

Recent Trends in the Economy and What Might Persist

white + burke

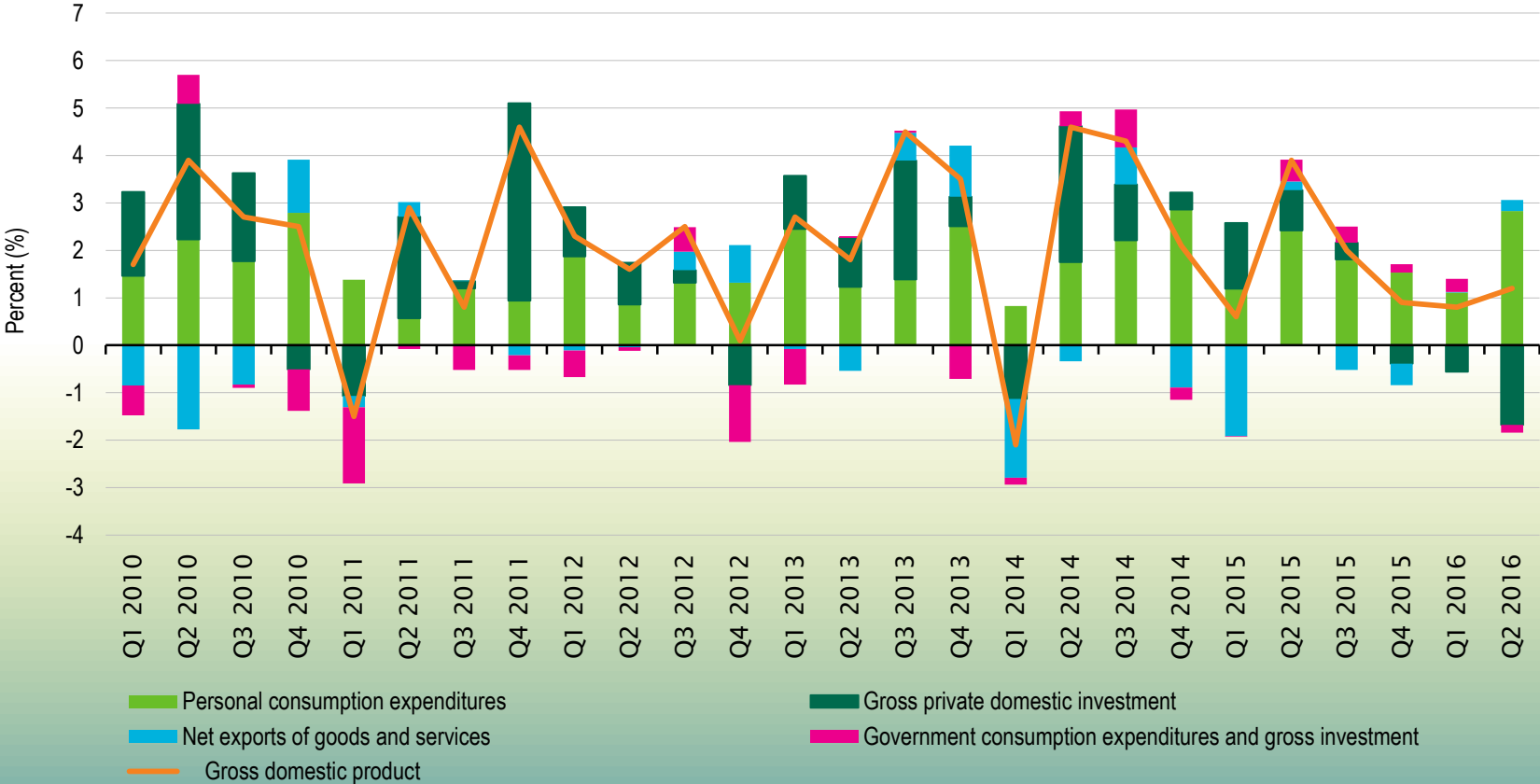
VERMONT DEVELOPMENT CONFERENCE



Current Macroeconomic Landscape

US GDP Growth

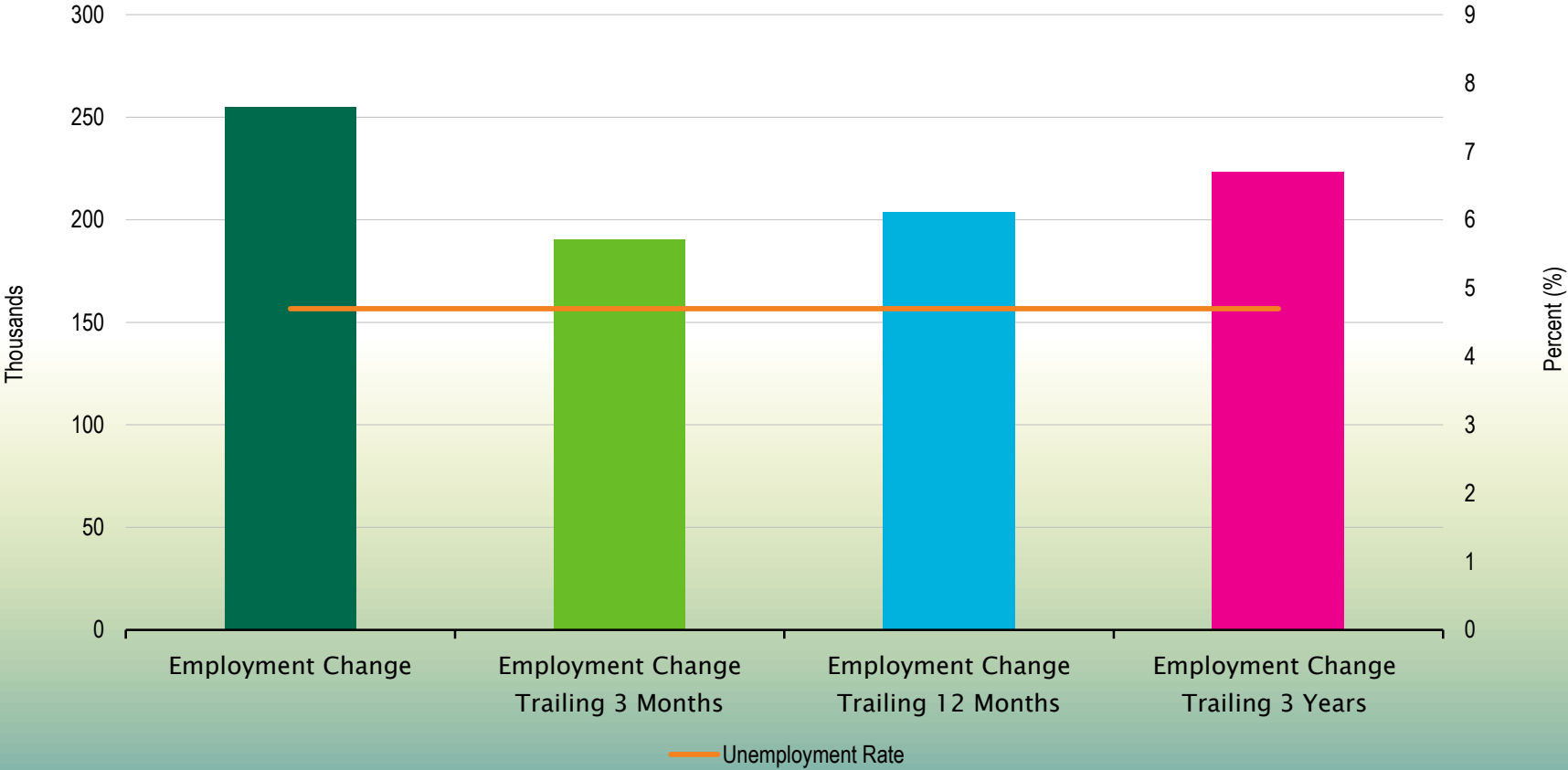
GDP growth and components



Source: BLS and CBRE Econometric Advisors, August 2016.

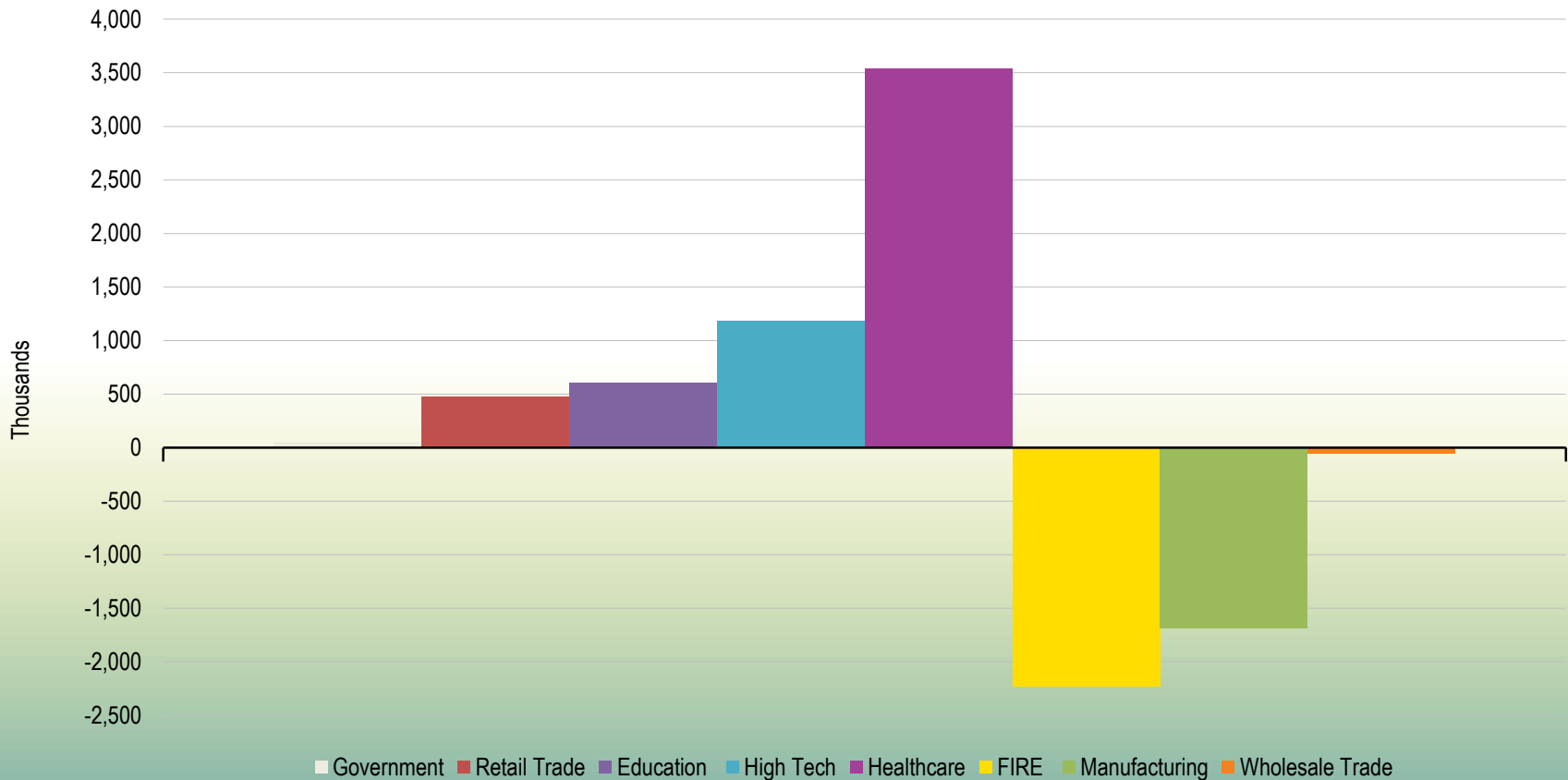
US Employment Growth

July employment monthly growth and average



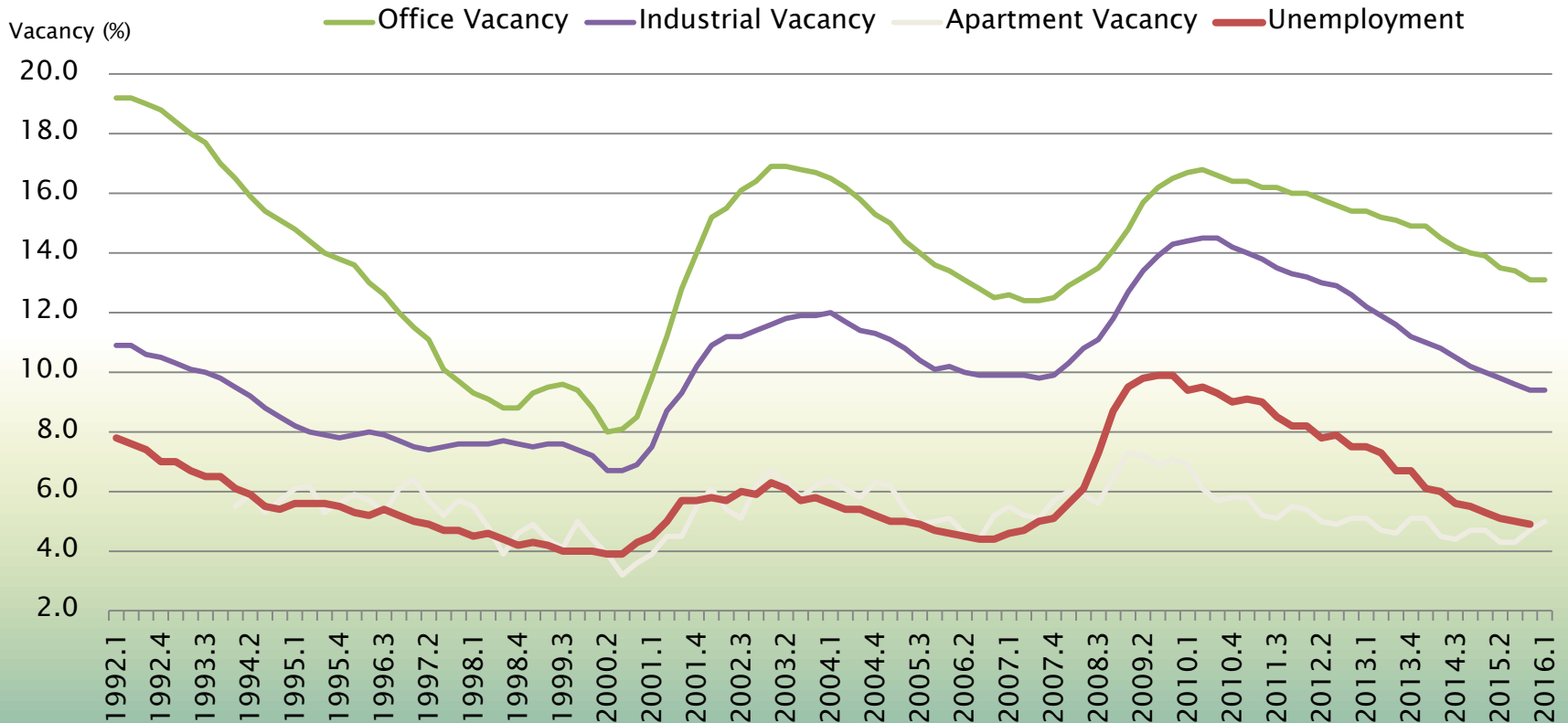
Source: BLS and CBRE Econometric Advisors, August 2016.

US Employment Growth (Q1 2007 – Q3 2016)



Source: BLS and CBRE Econometric Advisors, August 2016.

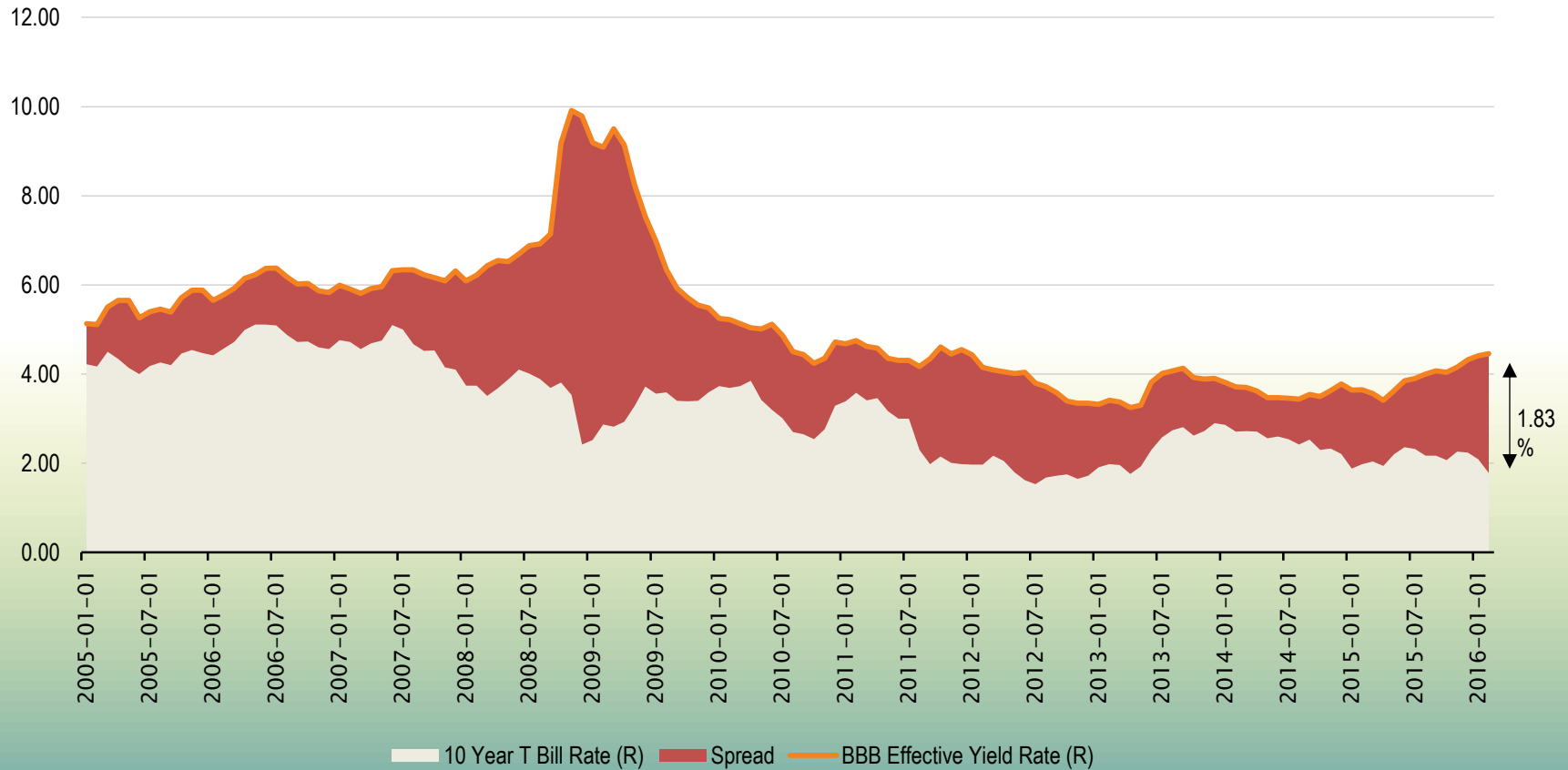
Why Does This Matter?



Source: CBRE Econometric Advisors and Macrobond, CBRE Research.

So Does the Fed

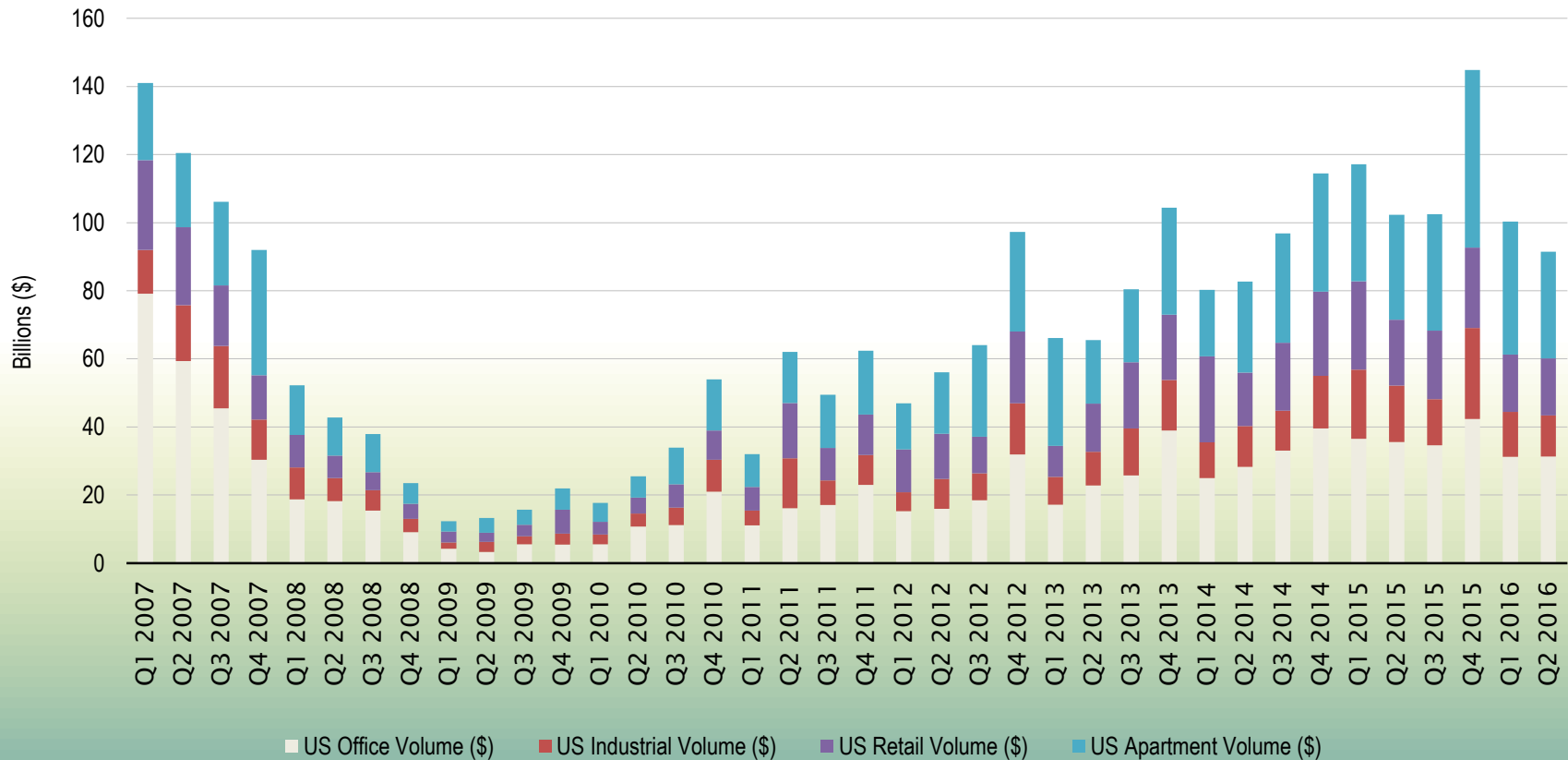
Spread widens



Source: St. Louis Federal Reserve Bank and CBRE Econometric Advisors, August 2016.

Transaction Volume (\$)

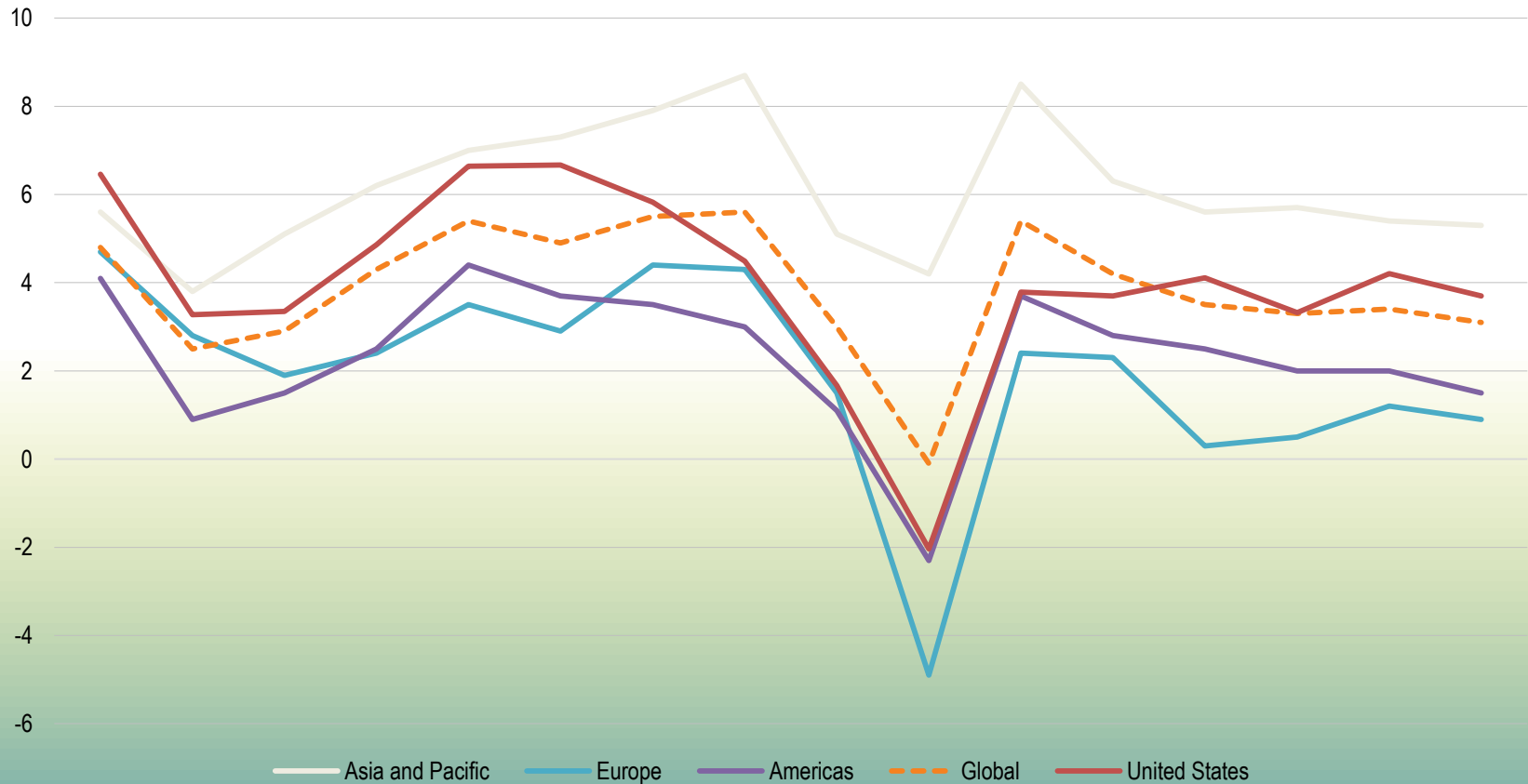
Investment activity slower across the board in Q2



Source: Real Capital Analytics, August 2016.

Global GDP Growth

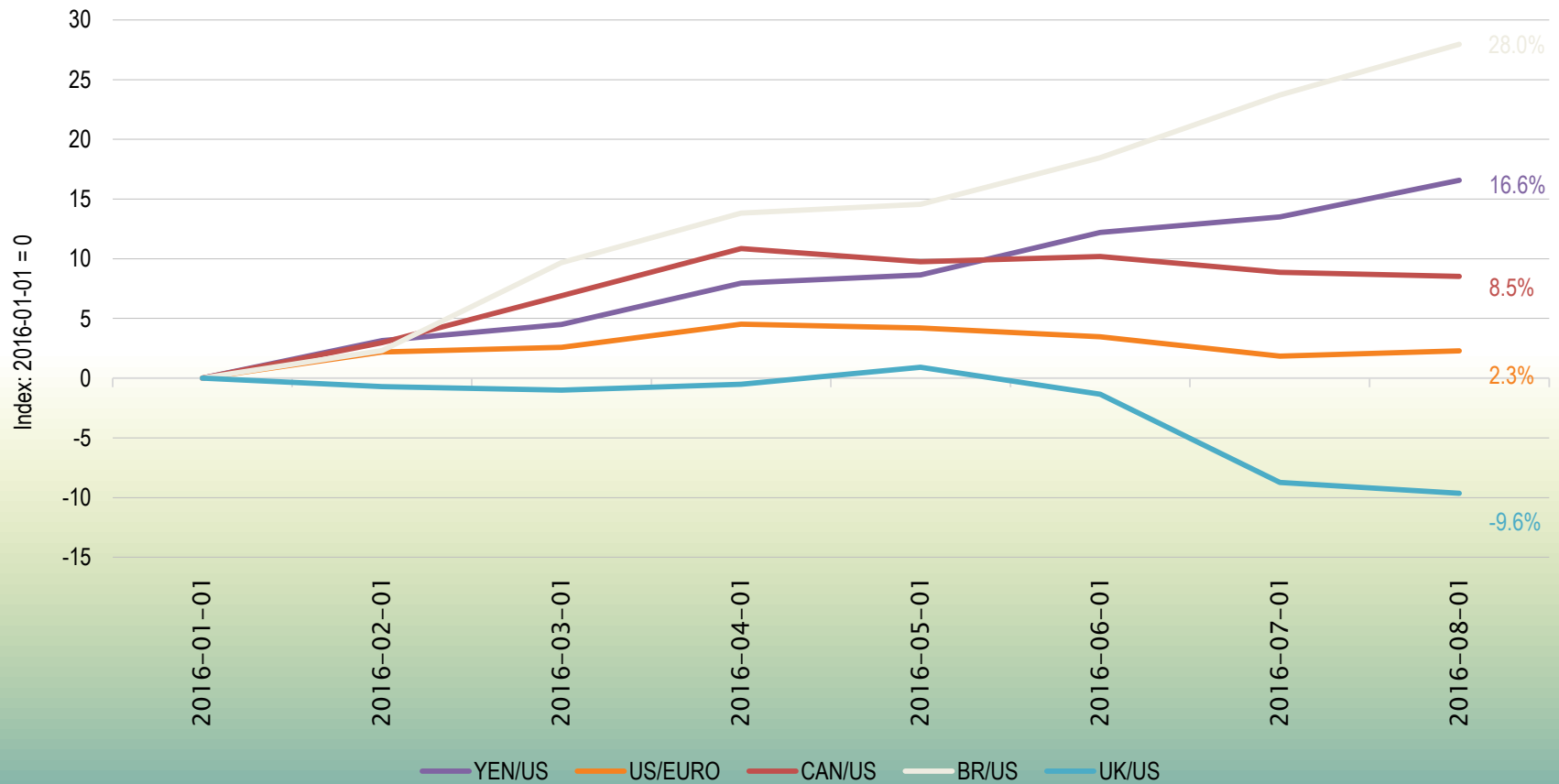
Asian growth remains strong



Source: International Monetary Fund, August 2016.

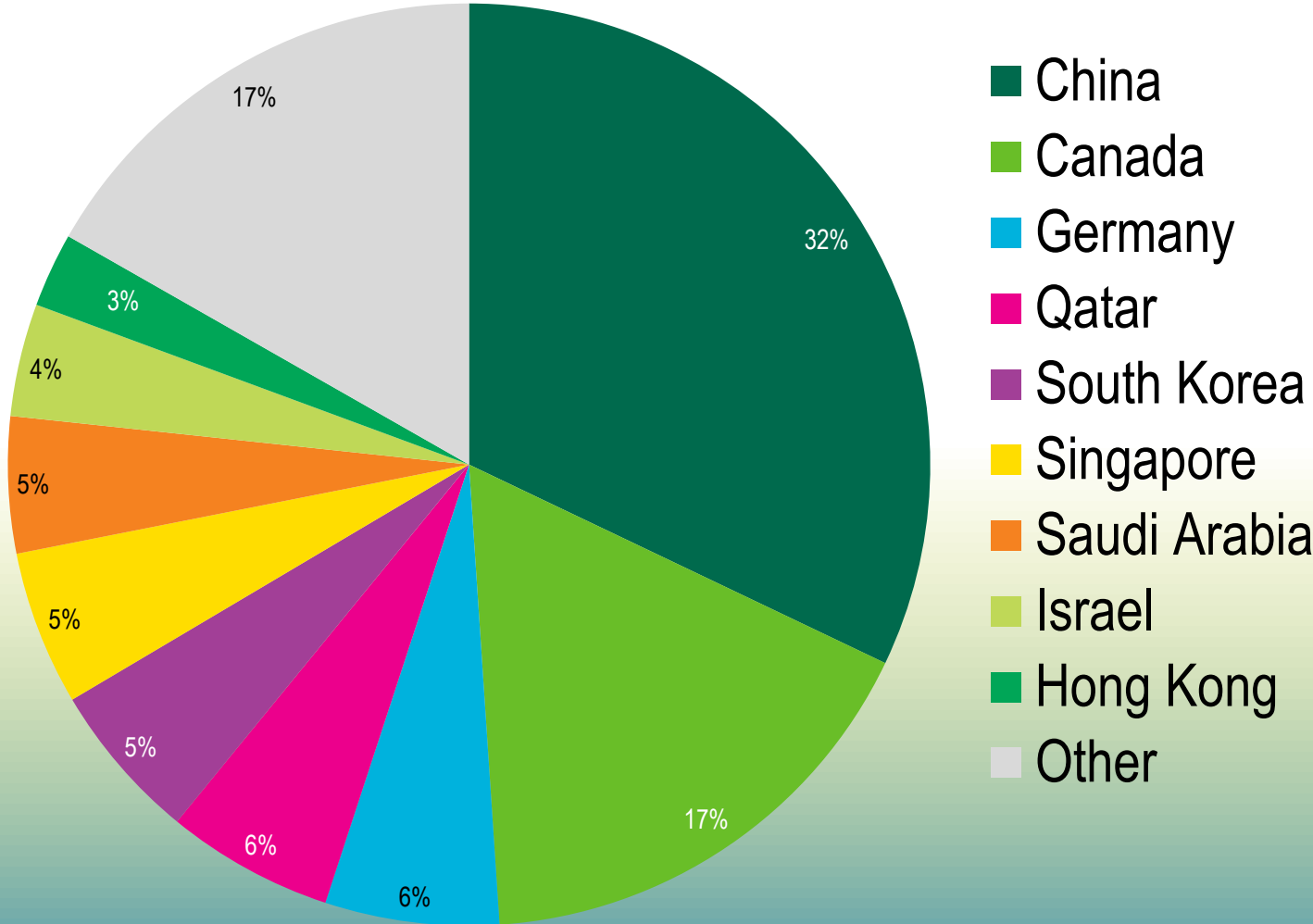
US Dollar

U.S. Dollar stops rising



Source: St. Louis Fed, August 2016.

US Crossborder Investment

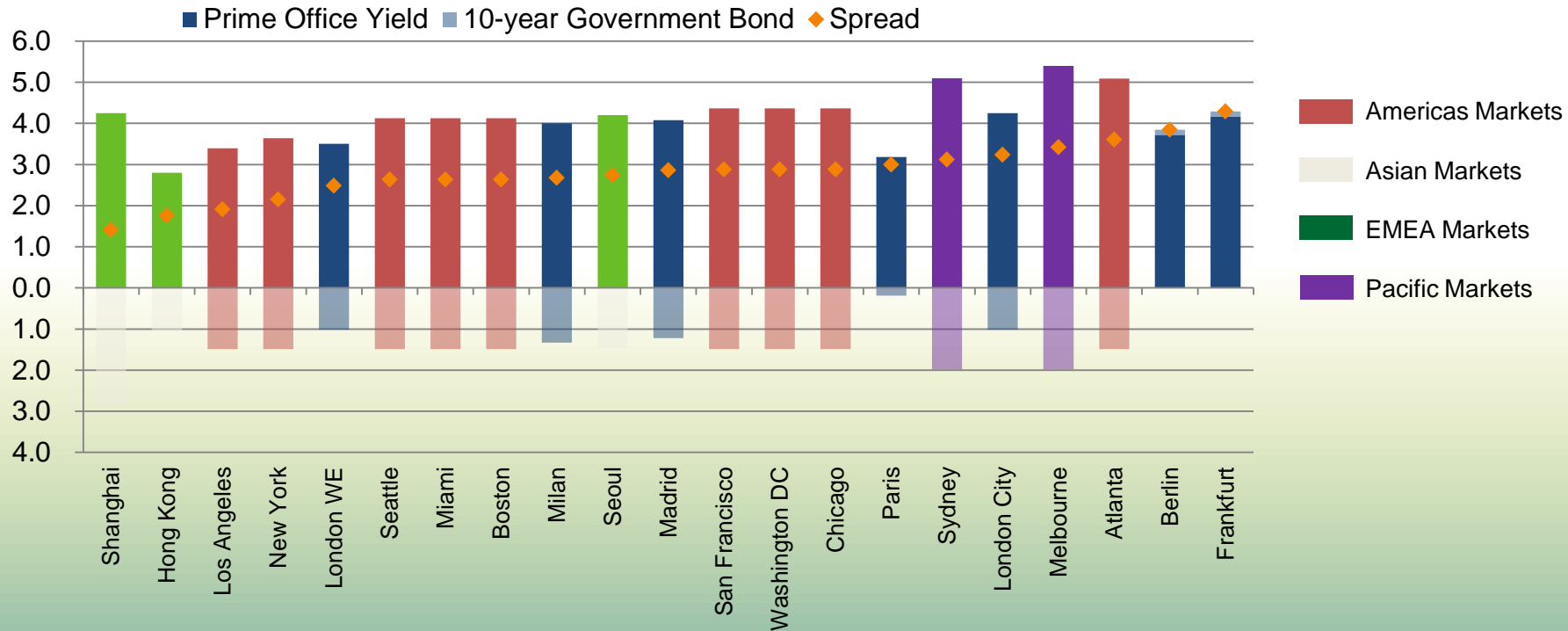


Source: CBRE Research, Real Capital Analytics, Q2 2016. Includes pending sales.

Capital Flows Equalize Spreads

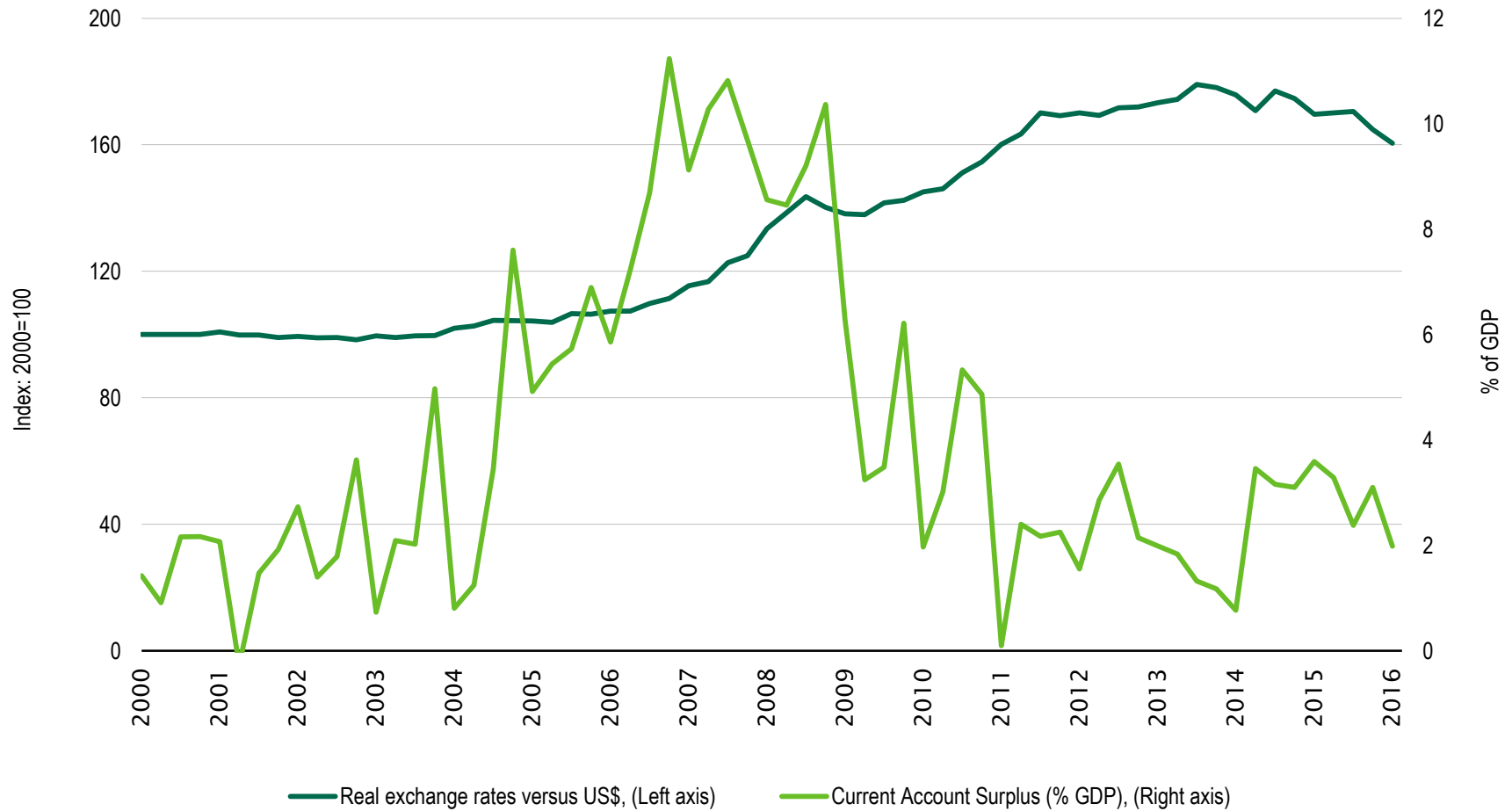
Prime office yield (net) relative to 10-year government bond

Q2 2016 Yield (%)



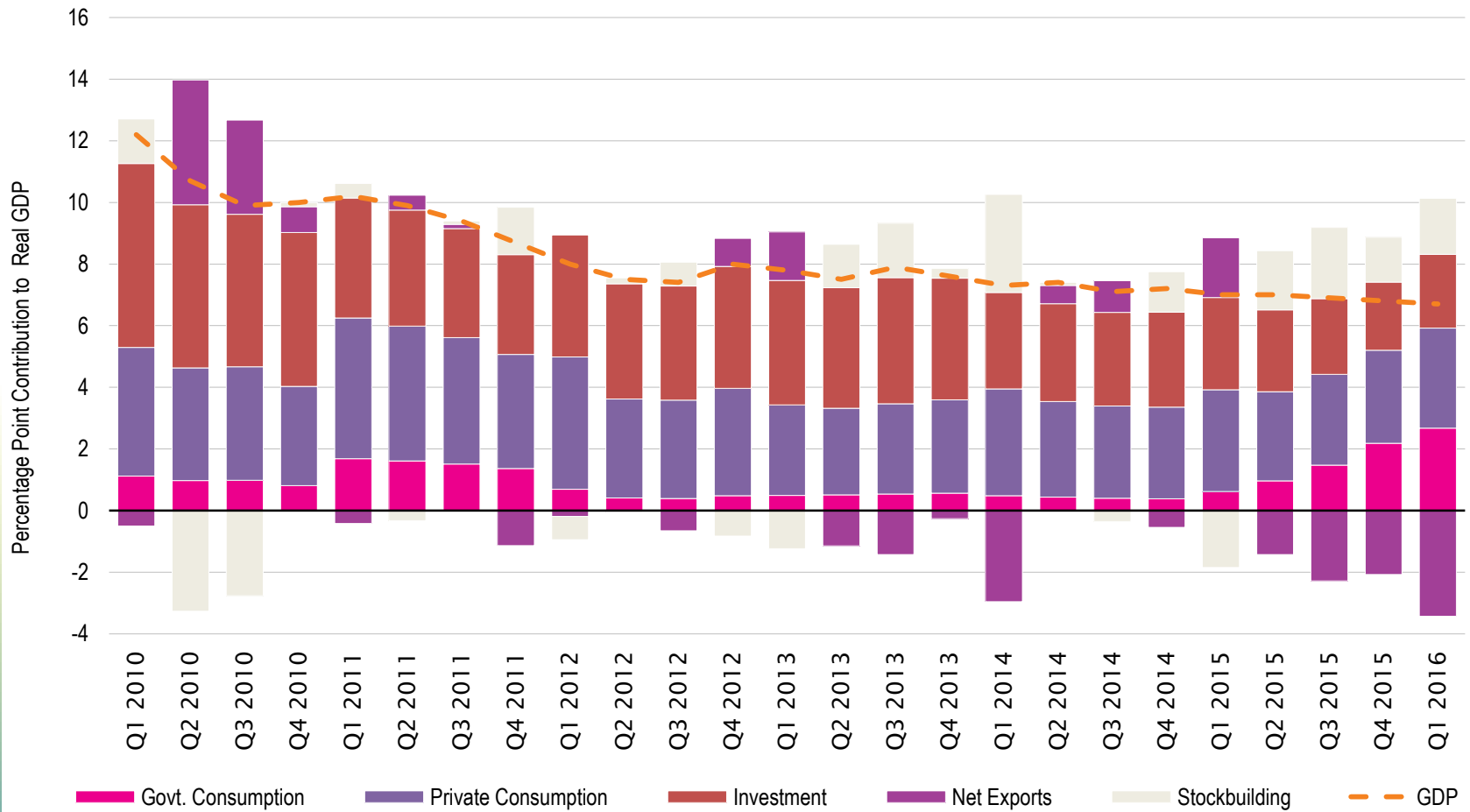
Source: CBRE Research, Macrobond, 2016.

Chinese Current Account



Source: Oxford Economics Q3, 2016.

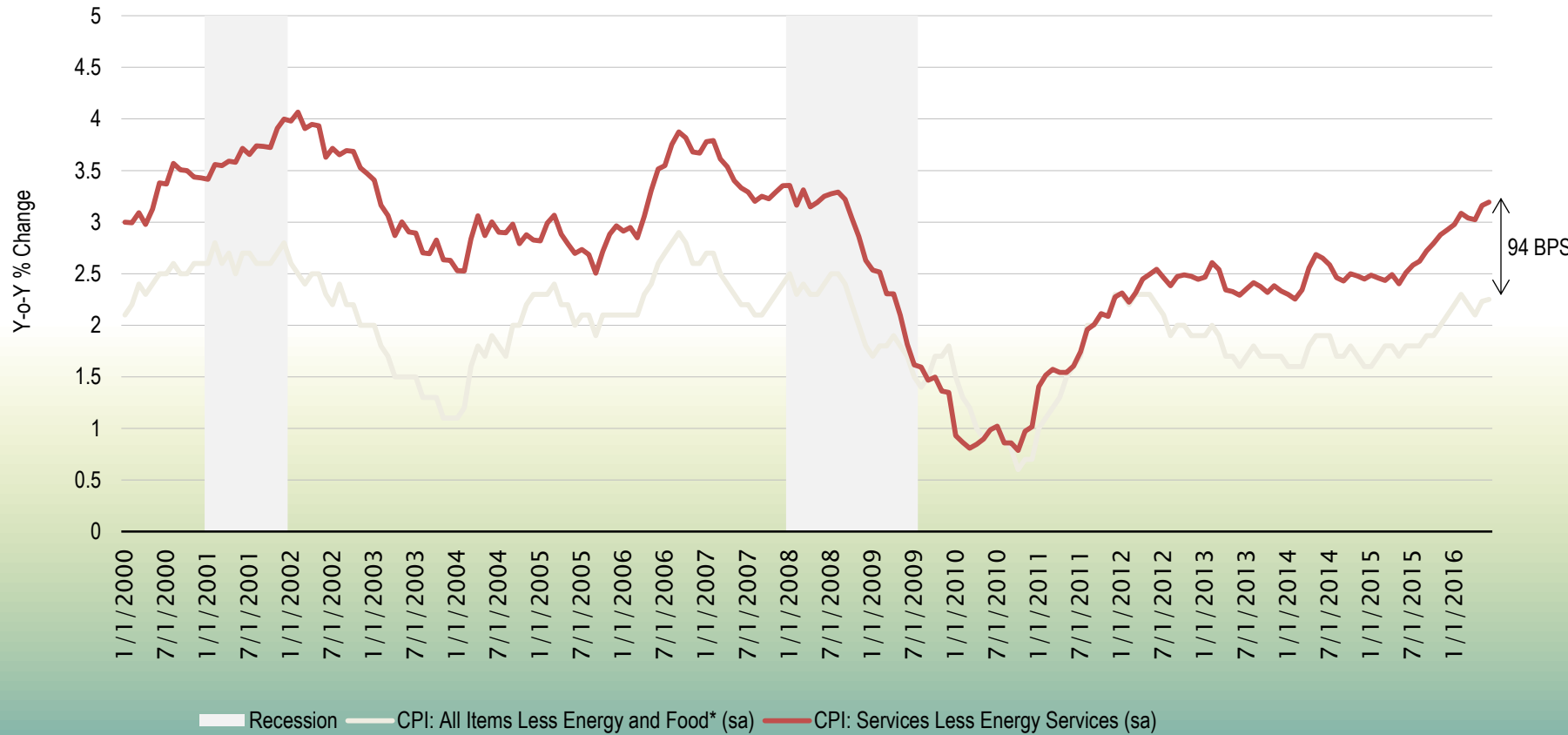
Chinese GDP Composition



Source: Oxford Economics Q3, 2016.

US Inflation Front

Gap widens

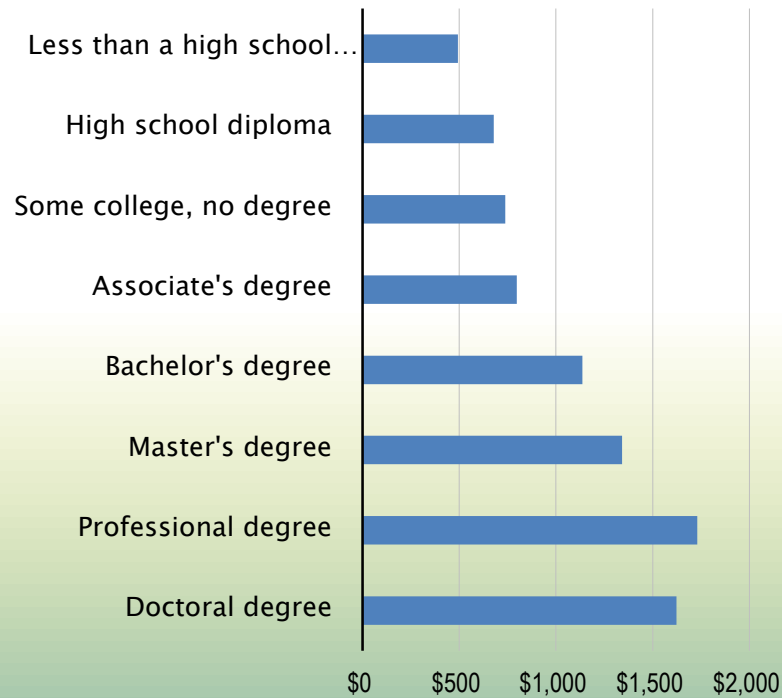


* CPI All Items includes both goods and services.

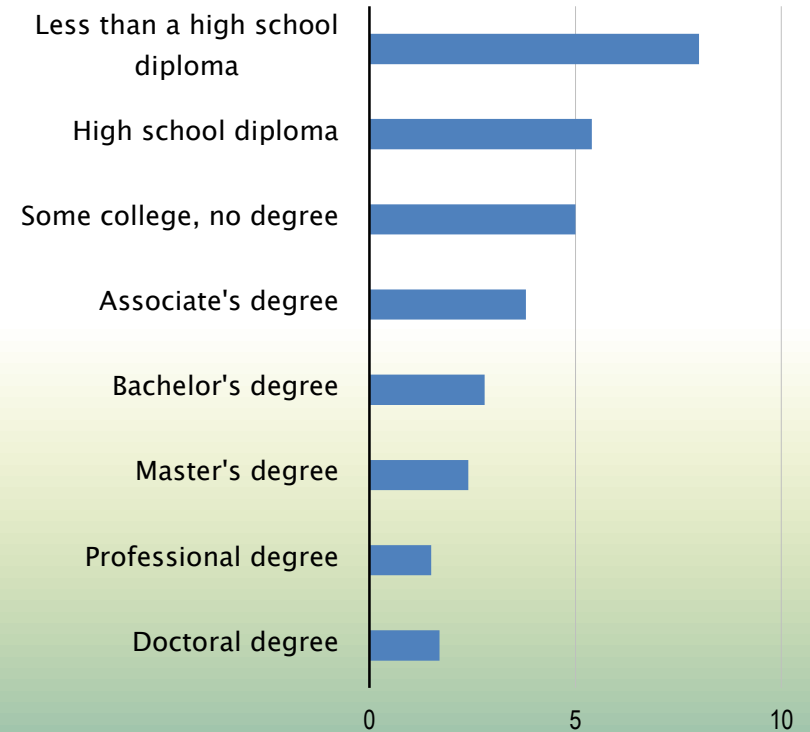
Source: St. Louis Federal Reserve Bank and Moody's Analytics, August 2016.

Education Matters

Median weekly earnings in 2015



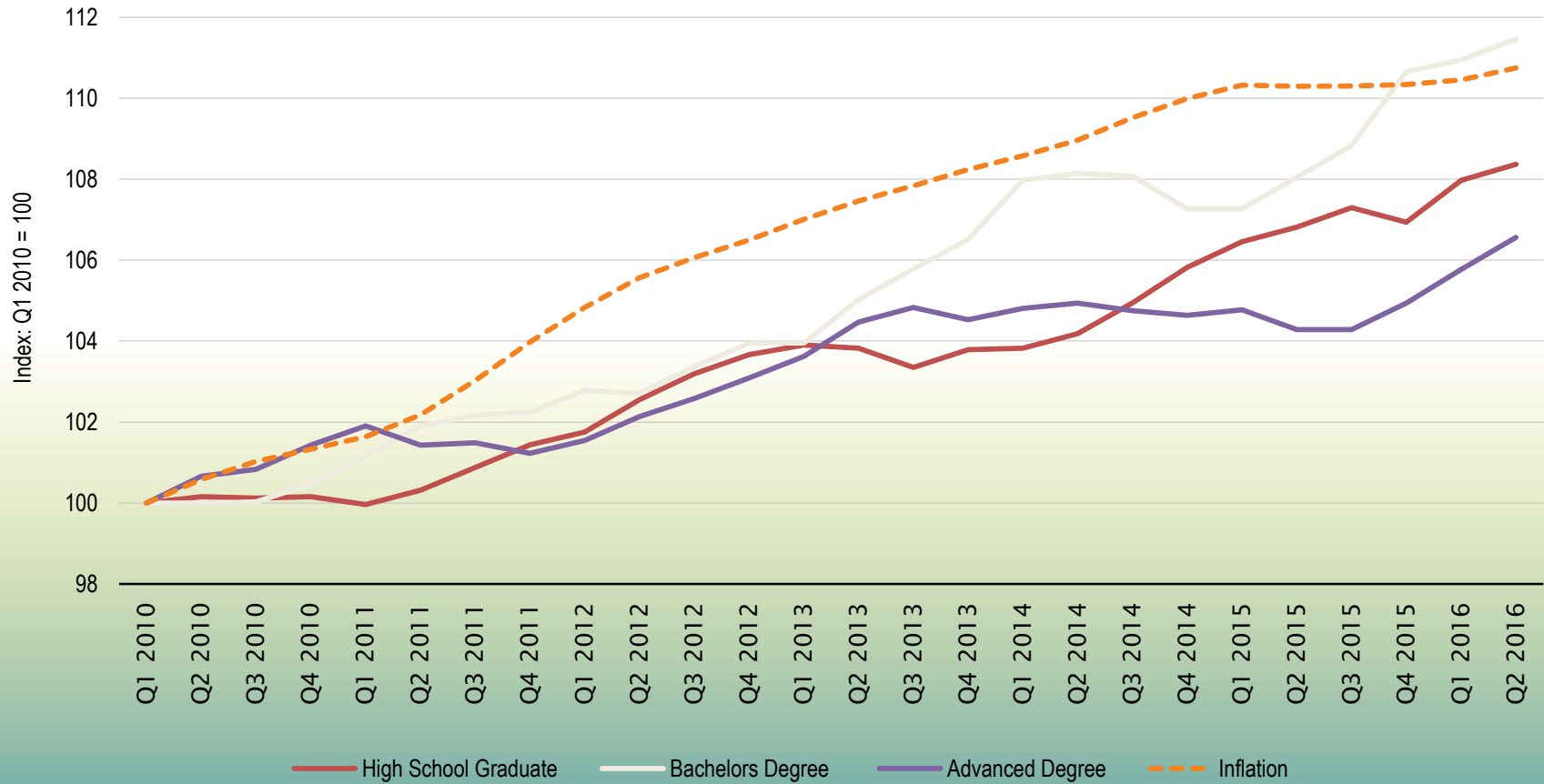
Unemployment rate (%) in 2015



Source: Bureau of Labor Statistics, August 2016.

Almost Always

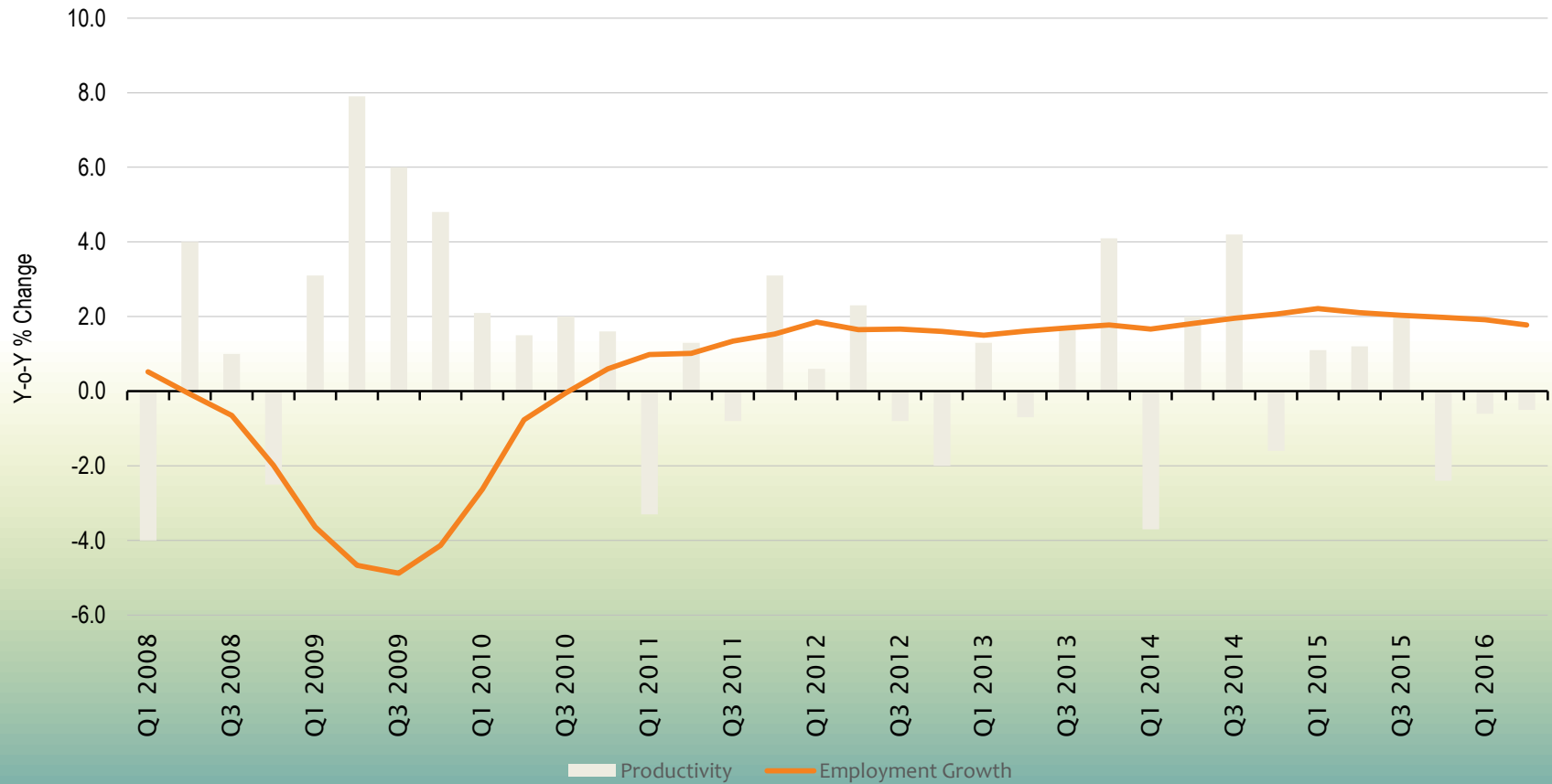
Nominal wage growth



Source: Bureau of Labor Statistics, August 2016.

Uneven Productivity Growth

Productivity growth – compounded annual rate of change



Source: Bureau of Labor Statistics, Federal Reserve Bank of St. Louis- August, 2016.

Current US Outlook

- Optimism

- Employment growth
- Wages
- Inflation
- Retail sales
- China consumers
- “Suburbs”

- Pessimism

- Uneven productivity
- Europe and ME
- EM debt
- Disruptions

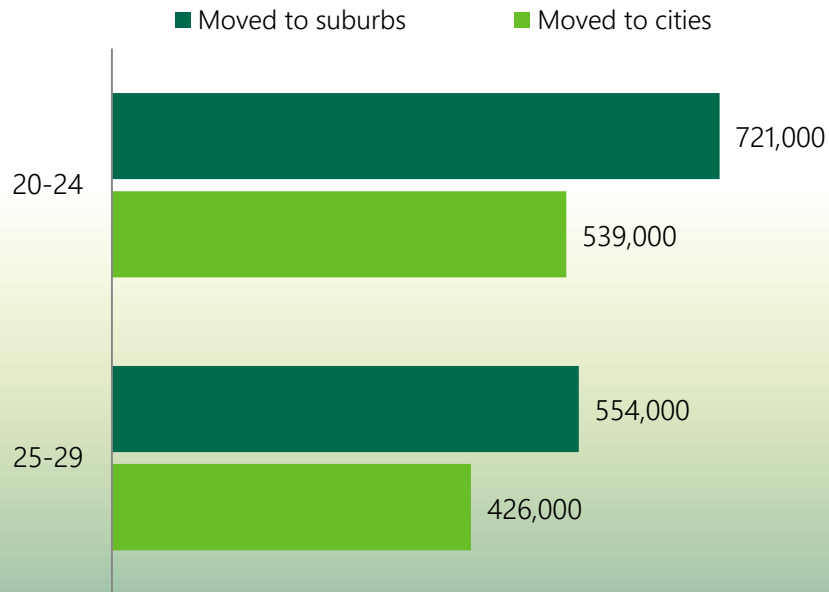


**“Suburbs” and the
Transportation Revolution**

US Suburbs

Youth Movement

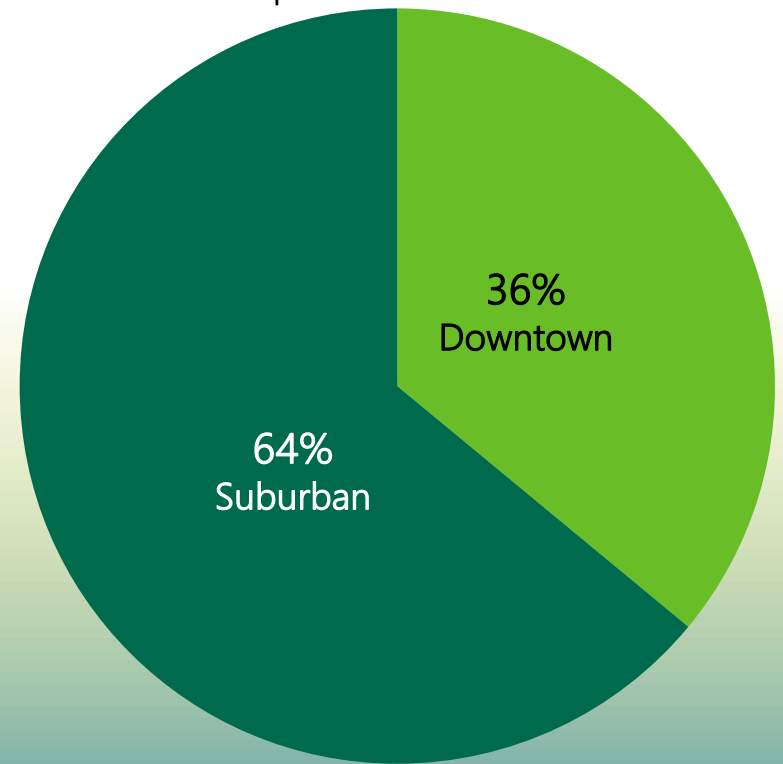
Millennial domestic migration by age group, 2014



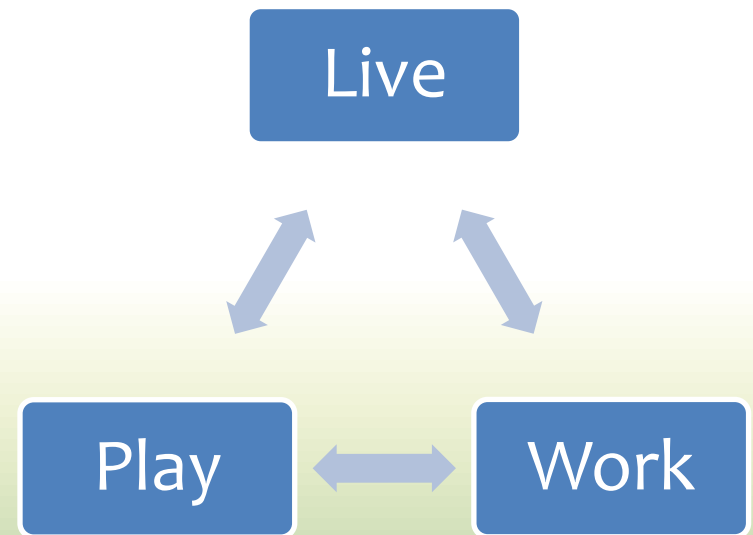
Source: CBRE Research, US Bureau of the Census

Suburbs are Outperforming, H1 2016

Share of Office net absorption vs. share of NRA



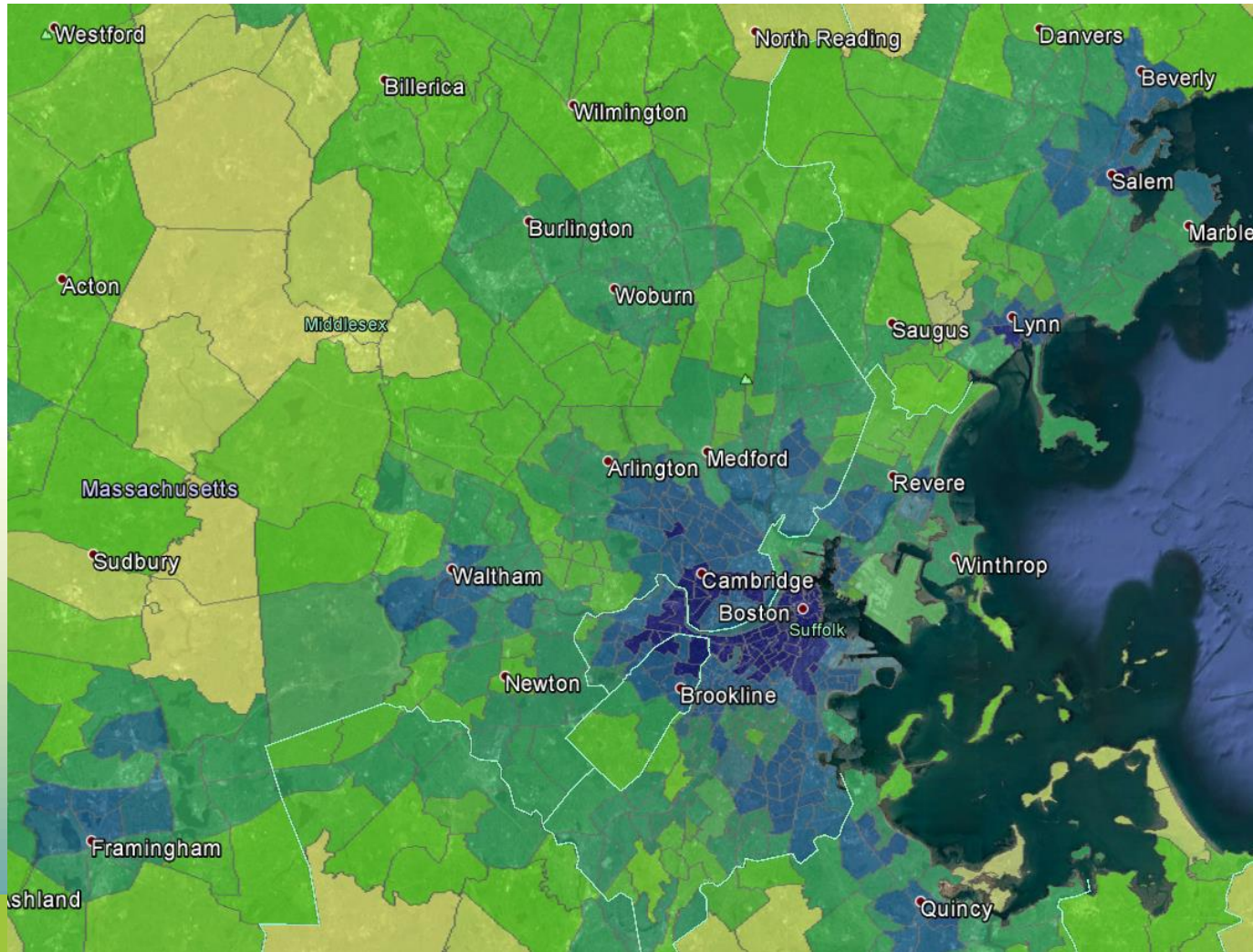
What does it mean to be URBAN?



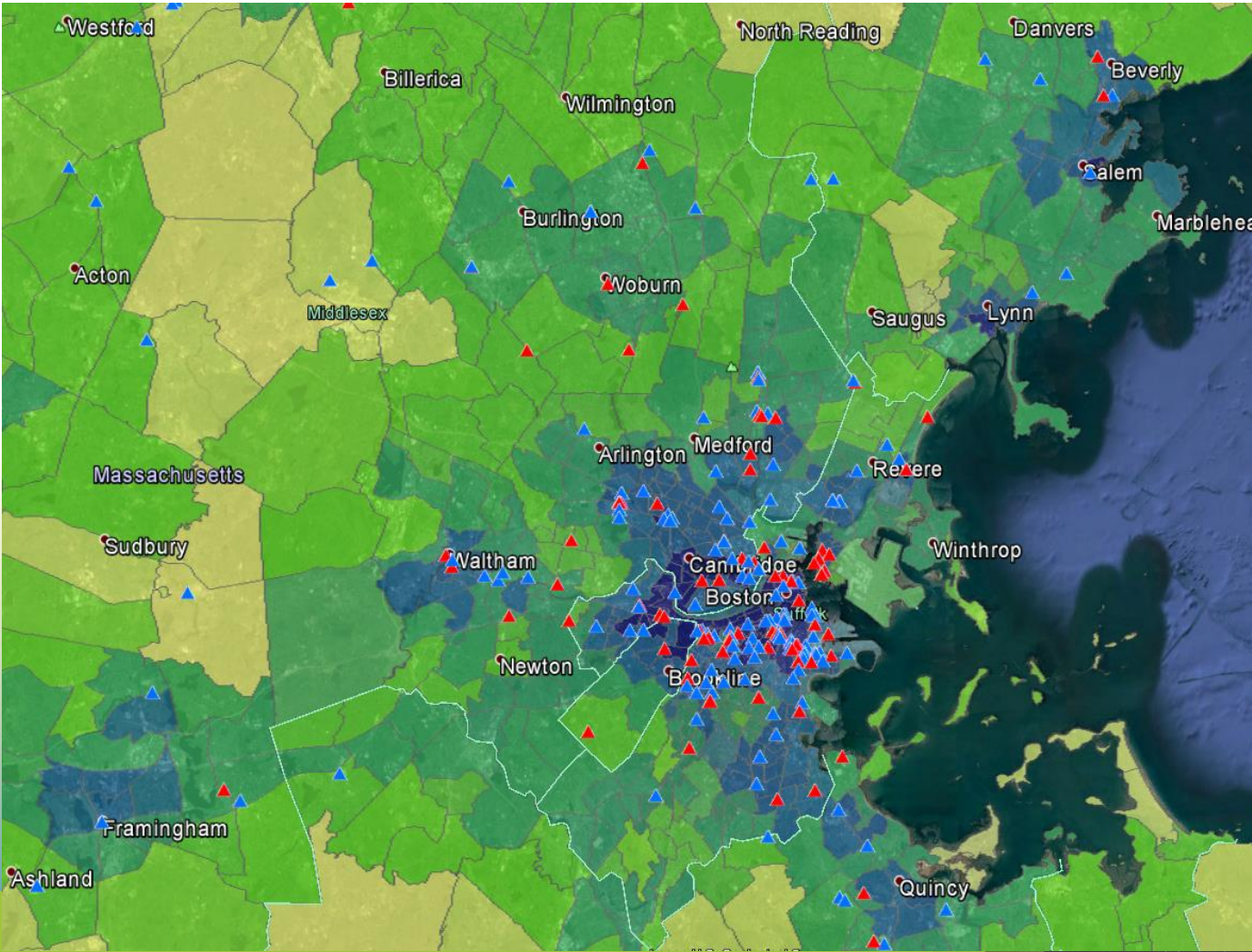
Urbanicity: Combination of Live, Work, Play



CBRE-EA Urbanicity Score (Boston)

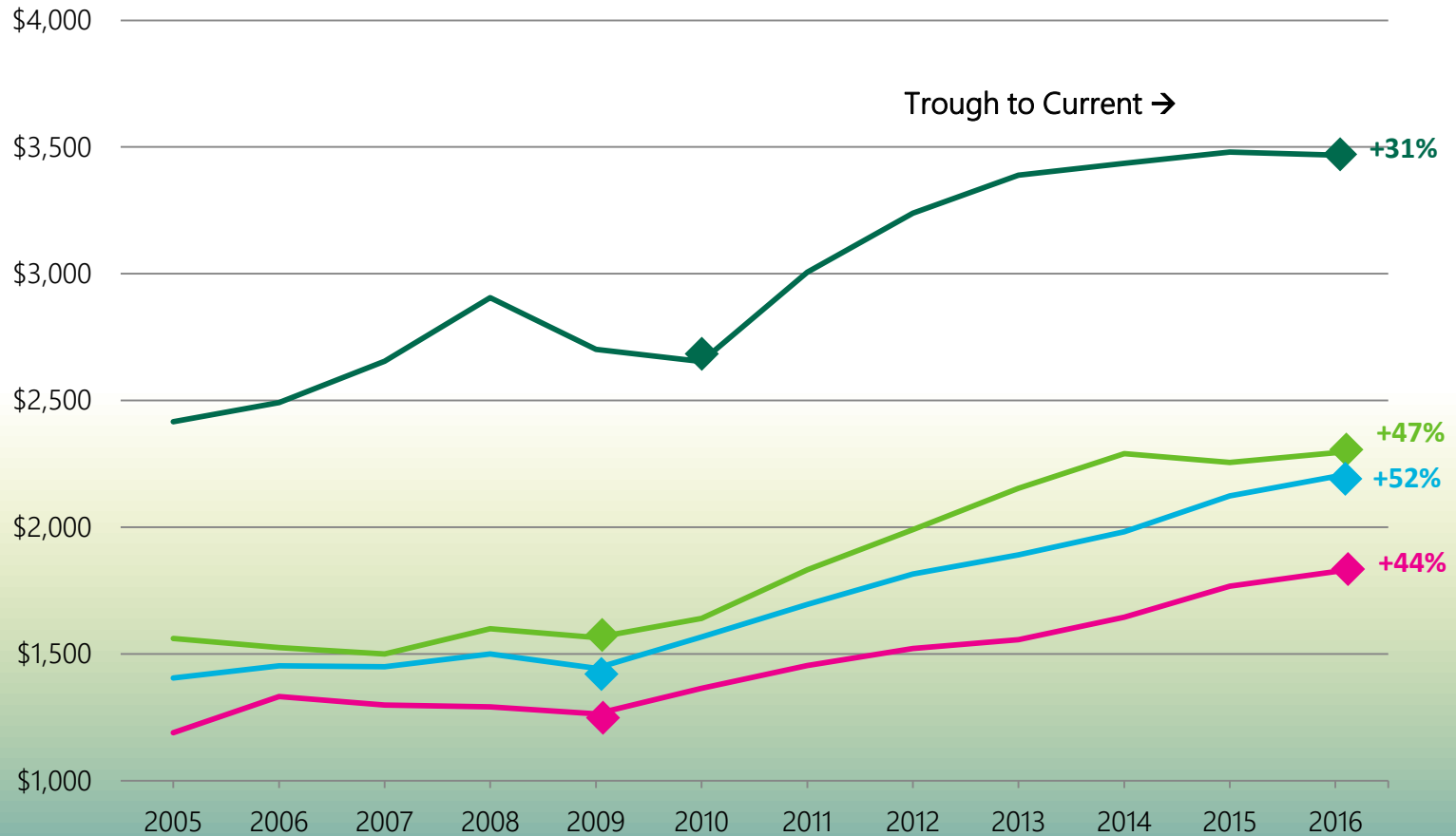


Construction Follows Urbanicity



Performance (Boston)

- nominal apartment RENT (\$/unit)



Urban Core High-Density Suburbs Mid-Density Suburbs Low-Density Suburbs



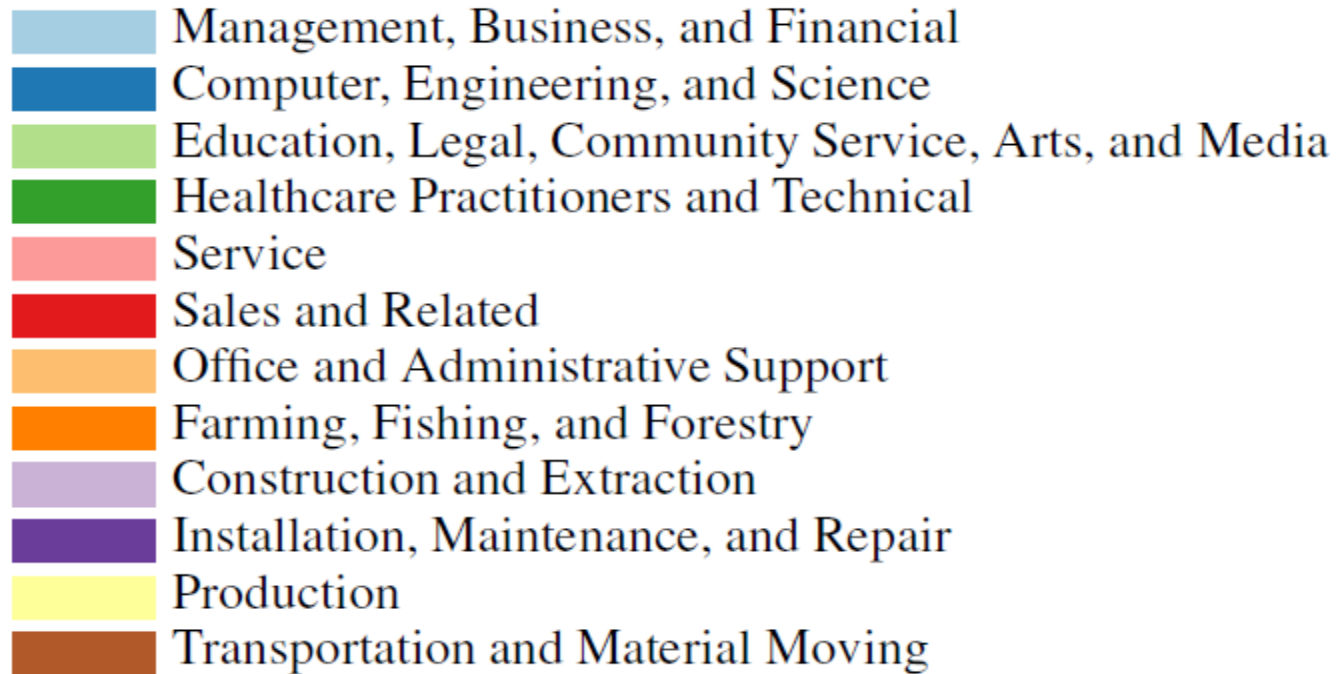
Disruption from Automation

Potential Impact of Automation

- Jobs vary in the mix of tasks that they require to be performed.
- Given current technology and expectations for technological change in the near term, we have a sense of which tasks are automatable.
- Oxford university researchers categorized ~700 occupations based on mix of knowledge, skill, and physical ability each requires.
- They predicted the probability that a given occupation is automatable, based on its mix of tasks.

Probability of Automatable Jobs

(Low to High)



Source: Frey and Osborne, *The Future of Employment*

What is at Risk?



{housekeeping}

A note of “Thanks”

- Event organizers
- Employment & Training Administration

Disclaimer

Reverse Q & A

- Since 2010, how much has the US population grown (in percent)?
 - Answer: 4.1%

Per US Census Bureau website
April 2010 to July 2015

Same source, same question for VT...

Reverse Q & A

- Since 2010, how much has the VT population grown?
 - Answer: z
 - Translation: “value greater than zero but less than half unit of measure shown”
 - Second Translation: $0 < z < 0.05\%$

Takeaway #1

- The Vermont population is growing – though not very fast

{but is this consistent with the narrative we hear?}

VT is aging... so is US

Two Quarters of a data story –

Persons 65 and Older as % of Population

	VT	US
2010	14.6%	13.0%
2015	17.6%	14.9%

Another Two Bits...

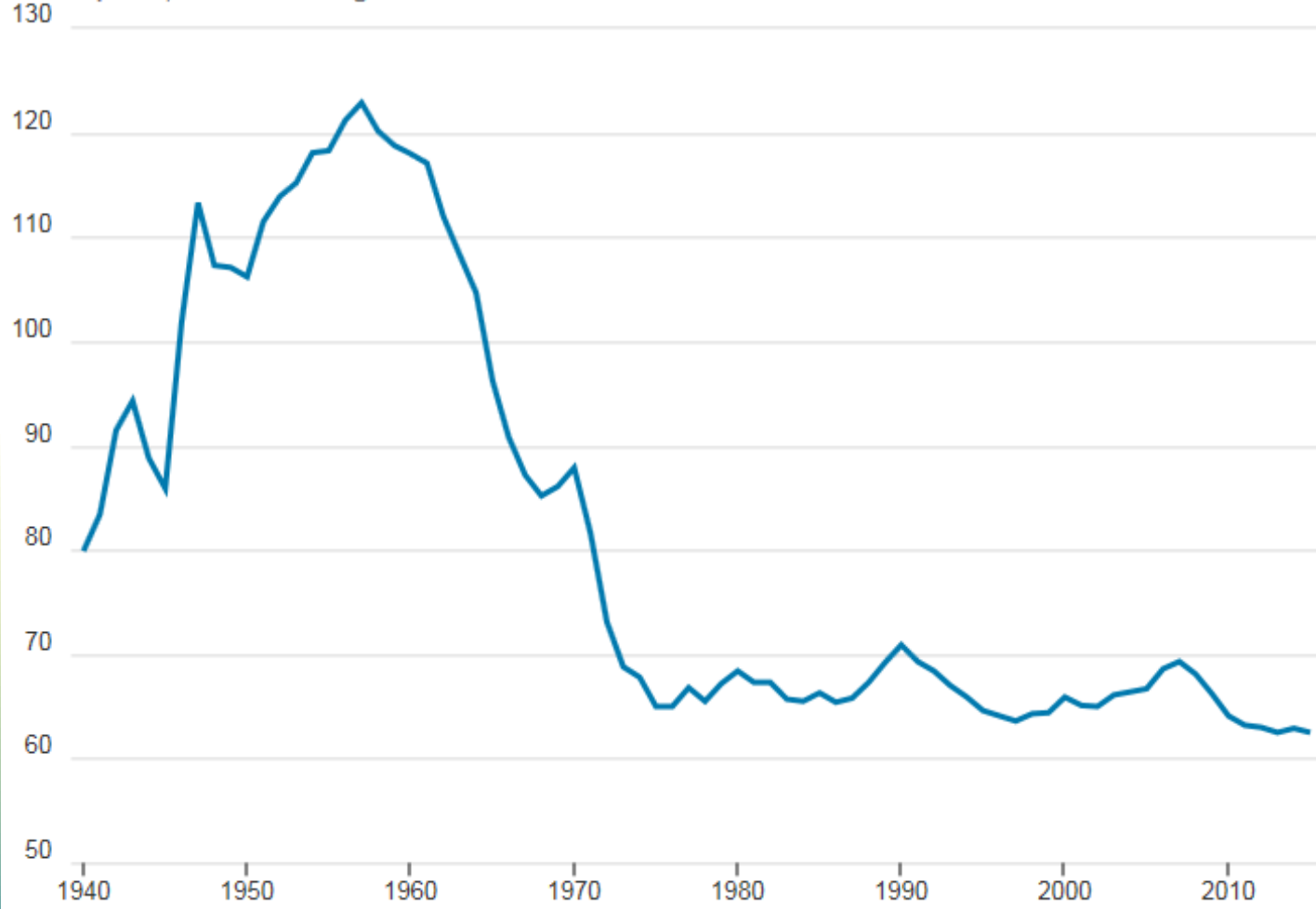
Persons Under 18 as % of Population

	VT	US
2010	20.7%	24.0%
2015	19.2%	22.9%

Part of the National Story

Fertility Rate


Births per 1,000 women aged 15-44



Source: WSJ website, data for United States

Vt. Birth Rate Lowest in the U.S.

Featured Videos

 Vt. Birth Rate Lowest in the U.S.

Burlington, Vermont - March 19, 2009

The National Center for Health Statistics reports Vermont had 6,513 live births in 2007-- 10.5 births for every 1,000 residents. It's the lowest birth rate in the nation, but not much lower than Maine at 10.7 and New Hampshire at 10.8.



Number one was Utah at 20.8. The national average was 14.3.

"It reflects an overall trend toward lower birth rates in general," explained Dr. Wendy Davis, Vt. Health Commissioner. "It also reflects our Vermont demographics."

Davis says the low birth rate is attributable to several factors like the state's very high percentage of Caucasian women who have very low birth rates, but a very low population of Hispanic women who have the highest birth rates.



Another factor: Vermont women are the best educated in the nation according to the report and they are having fewer children or none at all.

"I would hope that must reflect that people are being thoughtful about family planning and really doing this in a thoughtful manner," Davis said.

Economist Art Woolf said, "If they have careers, if you have more kids, you give up your career, and you give more years of your career if you have kids."

Woolf says a significant percent of well-educated women are forsaking motherhood for greater wealth; part of a declining birth rate trend in America that started 200 years ago.

Takeaway #1+z

- Compared to the US overall, Vermont's population has:
 - Higher level of educational attainment
 - Higher level of labor force participation
 - Lower birth rates

Why so much focus on *POP*?

- To put the current public dialogue in context
- To be a buzz kill (tradeoffs - see prev. slide)
- AND add the economic perspective

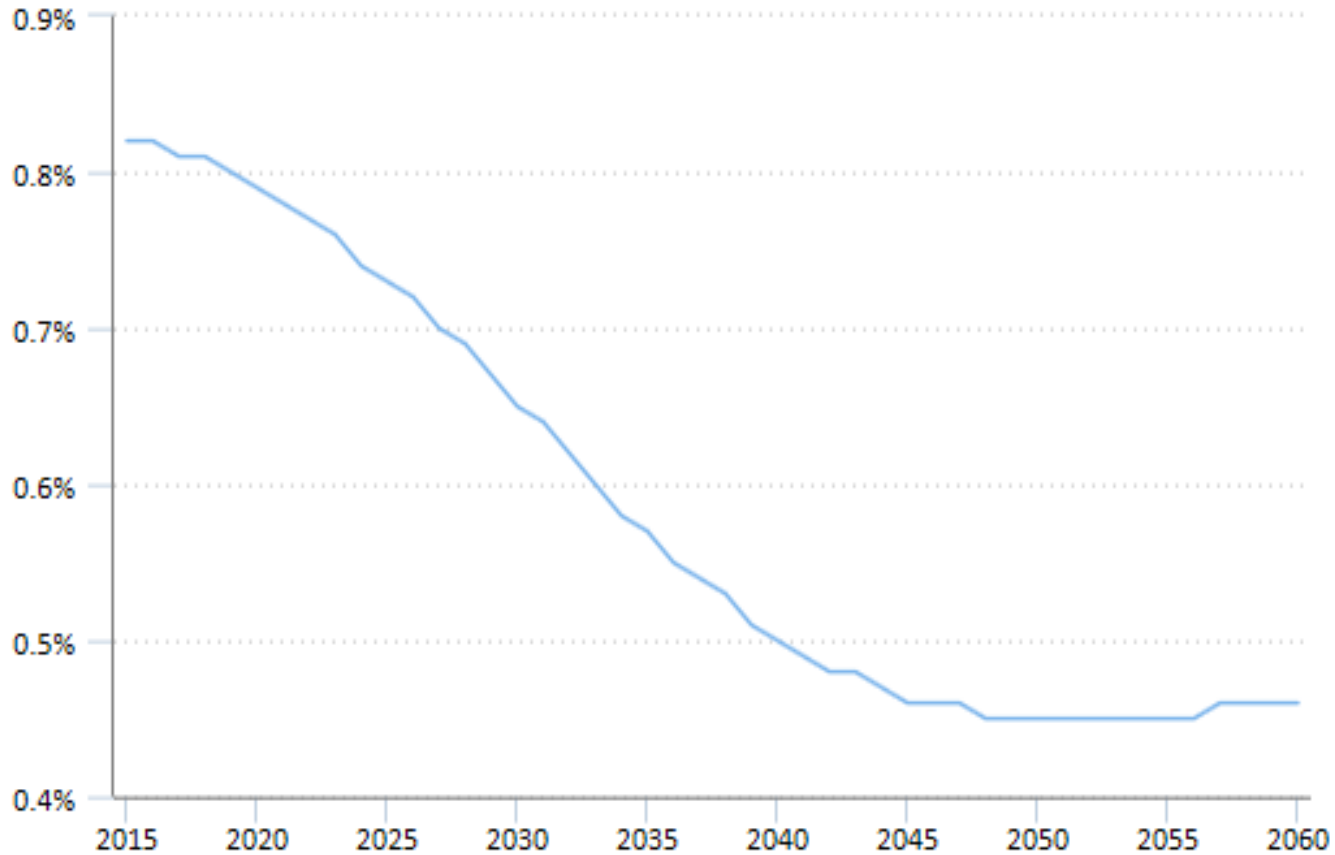
If you have a growth mindset...

3 Sources of (Traditional) Economic Growth

- population growth
 - ~ consumers as well as labor supply
- natural resources
- technological advancement

Decreasing Rate of Growth

Percentage change in U.S. resident population (projected)



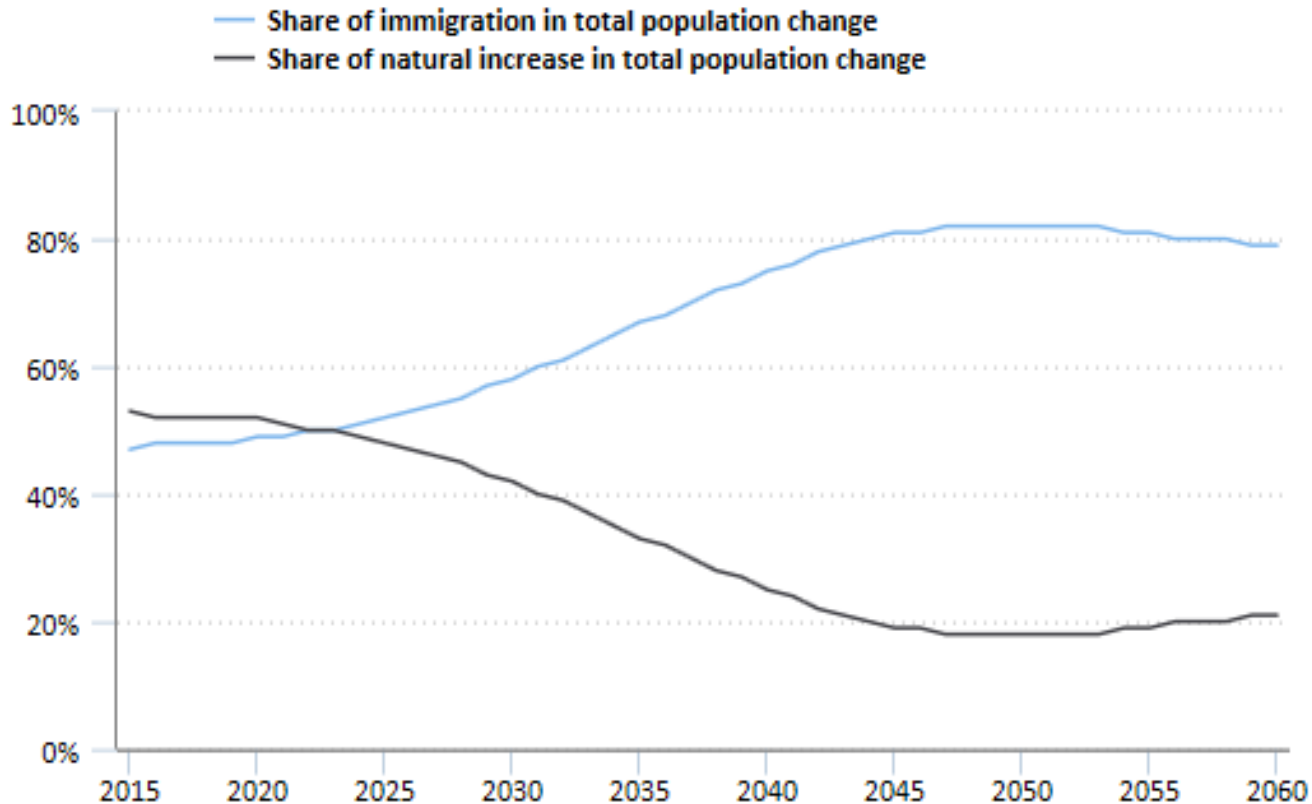
Click legend items to change data display. Hover over chart to view data.

Source: U.S. Census Bureau



New Americans

Projected share of natural increase of population and immigration in total population change

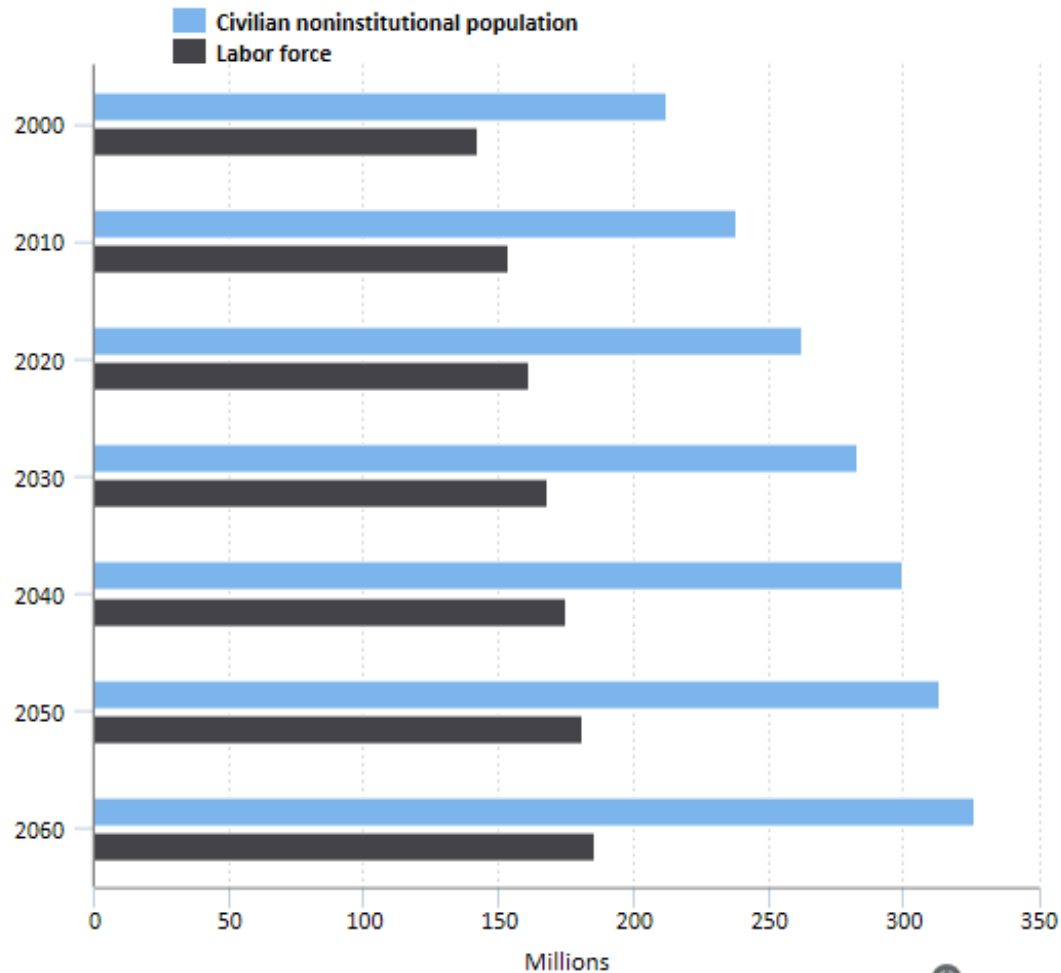


Hover over an area to see data.
Hover over legend items to see areas in a category.
Source: U.S. Census Bureau.



Future Labor Supply

Civilian noninstitutional population and labor force is growing

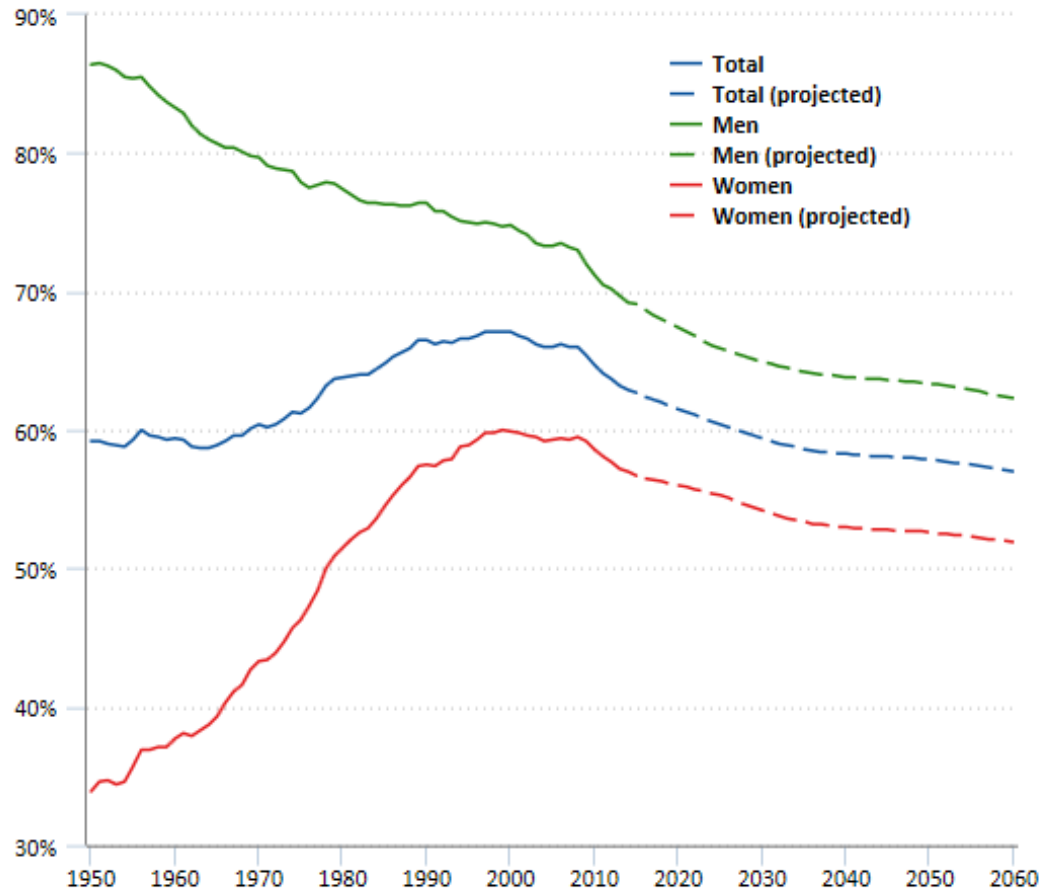


Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics



The General Trend

Labor force participation rates are projected to decline

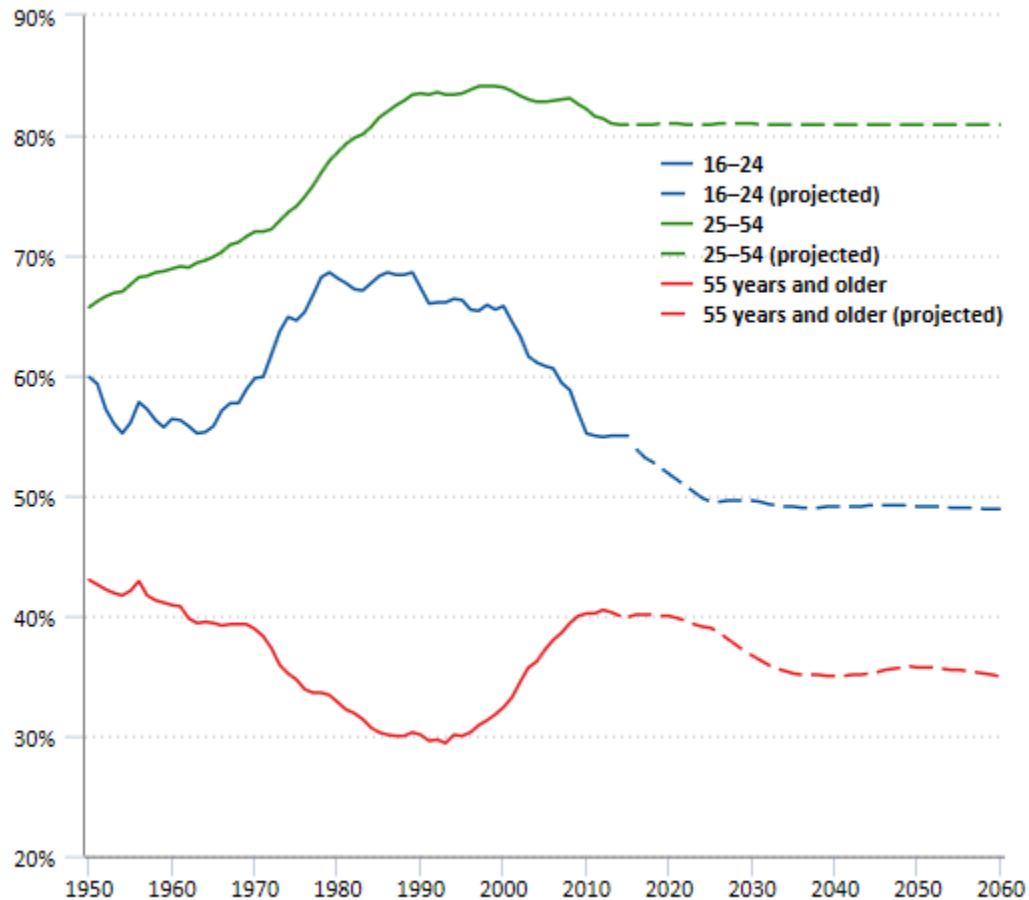


Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics



Not just gender, but age...

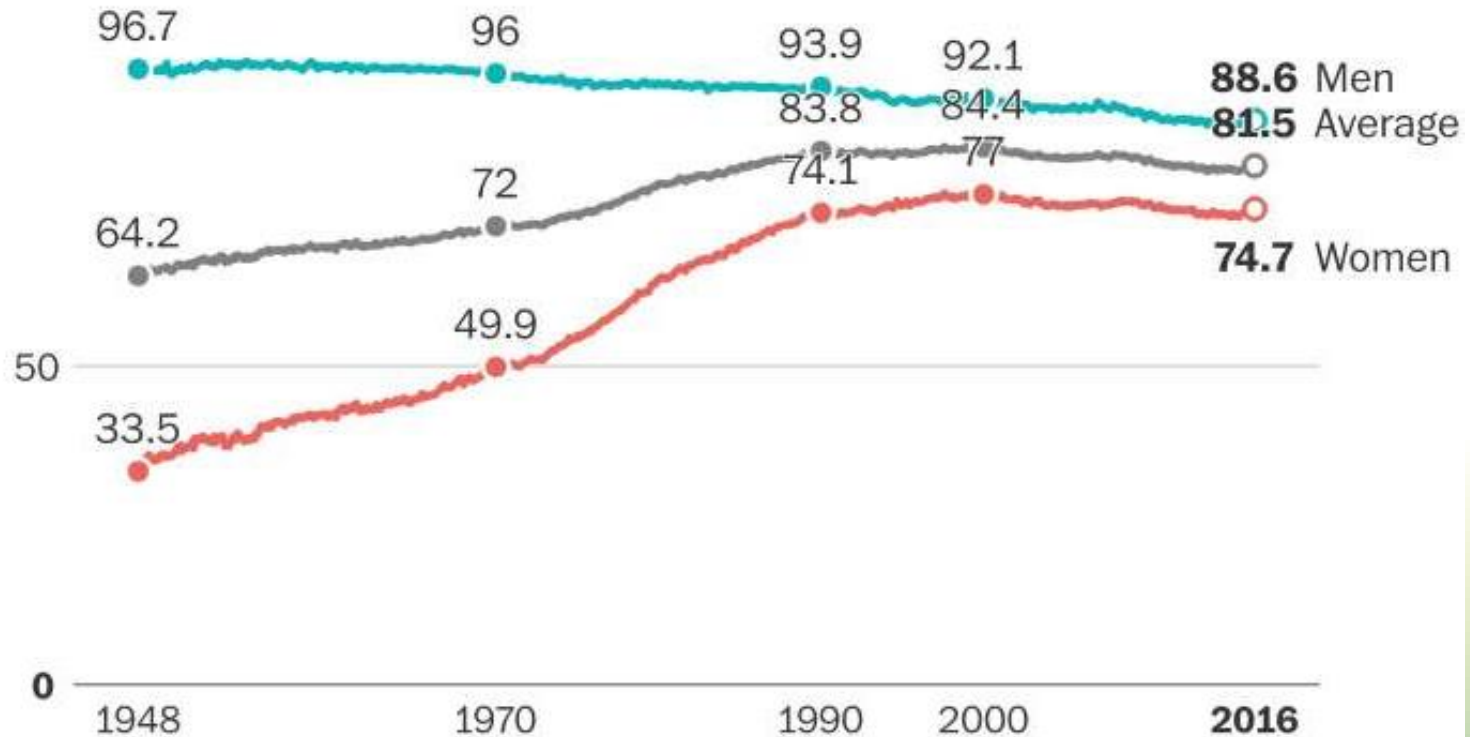
Labor force participation rates of all age groups are projected to decline



Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics

Understanding the “Why?”

Labor force participation among 25-54 year olds has declined slightly in recent decades



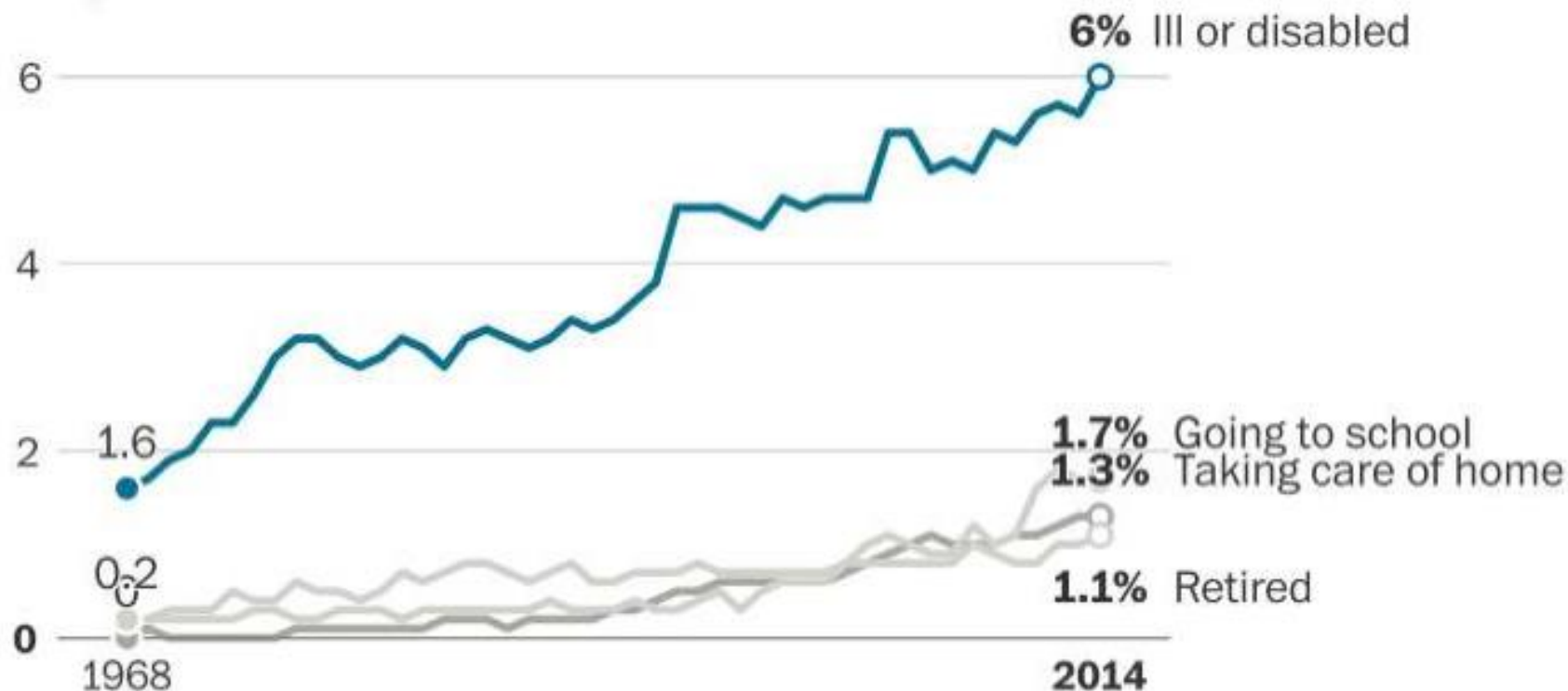
Source: Current Population Survey via BLS

WAPO.ST/WONKBLOG

© Provided by WP Company LLC d/b/a The Washington Post

Why aren't men aged 25-54 in the labor force?

About 6 percent of men today say they can't work because they are ill or disabled, up from 1.6 percent in 1968.



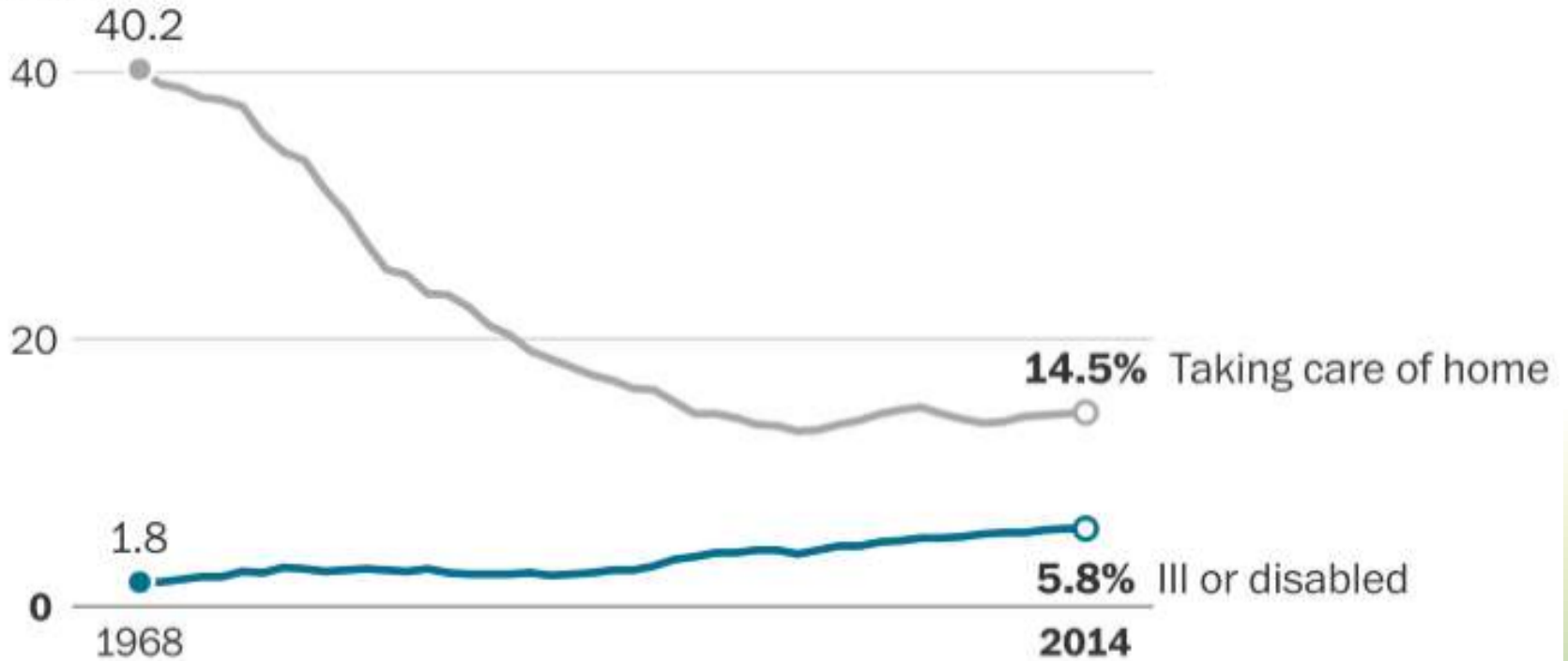
Source: Wonkblog analysis of CPS data via IPUMS

WAP0.ST/WONKBLOG

© Provided by WP Company LLC d/b/a The Washington Post

Why aren't women aged 25-54 in the labor force?

Rates of illness and disability have also been rising among women, but that trend has been obscured by a tremendous decline in the rate of women engaged in full-time housework.



Source: Wonkblog analysis of CPS data via IPUMS

WAPO.ST/WONKBLOG

© Provided by WP Company LLC d/b/a The Washington Post

Great Reason for Optimism

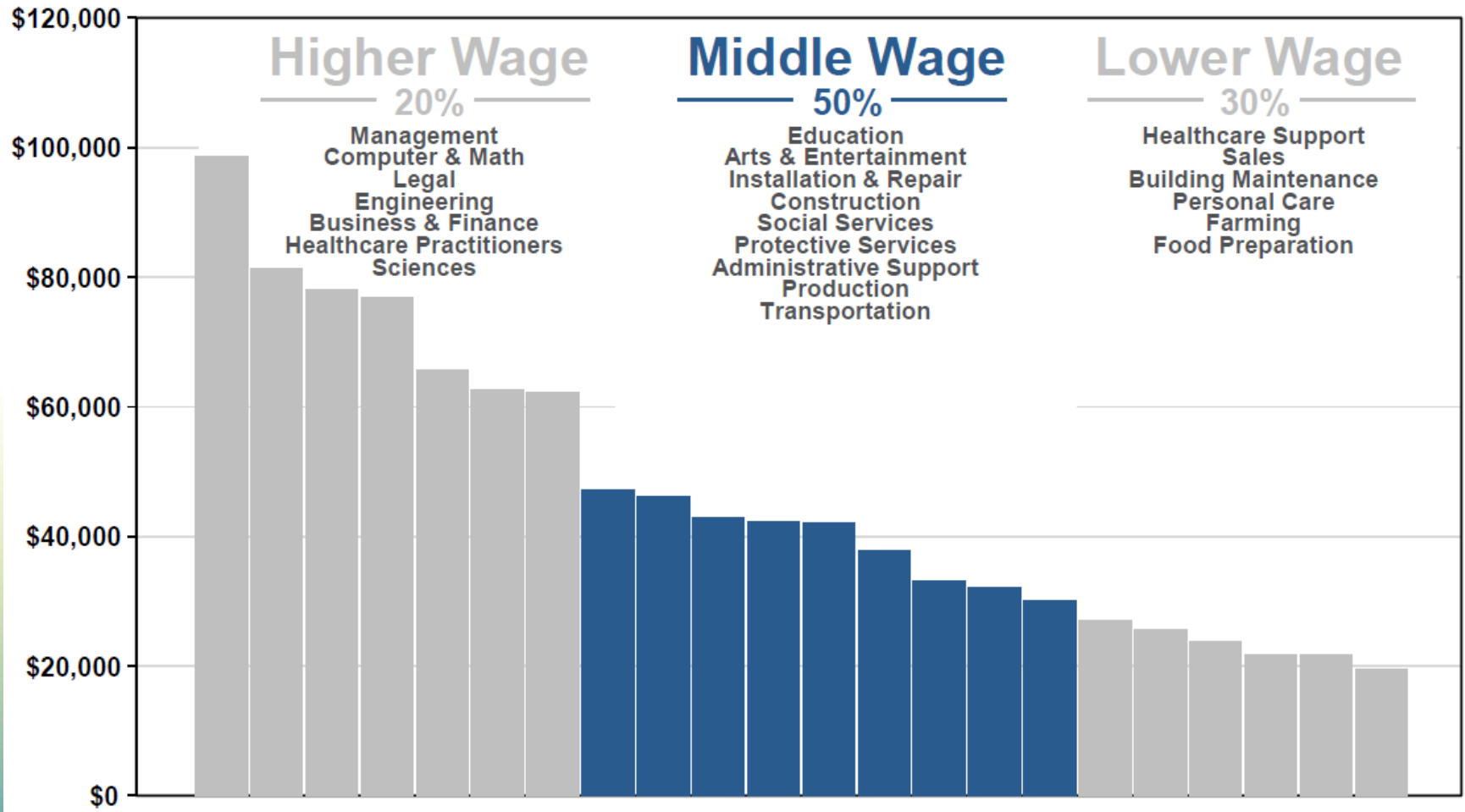
- We are still here... thanks to innovation
- Vermont trends are also US trends
 - Not solving problems alone

Tremendous Amount of Uncertainty

- Lots of competing needs
 - Resources need to be used strategically
- The political climate is _____
- Economic indicators go up and down
 - Where numbers represent people...

Job Categories

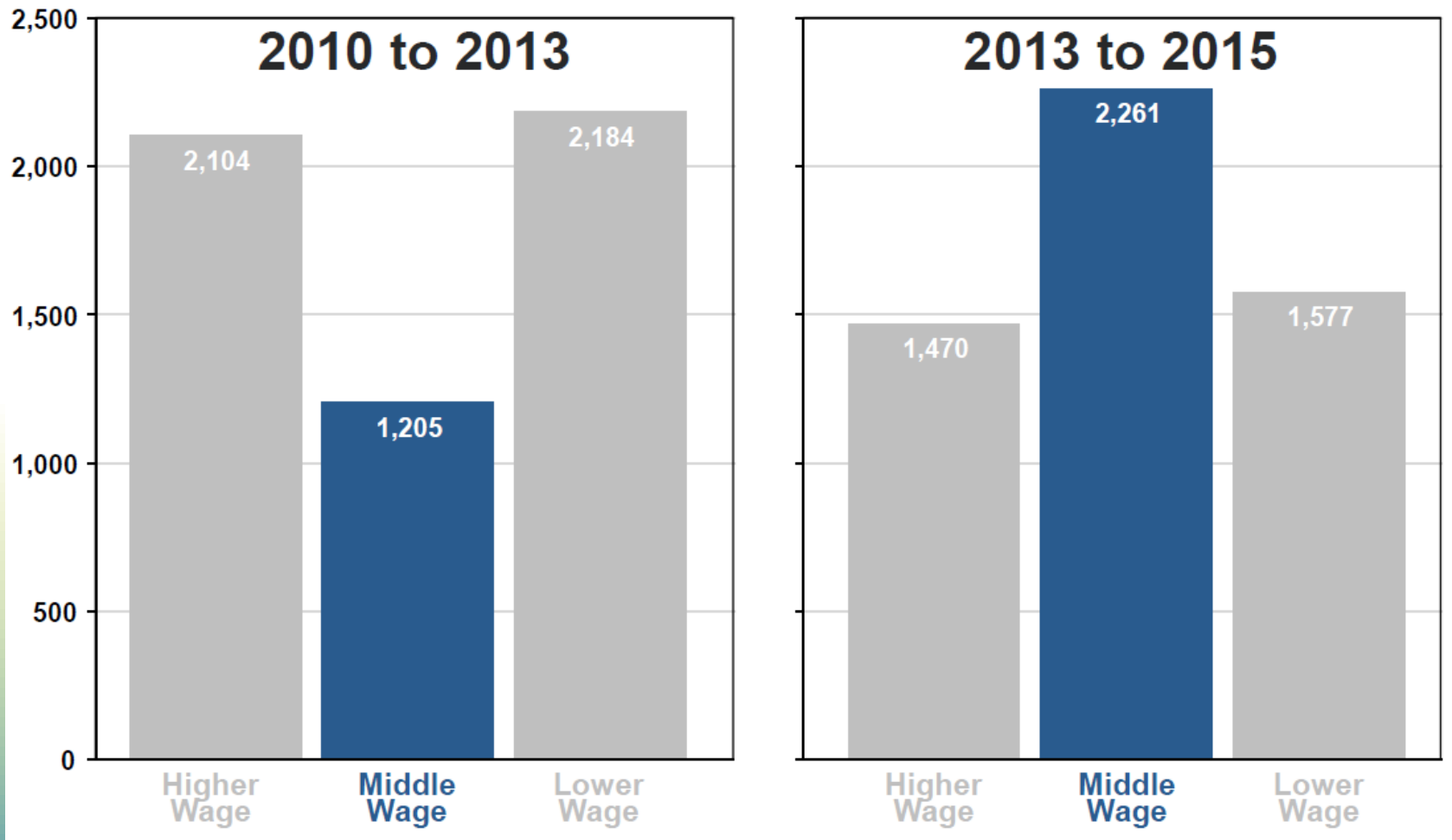
Based on 2015 Median Wages, United States



Source: New York Federal Reserve Bank using BLS OES data

Job Gains in the United States

Net Change in Total Employment, Thousands



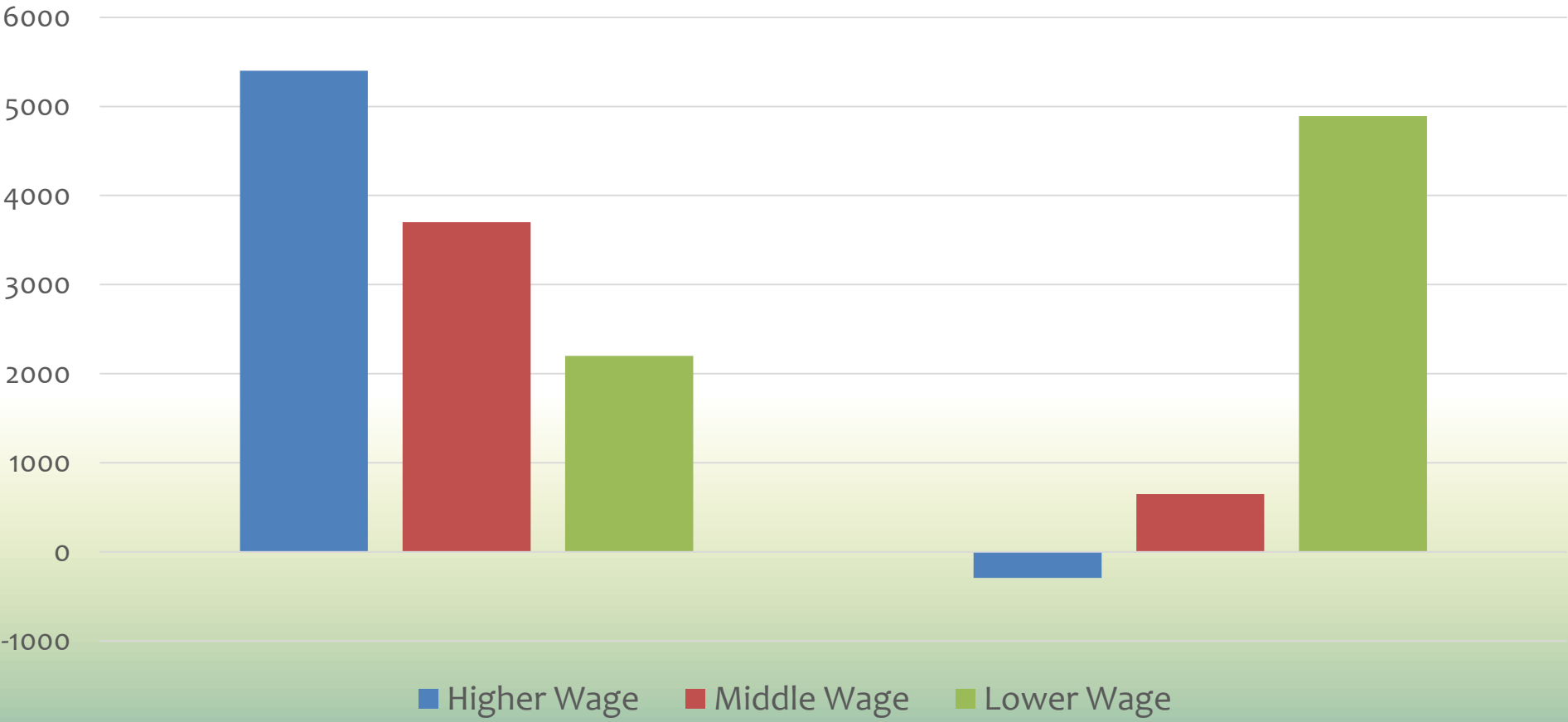
Source: New York Federal Reserve Bank using BLS OES data

Job Gains in Vermont

Net Change in Employment

2010 to 2013

2013 to 2015



Summary

The US economy is maturing and with that comes change

The current business cycle is maturing and with that comes change

Technology *is* change

– how will we embrace it?

QUESTIONS?

SPEAKERS

Tim Savage
CBRE – Econometric Advisors
Tim.Savage@cbre.com

Mathew Barewicz
Vermont Department of Labor
Mathew.Barewicz@Vermont.gov