

# *The Election Economy*

November 29, 2016

City of Georgetown



# More Growth Coming

## DEVELOPMENT PIPELINE

### PLANNING

### DEVELOPING

### BUILDING



OFFICIAL SEAL  
OFFICE OF THE MAYOR  
CITY OF GEORGETOWN TEXAS

MADE WITH  
ARCGIS

DATE: 12/1/2011  
PROJECT: 12/1/2011

12/1/2011

12/1/2011

12/1/2011

Project Name	Address	Phase	Owner	Status	Notes
Project 1	1234 Main St	Planning	John Doe	Active	Initial site plan review
Project 2	5678 Oak Ave	Developing	Jane Smith	Active	Environmental impact study
Project 3	9101 Pine Rd	Building	Mike Johnson	Active	Permitting process
Project 4	2345 Elm St	Planning	Sarah Lee	Active	Community meeting
Project 5	3456 Maple Dr	Developing	David Kim	Active	Feasibility study
Project 6	4567 Birch Ln	Building	Emily White	Active	Construction start
Project 7	5678 Cedar Ct	Planning	Chris Brown	Active	Site plan submission
Project 8	6789 Willow Way	Developing	Alex Green	Active	Environmental review
Project 9	7890 Spruce St	Building	Mia Black	Active	Foundation work
Project 10	8901 Ash Ave	Planning	Noah Gray	Active	Initial site plan review
Project 11	9012 Hickory Rd	Developing	Olivia Blue	Active	Environmental impact study
Project 12	0123 Sycamore Dr	Building	Liam Red	Active	Permitting process
Project 13	1234 Magnolia St	Planning	Ava Yellow	Active	Community meeting
Project 14	2345 Dogwood Ln	Developing	Ethan Purple	Active	Feasibility study
Project 15	3456 Redwood Ct	Building	Sophia Pink	Active	Construction start
Project 16	4567 Cypress Way	Planning	Lucas Orange	Active	Site plan submission
Project 17	5678 Juniper St	Developing	Isabella Green	Active	Environmental review
Project 18	6789 Fir Ave	Building	Benjamin Blue	Active	Foundation work
Project 19	7890 Cedar Rd	Planning	Charlotte Red	Active	Initial site plan review
Project 20	8901 Pine St	Developing	William Yellow	Active	Environmental impact study
Project 21	9012 Oak Ave	Building	Amelia Purple	Active	Permitting process
Project 22	0123 Maple Dr	Planning	James Green	Active	Community meeting
Project 23	1234 Birch Ln	Developing	Harper Blue	Active	Feasibility study
Project 24	2345 Elm St	Building	Elijah Red	Active	Construction start
Project 25	3456 Cedar Ct	Planning	Madison Yellow	Active	Site plan submission
Project 26	4567 Willow Way	Developing	Lucas Purple	Active	Environmental review
Project 27	5678 Spruce St	Building	Olivia Pink	Active	Foundation work
Project 28	6789 Ash Ave	Planning	Benjamin Orange	Active	Initial site plan review
Project 29	7890 Hickory Rd	Developing	Isabella Green	Active	Environmental impact study
Project 30	8901 Sycamore Dr	Building	Benjamin Blue	Active	Permitting process
Project 31	9012 Magnolia St	Planning	Isabella Yellow	Active	Community meeting
Project 32	0123 Dogwood Ln	Developing	Ethan Purple	Active	Feasibility study
Project 33	1234 Redwood Ct	Building	Sophia Pink	Active	Construction start
Project 34	2345 Cypress Way	Planning	Lucas Orange	Active	Site plan submission
Project 35	3456 Juniper St	Developing	Isabella Green	Active	Environmental review
Project 36	4567 Fir Ave	Building	Benjamin Blue	Active	Foundation work
Project 37	5678 Cedar Rd	Planning	Charlotte Red	Active	Initial site plan review
Project 38	6789 Pine St	Developing	William Yellow	Active	Environmental impact study
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Project 40	8901 Maple Dr	Planning	James Green	Active	Community meeting
Project 41	9012 Birch Ln	Developing	Harper Blue	Active	Feasibility study
Project 42	0123 Elm St	Building	Elijah Red	Active	Construction start
Project 43	1234 Cedar Ct	Planning	Madison Yellow	Active	Site plan submission
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Project 45	3456 Spruce St	Building	Olivia Pink	Active	Foundation work
Project 46	4567 Ash Ave	Planning	Benjamin Orange	Active	Initial site plan review
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Project 60	8901 Elm St	Building	Elijah Red	Active	Construction start
Project 61	9012 Cedar Ct	Planning	Madison Yellow	Active	Site plan submission
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Project 68	6789 Dogwood Ln	Developing	Ethan Purple	Active	Feasibility study
Project 69	7890 Redwood Ct	Building	Sophia Pink	Active	Construction start
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Project 98	6789 Willow Way	Developing	Lucas Purple	Active	Environmental review
Project 99	7890 Spruce St	Building	Olivia Pink	Active	Foundation work
Project 100	8901 Ash Ave	Planning	Benjamin Orange	Active	Initial site plan review



Scale: 1 inch = 1 mile

# Why are people moving here?



# Citizens' Quality of Life





Planning for Growth

A photograph of a wind farm with several white wind turbines in a row, receding into the distance. The sky is bright blue with scattered white clouds. The foreground shows a dry, grassy field with some low-lying shrubs and a dirt path.

100% Renewable Energy by 2018



Transportation Investments

# Southwest Bypass

Georgetown

Wolf Ranch Town Center

Georgetown

S Austin Ave

1460

Leander Rd

Leander Rd

Williamson County

Inner Space Cavern

SE Inner Loop



2243

Leander Rd

260

259

261

260

265

35

35

35

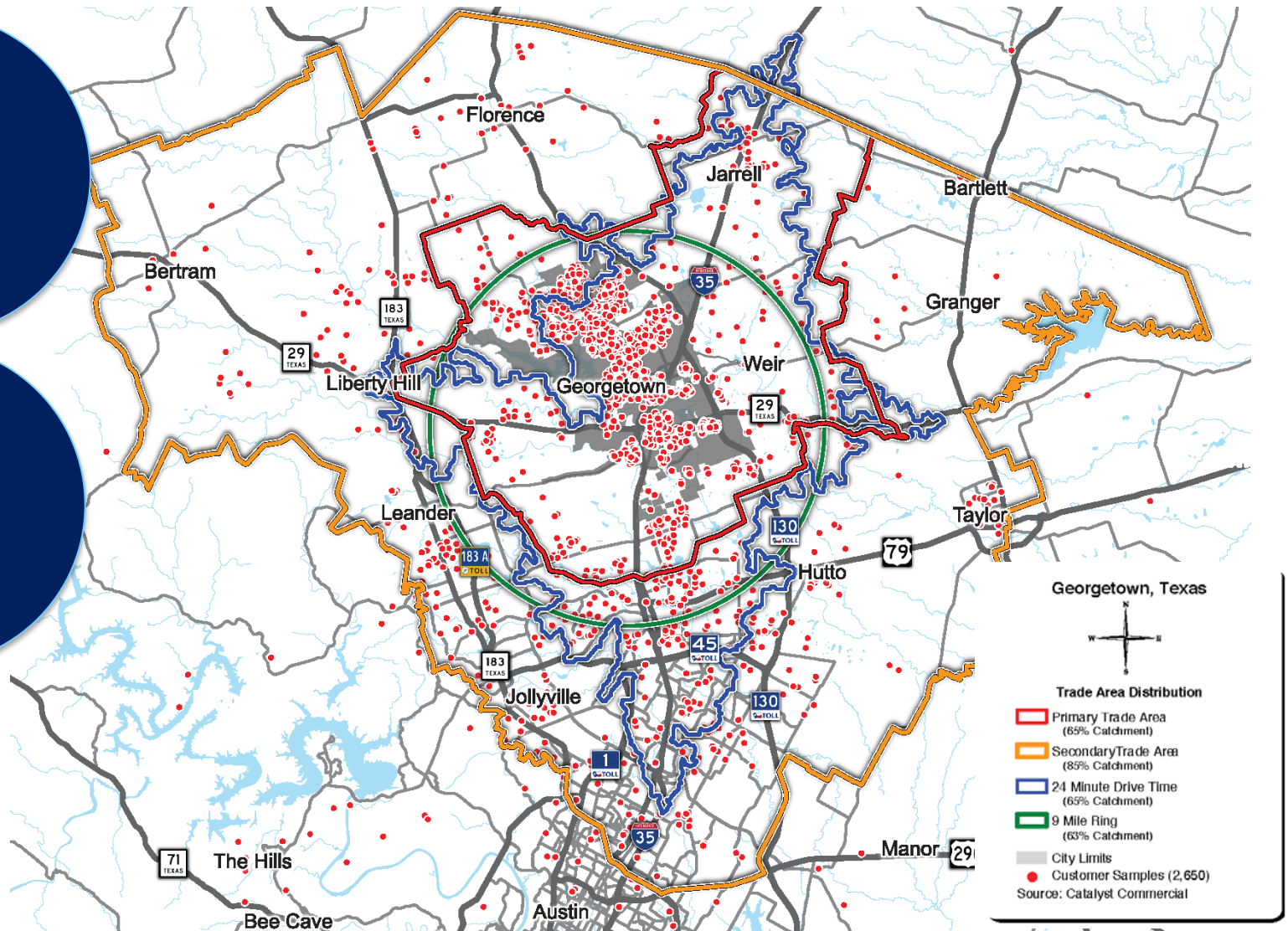
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# Retail Study

134,031  
PTA  
POP

57,958  
City  
POP



# Chris Chmura, PhD





**CHMURA**  
Economics & Analytics

# The Election Economy

City of Georgetown, Texas

November 29, 2016

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# Overview

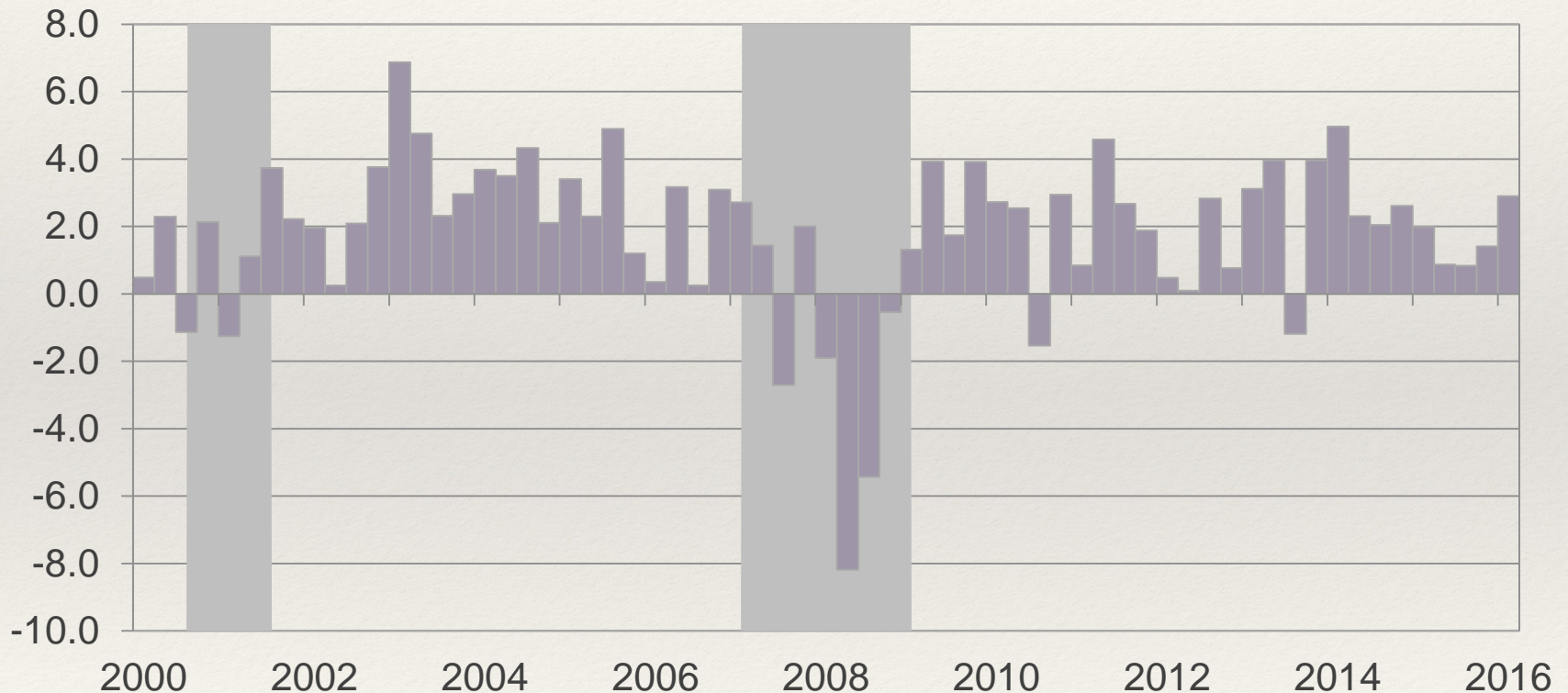
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- 📊 National growth: A pre and post view based on a changing administration
- 📊 We expect the Fed to raise the fed funds rate in December; Will rates rise more rapidly with the new administration?
- 📊 Texas growth slipped below the national pace
- 📊 Williamson County growing faster than the state and nation; Austin MSA slightly slower

# Current National Environment (Pre Election)

# Real GDP Growth Fastest Growth in Two Years... But Modest

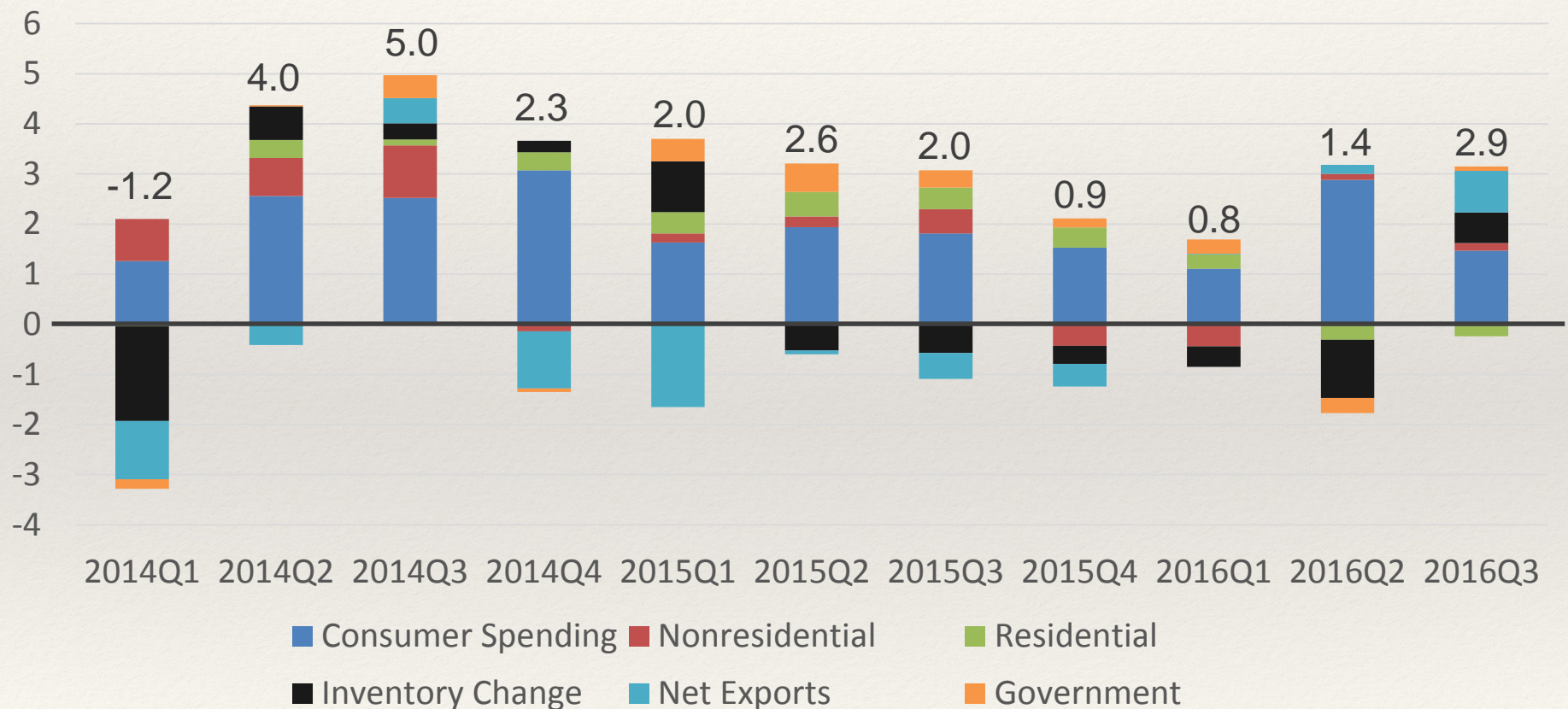
**Real Gross Domestic Product  
Quarterly Annualized Percent Change**



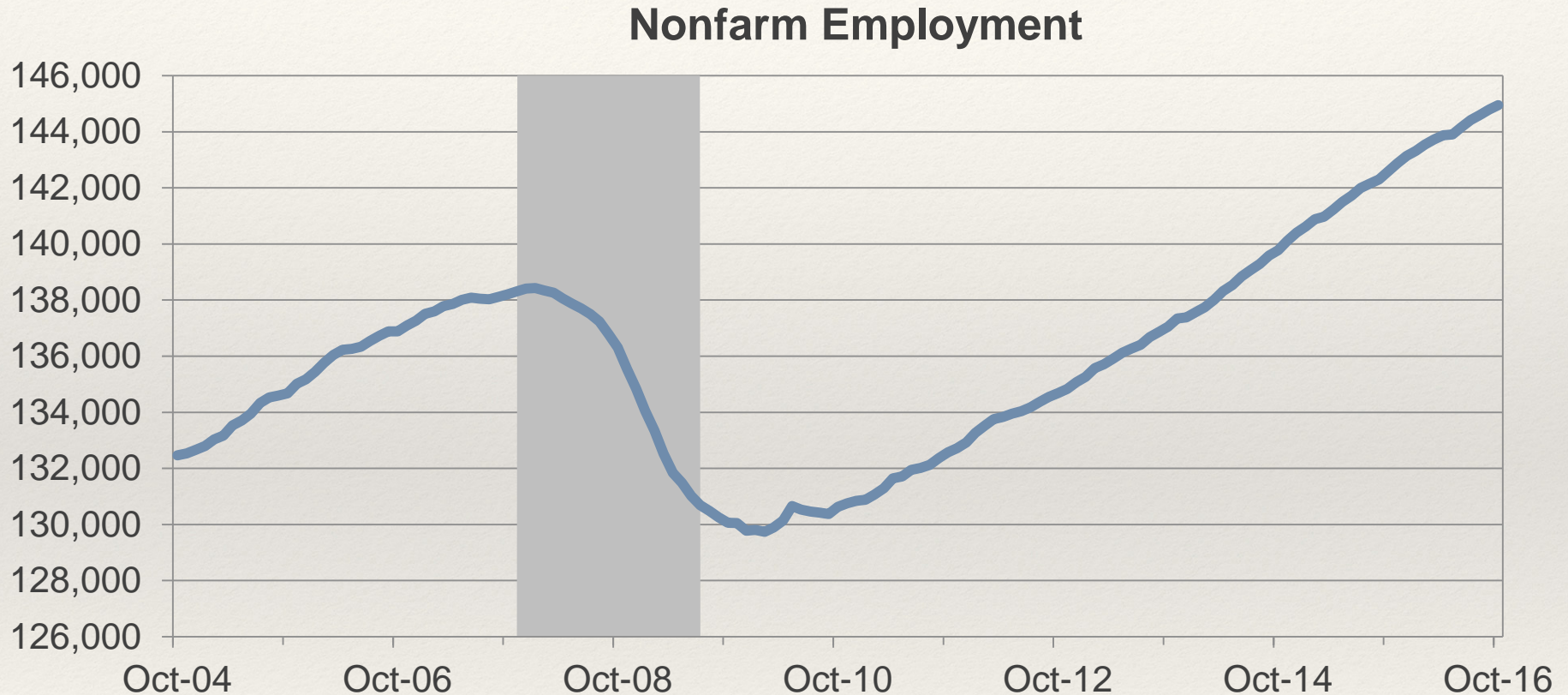
Source: BEA.  
Data through 3<sup>rd</sup> Qtr 2016

# Nearly All GDP Major Sectors Positive in the 3<sup>rd</sup> Quarter

Contributions to Percent Change in Real GDP



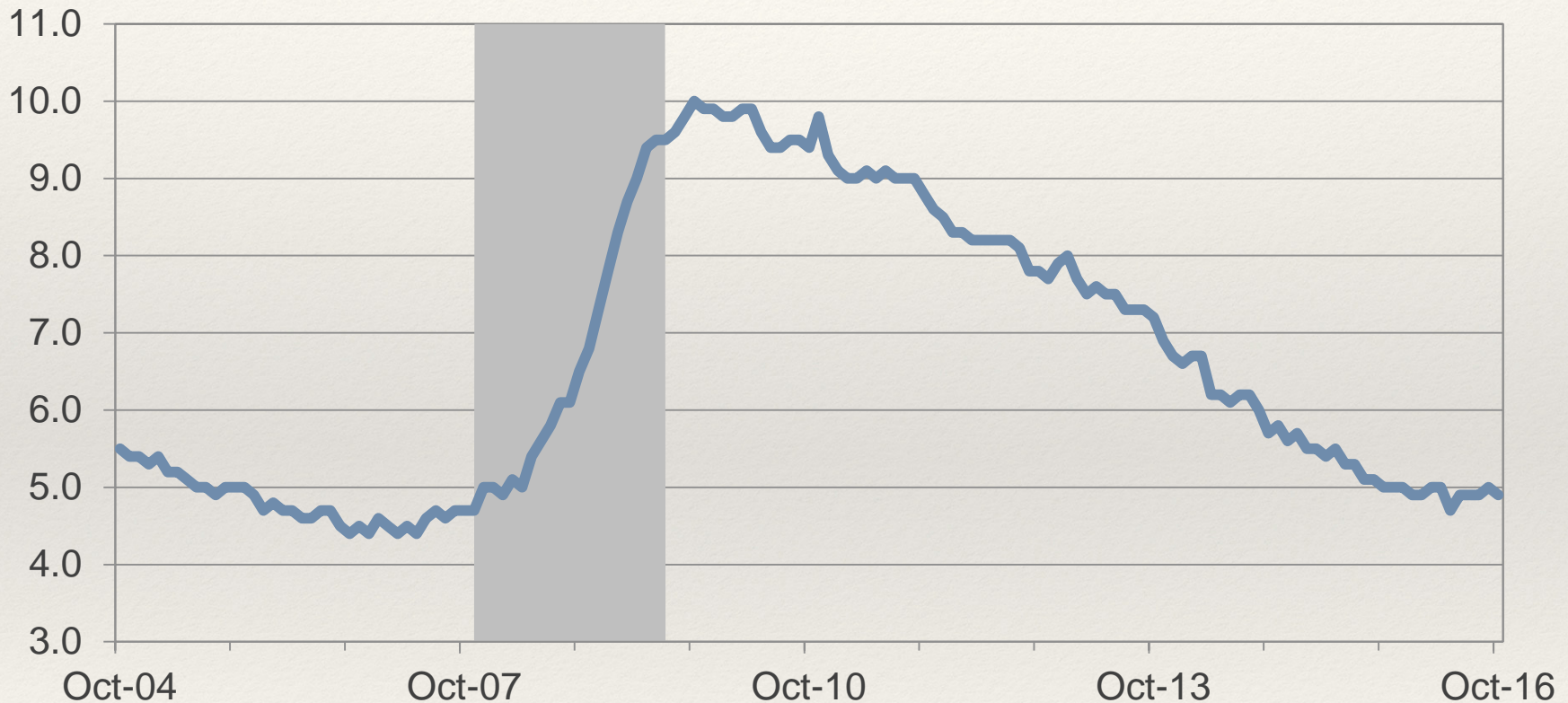
# Labor Market Continues to Improve



Source: U.S. Department of Labor.  
Data through October 2016

# Unemployment Rate is Holding Steady Around 5%; Full Employment?

Unemployment Rate



Source: U.S. Department of Labor.  
Data through October 2016

# Unemployment Rate for U-6 is Higher

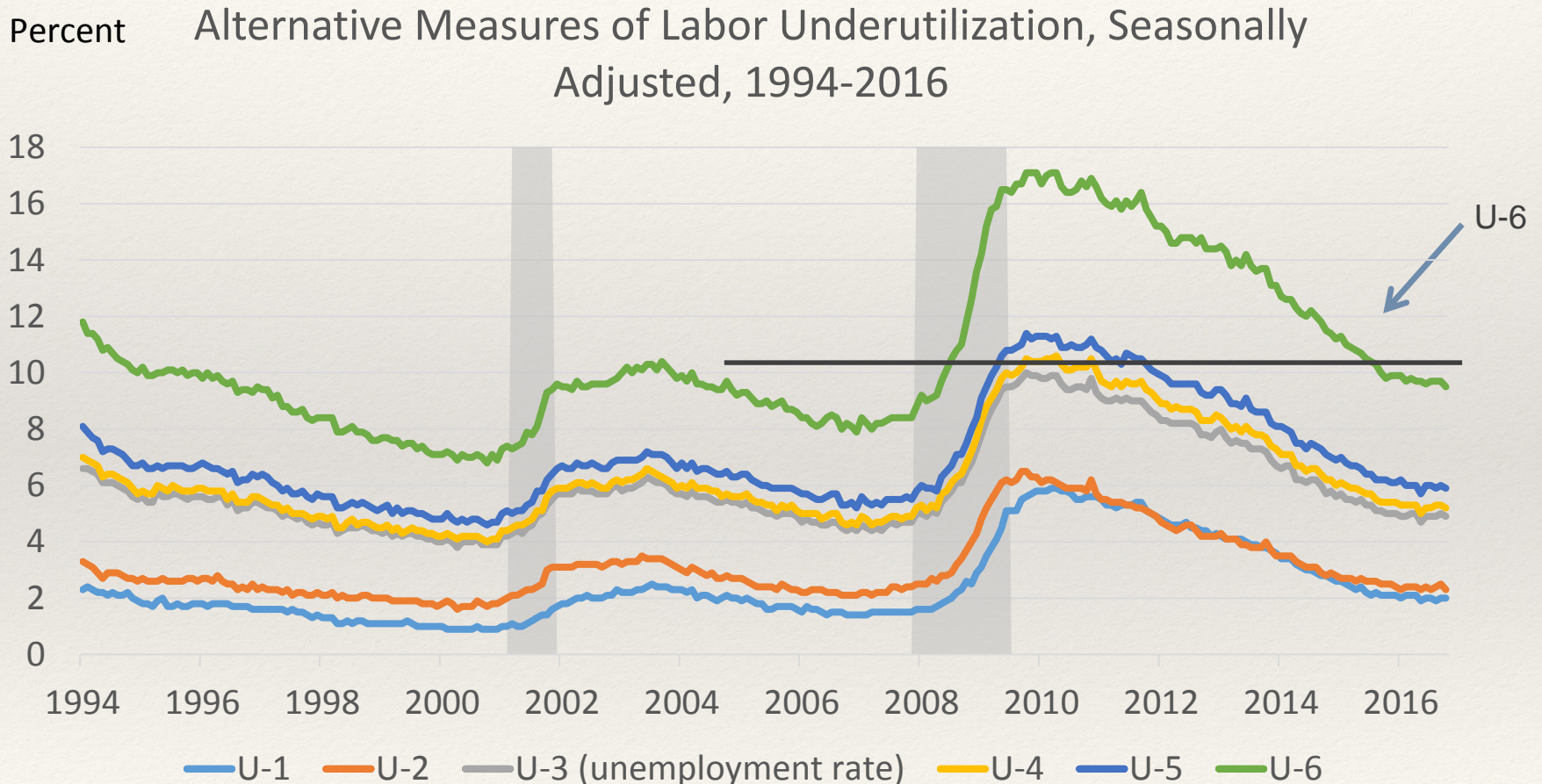
## HOUSEHOLD DATA

**Table A-15. Alternative measures of labor underutilization [Percent]**

Measure	Not seasonally adjusted			Seasonally adjusted					
	Oct. 2015	Sept. 2016	Oct. 2016	Oct. 2015	June 2016	July 2016	Aug. 2016	Sept. 2016	Oct. 2016
U-1 Persons unemployed 15 weeks or longer, as a percent of the civilian labor force	2.1	1.9	1.9	2.1	2.0	2.0	1.9	2.0	2.0
U-2 Job losers and persons who completed temporary jobs, as a percent of the civilian labor force	2.3	2.2	2.1	2.5	2.4	2.3	2.4	2.5	2.3
U-3 Total unemployed, as a percent of the civilian labor force (official unemployment rate)	4.8	4.8	4.7	5.0	4.9	4.9	4.9	5.0	4.9
U-4 Total unemployed plus discouraged workers, as a percent of the civilian labor force plus discouraged workers	5.2	5.1	5.0	5.4	5.2	5.2	5.3	5.3	5.2
U-5 Total unemployed, plus discouraged workers, plus all other persons marginally attached to the labor force, as a percent of the civilian labor force plus all persons marginally attached to the labor force	6.0	5.9	5.7	6.2	6.0	6.0	5.9	6.0	5.9
U-6 Total unemployed, plus all persons marginally attached to the labor force, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all persons marginally attached to the labor force	9.5	9.3	9.2	9.8	9.6	9.7	9.7	9.7	9.5

NOTE: Persons marginally attached to the labor force are those who currently are neither working nor looking for work but indicate that they want and are available for a job and have looked for work sometime in the past 12 months. Discouraged workers, a subset of the marginally attached, have given a job-market related reason for not currently looking for work. Persons employed part time for economic reasons are those who want and are available for full-time work but have had to settle for a part-time schedule. Updated population controls are introduced annually with the release of January data.

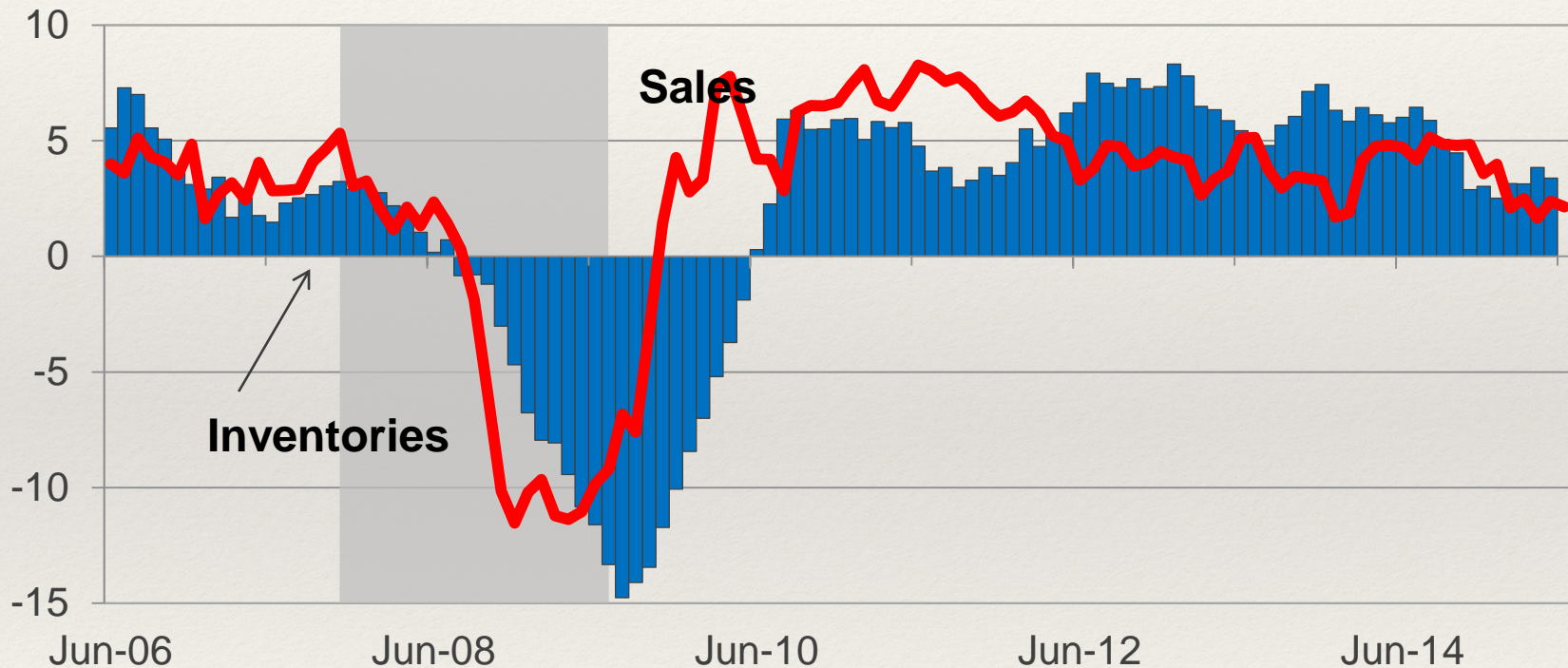
# Slack Remains in Labor Market But Closer to Normal Levels



Source: Bureau of Labor Statistics  
Data through October 2016

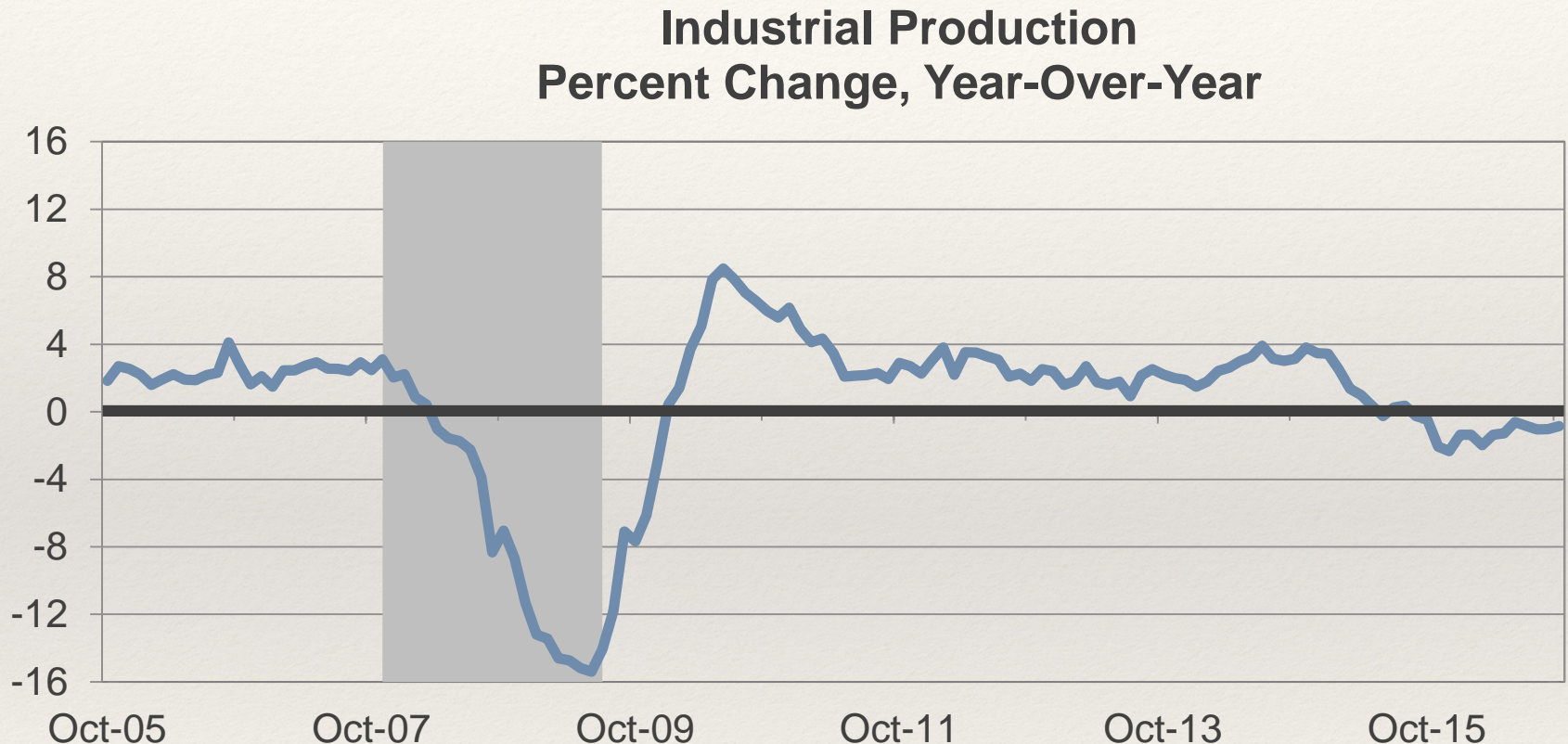
# Sales Growing at Modest Pace

Retail Sales and Inventory Growth Percent Change, Year-Over-Year



Source: U.S. Department of Commerce.  
Data through October 2016

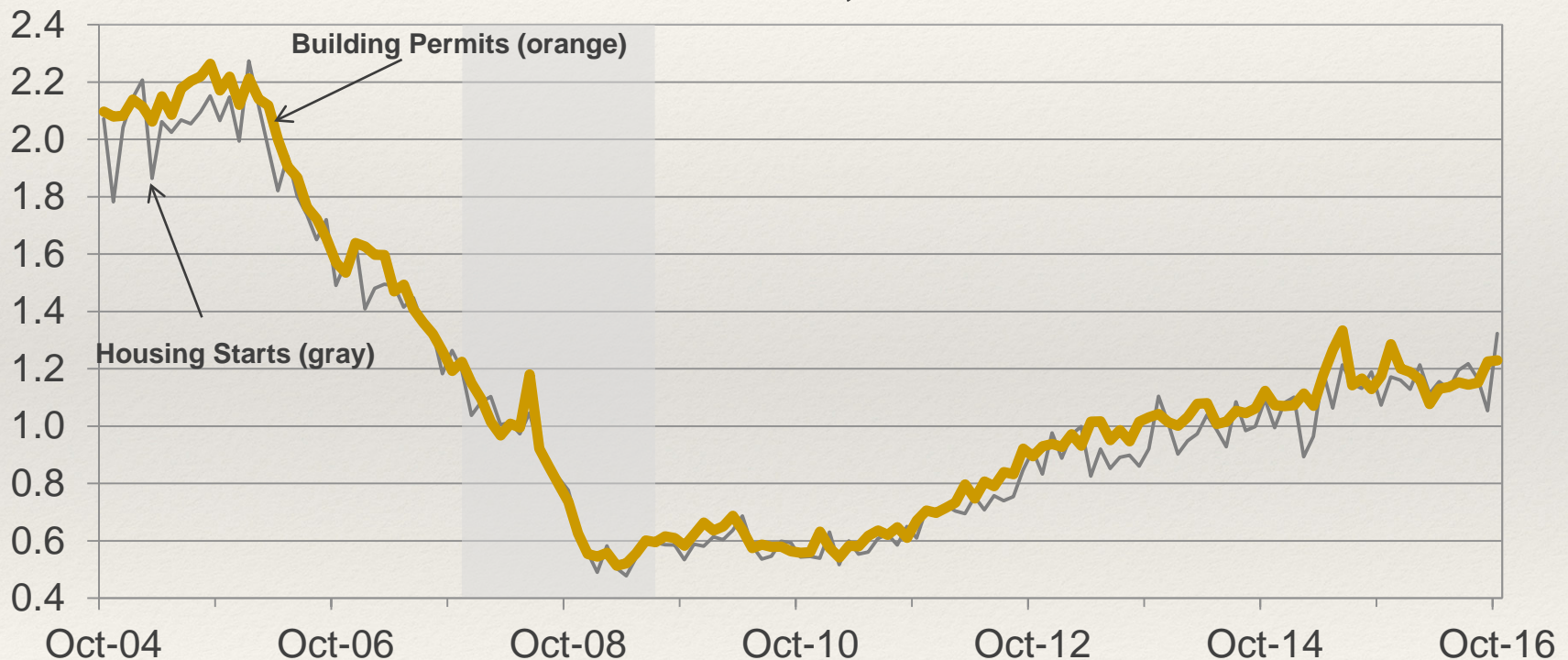
# Industrial Output Recently Slowed at Factories: Strong Dollar Having an Impact



Source: Federal Reserve Bank.  
Data through October 2016

# Home Building Picking Up: Large Ripple Impact throughout Economy

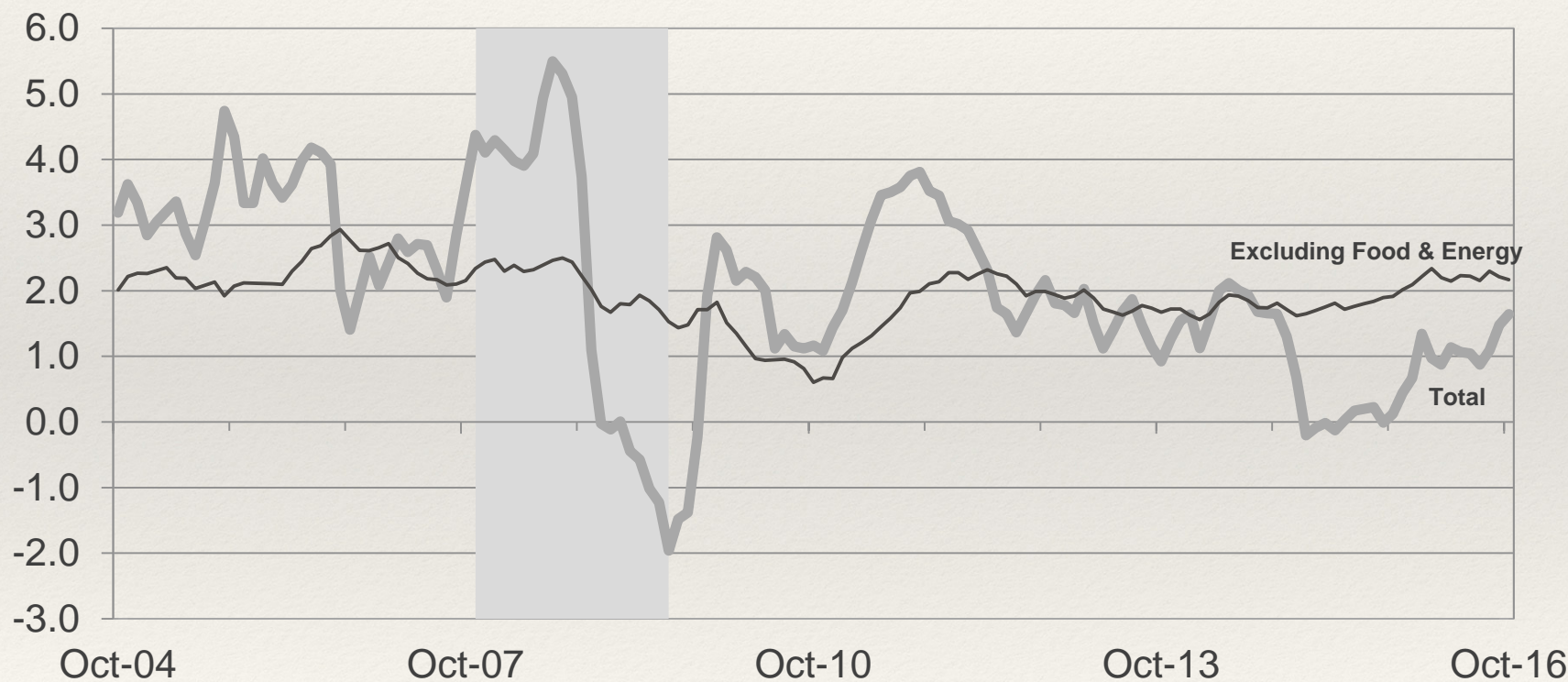
**Total Housing Starts and Permits  
Million Units, Annualized Rate**



Source: U.S. Department of Commerce.  
Data through October 2016

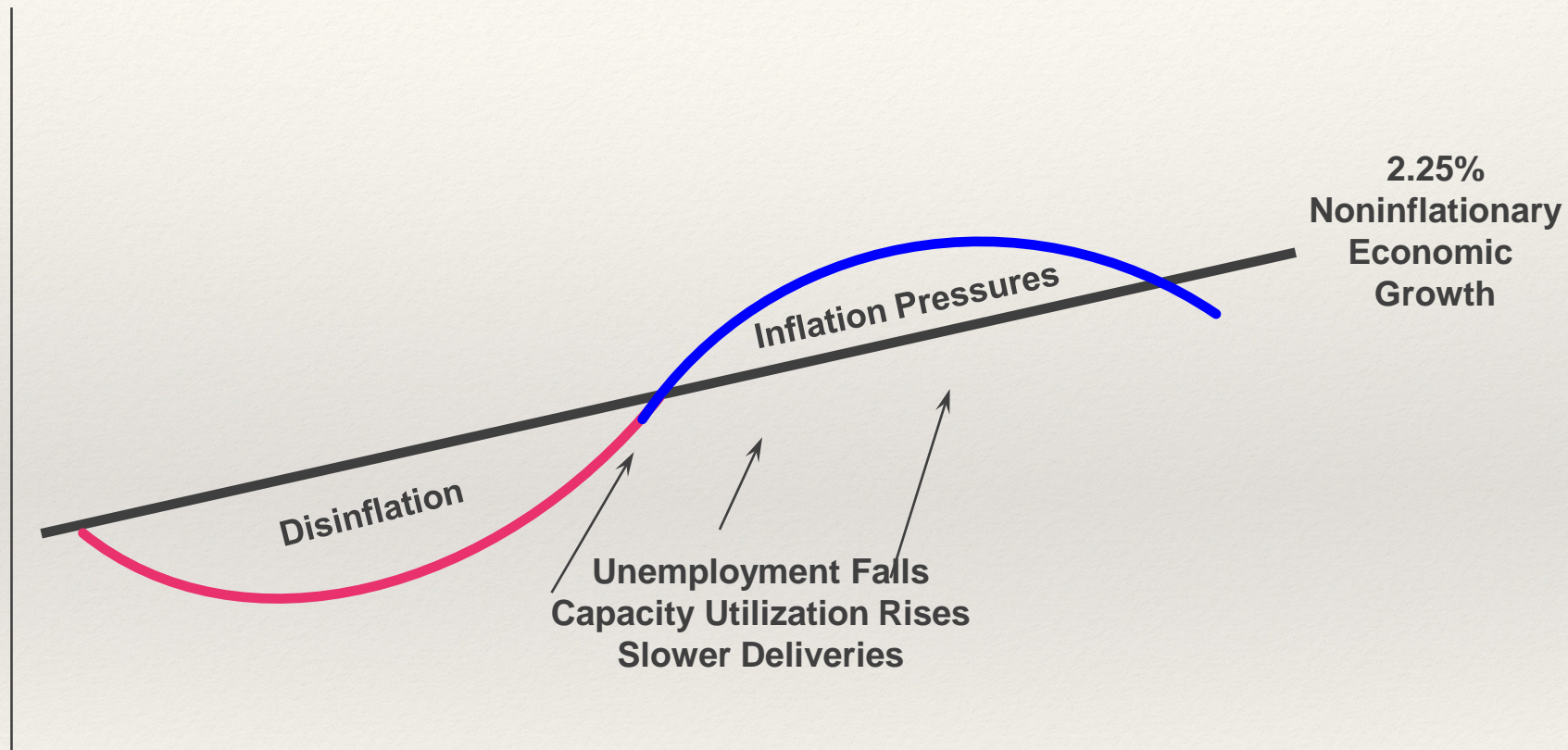
# Inflation: CPI at 1.6% (Low Oil Prices)

**Consumer Price Index  
Percent Change, Year-Over-Year**



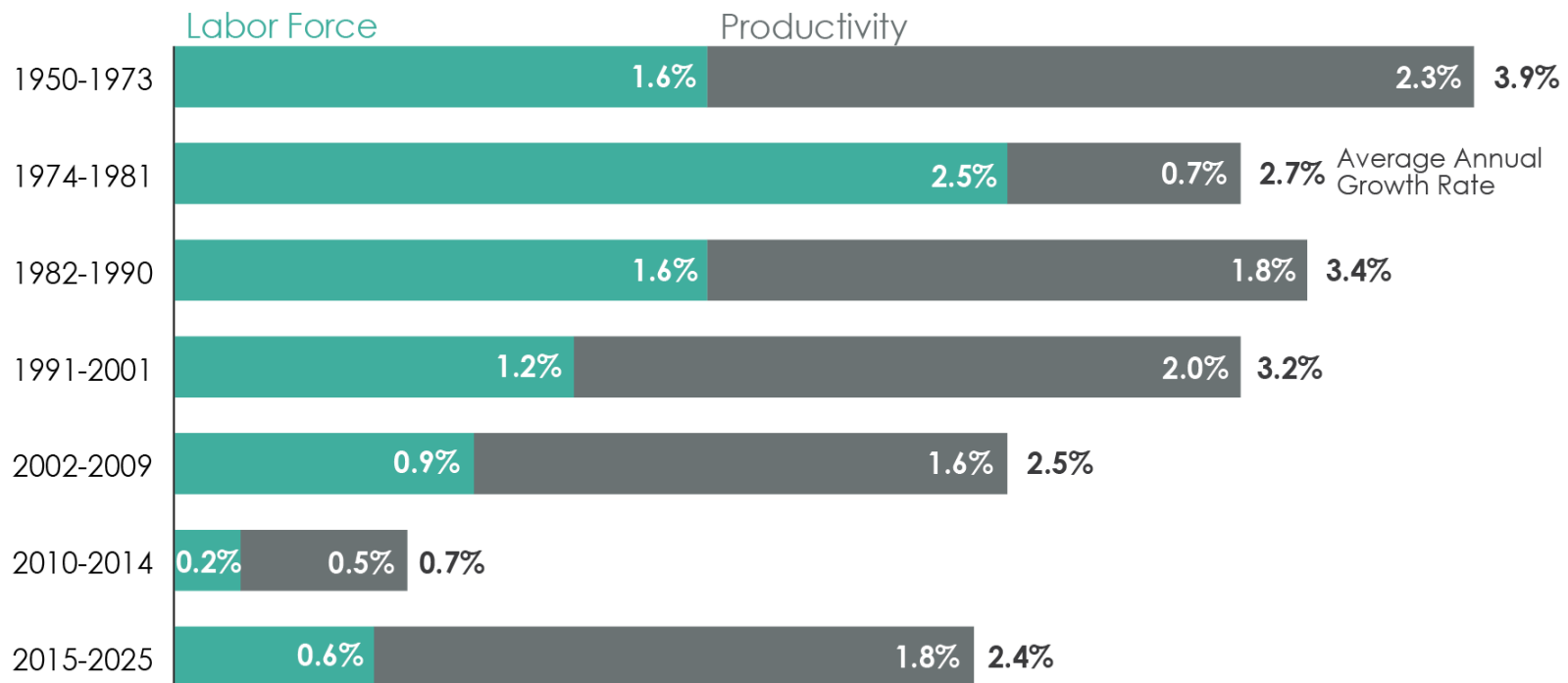
Source: Bureau of Labor Statistics.  
Data through October 2016

# The Fed's Goal: 2.25% Real GDP Growth?



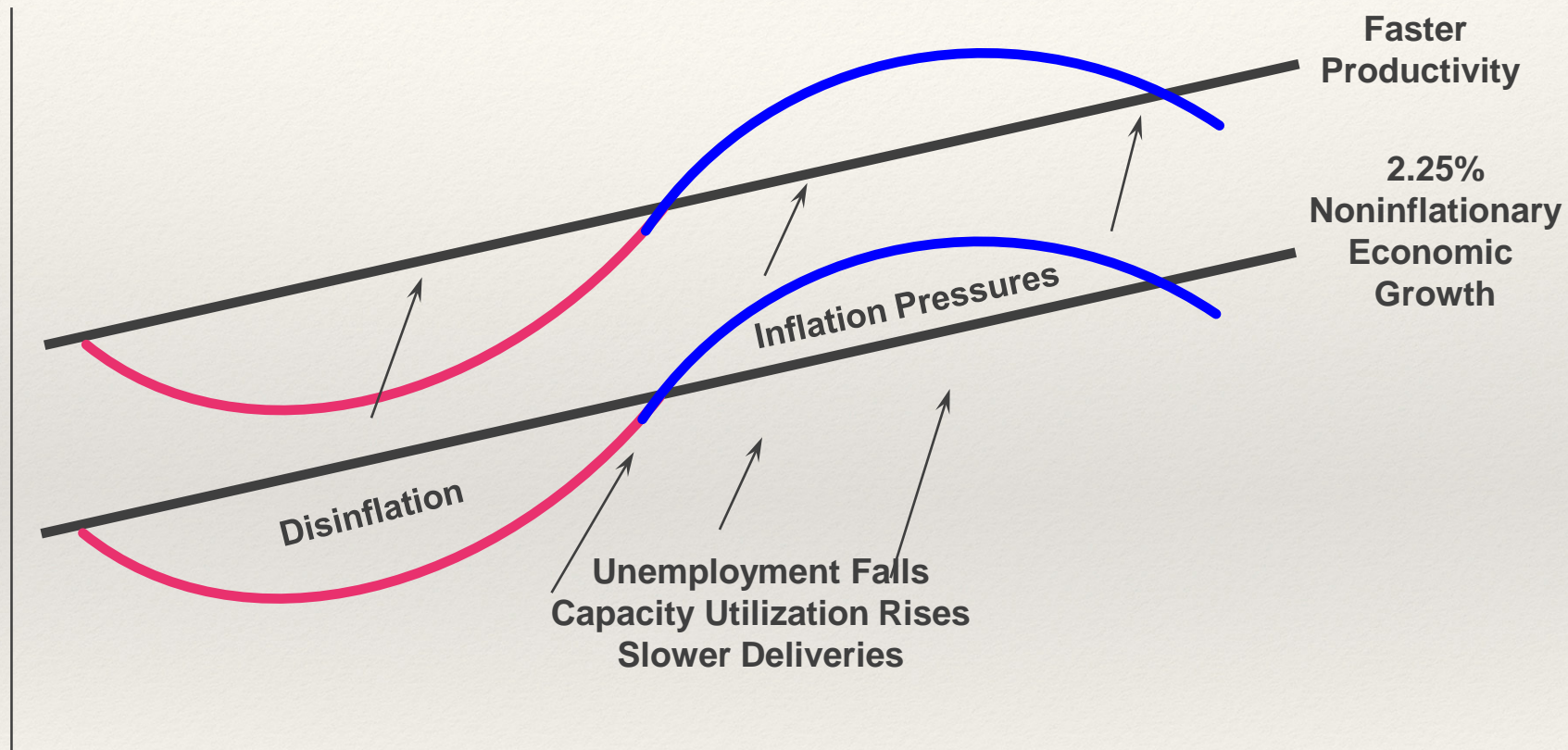
# How Fast Can the Economy Grow?

## Labor Force and Productivity Growth Drive National Growth

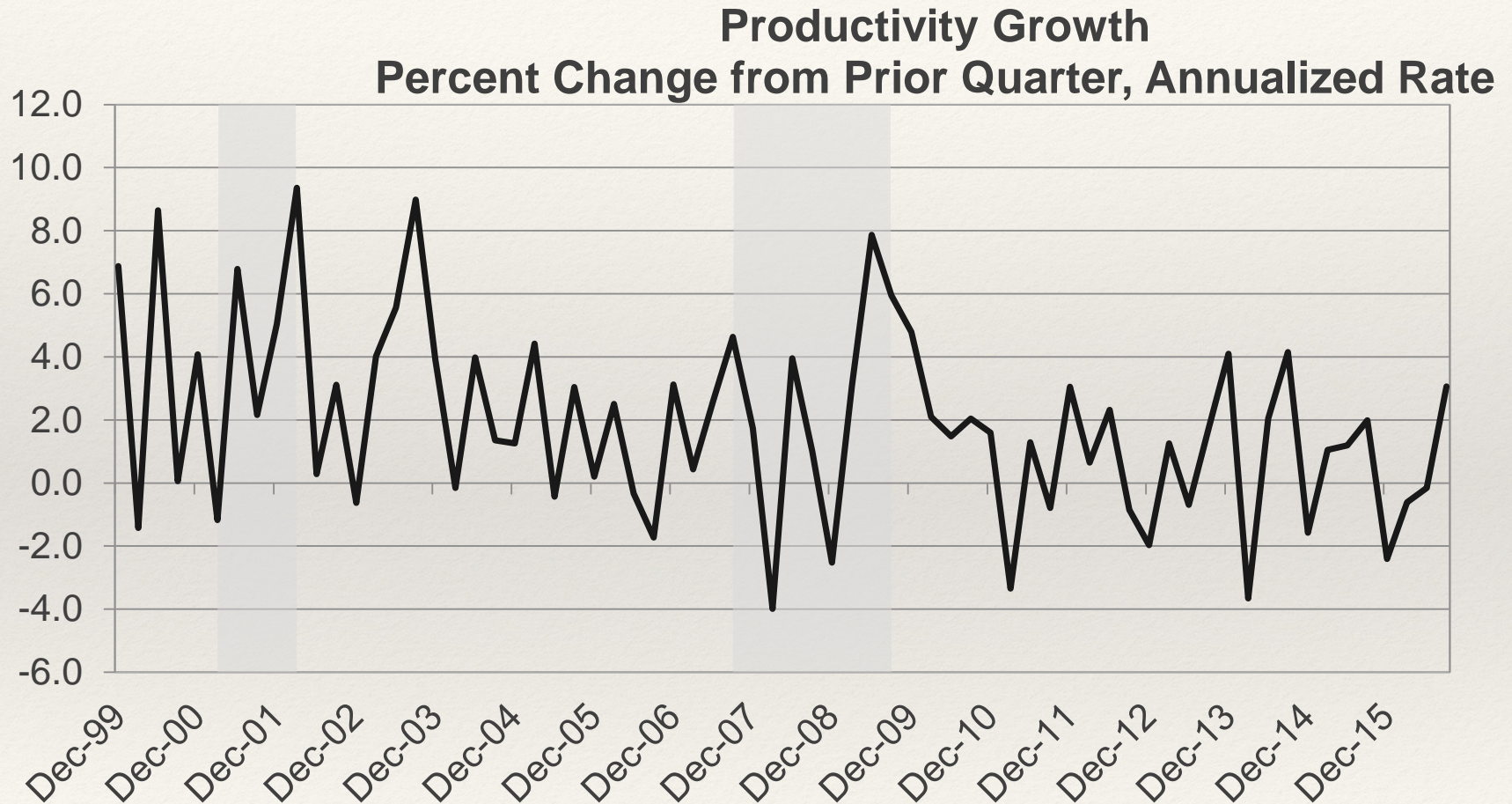


Source: Chmura Economics & Analytics and Bureau of Labor Statistics and Congressional Budget Office

# The Fed's Goal: Faster Productivity Growth Pushes the Target HIGHER!

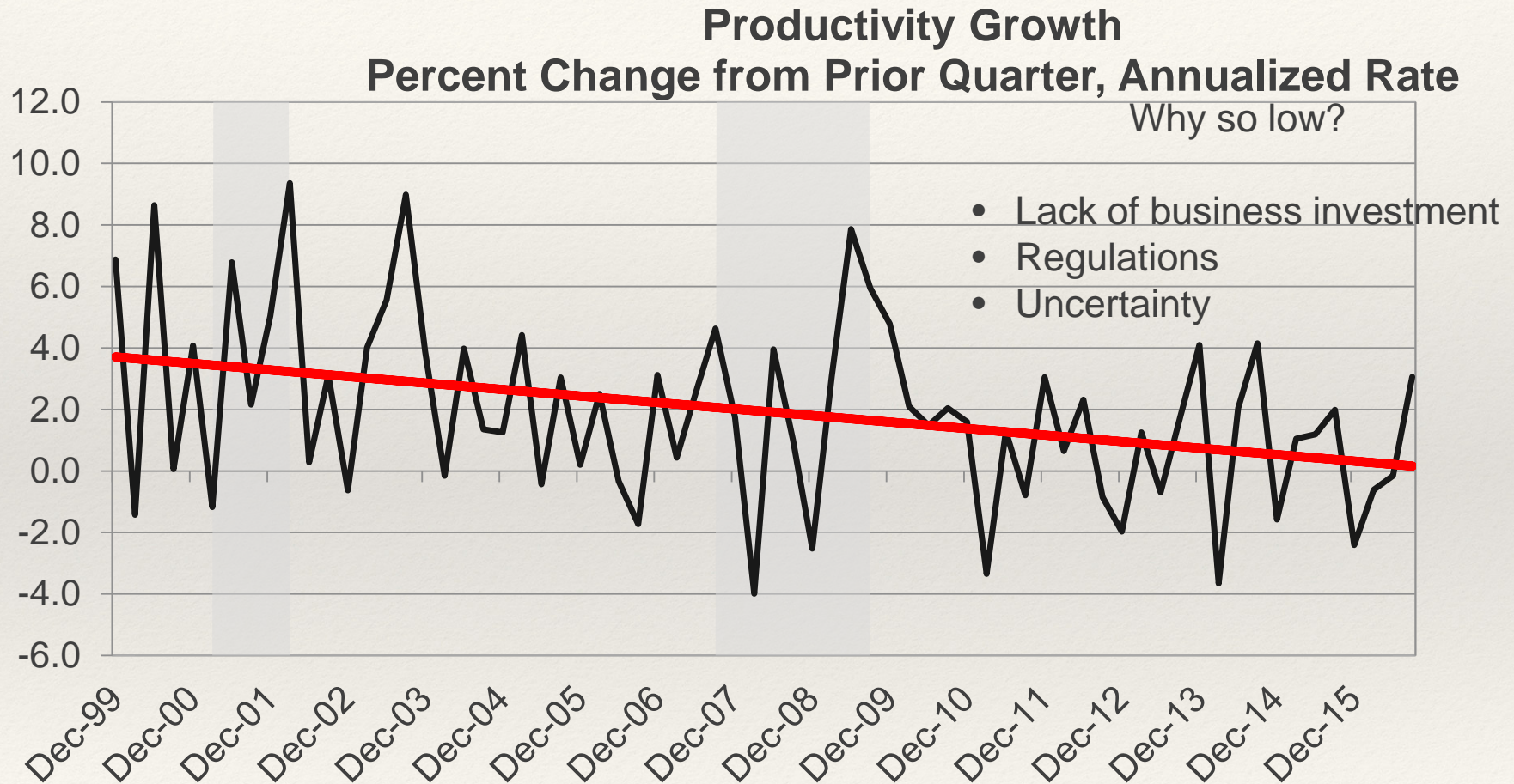


# Productivity Growth



Source: BEA.  
Data through 3<sup>rd</sup> Qtr 2016

# Productivity Growth



Source: BEA.  
Data through 3<sup>rd</sup> Qtr 2016

# National Forecast: Status Quo

	2015-16 Actual				2016-17 Forecast			
	Qtr4	Qtr1	Qtr2	Qtr3	Qtr4	Qtr1	Qtr2	Qtr3
Real Gross Domestic Product	0.9	0.8	1.4	2.9	2.3	2.2	2.8	2.4
Consumptions Expenditures	2.3	1.6	4.3	2.1	2.9	2.6	2.6	2.0
Residential Investment	11.5	7.8	-7.8	-6.2	-0.9	2.1	3.4	3.2
Nonresidential Investment	-3.3	-3.4	1.0	1.1	2.4	1.8	3.7	4.5
Equipment	-2.6	-9.5	-2.9	-2.8	1.4	2.3	5.3	6.0
Intellectual Property	4.5	3.8	9.0	4.0	3.4	3.1	2.3	3.5
Government Expenditure	1.0	1.6	-1.7	0.5	0.8	1.2	1.2	1.1
Net Exports Goods & Svcs	-566.9	-566.5	-558.7	-523.2	-524.0	-530.9	-528.4	-525.7
(Billions of 2009 Dollars)								

## Percentage Change From a Year Ago (%)

Consumer Price Index	0.4	1.1	1.1	1.1	1.5	2.1	2.0	2.1
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## Yields (%)

Federal Funds Rate	0.2	0.4	0.4	0.4	0.5	0.8	1.1	1.4
Prime Rate	3.3	3.5	3.5	3.5	3.5	3.8	4.1	4.4
10-Year Treasury	2.2	1.9	1.8	1.6	1.9	2.3	2.8	3.3
30-Year Conventional Mortgage	3.9	3.7	3.6	3.4	3.5	4.0	4.4	4.9

Source: Chmura Economics & Analytics  
Note: Yields reported for the average of the quarter  
GDP based on advanced figures (Billions of 2009 Dollars)

# New Forecast (Trump Administration)

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# Promises of the Trump Administration Regarding Economy

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- Corporate tax cuts
- Reduce individual tax cuts
- Reduce regulatory burden
- Reform energy policy
- Proposals on trade
  - Pressure on China to stop manipulating currency
  - Withdraw from Trans-Pacific Partnership (TPP)
  - Renegotiate North American Free Trade Agreement (NAFTA)
  - Identify foreign trade abuses unfairly impacting US workers
  - Respond using tools under American and international law

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# Business Taxes

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- Corporate tax rate lowered to 15% from 35% but eliminate most business deductions
- Pass-through entities (sole proprietors, partnerships, S-corps) can elect to be taxed at a flat rate of 15% on pass through income – Previously could have been 43.4% or 39.6%
- Expense investment rather than depreciate over time
- Allow repatriation of corporate projects held offshore at one-time tax rate of 10%

Source: [www.donaldjtrump.com/policies/tax-plan/](http://www.donaldjtrump.com/policies/tax-plan/)

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# Individual Income Taxes

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- 📊 Taxes cut at every income level
- 📊 Reduce tax brackets from 7 to 3
- 📊 Average tax cut in 2017: \$2,940 (after-tax income +4.1%)
- 📊 Brackets & **Rates** for Married-Joint filers:
  - Less than \$75,000: **12%**
  - More than \$75,000 but less than \$225,000: **25%**
  - More than \$225,000: **33%**

*\*Brackets for single filers are ½ of these amounts*

Source: Tax Policy Center Urban Institute & Brookings Institution, October 18, 2016 and [www.donaldjtrump.com](http://www.donaldjtrump.com)

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# Economic Implications

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- Corporate tax cuts and reduced regulation
  - Stimulates business investment
  - Increases productivity growth
  - Increases corporate profits
  - Decreases price of oil (damps inflation)
- Reduced individual income taxes
  - Increase spending
  - Some will increase savings or pay off debt
- Inflation and trade deficit
  - Faster growth can put upward pressure on wages
  - Less regulation in oil & gas decreases price of oil (damps inflation)
  - Pressure on China to stop manipulating its currency would put upward pressure on Chinese currency (and reduce imports to U.S.)

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# Economic Implications

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- Short-term lift to economy
- Long-term less certain
- Decrease in Federal revenue offset by increased spending and faster growth?
- Increase in Defense spending offset by decreases in other areas?
- Increased Federal deficit pushes interest rates up and squeezes out private investment growth
- Trump view: Trade, regulatory, energy reform increases economic growth/revenue enough to offset much of revenue losses from tax reductions

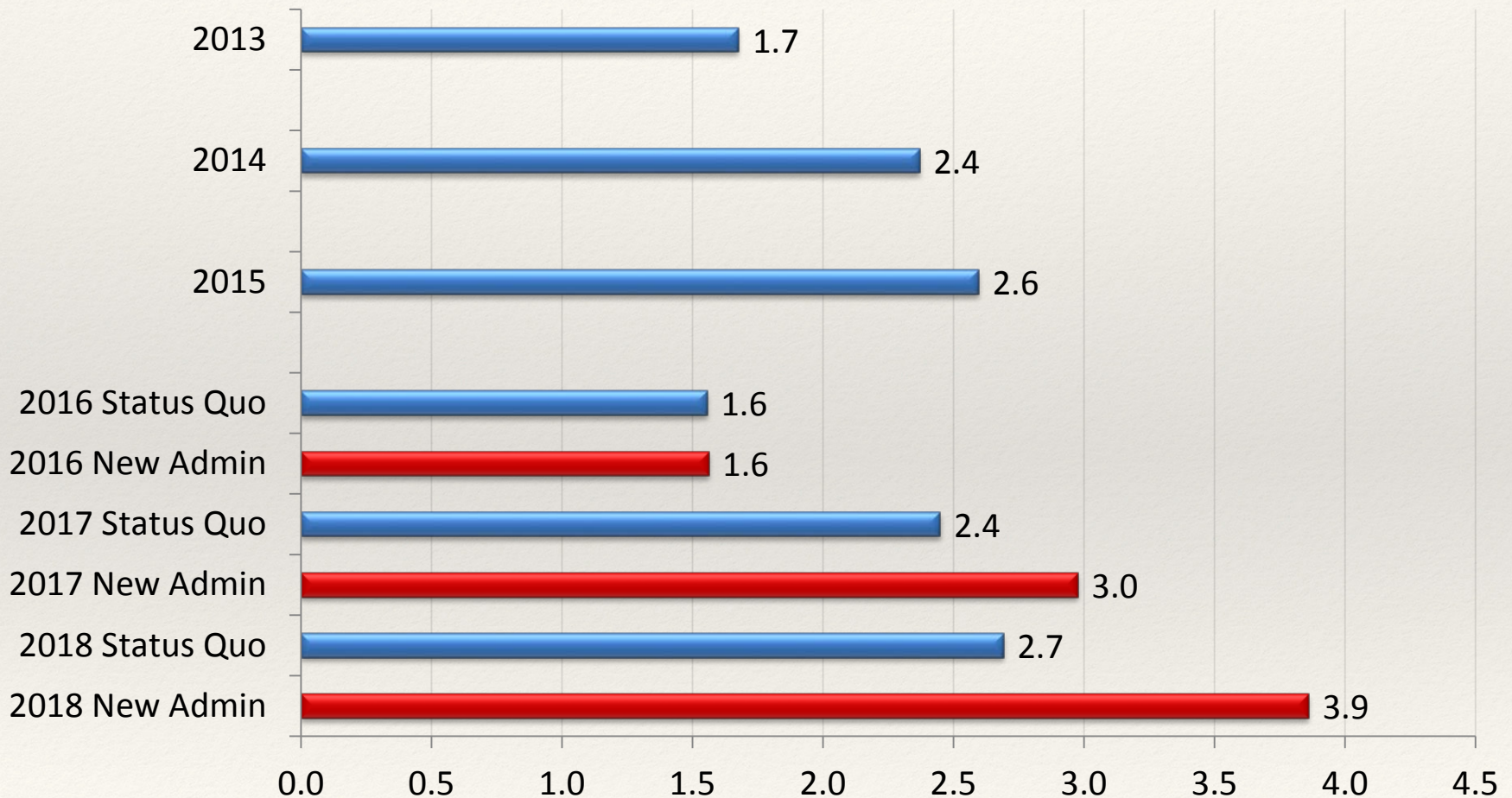
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Equipment	-2.6	-9.5	-2.9	-2.8	1.9	5.3	8.3	9.0
Intellectual Property	4.5	3.8	9.0	4.0	3.4	4.1	3.3	4.5
Government Expenditure	1.0	1.6	-1.7	0.5	0.8	1.2	1.2	1.1
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(Billions of 2009 Dollars)								
Percentage Change From a Year Ago (%)								
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Yields (%)								
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Prime Rate	3.3	3.5	3.5	3.5	3.5	3.8	4.3	4.7
10-Year Treasury	2.2	1.9	1.8	1.6	1.9	2.3	3.1	3.5
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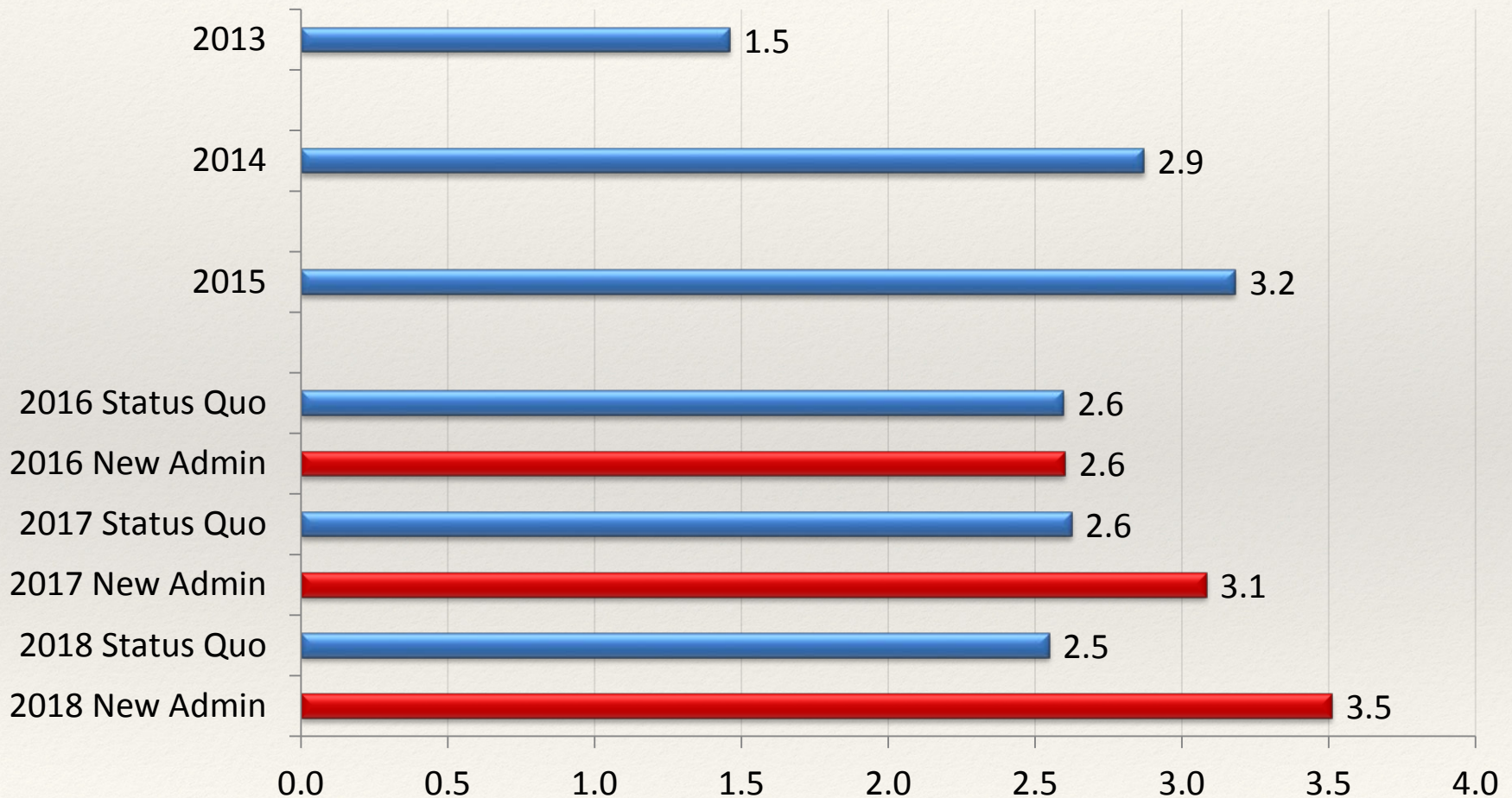
Source: Chmura Economics & Analytics

Note: Yields reported for the average of the quarter GDP based on advanced figures (Billions of 2009 Dollars)

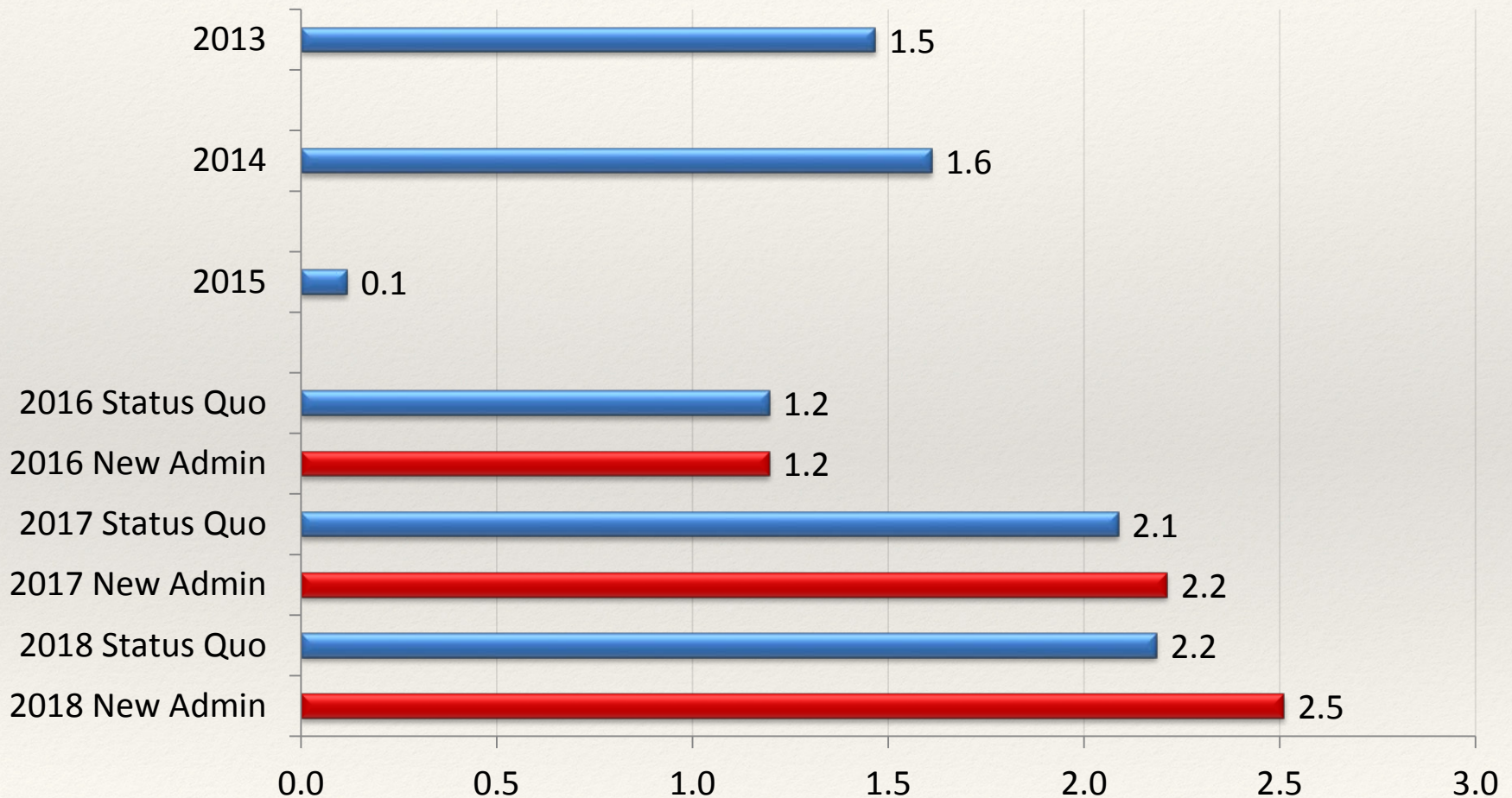
# Real GDP Annual Percentage Growth Rate



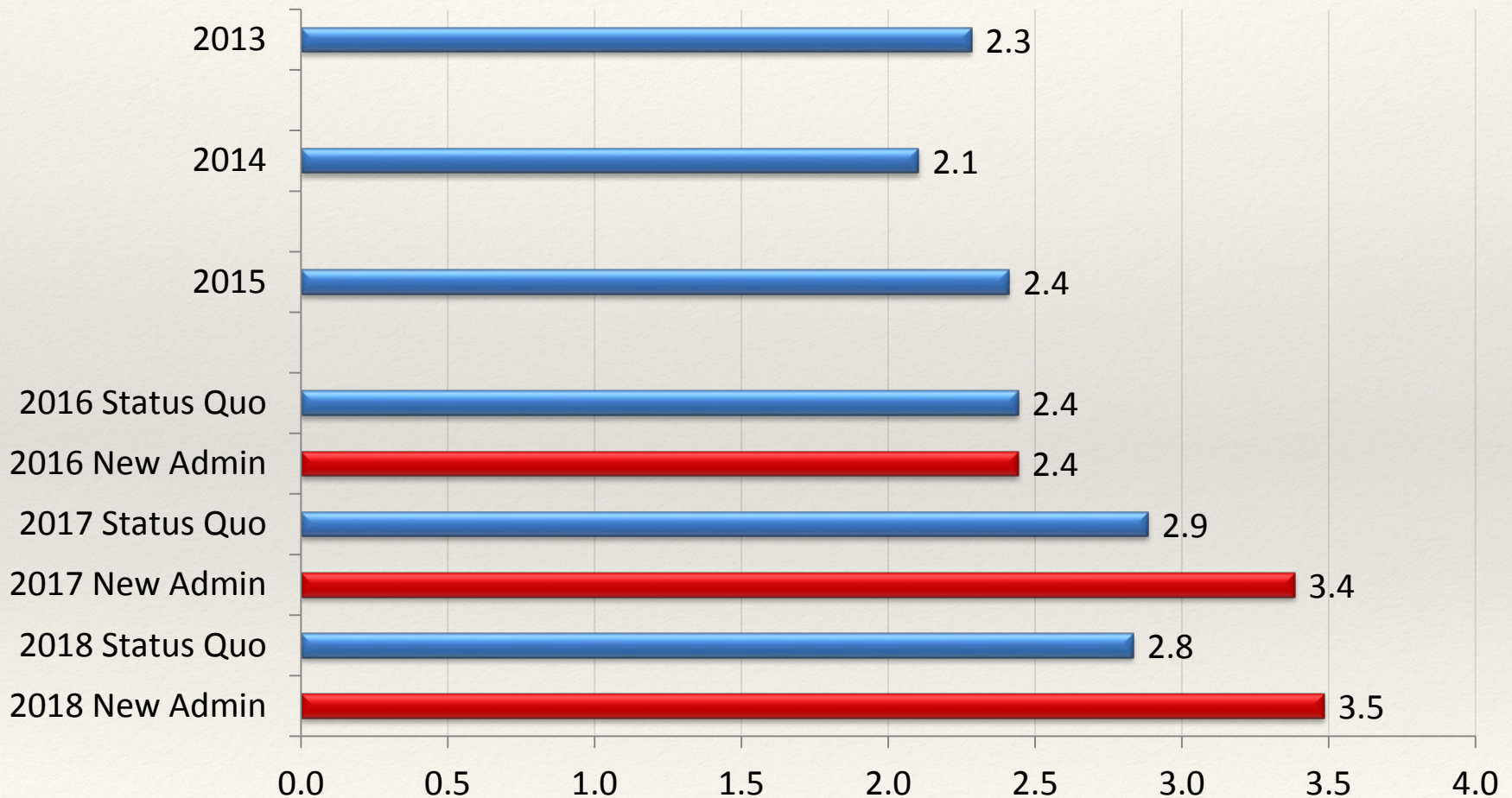
# Personal Consumption Expenditures Annual Percentage Growth Rate



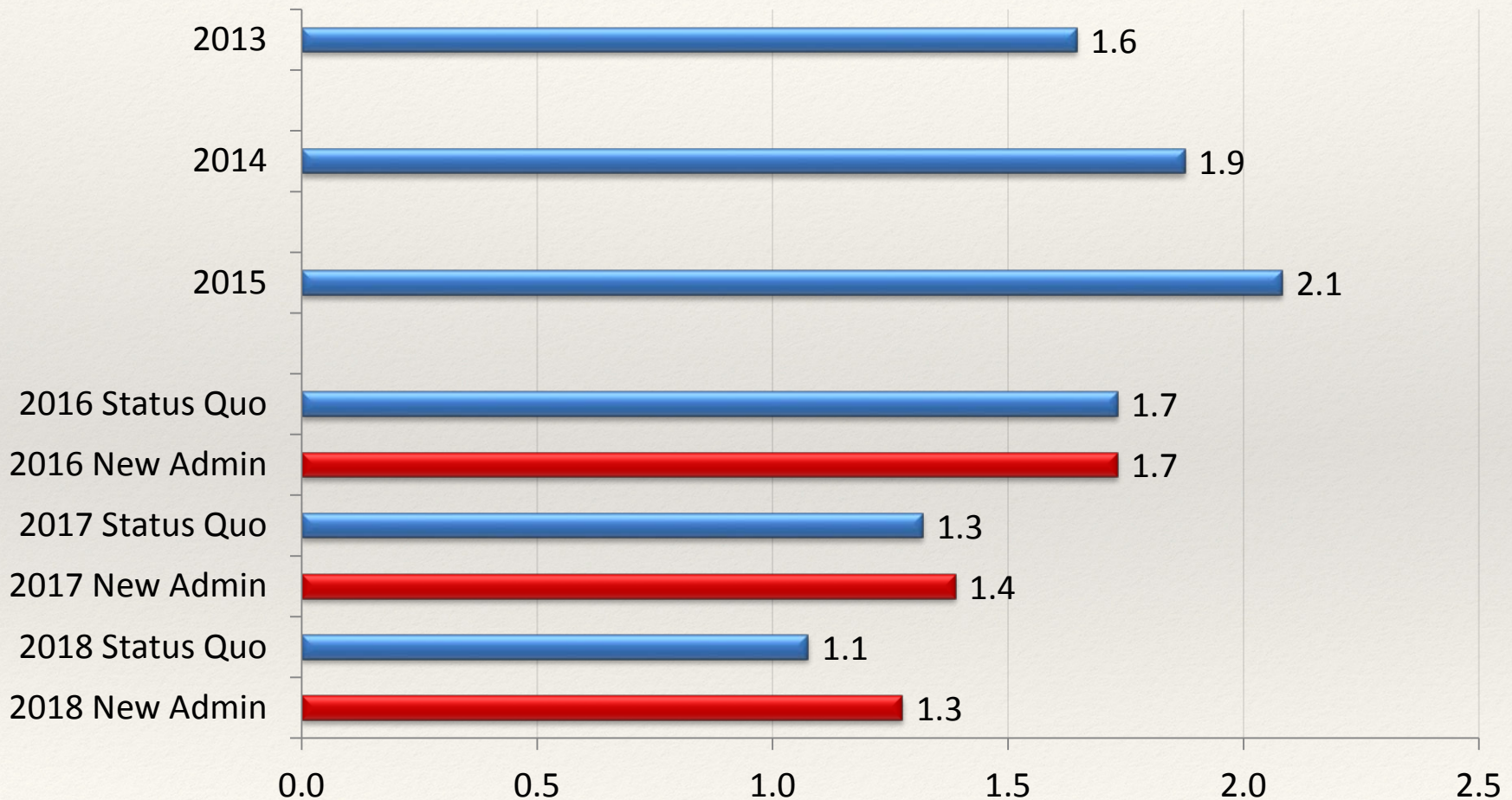
# Consumer Price Index Annual Percentage Growth Rate



# Average Hourly Earnings, Private Workers Annual Percentage Growth Rate



# Total Non-Agricultural Employment Annual Percentage Growth Rate



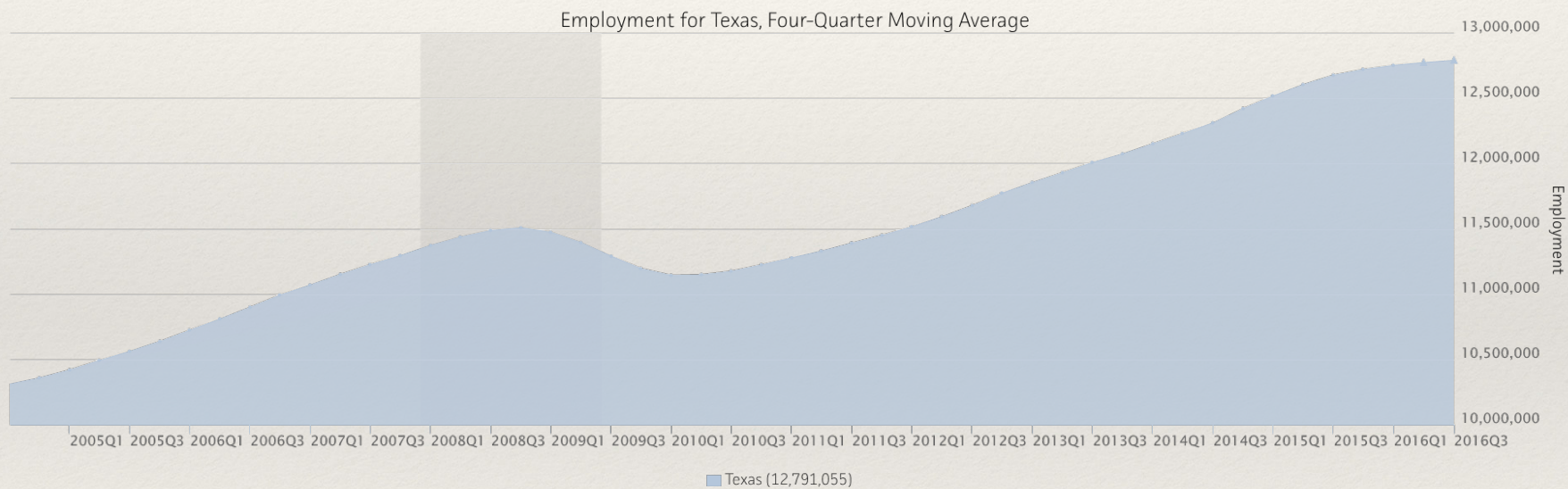
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# Risks to the Growth

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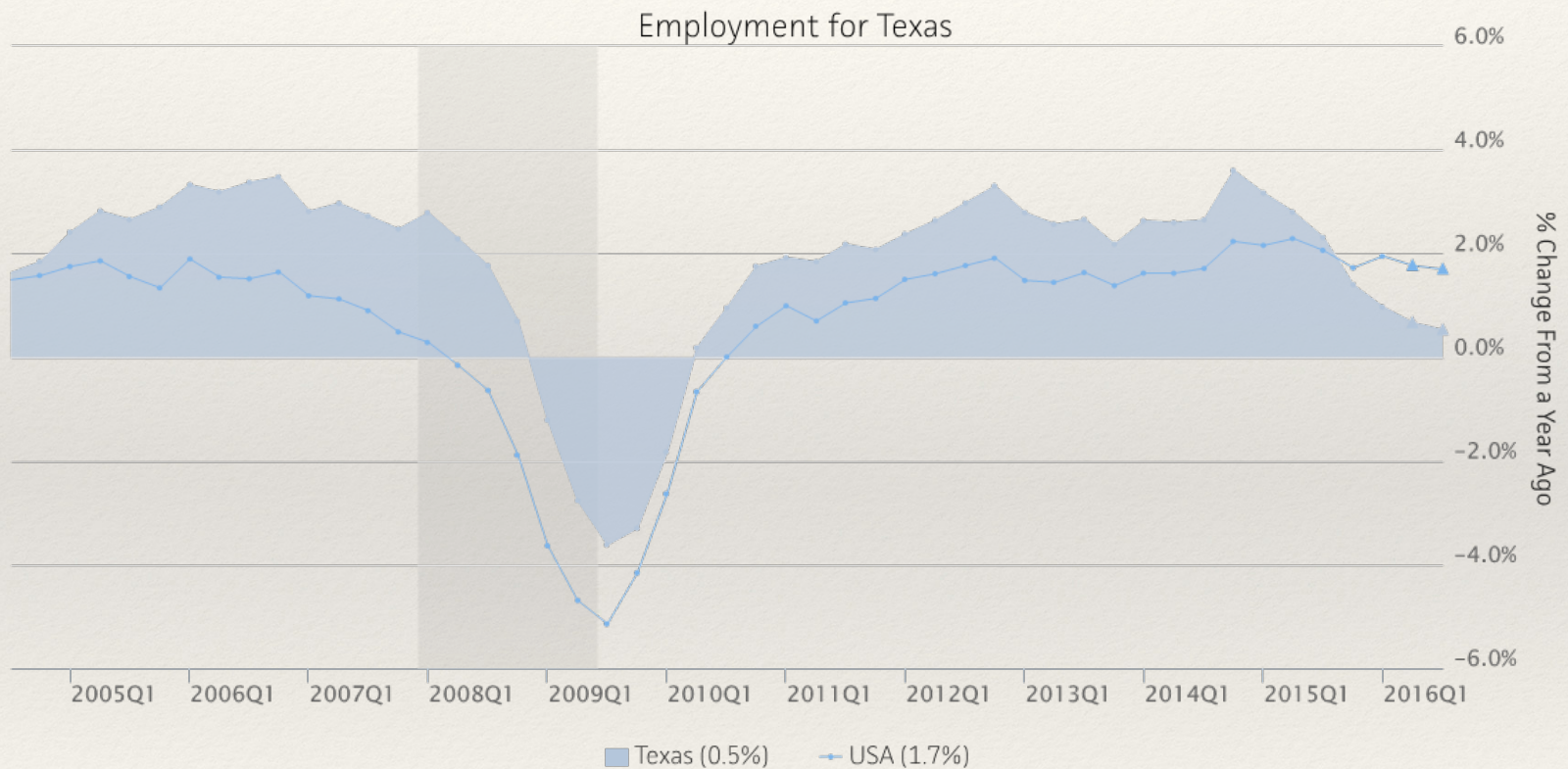
- Foreign investors increase U.S. holdings of bonds while Fed raises fed funds rate target
- Foreign investors reduce holdings of U.S. bonds
- Tougher trade policies cause other countries to tighten policies

# Texas: 1.3 Million Jobs Above Previous Peak



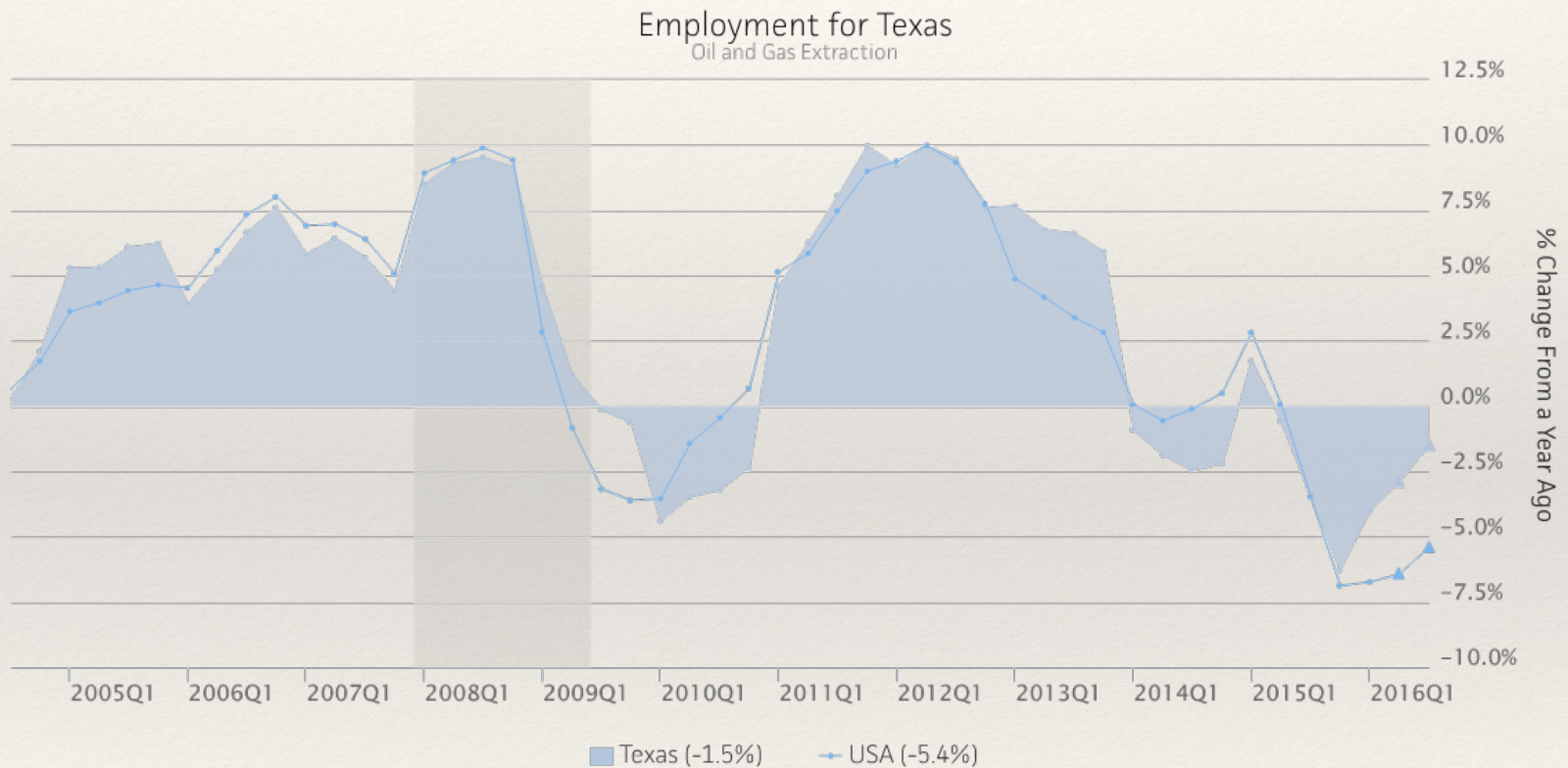
Source: JobsEQ®. Data as of 2016Q3. The shaded areas represent national recessions.

# Faster Growth Than the Nation Since 2005



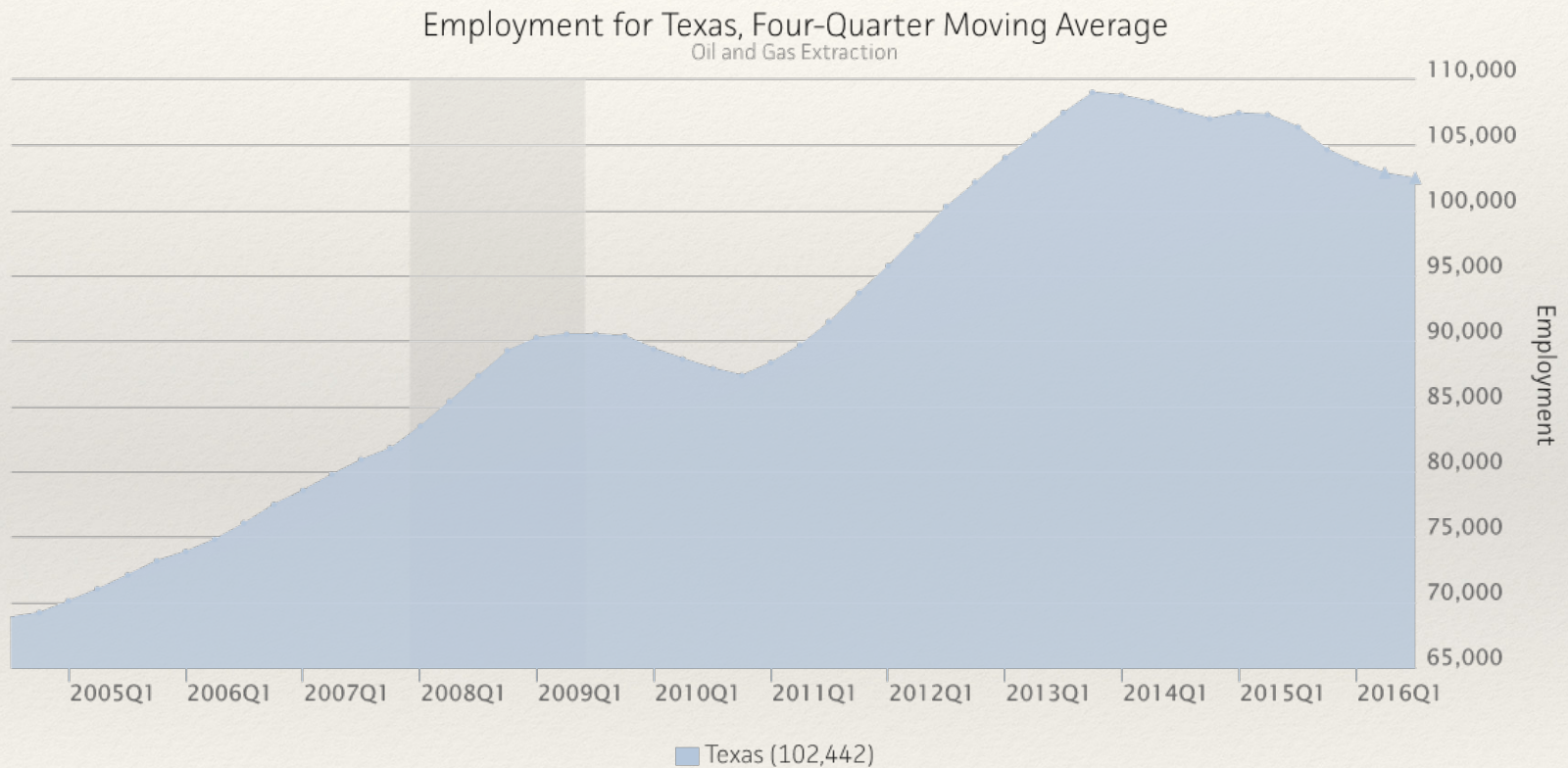
Source: JobsEQ®. Data as of 2016Q3. The shaded areas represent national recessions.

# Downturn in Oil and Gas Industry is Impacting Growth



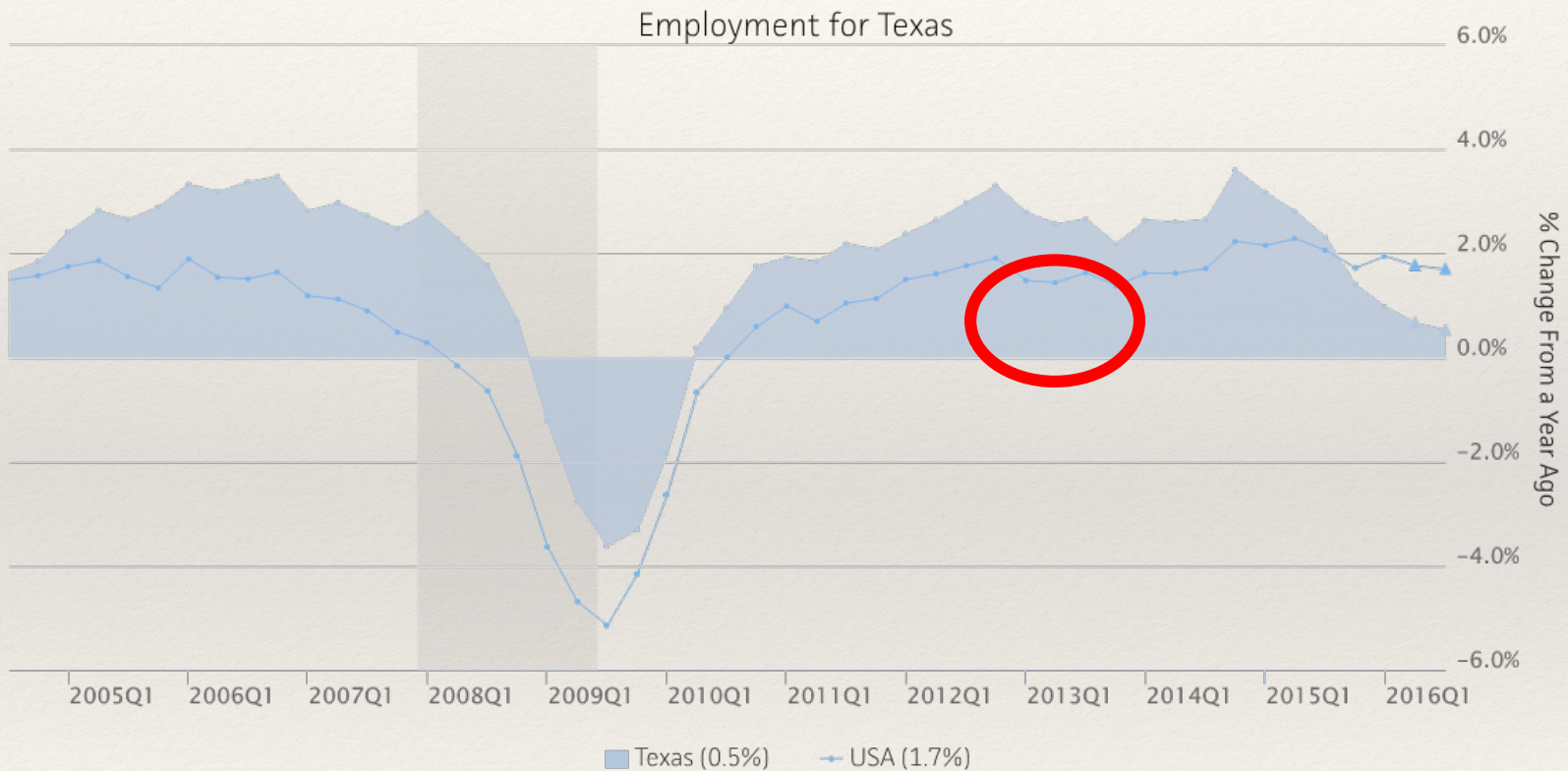
Source: JobsEQ®. Data as of 2016Q3. The shaded areas represent national recessions.

# -6,600 Jobs Since 2013Q4



Source: JobsEQ®. Data as of 2016Q3. The shaded areas represent national recessions.

# Defense Cuts and Government Shut Down also Damped Growth



Source: JobsEQ®. Data as of 2016Q3. The shaded areas represent national recessions.

**#3**  
IN NATION

**\$37.9 BILLION**  
SPENT IN STATE

**#21**  
IN NATION

**2.3%**  
OF STATE GDP

**9.3%**

**% OF TOTAL U.S.**  
DEFENSE SPENDING

**\$1,378**

**PER RESIDENT**  
SPENDING

## DEFENSE PERSONNEL

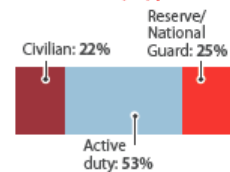
**\$10.4 Billion**

TOTAL PAYROLL

**218,523**

TOTAL PERSONNEL

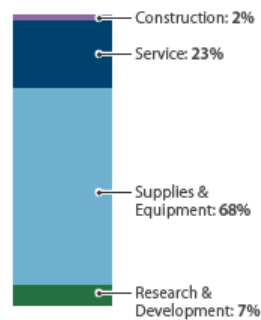
### Allocation, By Type



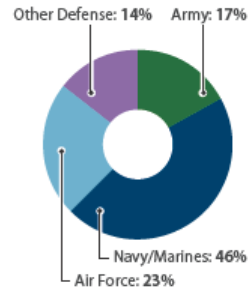
### Top Personnel Locations

- 1 **Bexar County**  
60,076
- 2 **Bell County**  
34,167
- 3 **El Paso County**  
32,357
- 4 **Tarrant County**  
11,738
- 5 **Harris County**  
8,908
- 6 **Wichita County**  
5,462
- 7 **Taylor County**  
4,917
- 8 **Dallas County**  
3,816
- 9 **Travis County**  
3,701
- 10 **Tom Green County**  
3,680

### By Type



### By Service

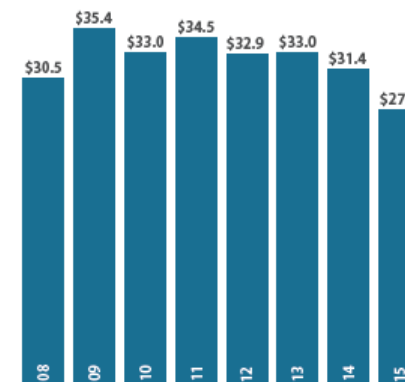


### Top Contractors

(M=millions B=billions)

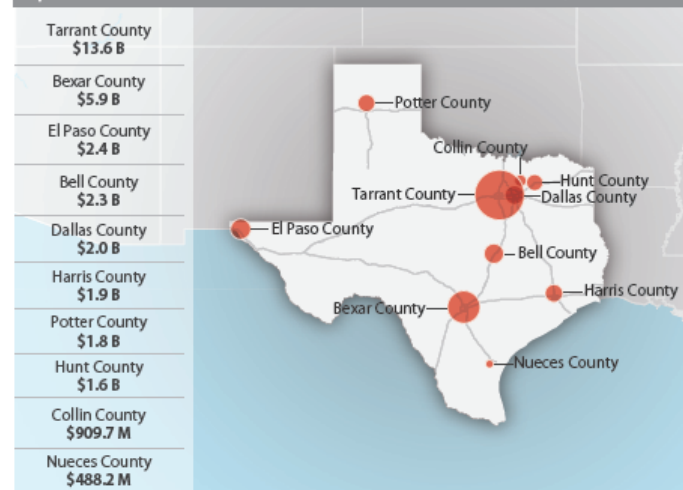
Lockheed Martin	\$12.6 B
L-3 Communications	\$2.4 B
Bell Boeing Joint Project Office	\$1.8 B
Textron	\$940.0 M
Royal Dutch Shell	\$880.5 M
Raytheon	\$820.1 M
Valero	\$685.1 M
Cerberus Cptl Mgmt (DynCorp Intl)	\$382.5 M
Boeing	\$196.3 M
Elbit Systems	\$154.0 M

### Value of Contract Awards Performed (Billions)



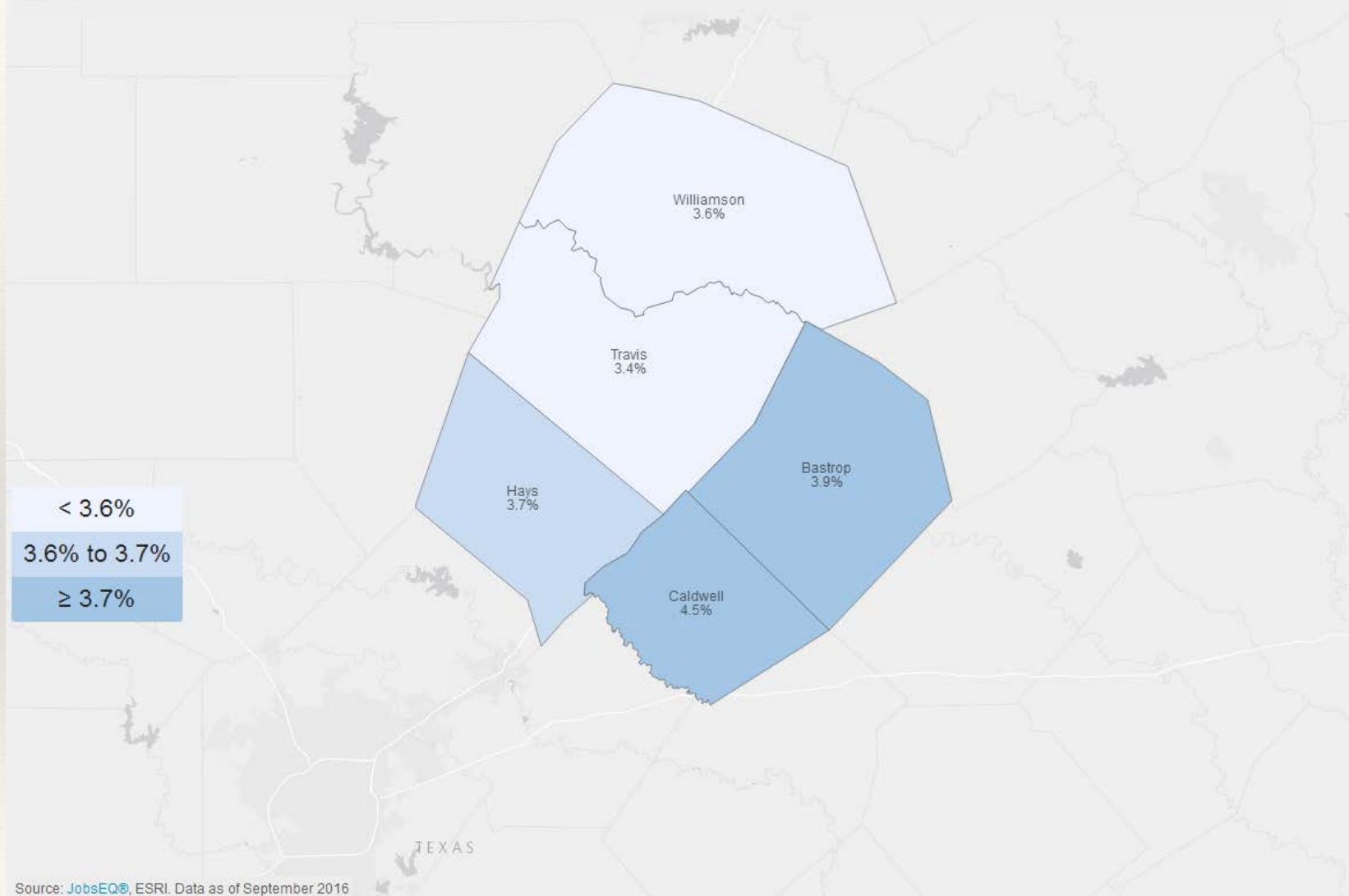
### TOP DEFENSE SPENDING LOCATIONS

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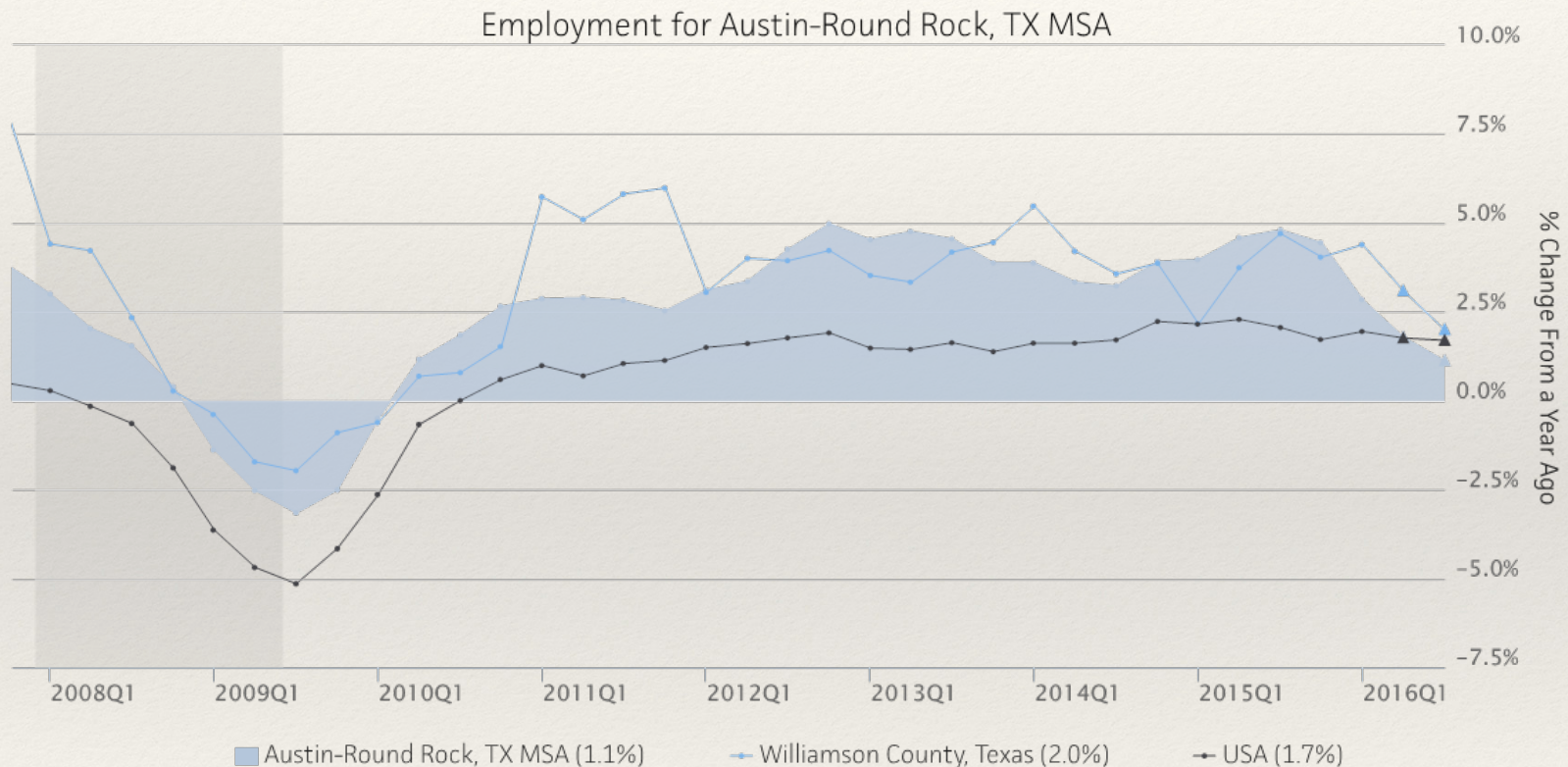


**TEXAS**

## Austin-Round Rock, TX MSA, Unemployment Rate as of September 2016



# Williamson County Outperforming U.S. and Austin MSA



Source: JobsEQ®. Data as of 2016Q3. The shaded areas represent national recessions.

# Williamson County Expected to Continue to Outpace Nation

	Current			Historical	Forecast		
	Four Quarters Ending with 2016q3			Total Change over the Last 5 Years	Over the Next 10 Years		
Industry	Employment	Avg. Annual Wages	Location Quotient	Employment	Total Approx Repl Demand	Total Growth Demand	Avg. Annual Growth Percent
Retail Trade	24,149	\$31,408	1.29	5,090	8,608	8,140	2.9%
Educational Services	19,240	\$41,828	1.35	2,529	4,440	4,477	2.1%
Accommodation and Food Services	17,439	\$18,978	1.14	4,491	7,019	5,880	2.9%
Health Care and Social Assistance	17,326	\$42,821	0.72	5,746	4,040	8,558	4.1%
Construction	13,892	\$52,193	1.47	2,638	3,225	5,772	3.5%
Professional, Scientific, and Technical Services	12,267	\$70,930	1.09	4,390	3,005	5,208	3.6%
Wholesale Trade	12,076	\$89,233	1.78	-4,022	3,015	3,556	2.6%
Manufacturing	12,063	\$105,368	0.85	5,431	3,039	2,208	1.7%
Admin, Support, Waste Mgmt & Remediation Svcs	9,599	\$37,536	0.86	1,219	2,531	3,830	3.4%
Other Services	8,954	\$29,181	1.17	1,082	2,579	2,983	2.9%
Finance and Insurance	6,199	\$68,893	0.91	137	1,672	1,997	2.8%
Public Administration	4,013	\$56,828	0.49	-39	1,111	1,279	2.8%
Arts, Entertainment, and Recreation	3,380	\$22,260	1.00	358	1,191	1,202	3.1%
Transportation and Warehousing	2,673	\$53,276	0.38	-763	776	681	2.3%
Real Estate and Rental and Leasing	2,330	\$50,668	0.80	556	588	686	2.6%
Information	2,190	\$60,734	0.63	574	603	680	2.7%
Utilities	1,546	\$77,933	1.67	823	441	392	2.3%
Agriculture, Forestry, Fishing and Hunting	1,268	\$13,659	0.50	19	497	315	2.2%
Mining, Quarrying; Oil and Gas Extraction	994	\$49,203	1.34	192	271	281	2.5%
Mgmt of Companies and Enterprises	385	\$263,593	0.15	-585	93	125	2.8%
<b>Total - All Industries</b>	<b>172,067</b>	<b>\$49,510</b>	<b>1.00</b>	<b>29,922</b>	<b>48,178</b>	<b>58,279</b>	<b>3.0%</b>

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# Williamson County: Top 20 Occupations with Job Openings

	Current: Four Quarters Ending with 2016q3		Historical Total Change over the Last 5 Years	
Title	Employment	Avg. Annual Wages <sup>1</sup>	Employment	Current Online Job Ads <sup>2</sup>
Retail Salespersons	6,827	\$27,000	990	752
First-Line Supervisors of Retail Sales Workers	2,304	\$43,900	428	541
Childcare Workers	1,563	\$21,800	207	325
Customer Service Representatives	3,388	\$30,000	-86	315
Combined Food Preparation and Serving Workers, Including Fast Food	5,019	\$18,700	1,218	278
Stock Clerks and Order Fillers	2,435	\$24,800	365	273
First-Line Supervisors of Food Preparation and Serving Workers	1,315	\$35,900	321	251
Sales Representatives, Services, All Other	1,042	\$58,500	255	217
Computer Occupations, All Other	199	\$79,400	32	214
Registered Nurses	1,893	\$63,500	814	184
Maids and Housekeeping Cleaners	945	\$19,200	220	183
Software Developers, Applications	1,406	\$90,100	553	182
Preschool Teachers, Except Special Education	774	\$35,500	171	182
Cashiers	4,881	\$20,800	1,207	170
Marketing Managers	281	\$144,700	55	156
Computer User Support Specialists	1,006	\$48,200	115	148
Nonfarm Animal Caretakers	296	\$21,000	84	138
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2,396	\$22,000	482	129
Medical Secretaries	539	\$33,600	151	124
Maintenance and Repair Workers, General	1,227	\$33,800	194	116

Source: JobsEQ

2. Data represent found online ads active within the last thirty days in any zip code intersecting or within the selected region; data represents a sampling rather than the complete universe of postings; the listing search uses keywords that are similar to but not the equivalent of the SOC occupation definitions.

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First-Line Supervisors of Food Preparation and Serving Workers	1,315	\$35,900	321	251
Sales Representatives, Services, All Other	1,042	\$58,500	255	217
Computer Occupations, All Other	199	\$79,400	32	214
Registered Nurses	1,893	\$63,500	814	184
Maids and Housekeeping Cleaners	945	\$19,200	220	183
Software Developers, Applications	1,406	\$90,100	553	182
Preschool Teachers, Except Special Education	774	\$35,500	171	182
Cashiers	4,881	\$20,800	1,207	170
Marketing Managers	281	\$144,700	55	156
Computer User Support Specialists	1,006	\$48,200	115	148
Nonfarm Animal Caretakers	296	\$21,000	84	138
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2,396	\$22,000	482	129
Medical Secretaries	539	\$33,600	151	124
Maintenance and Repair Workers, General	1,227	\$33,800	194	116

Source: JOLTS

2. Data represent found online ads active within the last thirty days in any zip code intersecting or within the selected region; data represents a sampling rather than the complete universe of postings; the listing search uses keywords that are similar to but not the equivalent of the SOC occupation definitions.

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# Conclusions

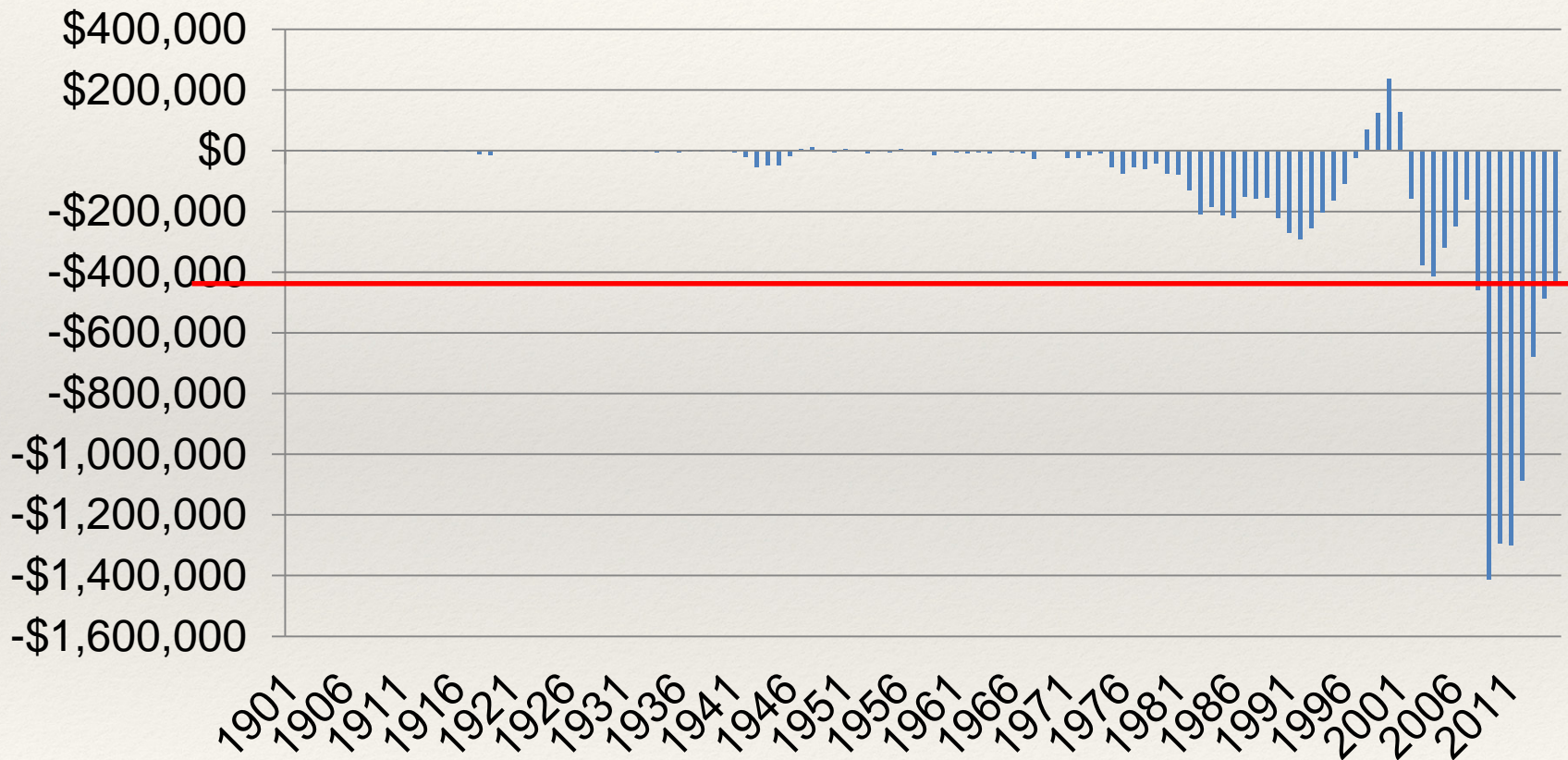
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- Trump Administration expected to boost short-term growth
  - Need more information on policies for long-term outlook
- Fed should raise rates in December
- Texas will benefit from increased defense spending
- Employment in Williamson County expected to outpace the state and Austin-Round Rock MSA over next 10 years

# Additional Slides

# Longer-Term Issue: Federal Spending Needs to be Cut

**Federal Deficit, (\$Millions)**

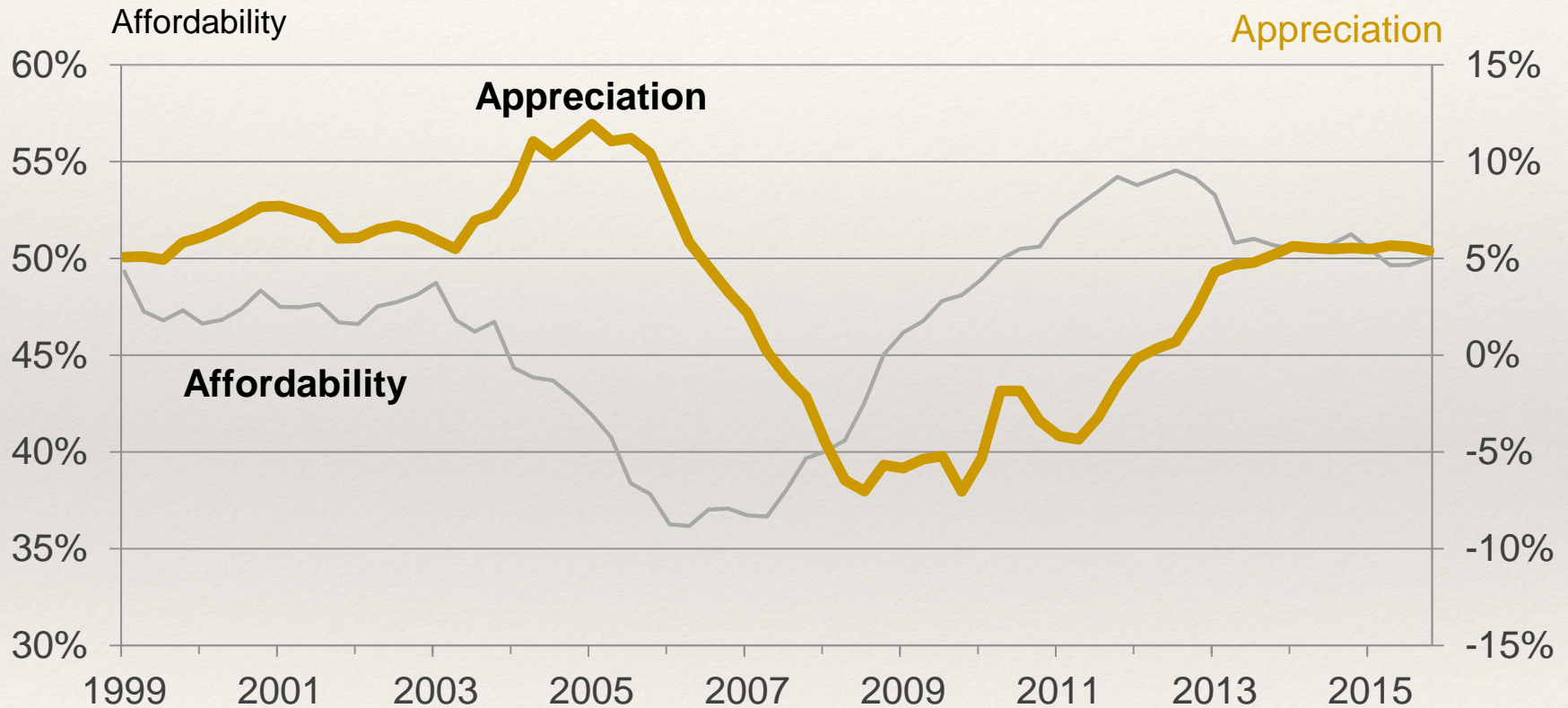


Source: St. Louis Fed, Chmura

Last data point is 2015

# Homes Affordability Slipped as Prices Rose

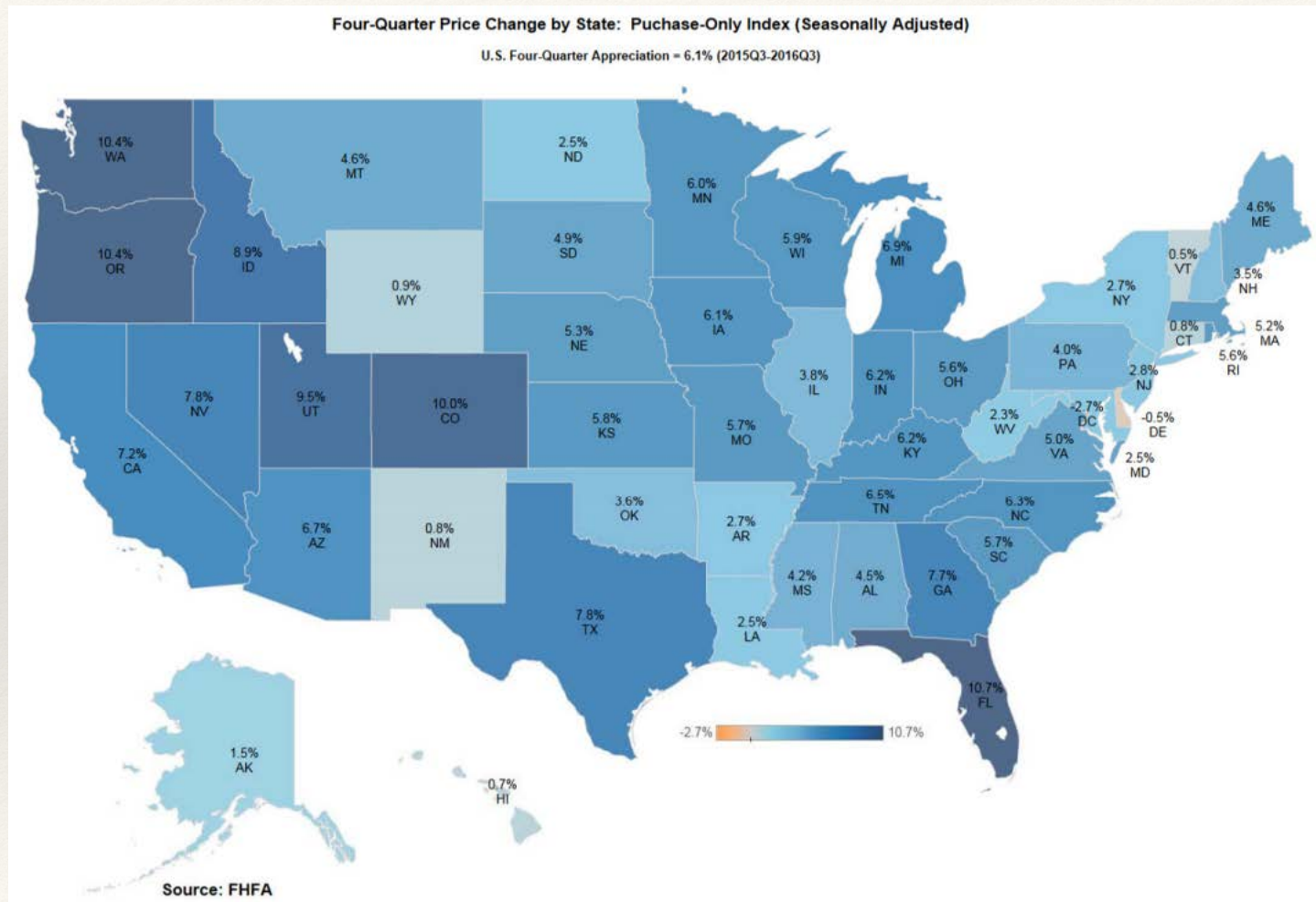
Home Affordability vs. Appreciation



Source: Federal Housing Finance Agency.  
Data through 1<sup>st</sup> Qtr 2016

# Home Prices are Rising in 49 States

## Change in Home Prices From Year Ago, 2015 Q3



Source: Federal Housing Finance Agency

# Homeownership Percentages are Relatively Low

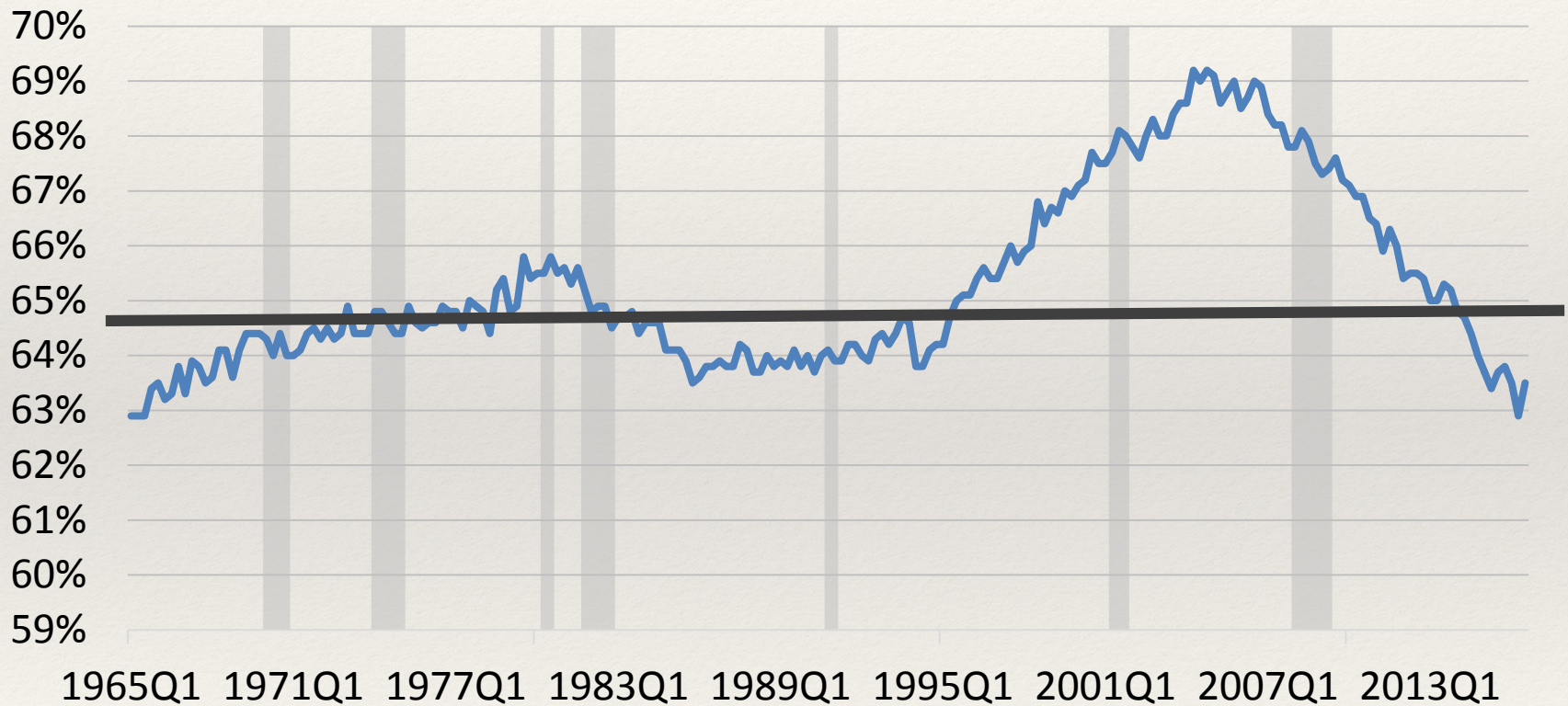
United States Homeownership Rate



Source: U.S. Census  
Data through 2016 Qtr 3

# Homeownership Percentages are Relatively Low

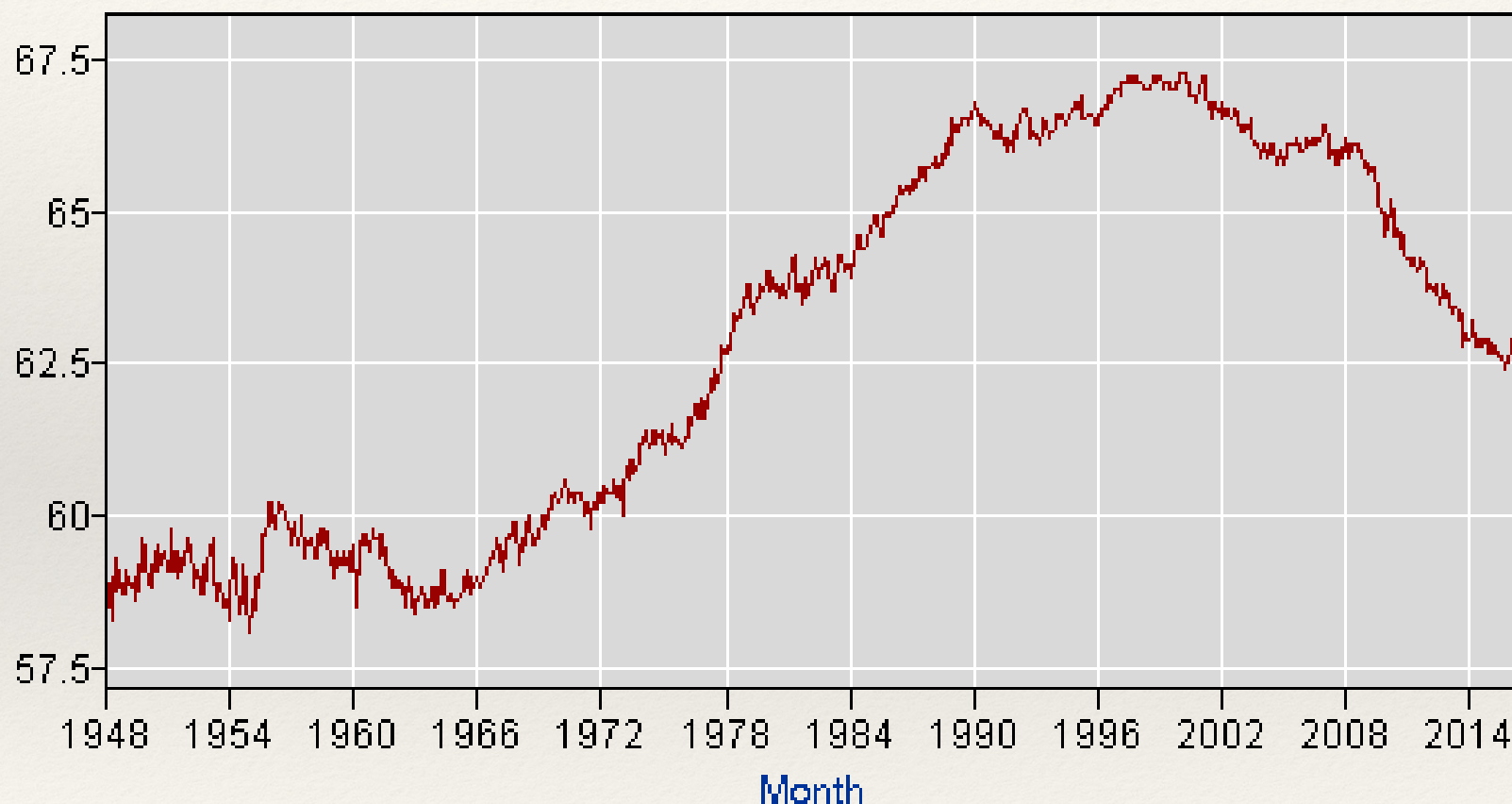
United States Homeownership Rate



Source: U.S. Census  
Data through 2016 Qtr 3

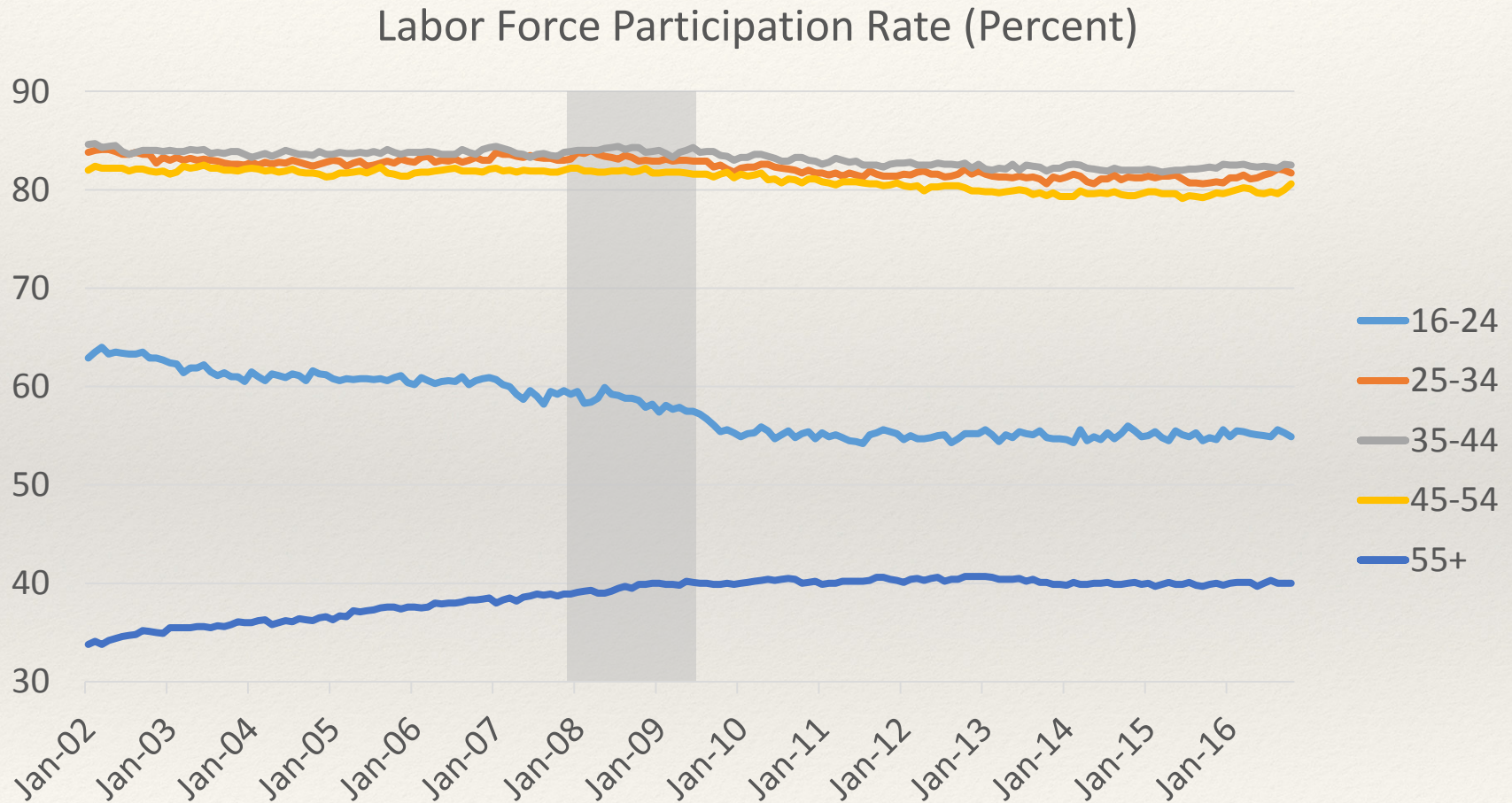
# Labor Market is Weaker than Unemployment Rate Suggests

Participation Rate: % 16 years and over in the labor market



Source: U.S. Department of Labor Statistics.  
Data through October 2016

# Labor Force Decline: Some Retirees



Source: U.S. Department of Labor Statistics. Data through October 2016

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# Real Rates ( $R^*$ )

## “Natural” Rate of Interest

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- Inflation-adjusted federal funds rate consistent with
  - Maximum employment
  - Stable inflation
- Historically  $r$ -star tracked well with 4-quarter growth rate of potential GDP (estimated by CBO)
- Lower potential GDP = lower federal funds rate
  - = approximately 1% real federal funds rate target
- FRBSF Economic Letter, August 29, 2016 “Projecting the Long-Run Natural Rate of Interest”

Thank you!

