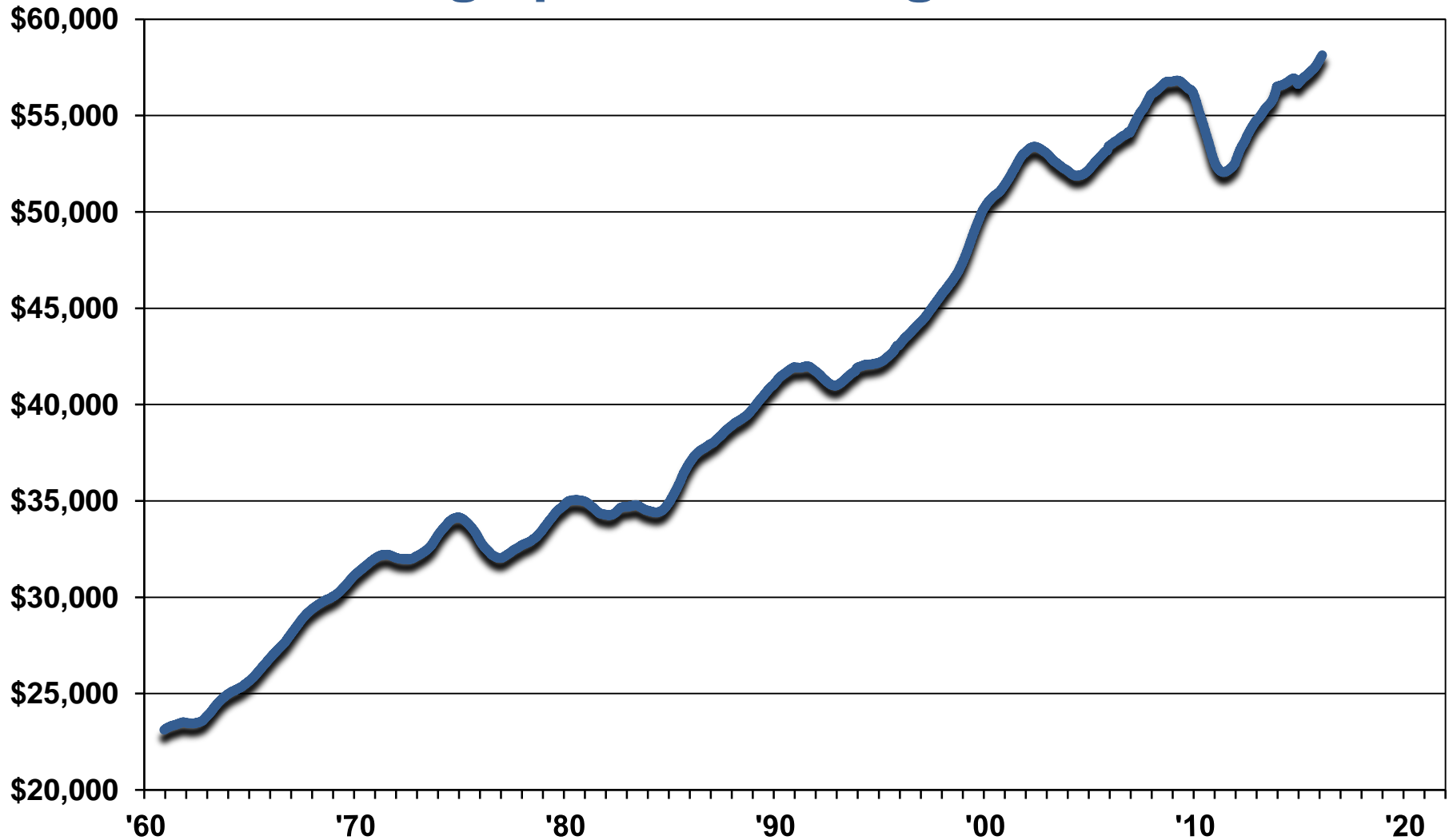
— Yield on 10 Year Treasury Note

Source: Factset

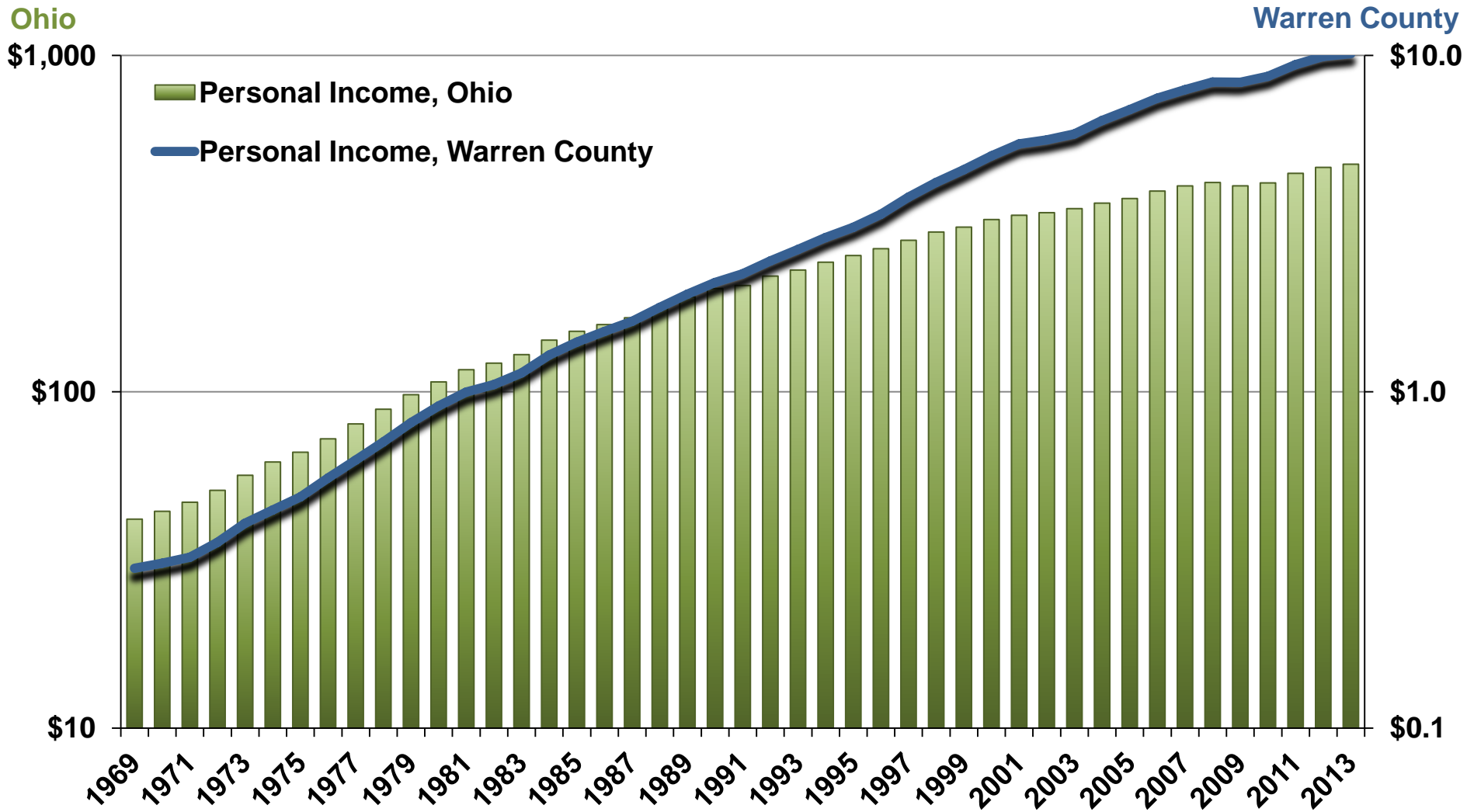
# Corporate AAA Bond Yields Inverted for Prices



# Real Personal Income Less Transfer Receipts Average per Person Age 18 to 65

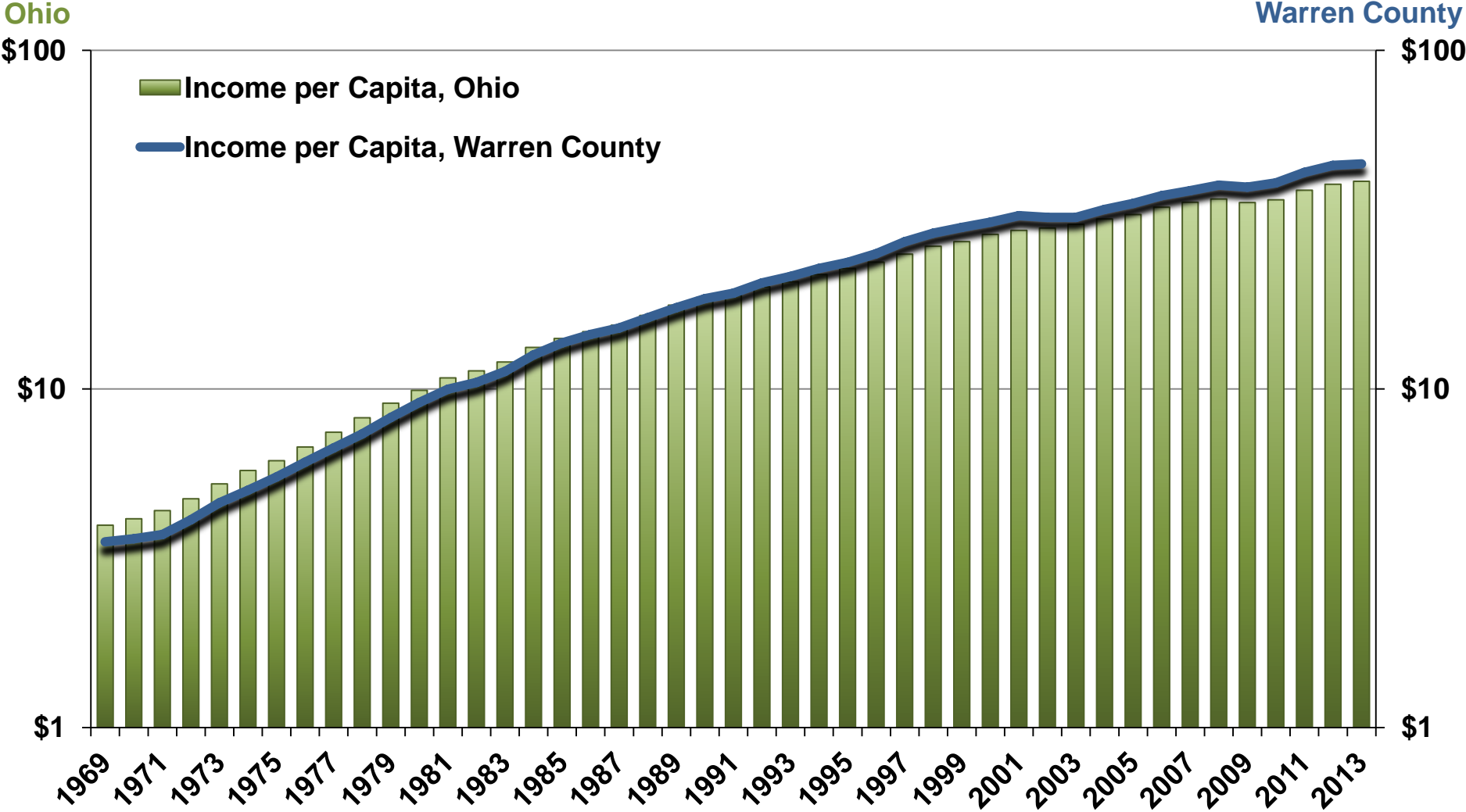


# Ohio to Warren County Personal Income



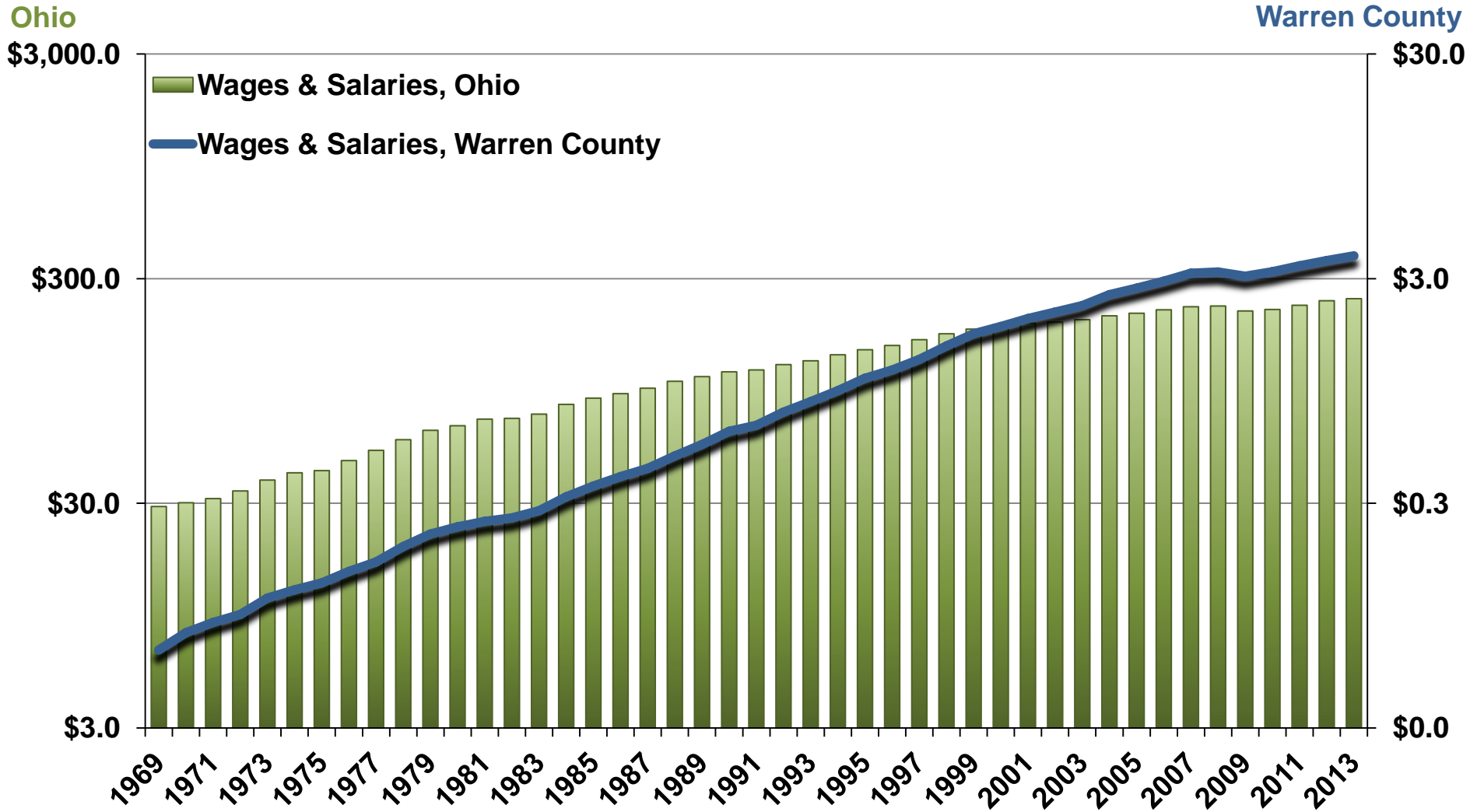


# Ohio to Warren County per Capita Income

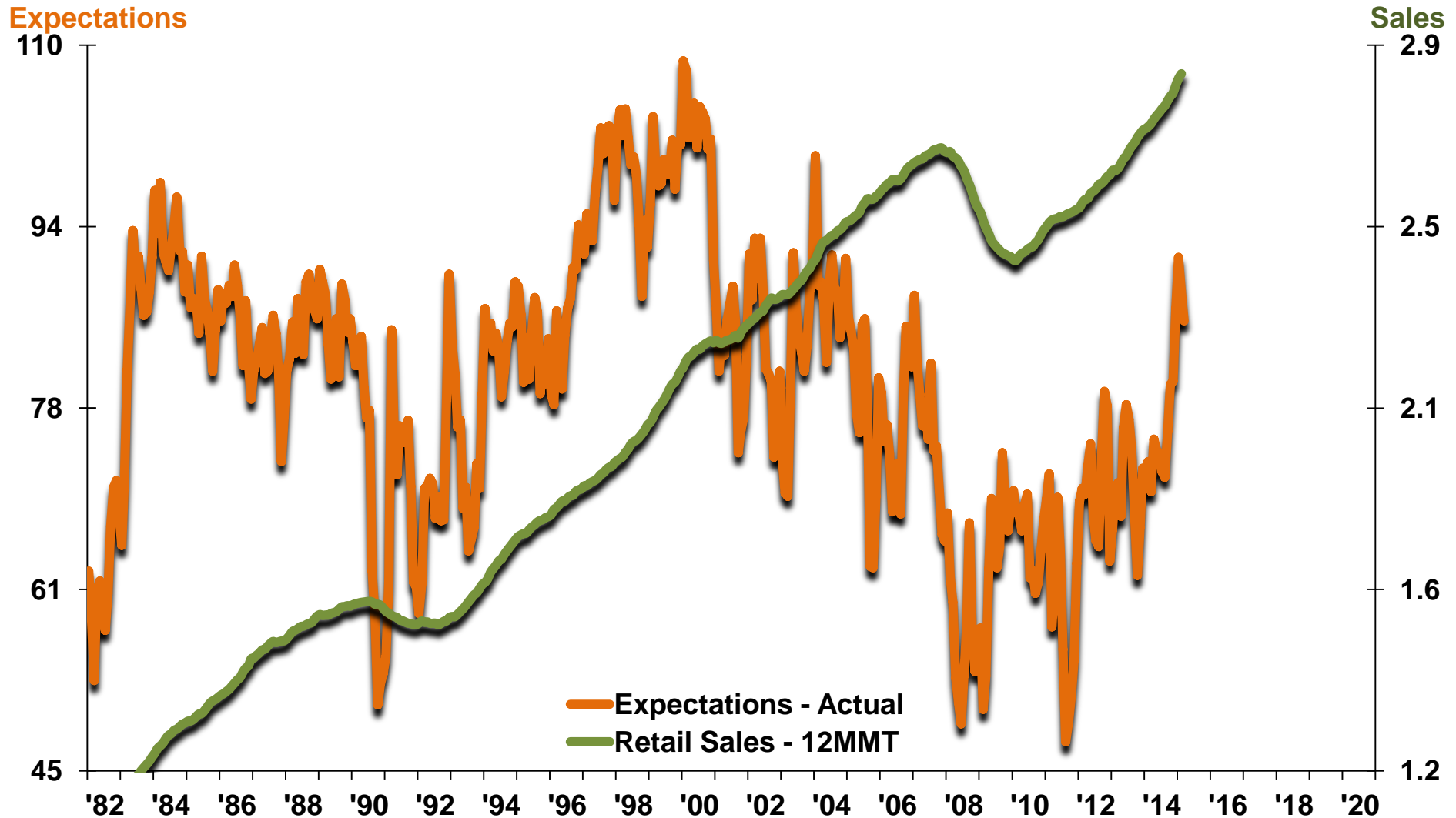


Thousands of Dollars

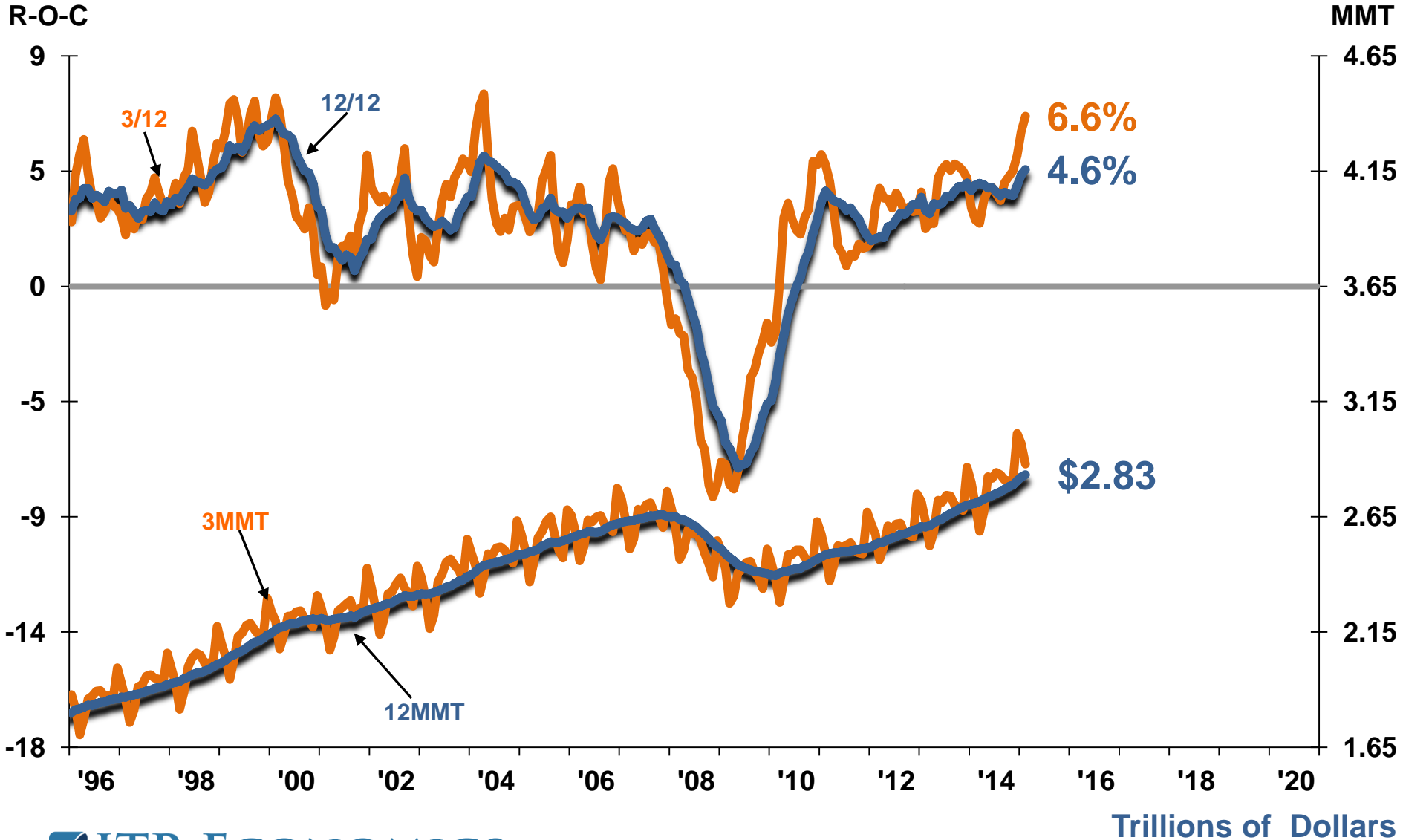
# Ohio to Warren County Wages & Salaries



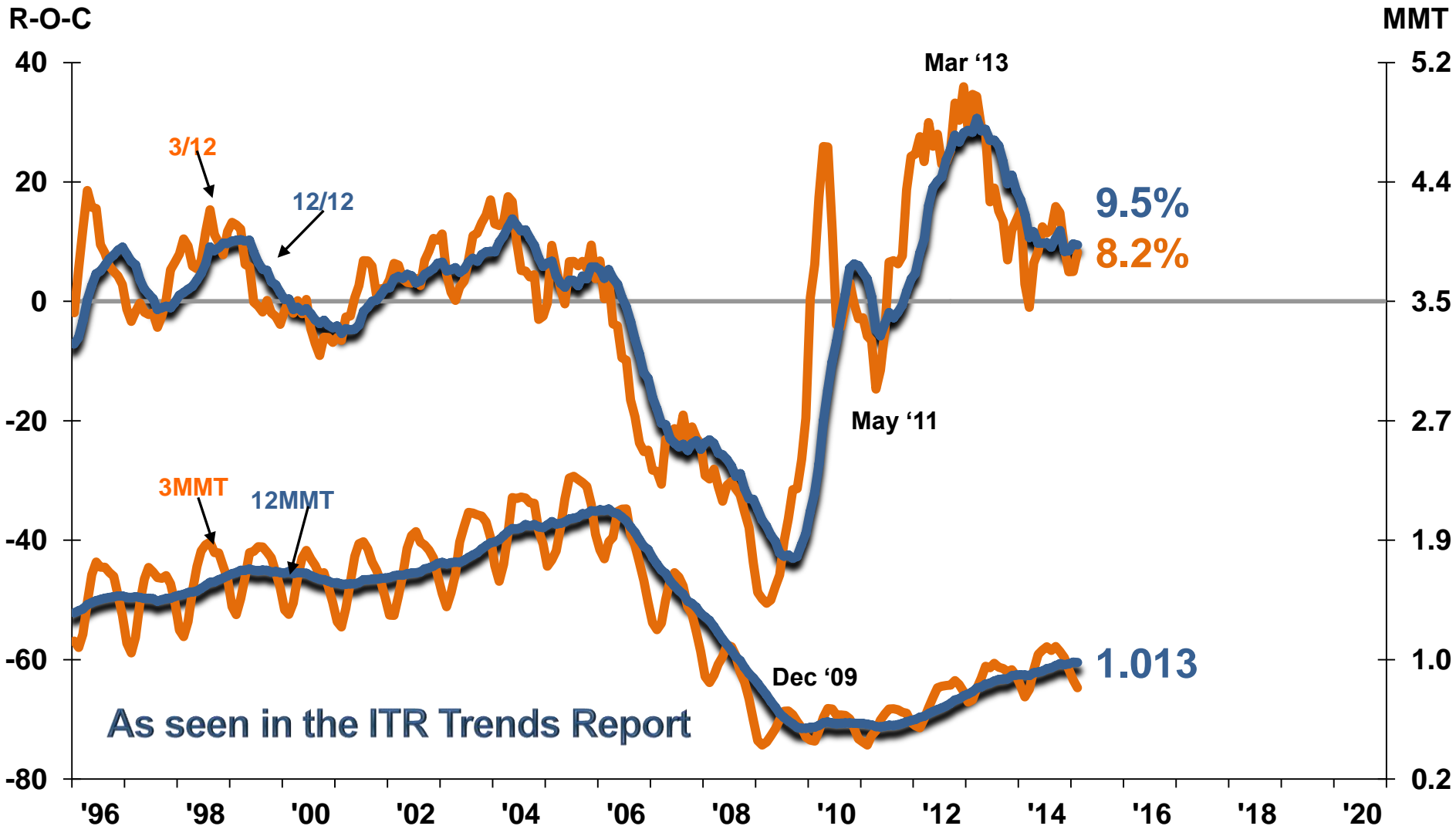
# Consumer Expectations and Retail Sales



# Total Retail Sales (deflated)

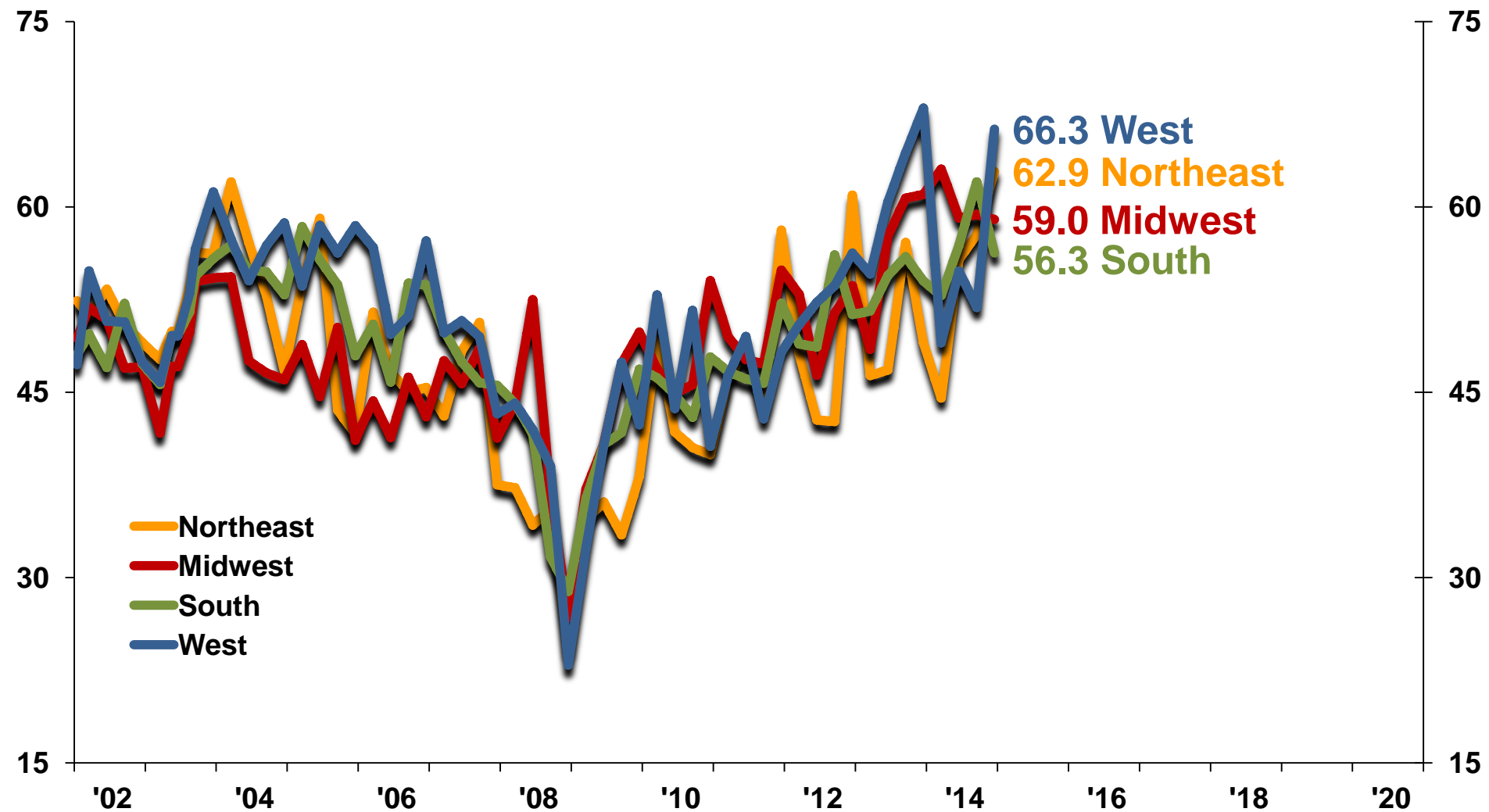


# Housing Starts

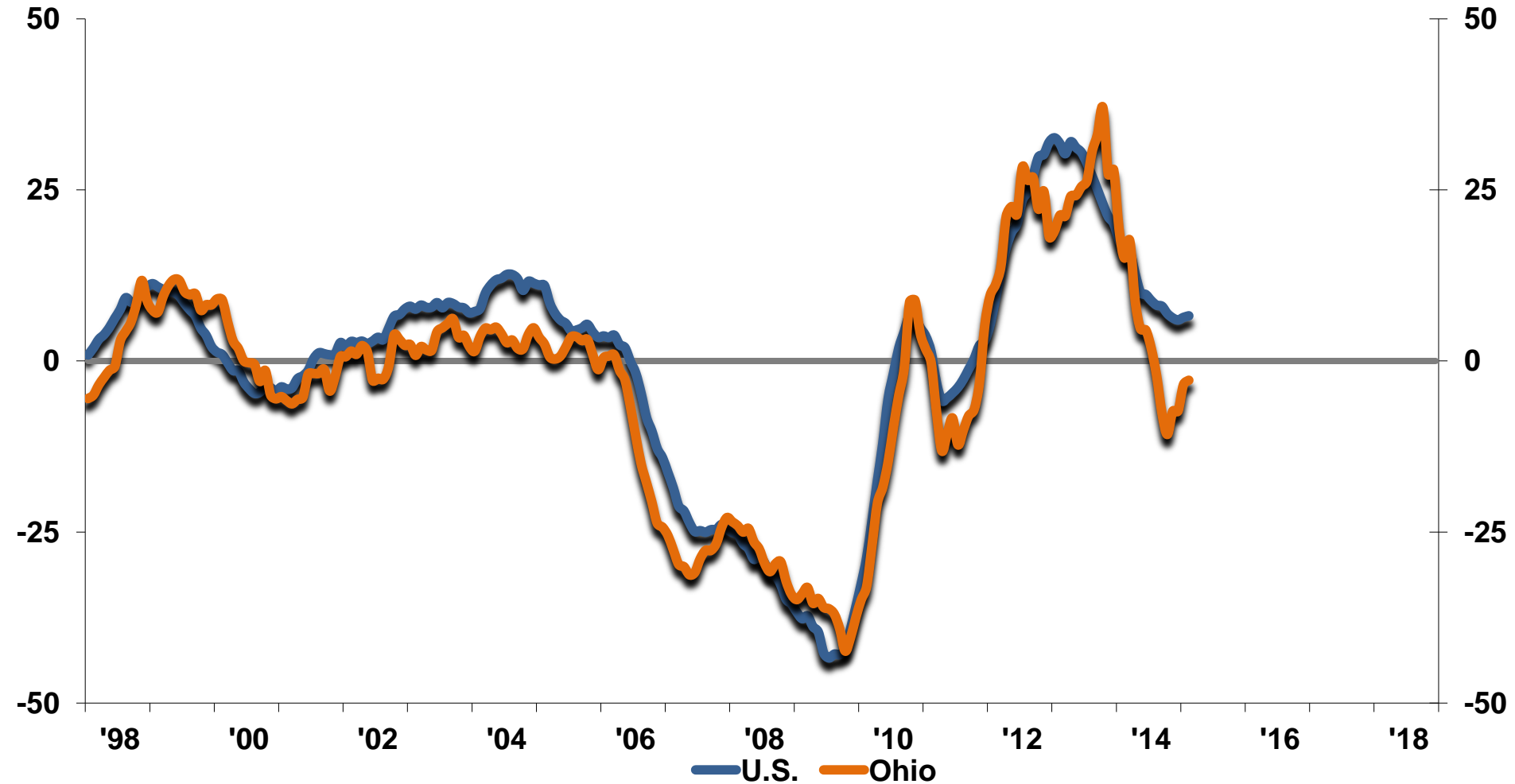


As seen in the ITR Trends Report

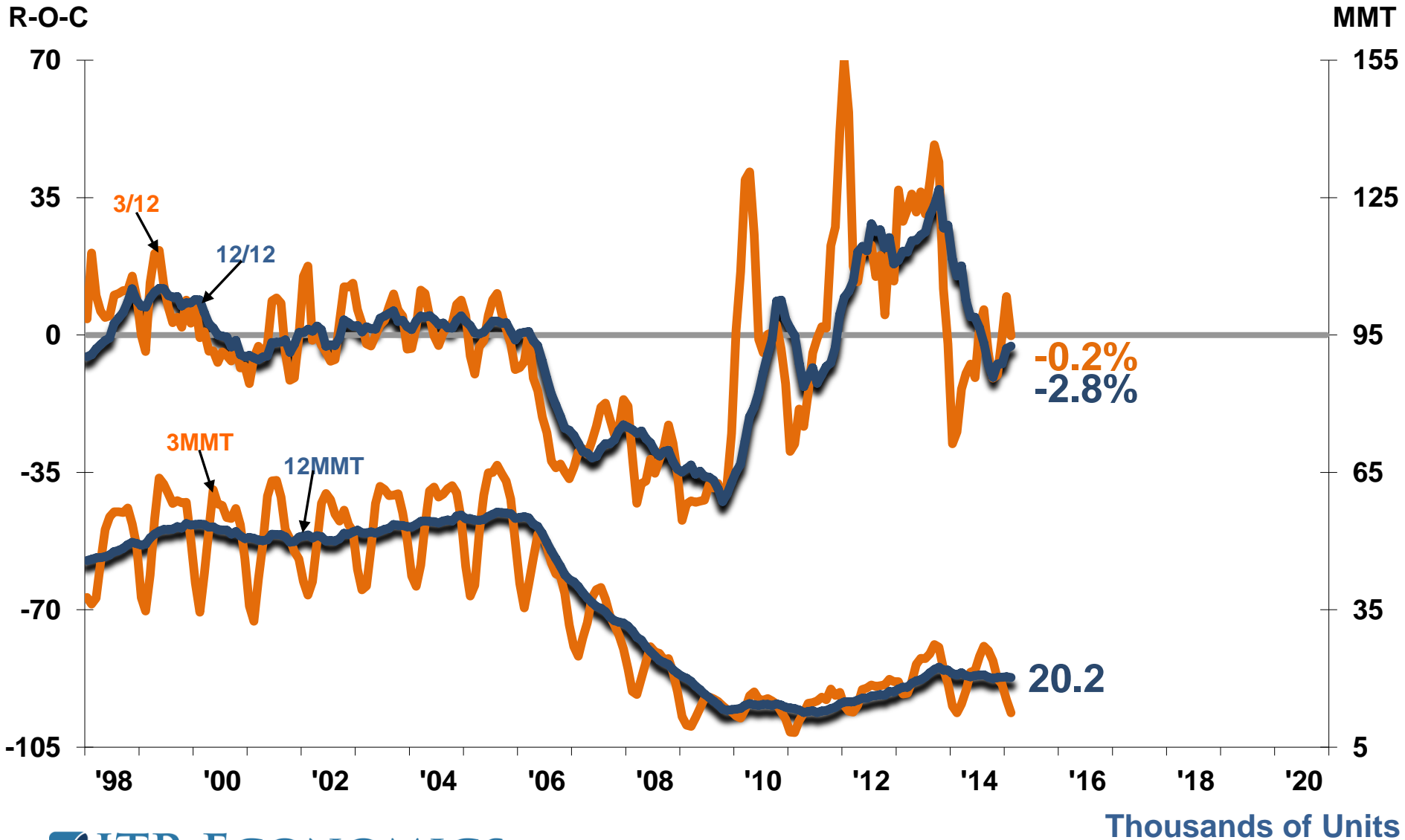
# Remodeling Market Index



# US to Ohio Building Permits

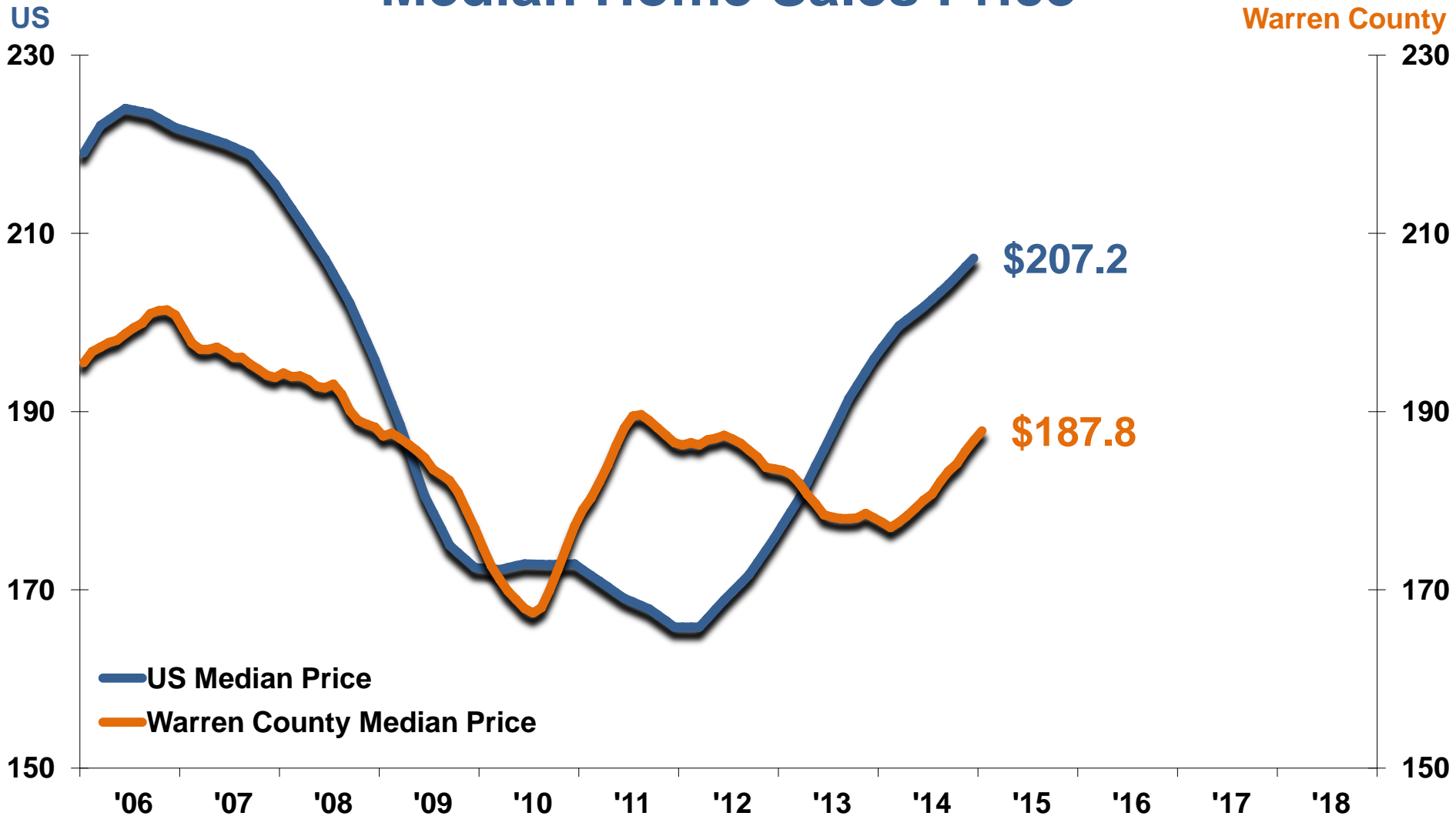


# Ohio Housing Unit Building Permits

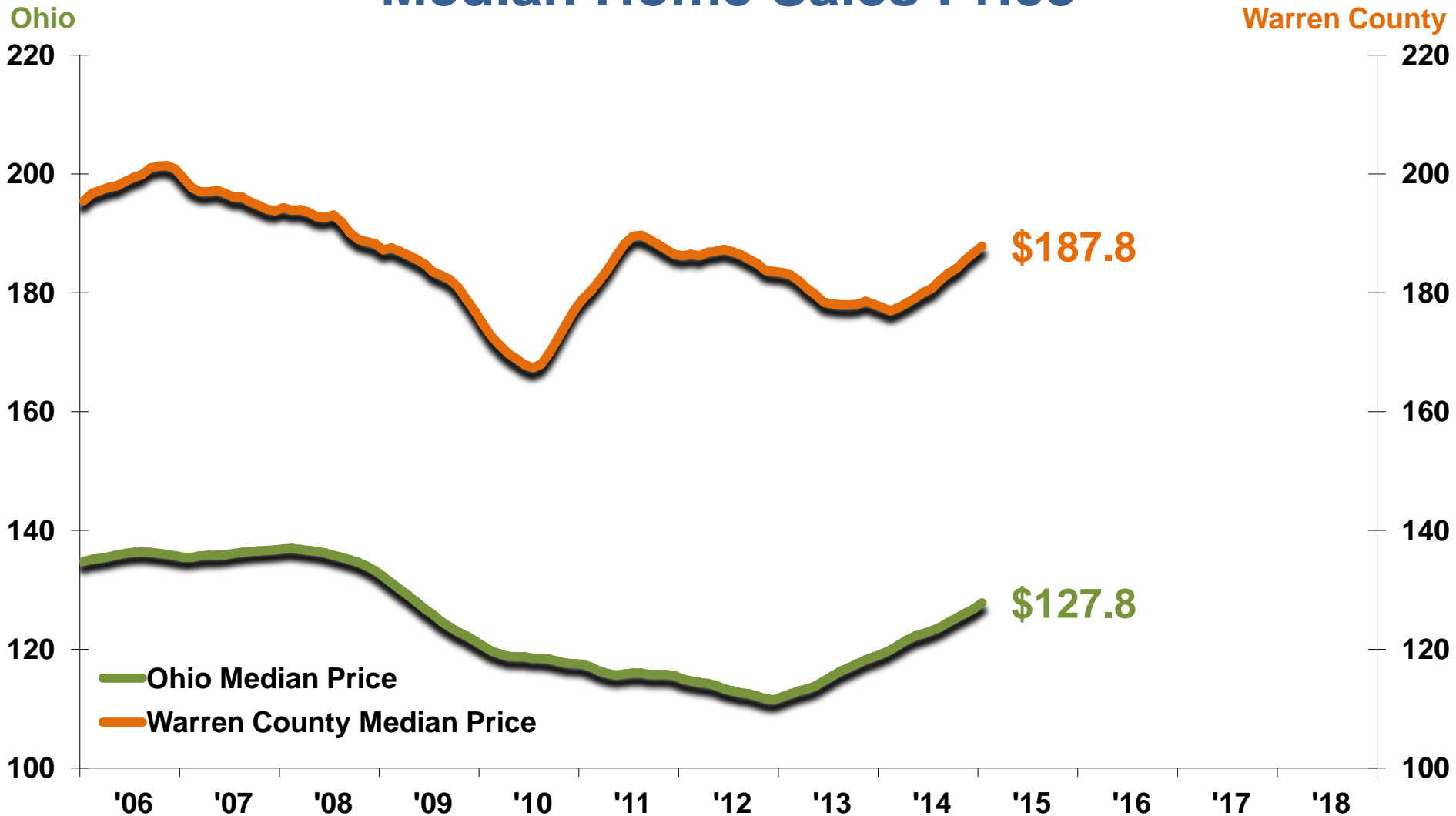




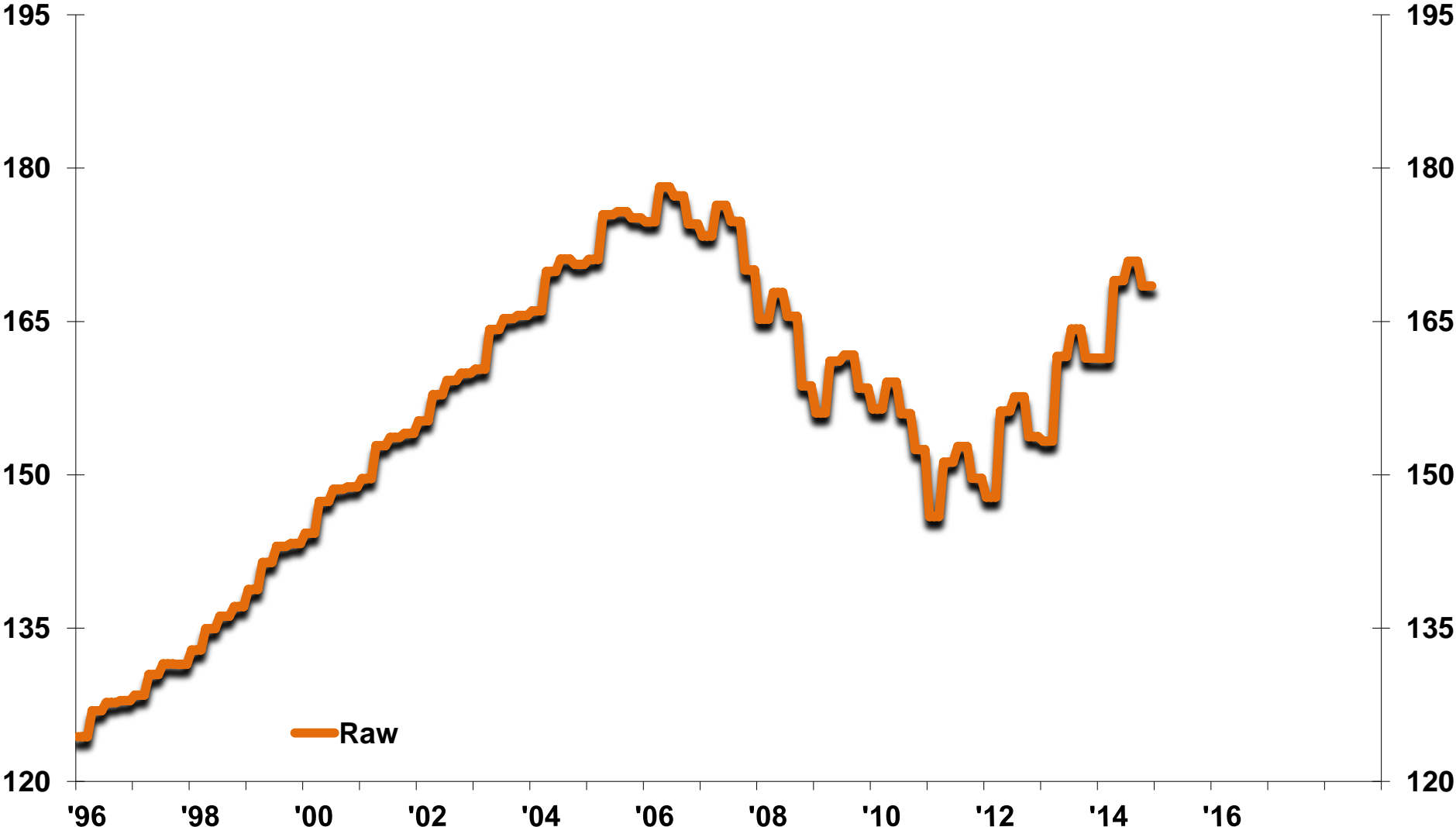
# US to Warren County Median Home Sales Price



# Ohio to Warren County Median Home Sales Price

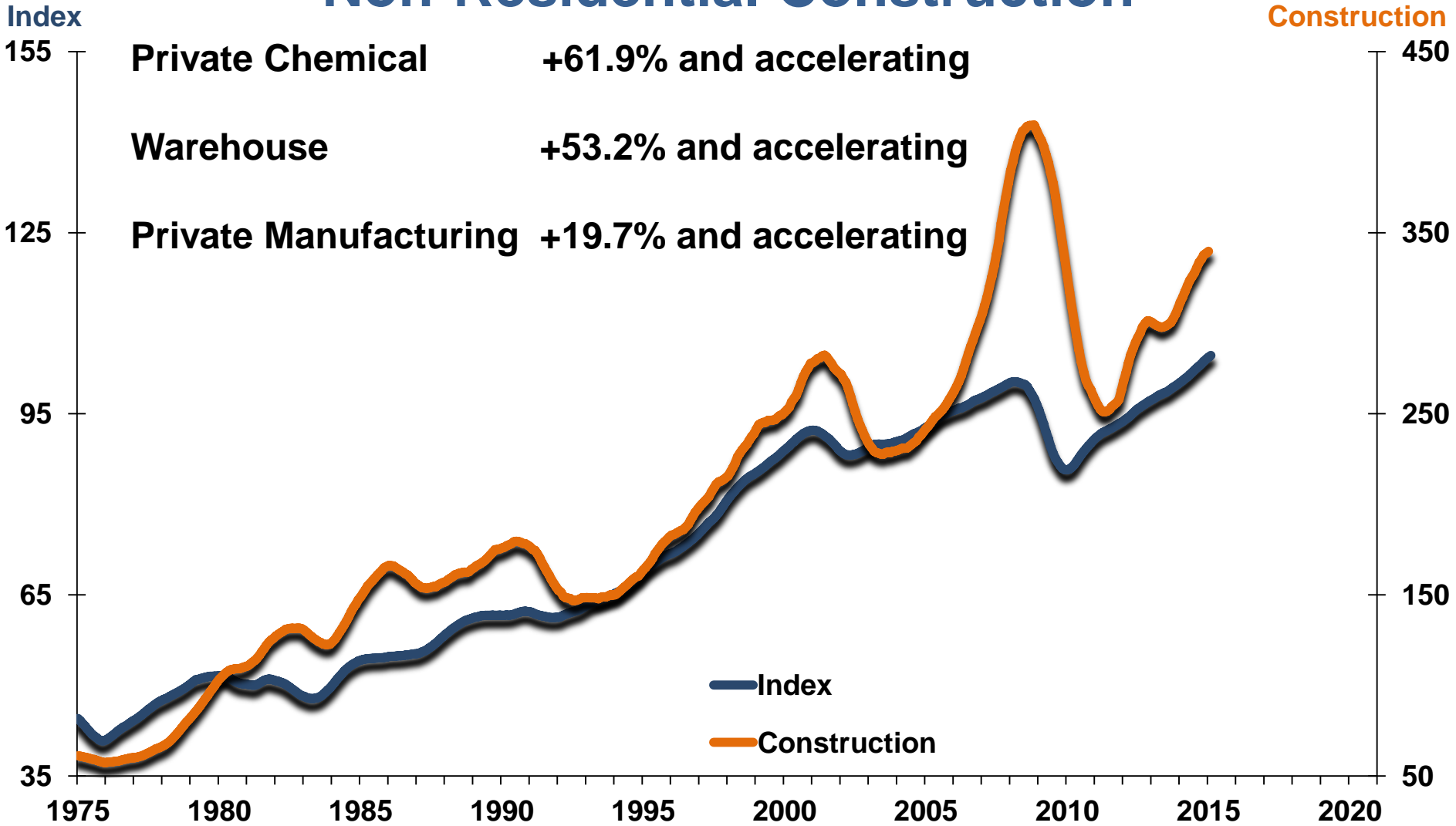


# Ohio Housing Price Index

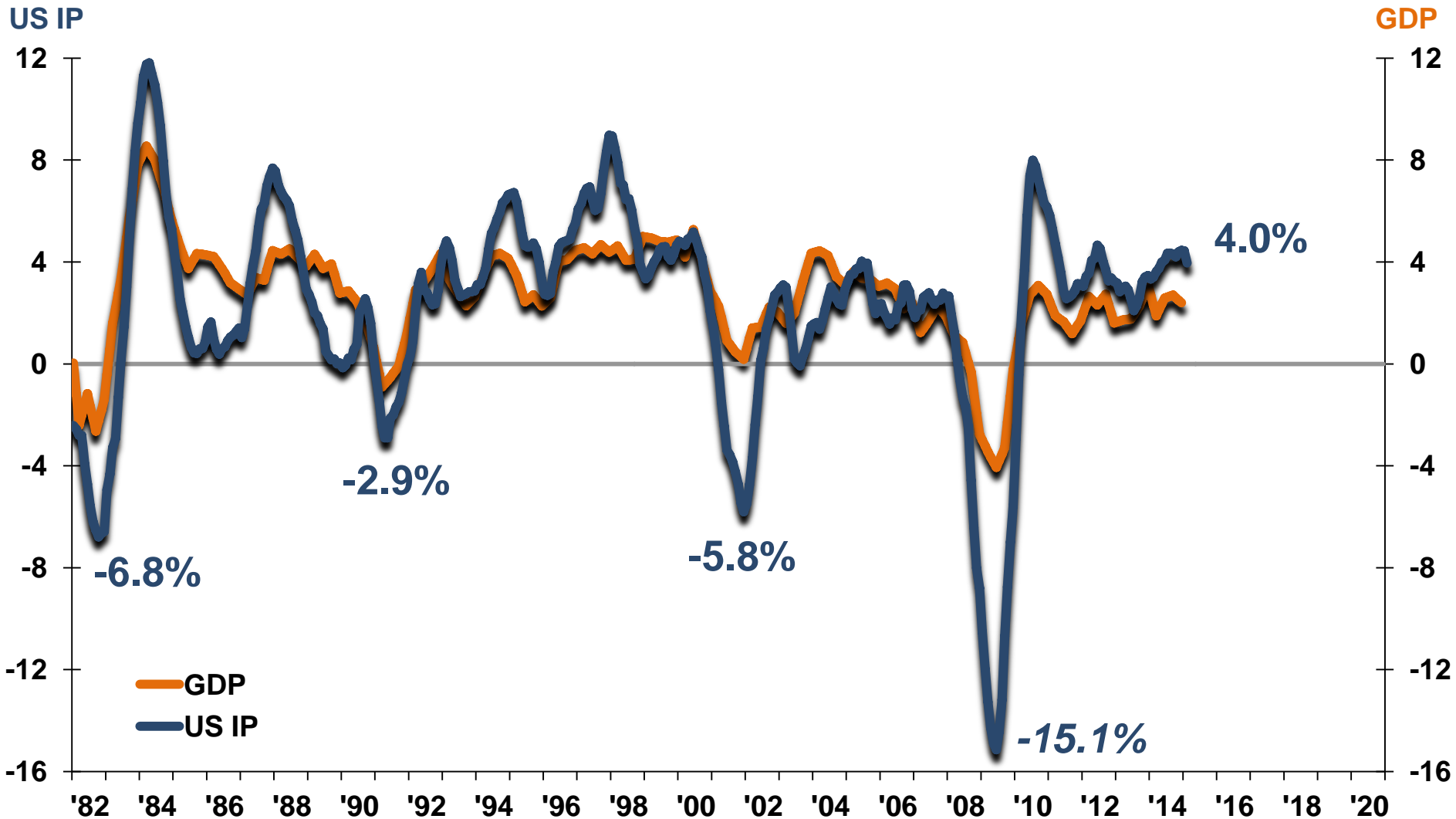


Year over Year % Change

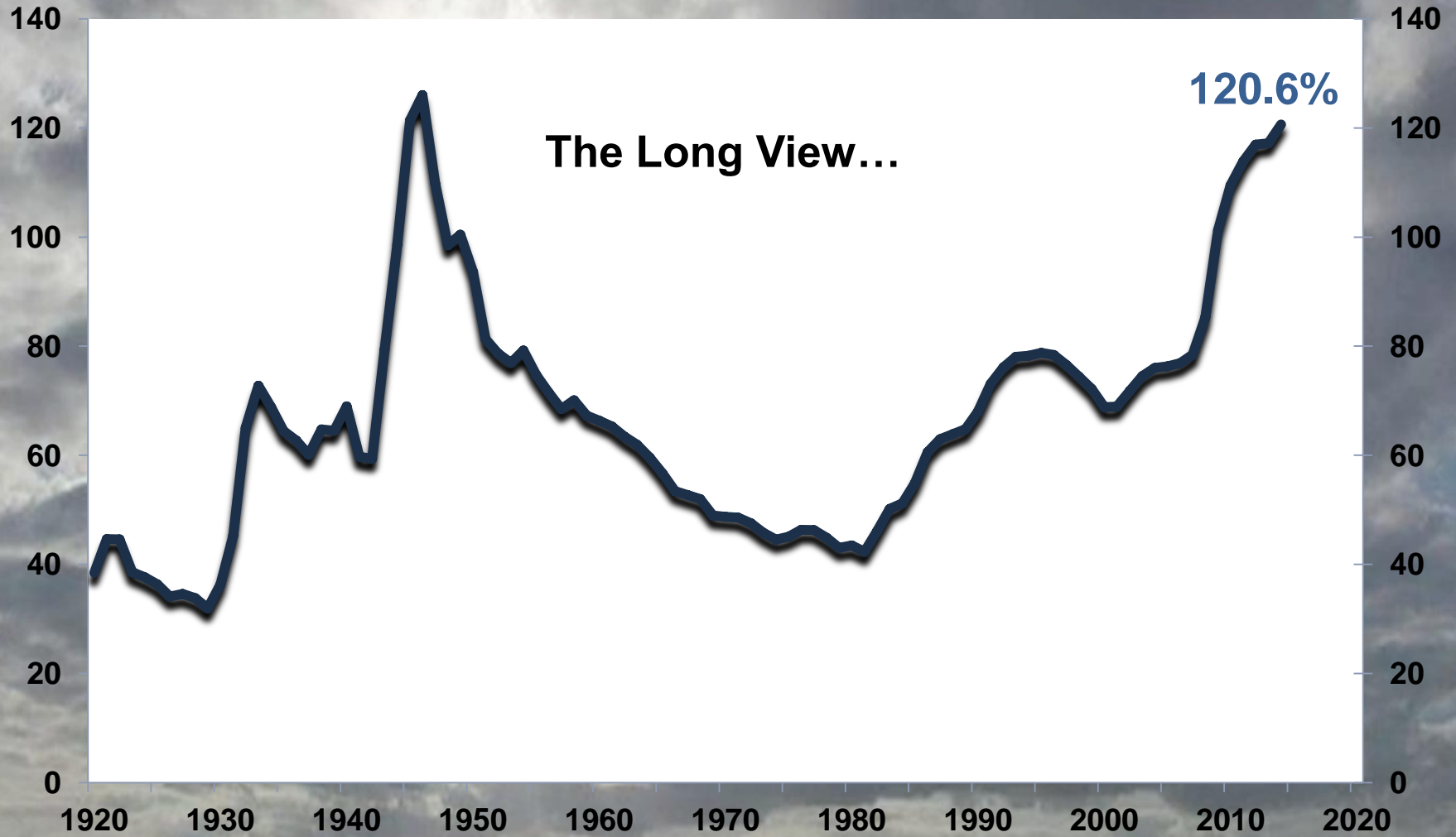
# US Industrial Production to Non-Residential Construction



# US Industrial Production to Gross Domestic Product



# Total U.S. Public Debt

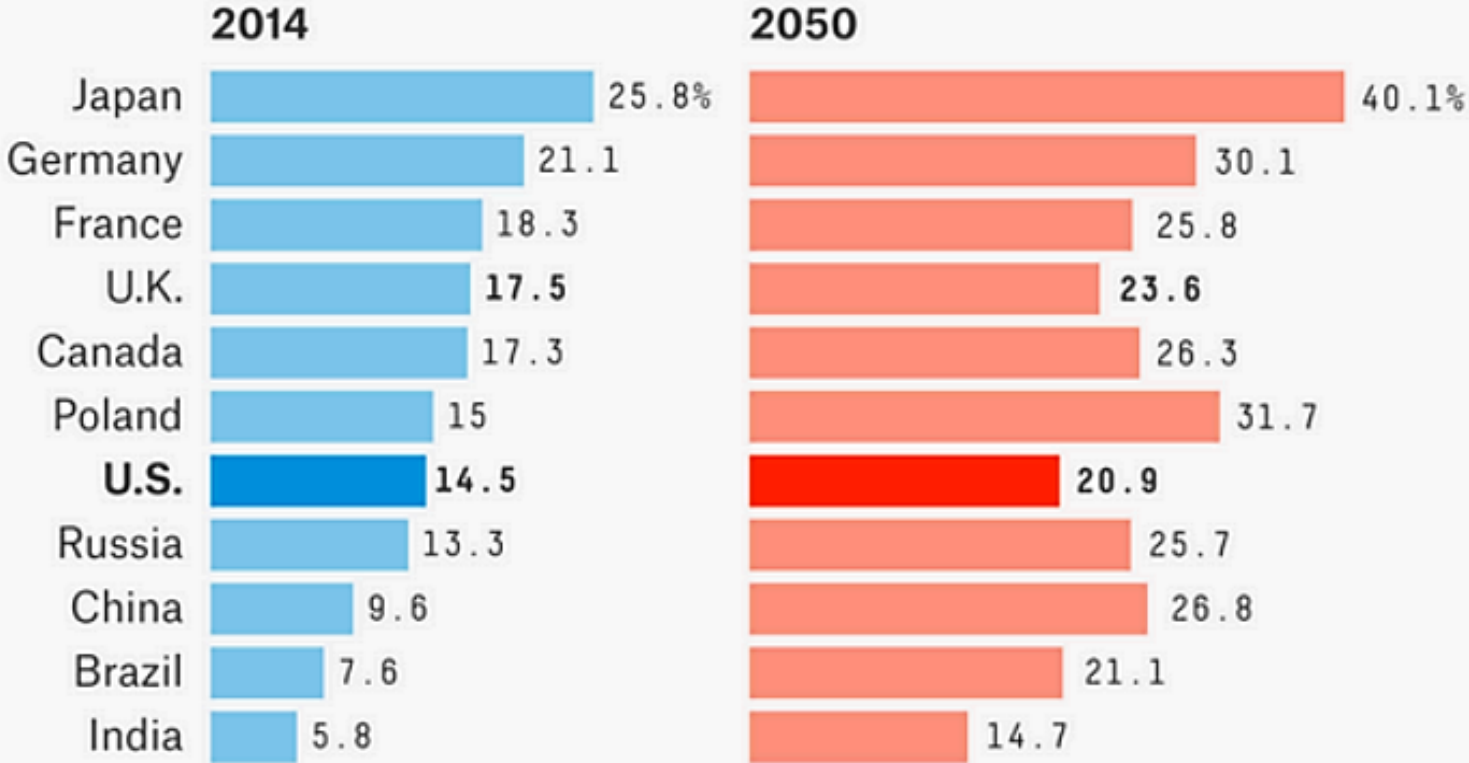


# Estimated Percent of Total Population in 2030

<u>Age Group</u>	<u>US</u>	<u>China</u>	<u>India</u>	<u>Ger</u>	<u>Mex</u>	<u>Braz</u>	<u>Japan</u>	<u>Can</u>
<b>65 &amp; older</b>	<b>19.6</b>	<b>17.2</b>	<b>8.9</b>	<b>27.9</b>	<b>11.5</b>	<b>12.2</b>	<b>32.2</b>	<b>24.8</b>
<b>40-64</b>	<b>29.0</b>	<b>37.9</b>	<b>28.9</b>	<b>32.9</b>	<b>29.7</b>	<b>32.7</b>	<b>32.8</b>	<b>30.8</b>
<b>20-39</b>	<b>25.4</b>	<b>24.0</b>	<b>31.0</b>	<b>21.5</b>	<b>28.9</b>	<b>29.1</b>	<b>19.5</b>	<b>23.7</b>
<b>less than 20</b>	<b>25.9</b>	<b>21.0</b>	<b>31.4</b>	<b>17.6</b>	<b>29.9</b>	<b>25.9</b>	<b>15.6</b>	<b>20.6</b>

# Share of Population Age 65 And Over

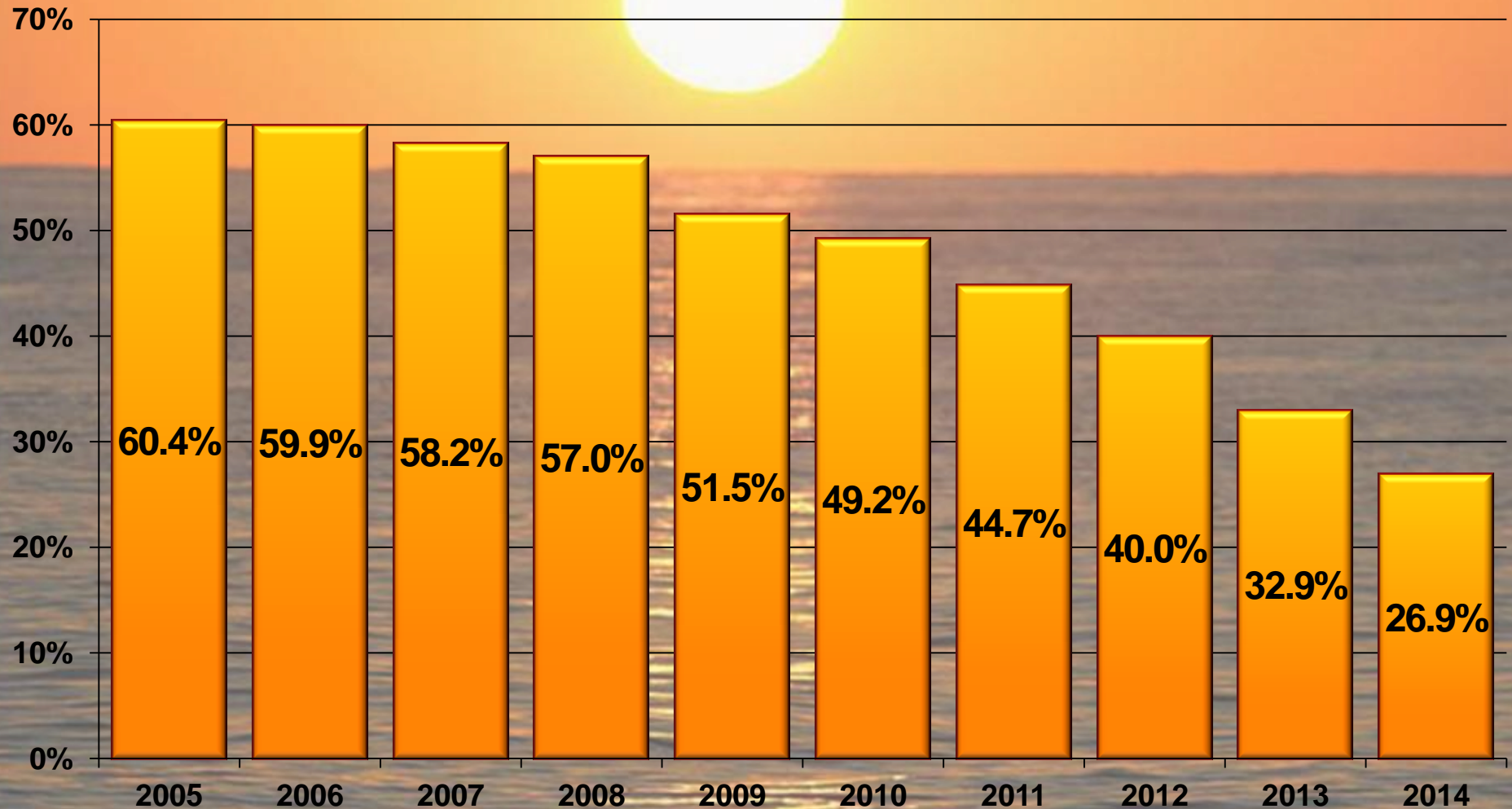
Selected countries

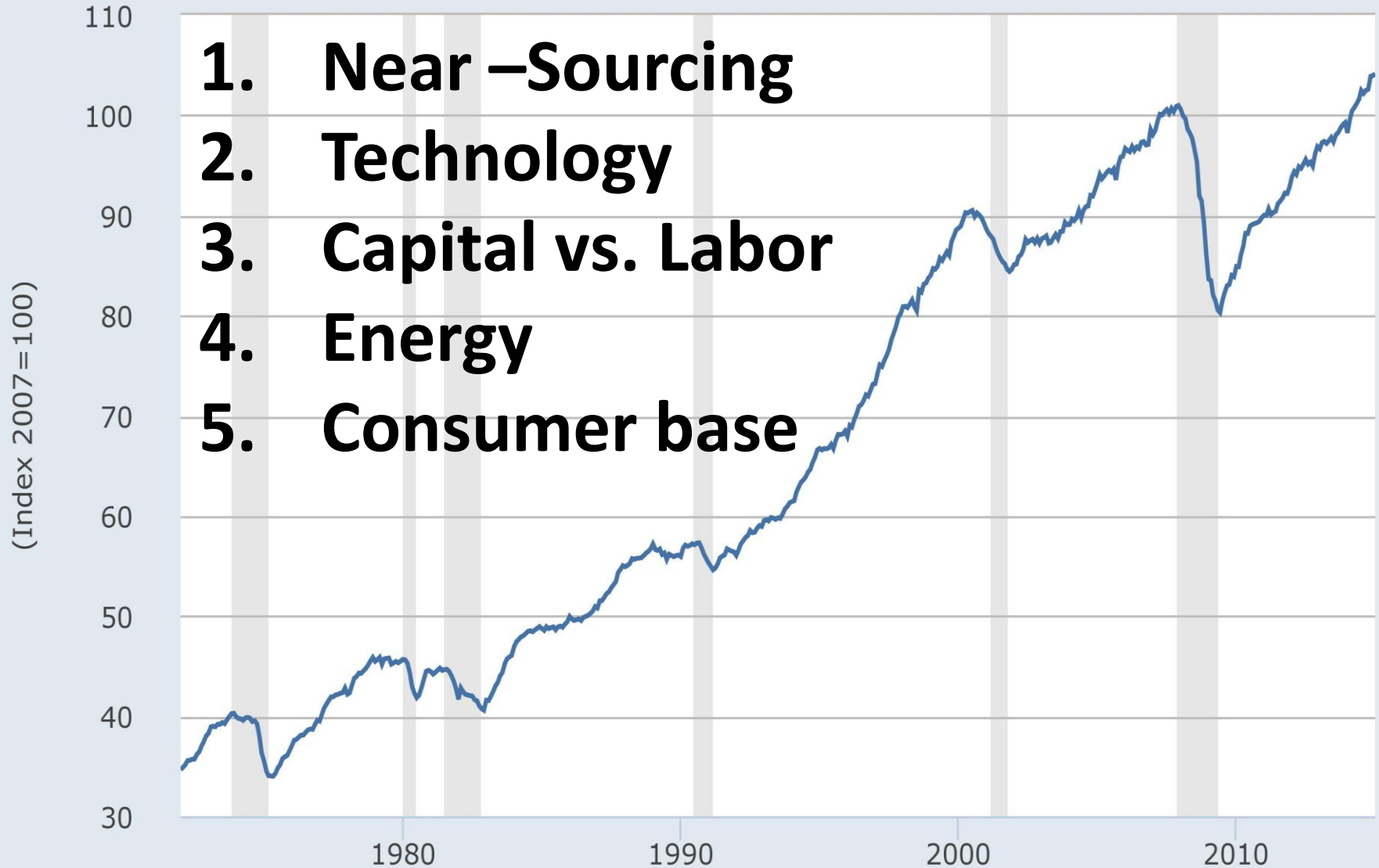




# U.S. Dependence on Foreign Oil Declining

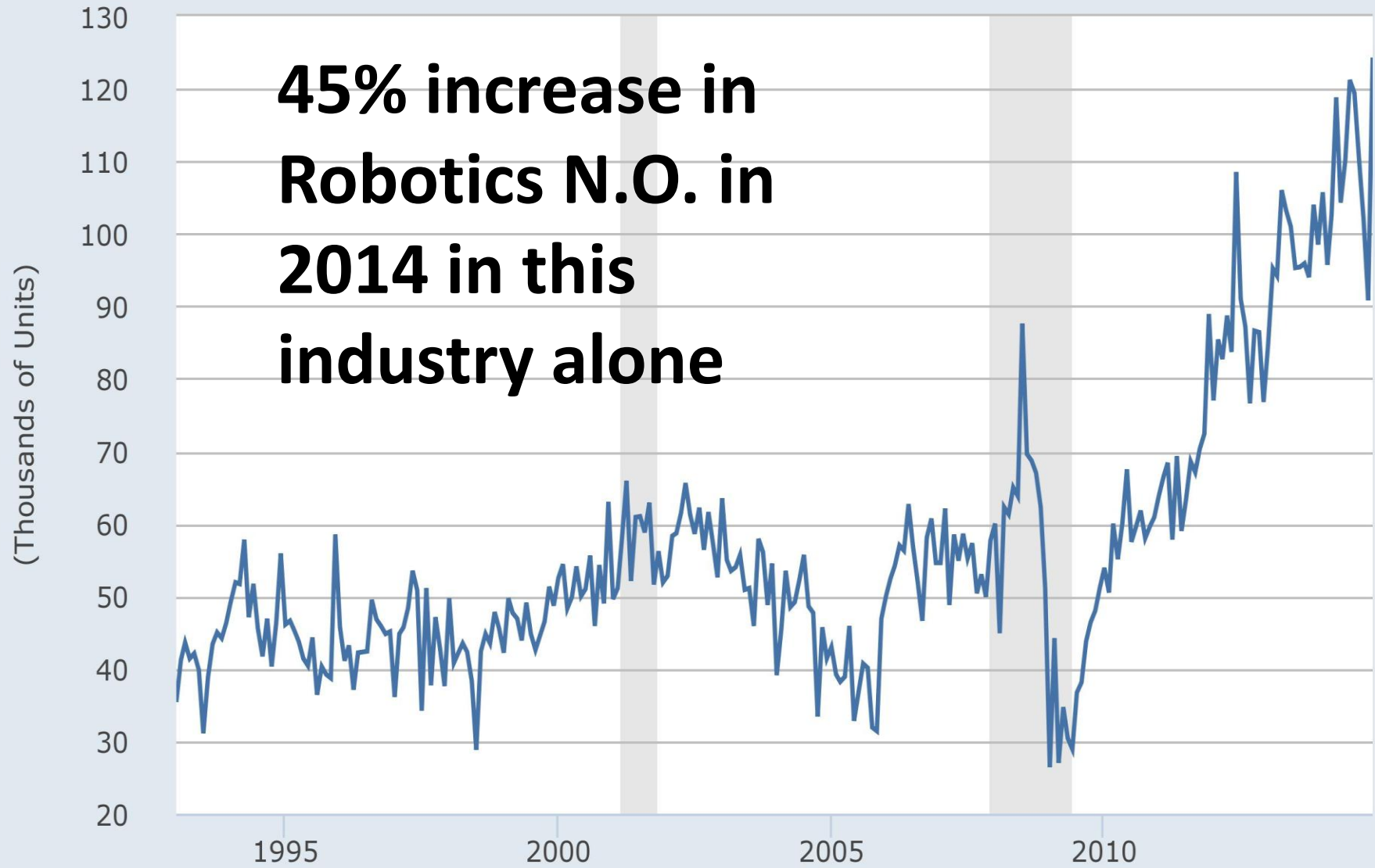
## Net imports as a share of domestic consumption





Source: Board of Governors of the Federal Reserve System (US)

Shaded areas indicate US recessions - 2015 research.stlouisfed.org



Source: US. Bureau of Economic Analysis

Shaded areas indicate US recessions - 2015 [research.stlouisfed.org](http://research.stlouisfed.org)

## Look for More Opportunities in These Sectors

- ▶ Energy Distribution
- ▶ Water Distribution/Conservation
- ▶ Infrastructure
- ▶ Vocational Education
- ▶ Health Care
- ▶ Food
- ▶ Mexico
- ▶ Housing
- ▶ Printed Electronics
- ▶ Robotics
- ▶ Security
- ▶ 3-D Printing
- ▶ Natural Resources (Harvesting/Conserving)
- ▶ Entertainment

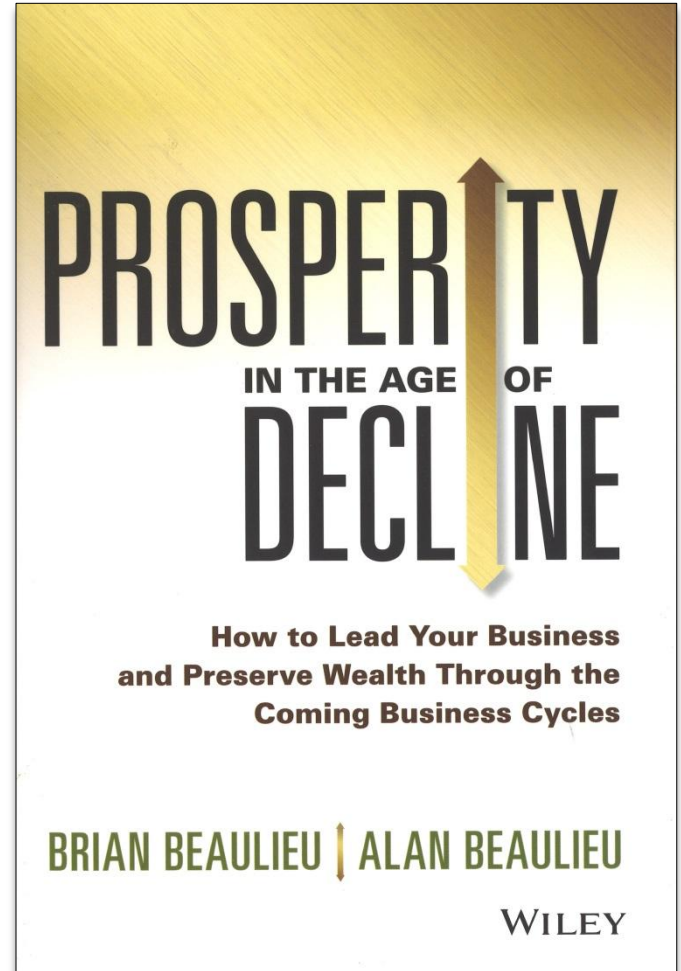
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**Are you ready?**

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from Barnes & Noble.**



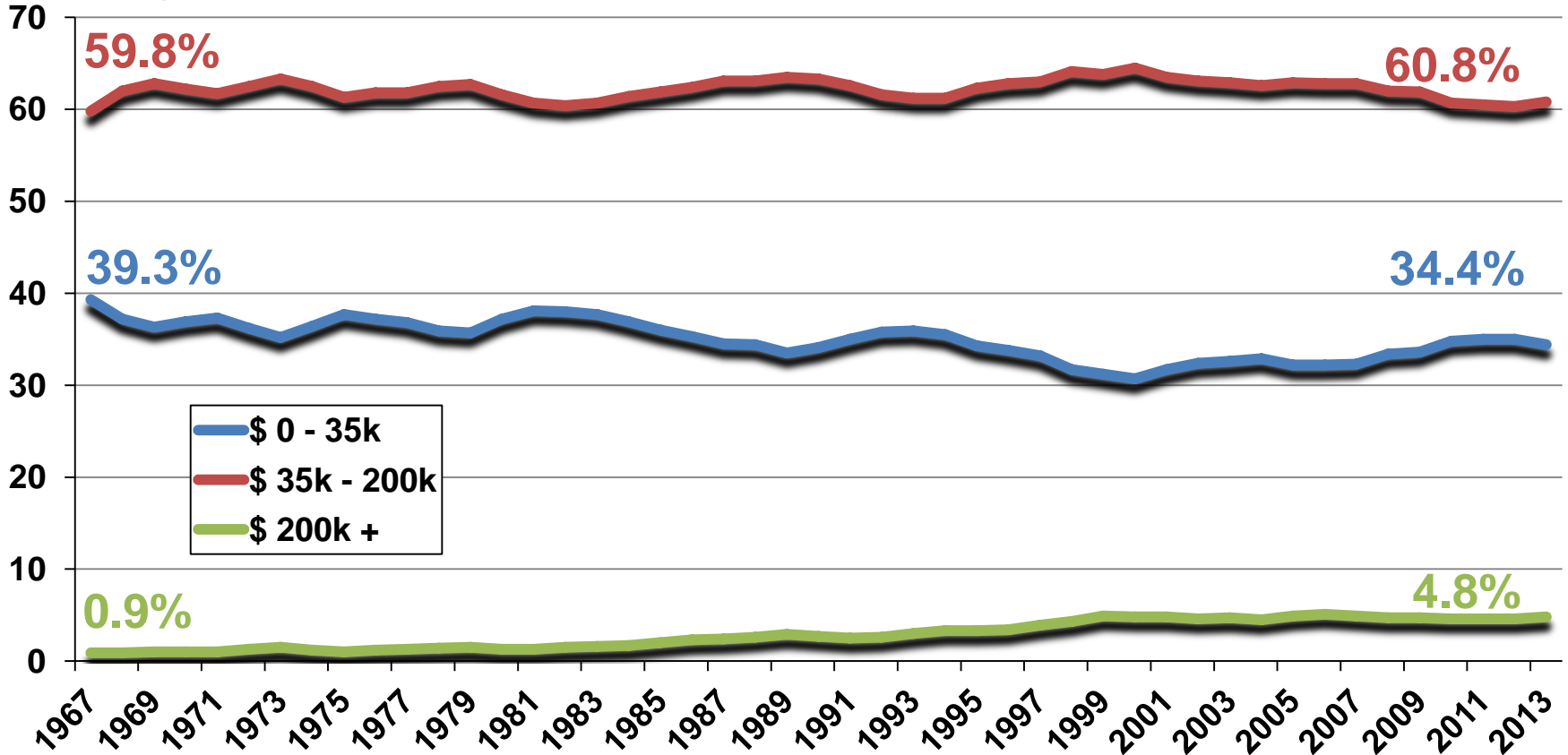
# ITR Management Objectives™

## Preparing for the Rise Ahead

1. Budget for the rise...do you have enough....
2. Invest in customer market research to reduce price sensitivity
3. Make sure your training and retention programs are top notch
4. Marketing and advertising spending increasingly effective
5. Drive efficiencies with technology
6. Hire sales people and leaders
7. Lock in costs toward the end of 2015
8. Expand credit offerings to garner market share
9. What are you going to do to avoid 2019?

# Household Distribution by Income Level

Percentage



**Income by Household**

**% in 1967**

**% in 2013**

**Less than \$35,000**

**39.3%**

**34.4%**

**\$35,000 to \$200,000**

**59.8%**

**60.8%**

**Over \$200,000**

**0.9%**

**4.8%**

# 8 Must Watch Items

- ❖ **ITR Leading Indicator**
- ❖ **Housing Starts**
- ❖ **Bond Market**
- ❖ **US Leading Indicator**
- ❖ **Purchasing Managers Index**
- ❖ **Retail Sales**
- ❖ **Employment**
- ❖ **Nondefense Capital Goods New Orders**

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**SUBJECT: “Warren County is Great!”**

**(Include your Company Name and Email Address)**