



First American

Automation Angst

The Information Revolution, Millennials, and the Housing Market

November, 2016



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Handloom Weavers and Saddle Makers

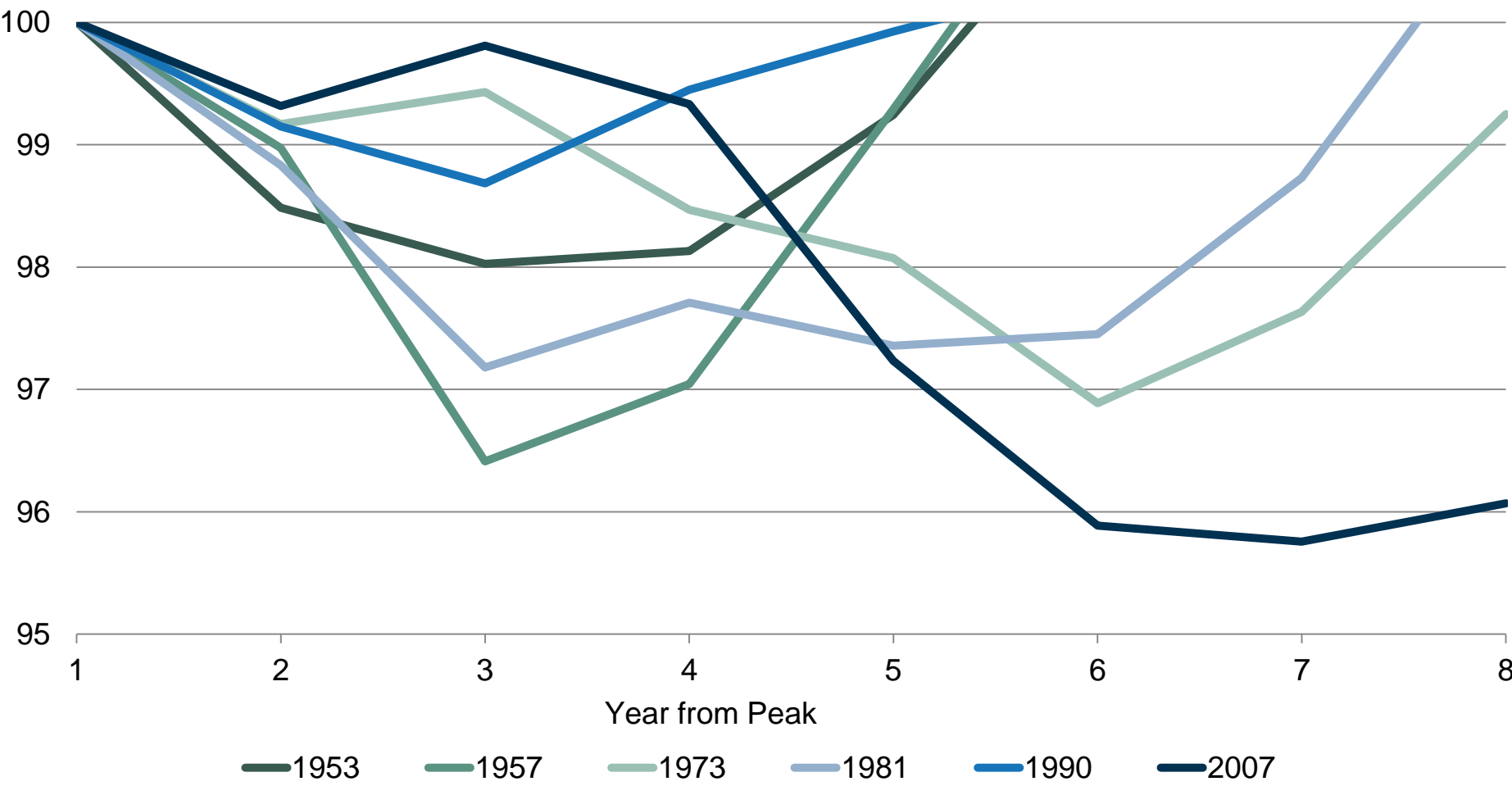
The Relative Importance of Factors of Production



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Underperforming Potential- GDP Depth and Duration

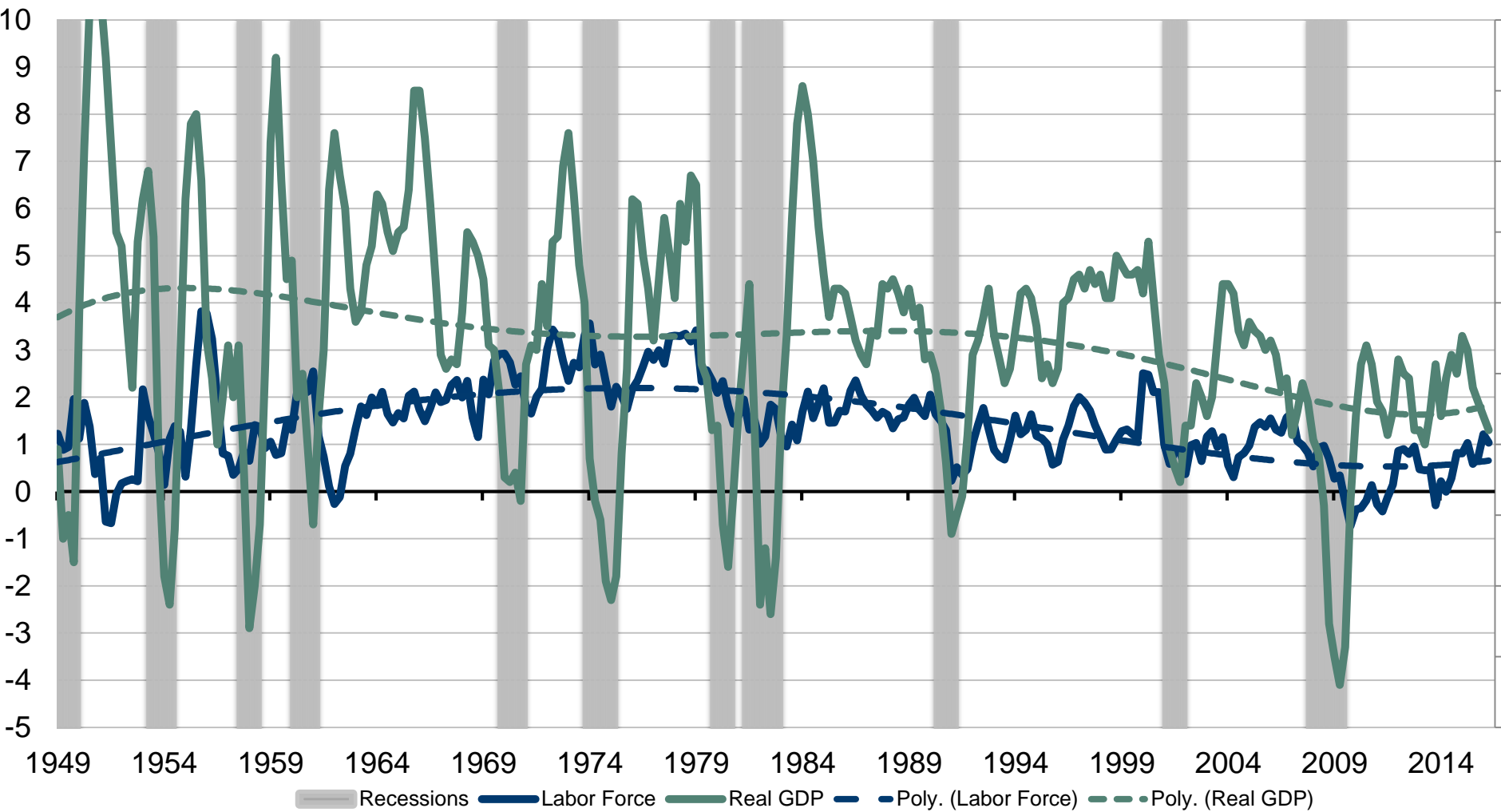
Real Quarterly GDP (SA, %, Recession Peak = 100)



Source: BEA, FRED, Q3 2009

People Power Drives Economic Growth

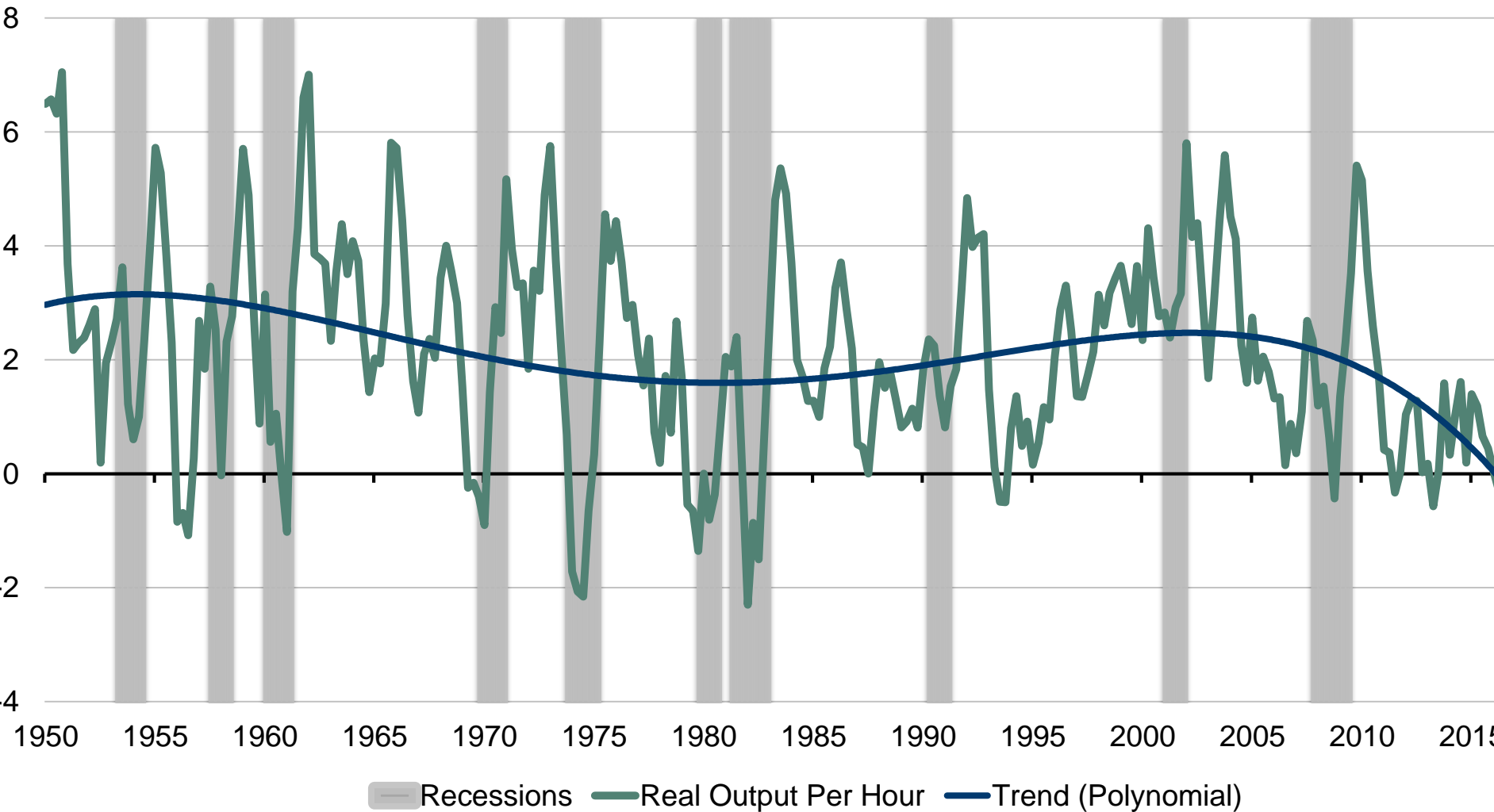
Percent Change from a Year Ago (SA)



Source: U.S. BEA, BLS, FRED, Q3 2016

Making More With Less? Productivity Gains Almost Gone

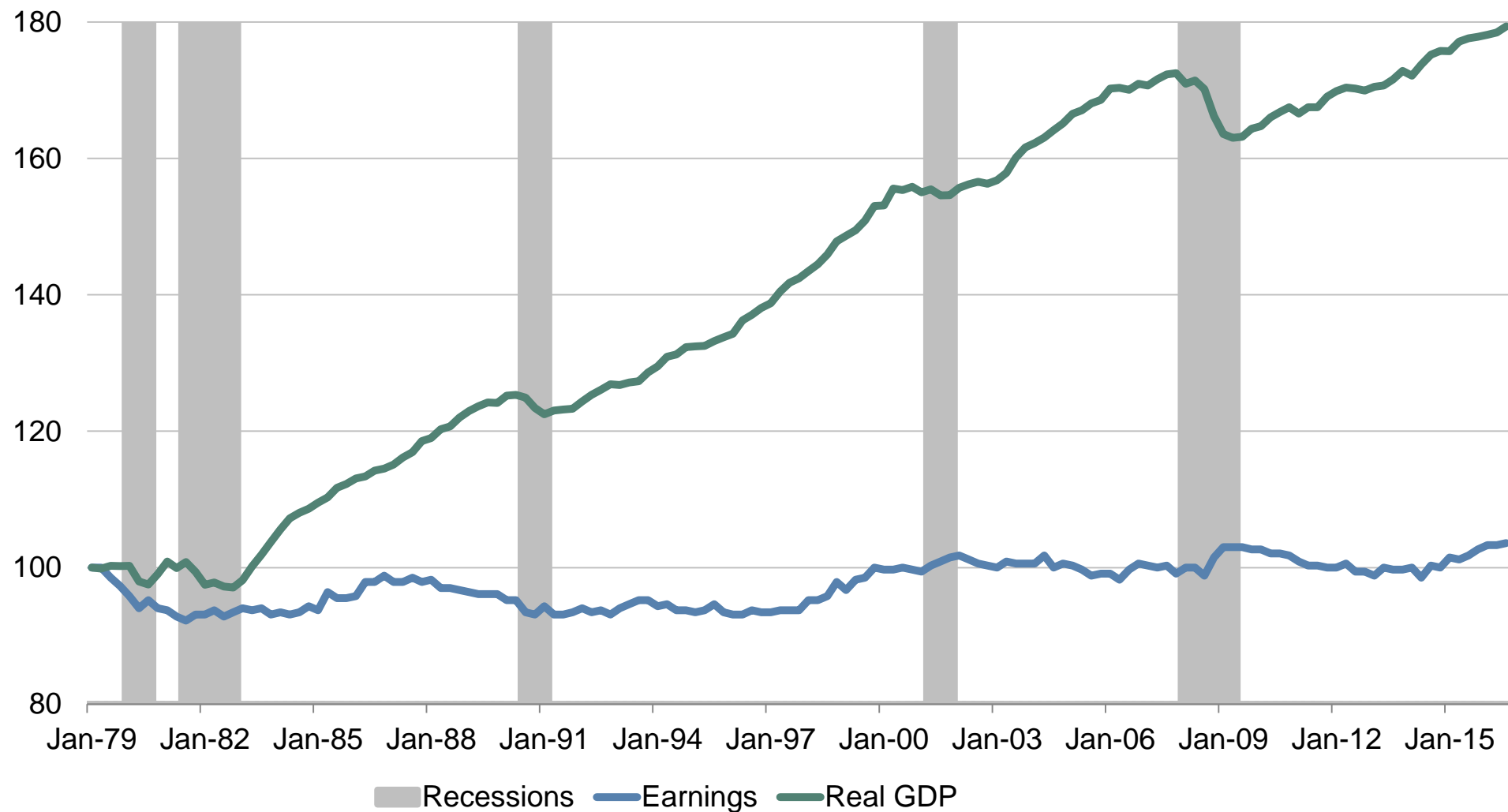
Non-Farm Real Output Per Hour of All Persons (Percent Change YOY, SA)



Source: BLS, FRED, Q3 2016

Capital Versus Labor- Who Gains the Growth Benefits?

Real GDP Per Capita and Full Time Employed Median Earnings (SA, Q1 1979 = 100)



Source: BLS, BEA, FRED, Q3 2016

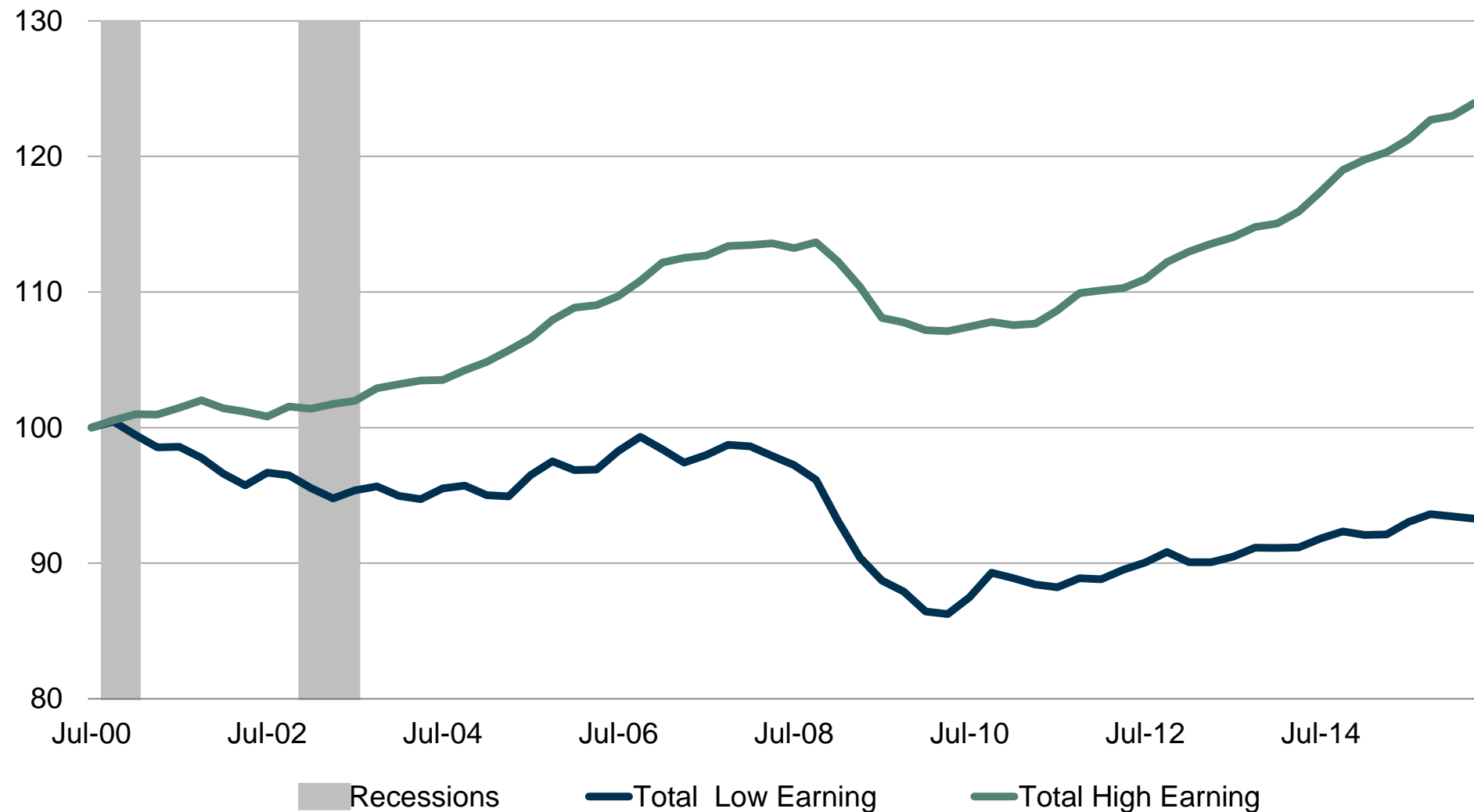
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Job Polarization- Job Creation is Skill Skewed

Employment Count of Full Time Workers (Q3 2000 = 100)



Source: BLS, Q3 2016

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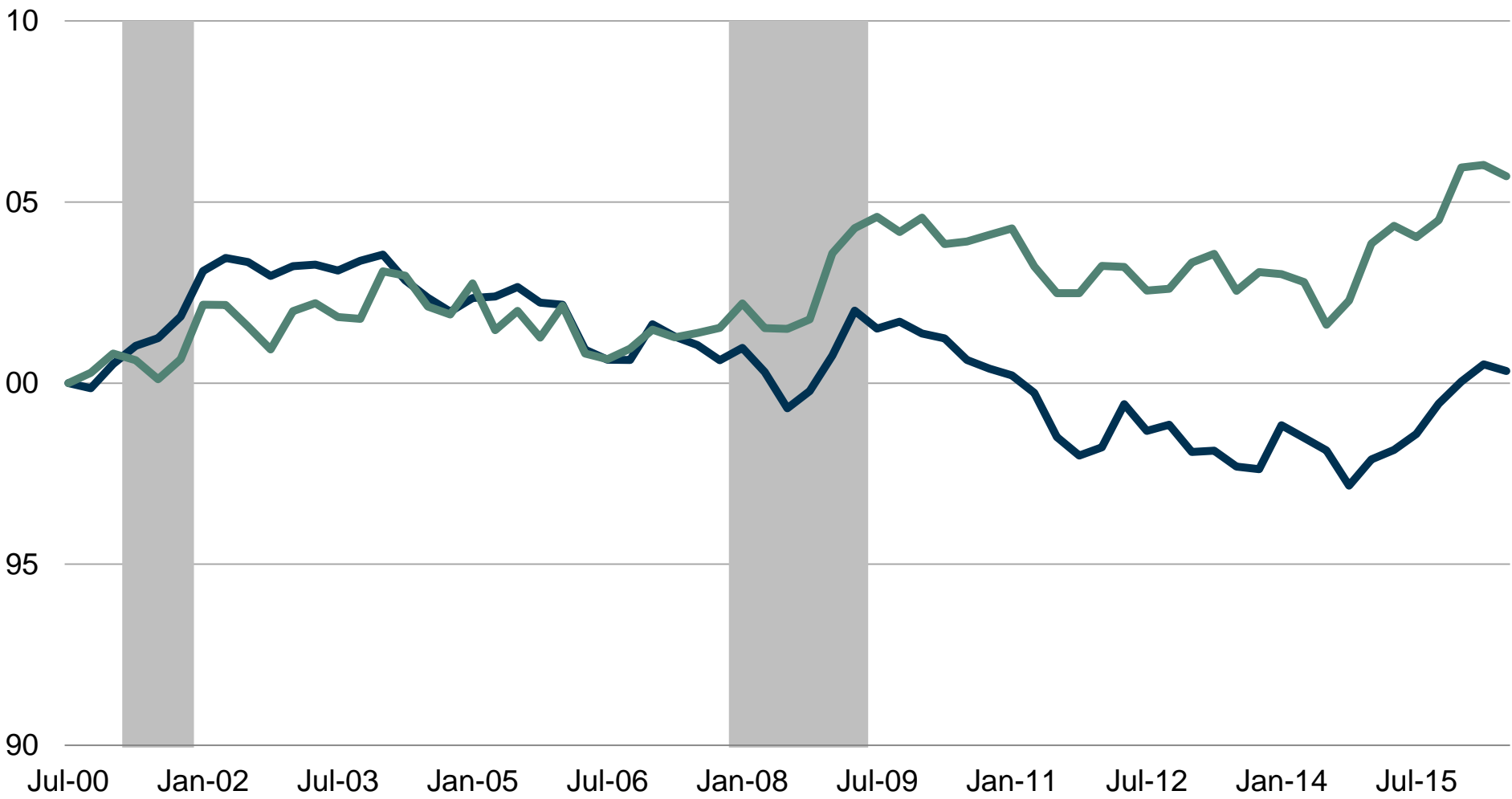
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Robot Maker or Wage Taker

Median Usual Weekly Earnings (Inflation Adjust Q1 2016, Q3 2000 = 100)



Source: BLS, Q3 2016

Recessions

< \$40k

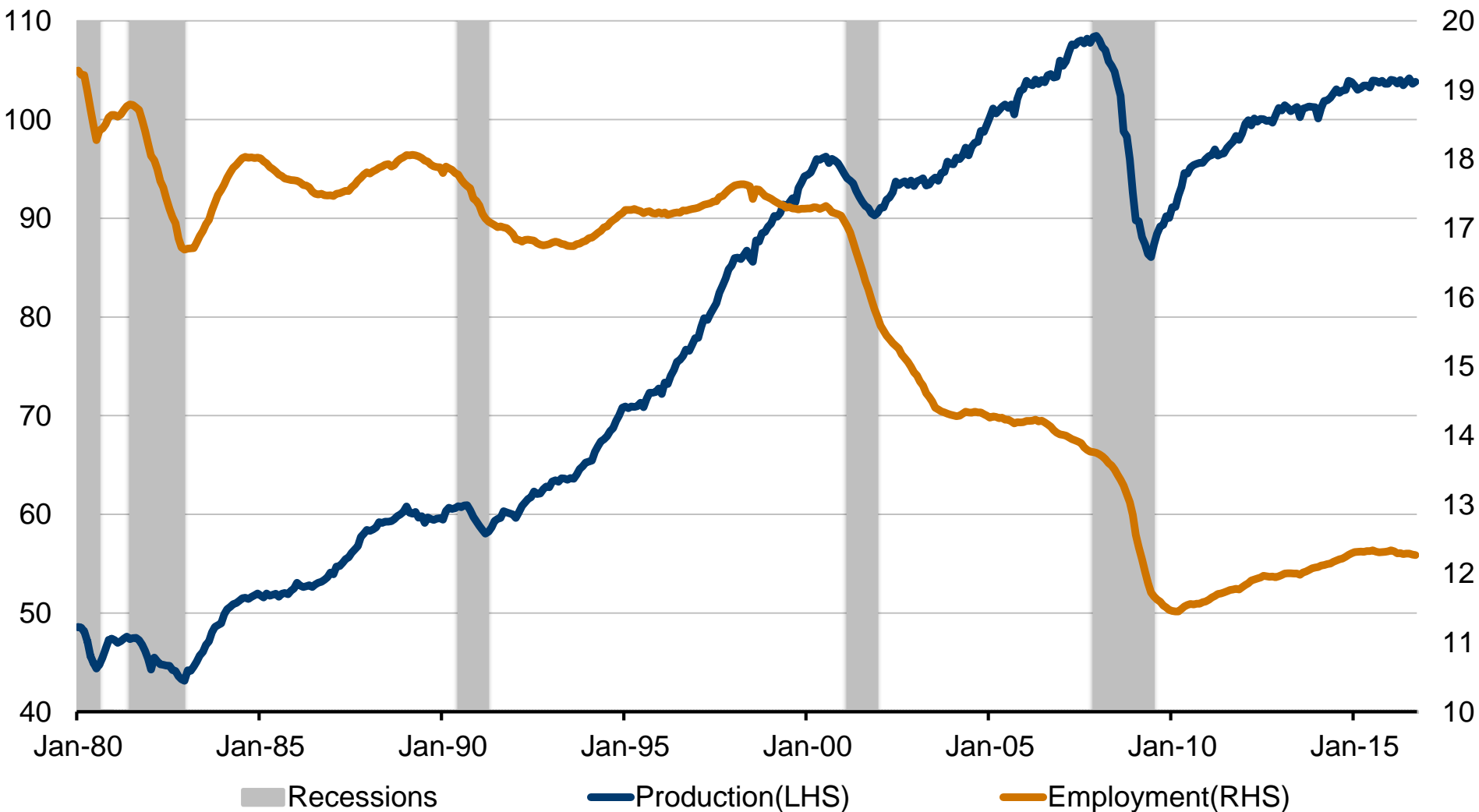
> \$40k

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The Plight of Labor

Ind. Manuf. Prod. (Index 2012=100, Monthly, SA) and Employment (MM of Persons)

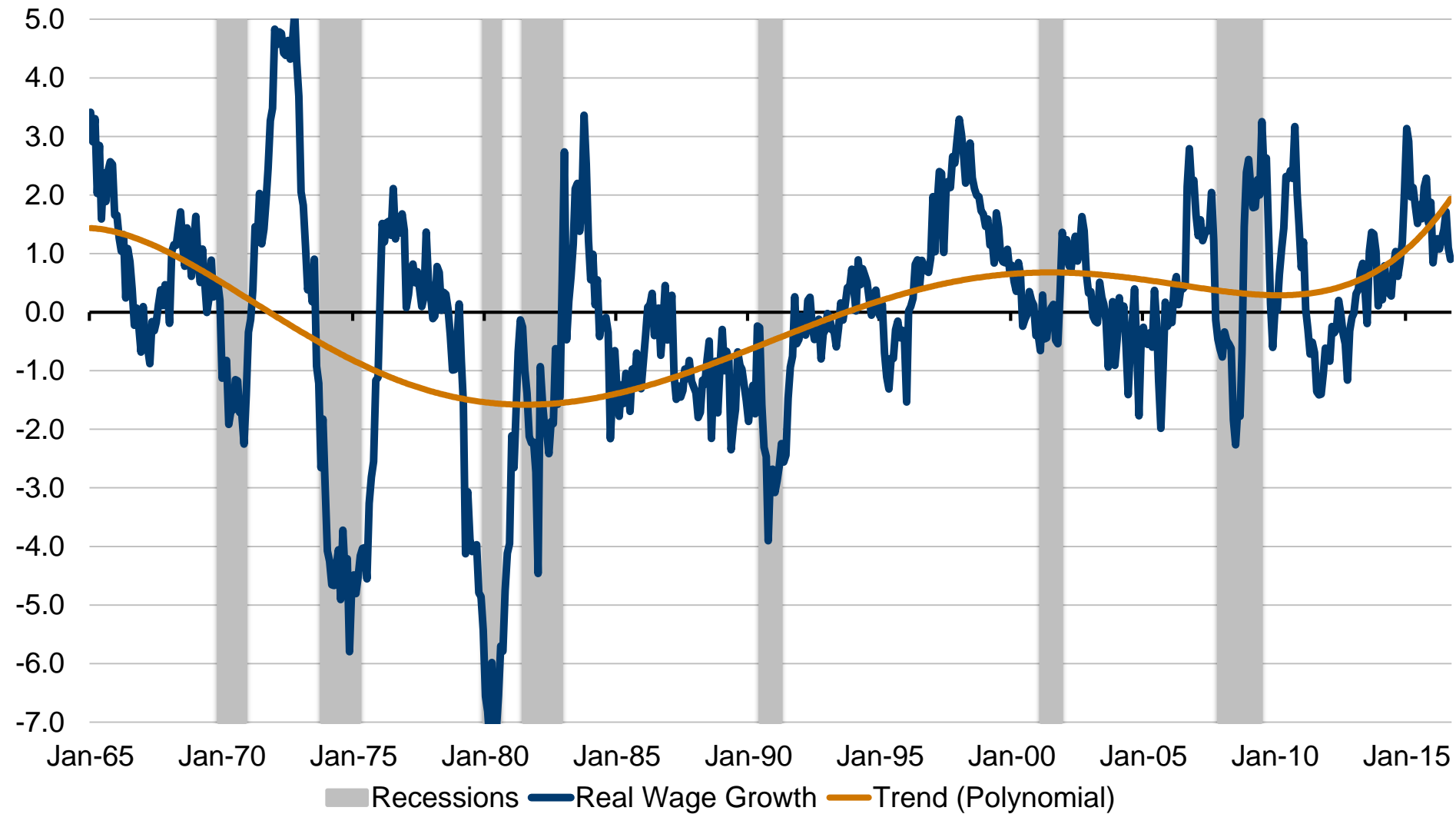


Source: BLS, Fed Board of Governors, September 2016



Wage Growth Trending in the Right Direction

Real Growth in Production and Nonsupervisory Average Weekly Earnings



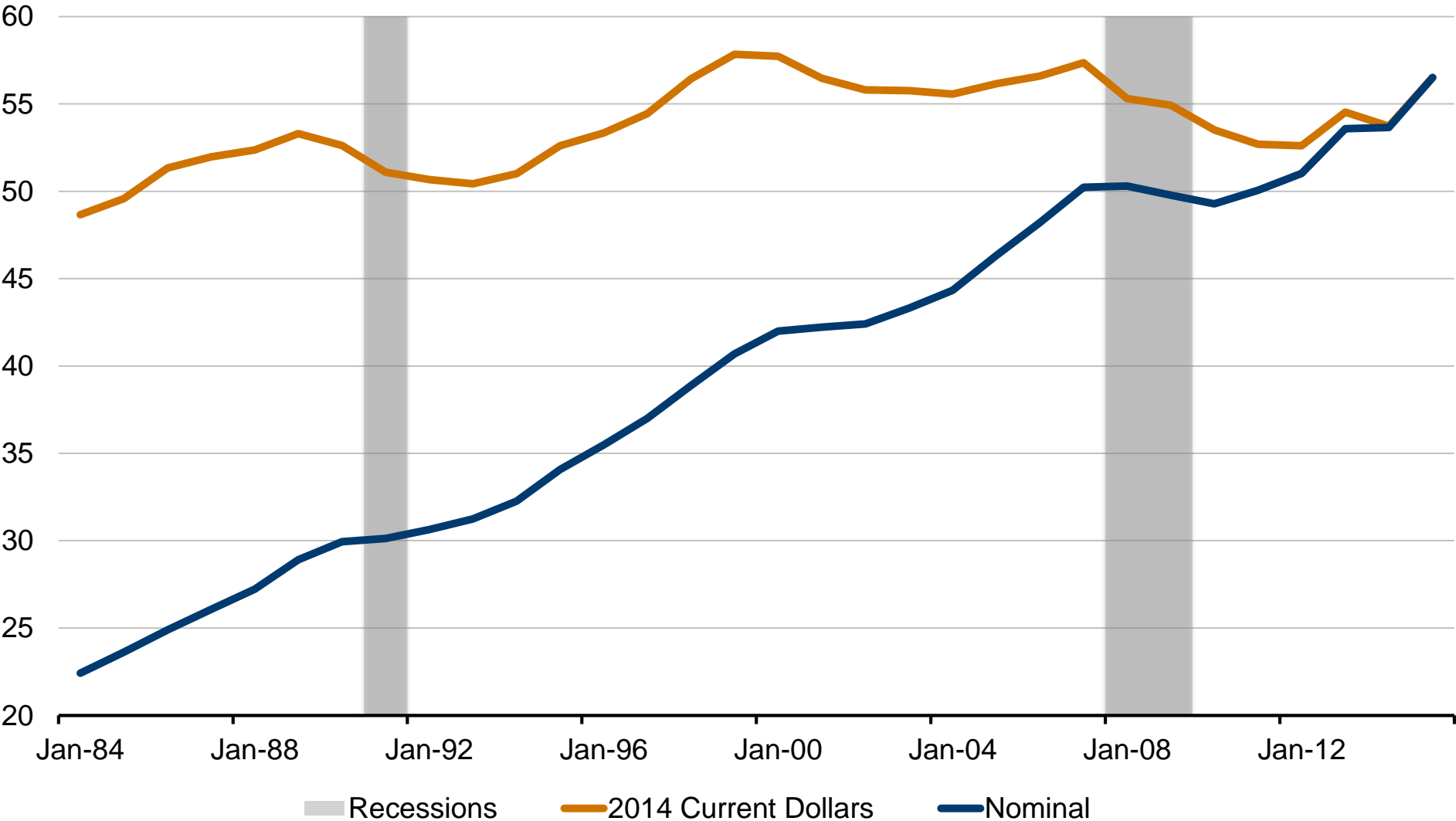
Source: BLS, FRED, September 2016

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Household Income Stagnating for Decades

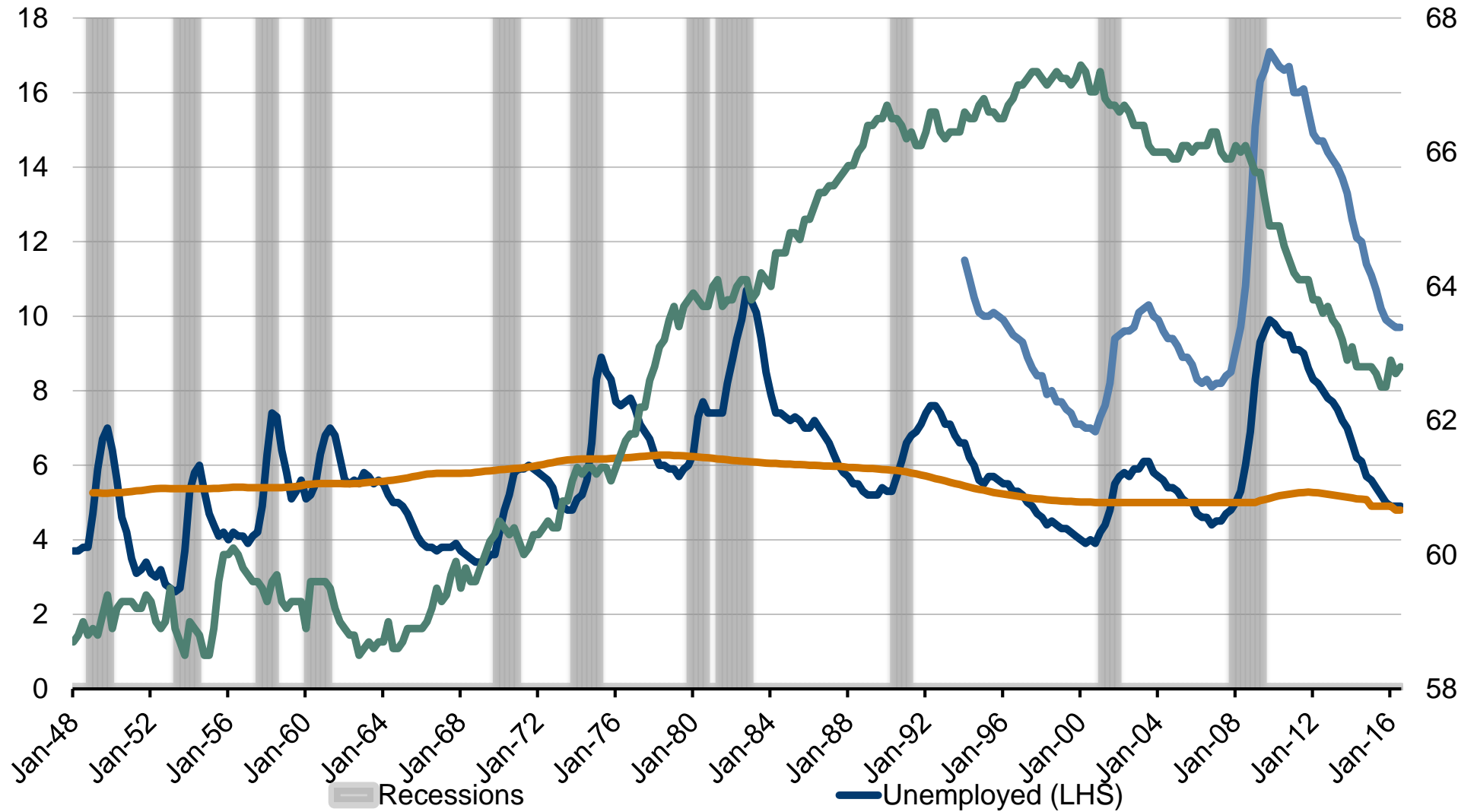
Median Household Income (\$ Thousands, Annual)



Source: BLS, Census, FRED, 2015

Underworked or Aging? Finding the New Normal

Unemployment Rates and Labor Force Participation (% ,SA)

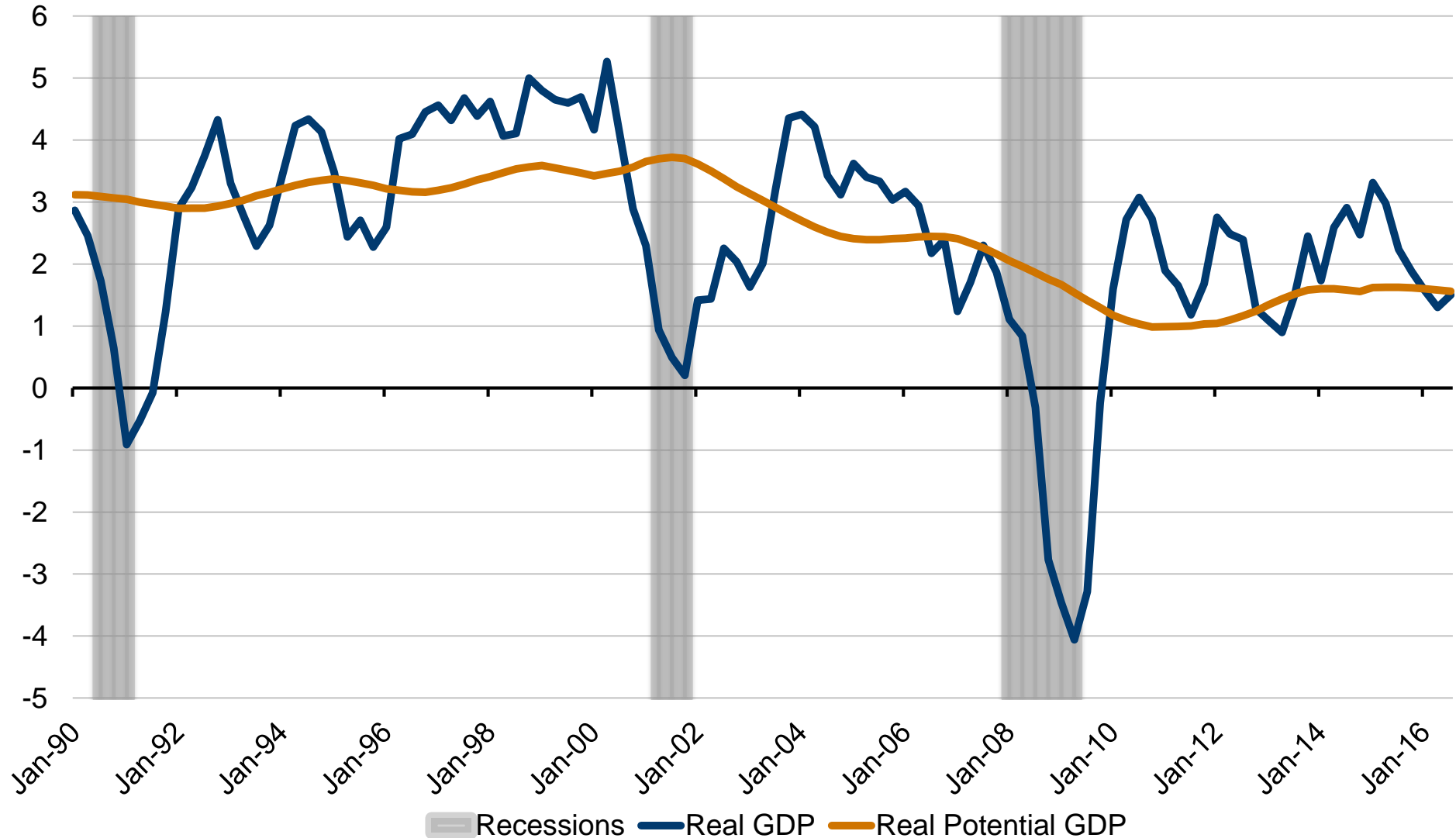


Source: BLS,CBO, FRED, Q3 2016

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Return To Our Fading Potential

Real & Potential GDP Year-Over-Year (SAAR, Chained 2009 \$)

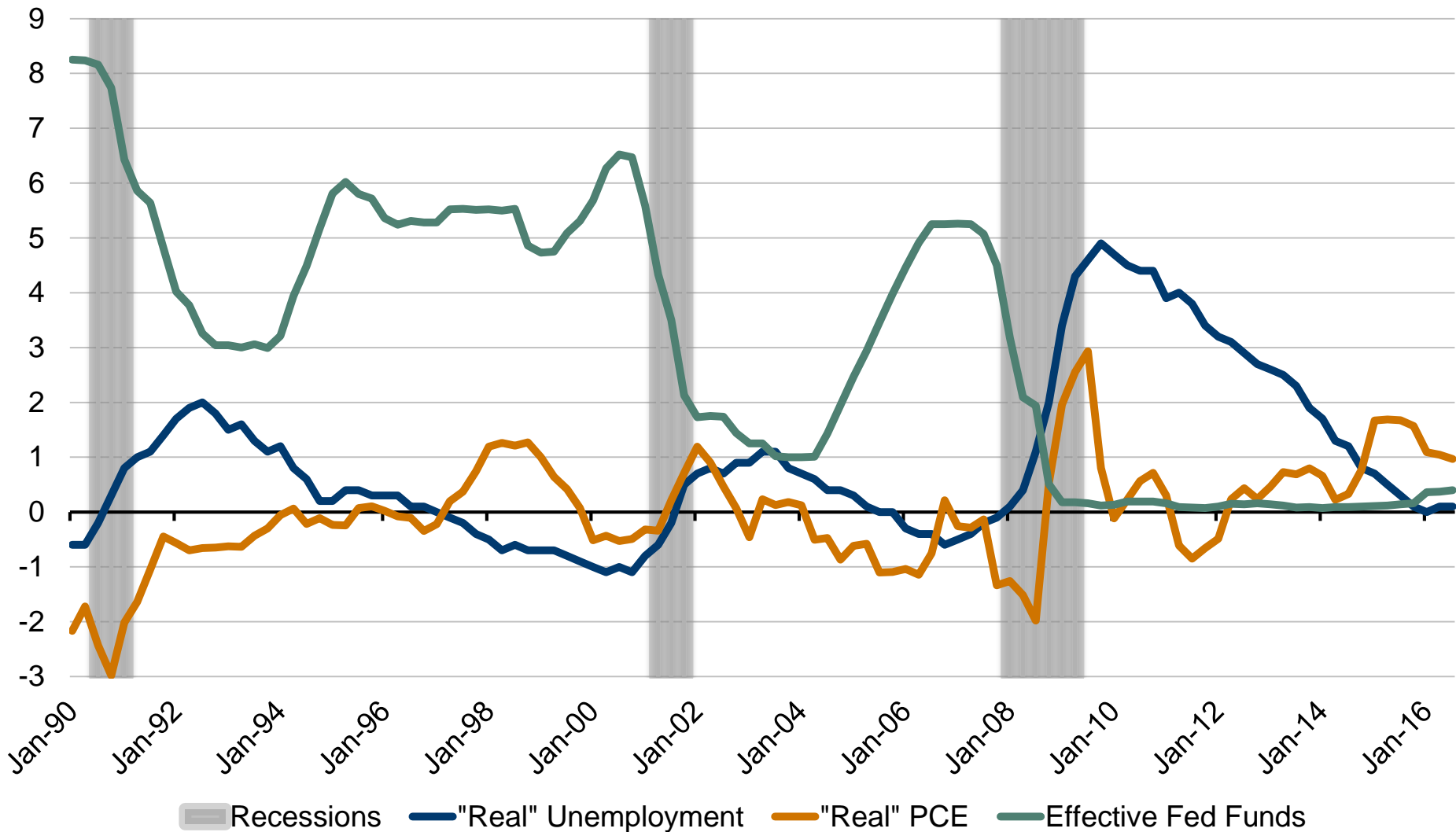


Recessions Real GDP Real Potential GDP

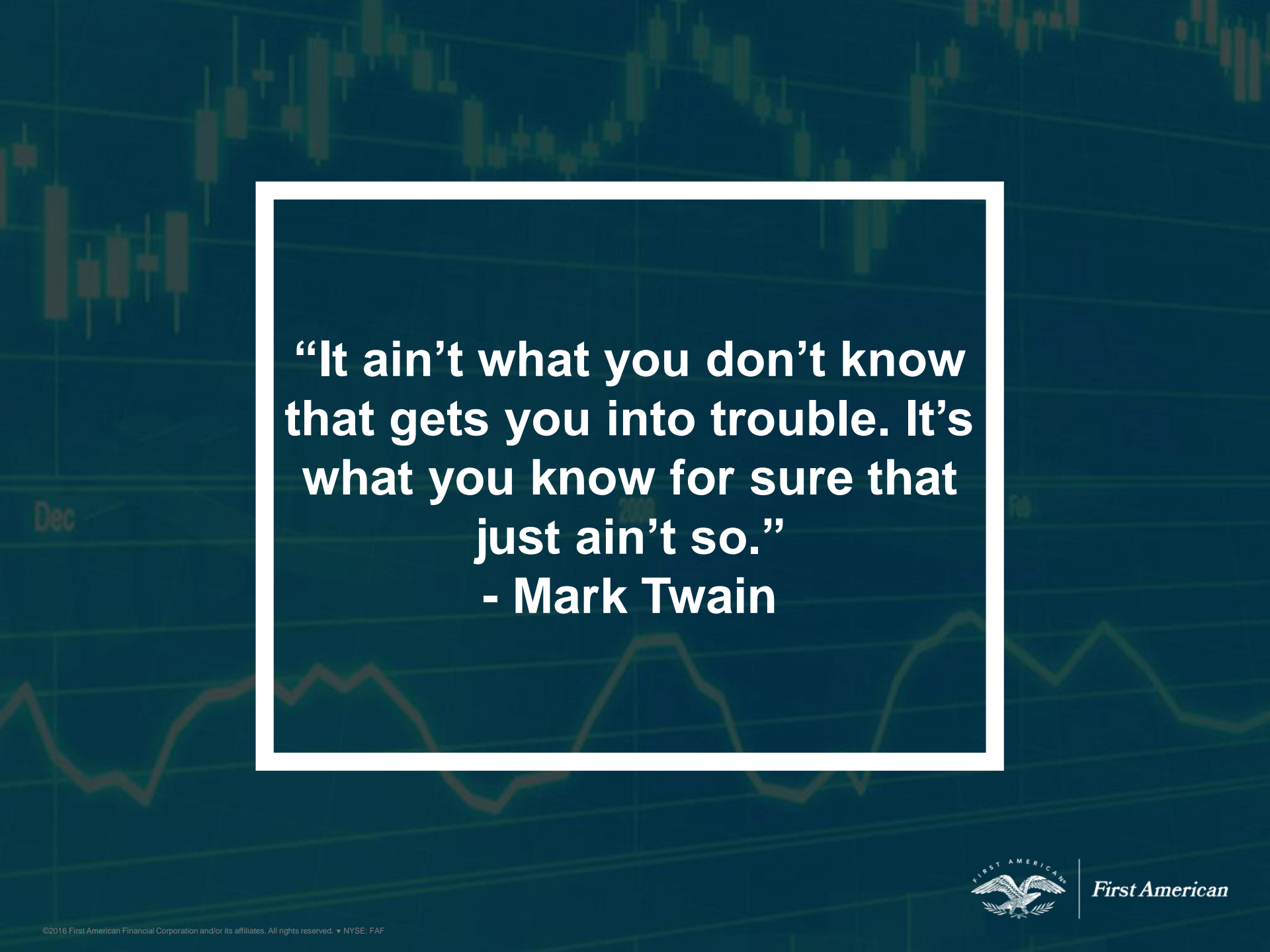
Source: U.S. BEA, CBO, FRED, Q3 2016

Weak Potential Requires Loose Monetary Policy

"Real" Unemployment & Inflation (Adjusted for Fed Targets)



Source: BLS, CBO, BEA, Fed Board of Governors, FRED, Q3 2016

The background of the slide is a dark blue financial chart. It features a candlestick chart in the upper half and a line chart in the lower half. The candlestick chart has green and red bars, while the line chart is a jagged, fluctuating line. The entire chart is overlaid with a grid of light blue lines.

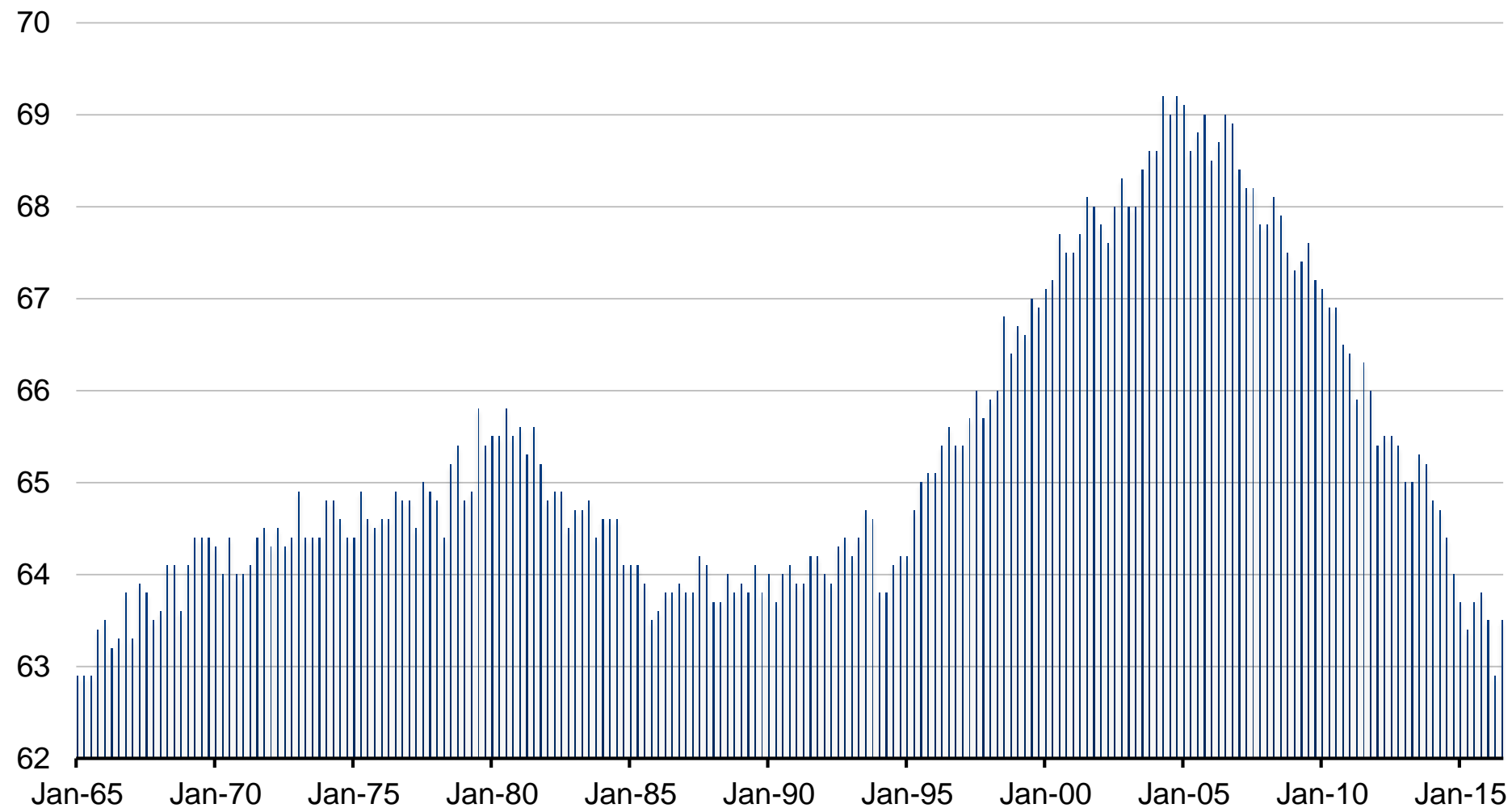
**“It ain’t what you don’t know
that gets you into trouble. It’s
what you know for sure that
just ain’t so.”
- Mark Twain**



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Is Something Restricting the American Dream?

Homeownership Rate (%)

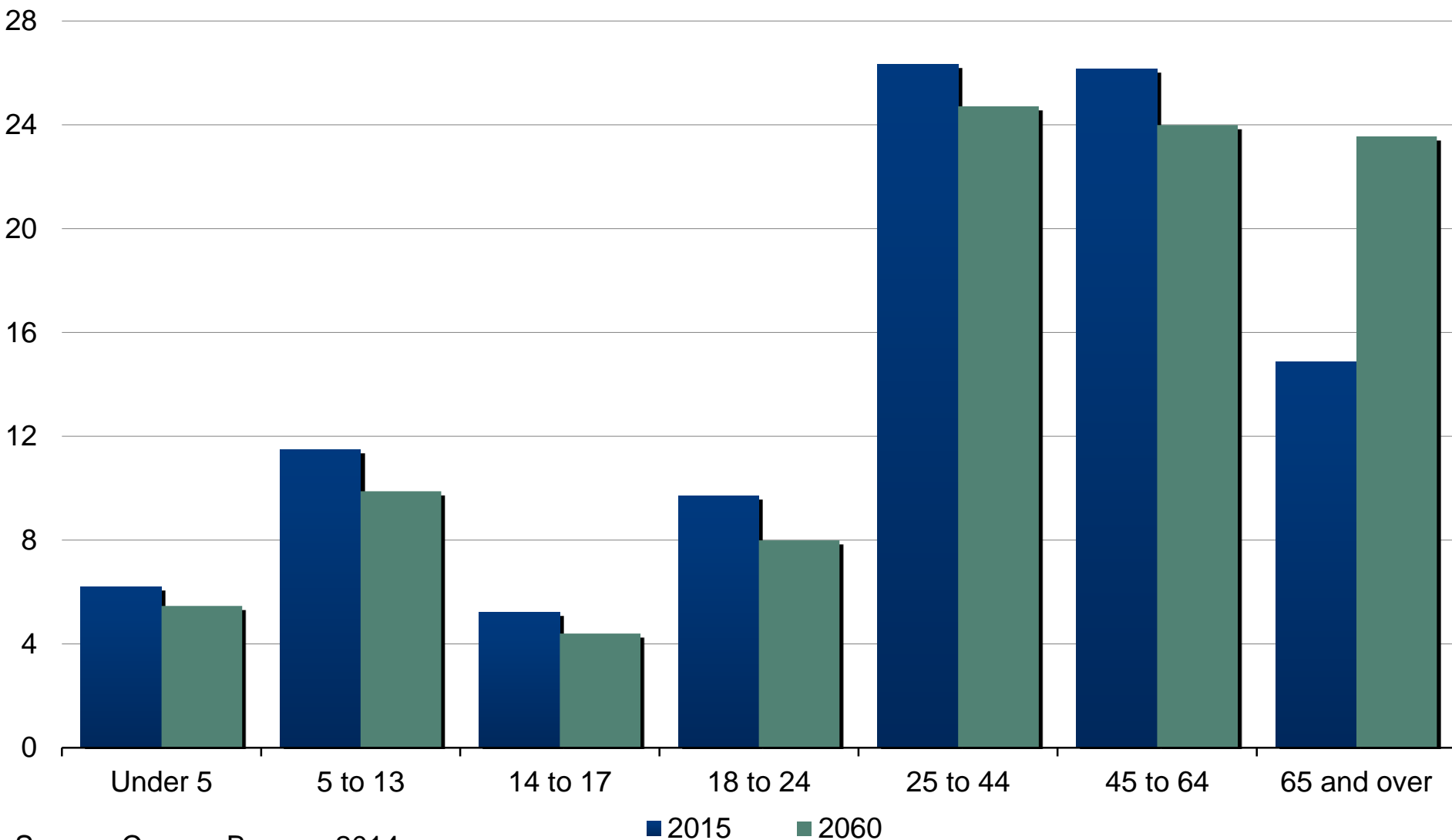


Source: US Census Bureau, Q3 2016



The Aging of America

Percent Share of Total U.S. Population

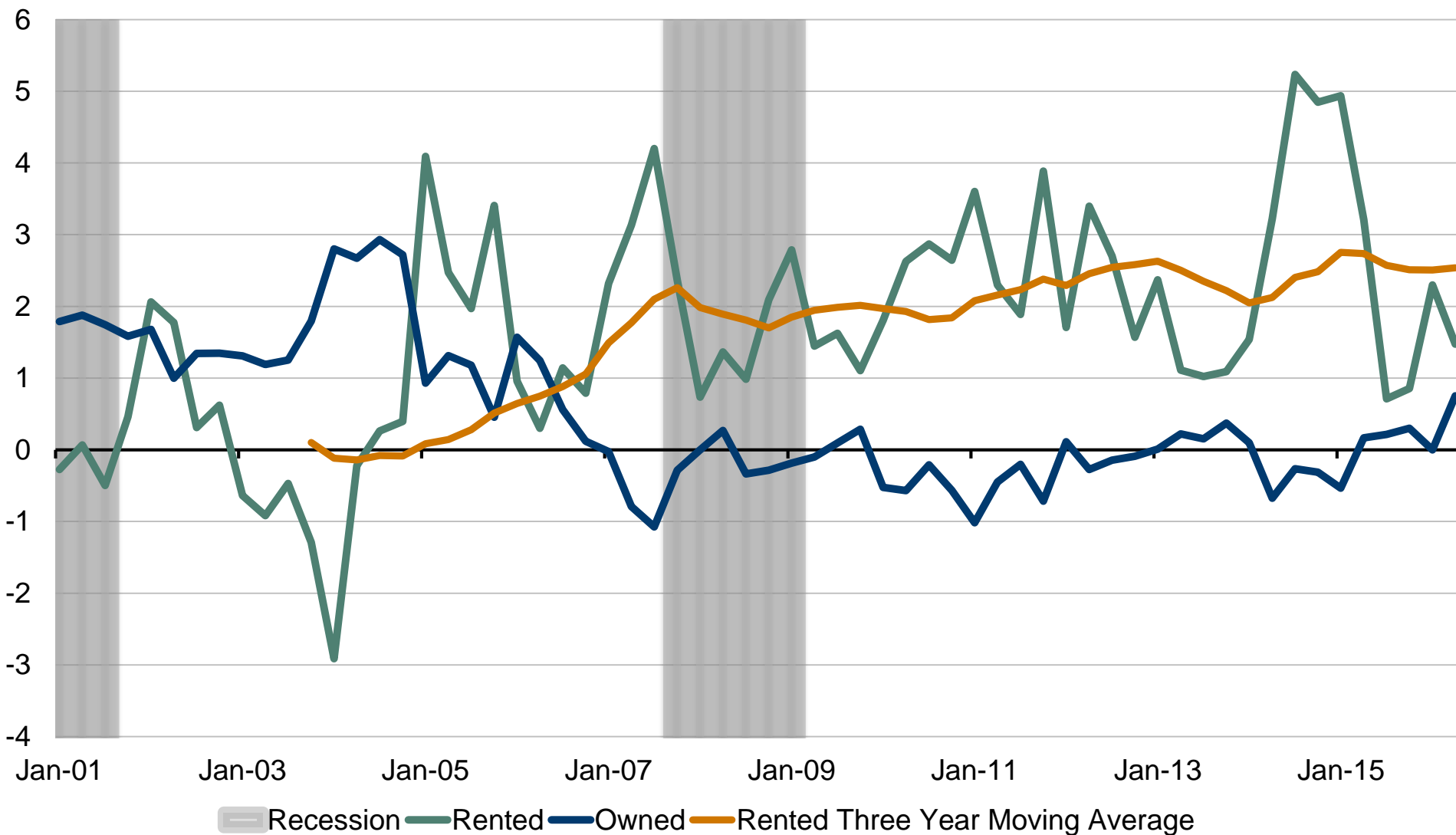


Source: Census Bureau, 2014



Demographics Drives Rental Demand

Household Formation by Occupancy Type (Year-Over-Year Inventory Growth, %)

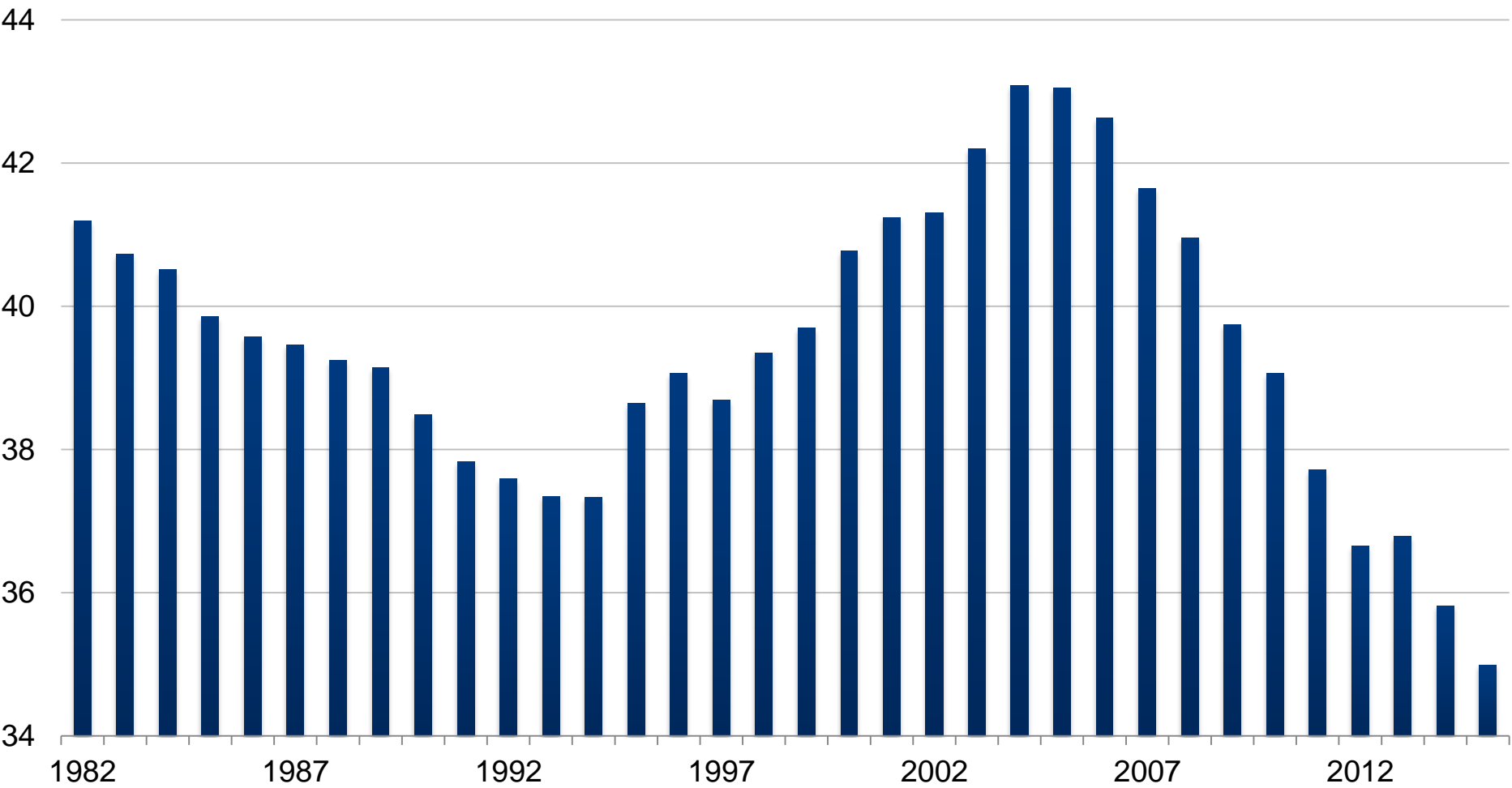


Source: Census Bureau, FRED Q3 2016

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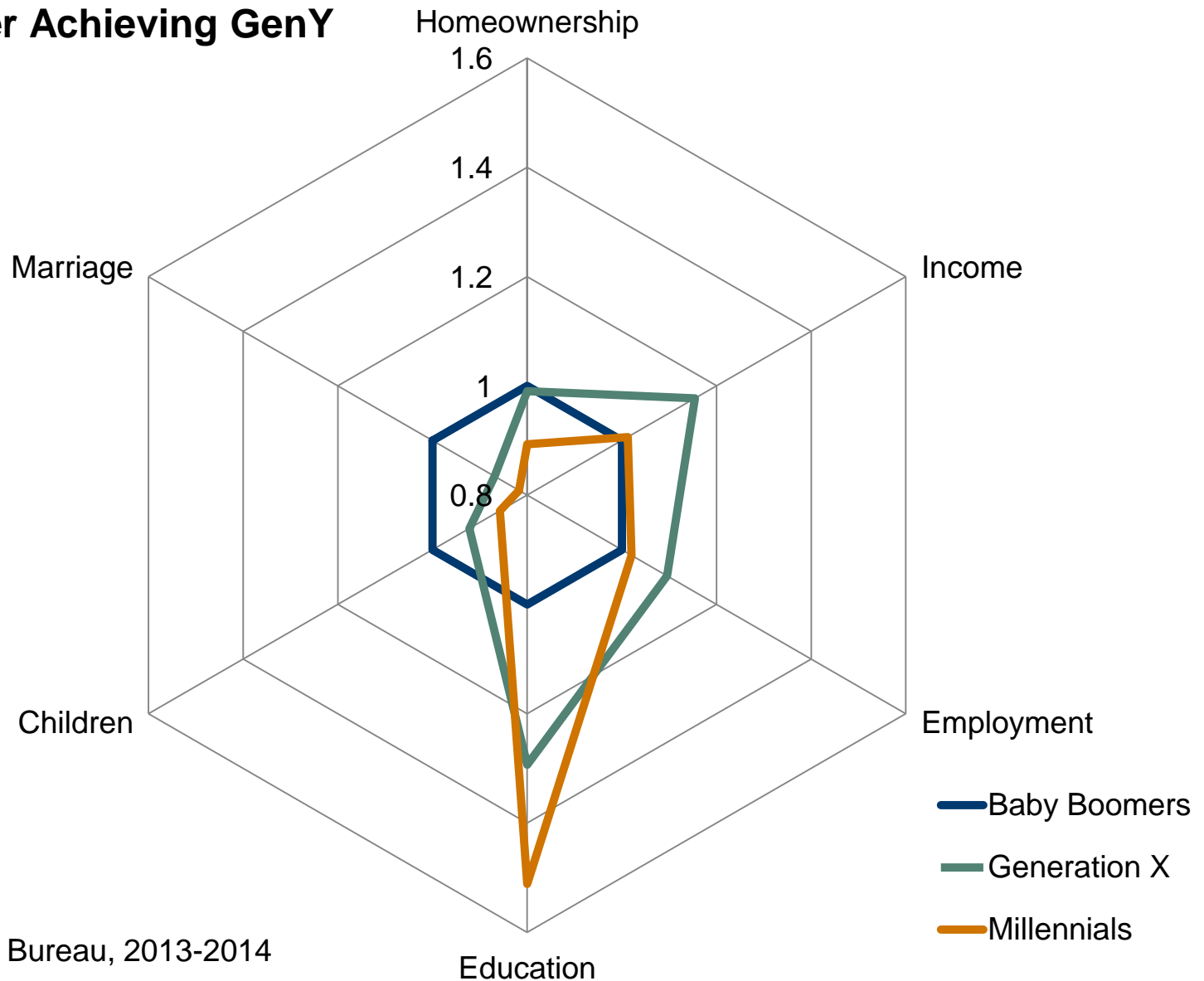
Renting Millennials

Homeownership Rate for Households Under 35



Source: Census Bureau CPS/HVS, 2015

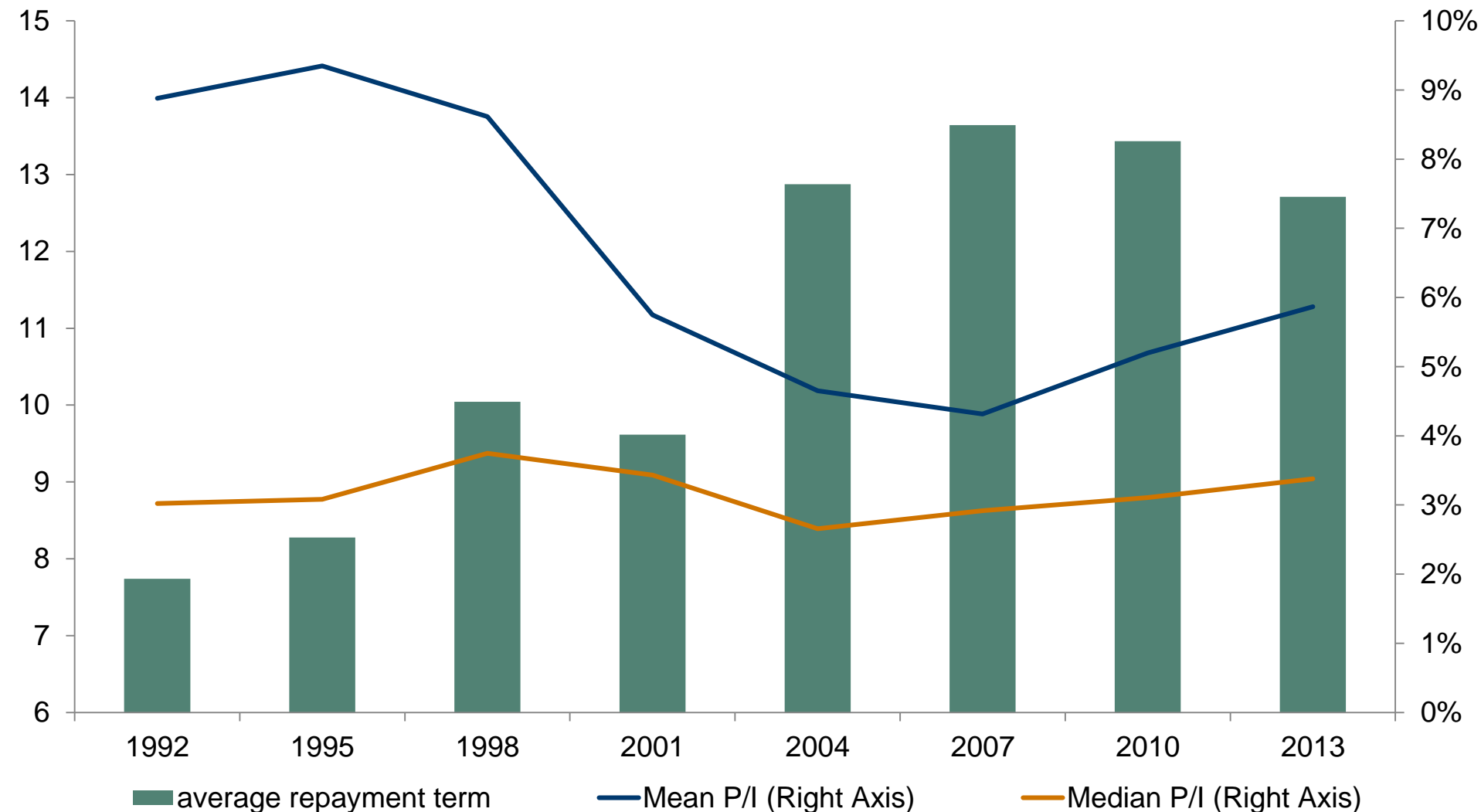
Over or Under Achieving GenY



Source: Census Bureau, 2013-2014

Borrow More and Pay More?

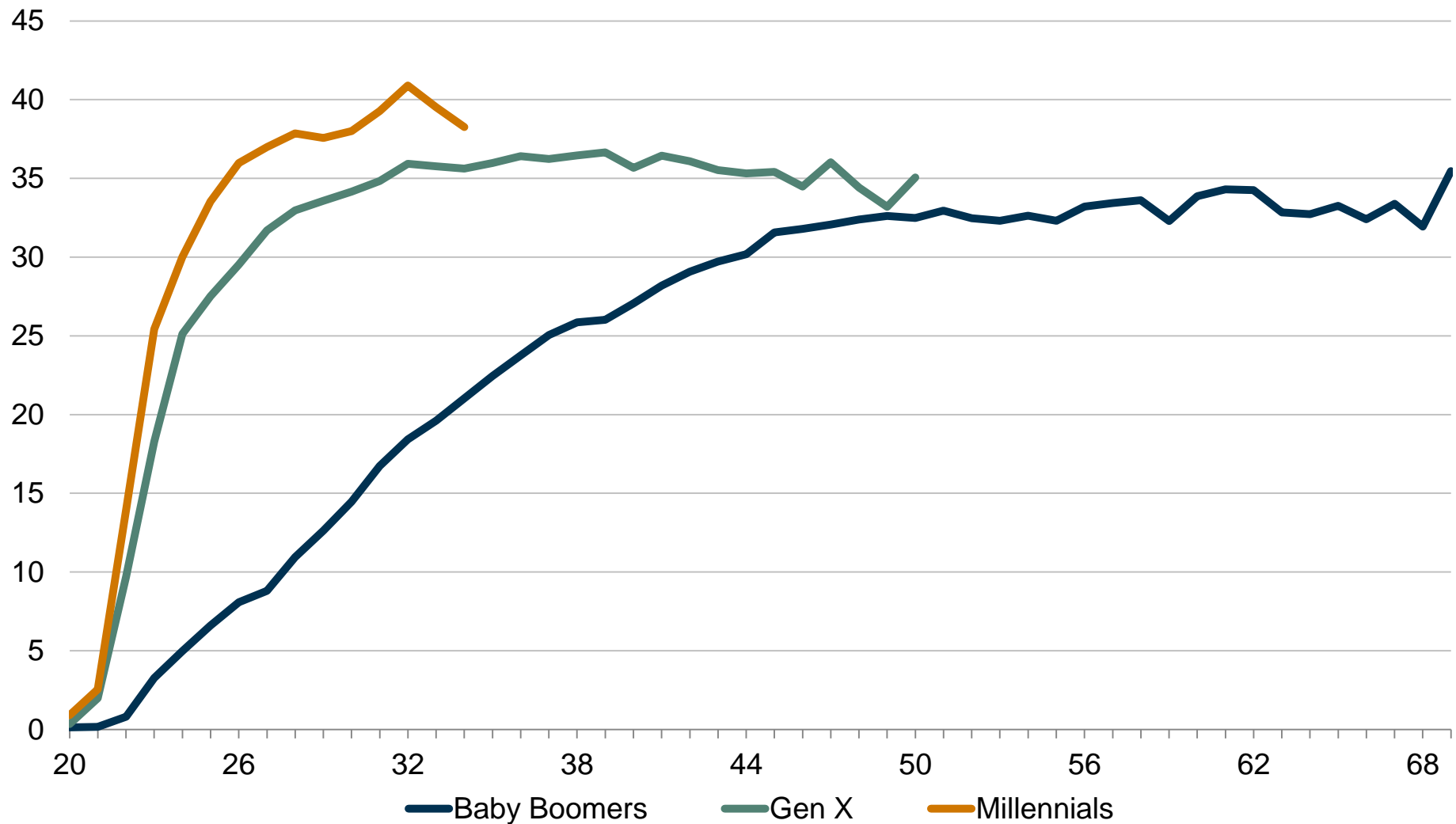
Average Loan Term (Years) and Payment-to-Income Ratio



Source: Federal Reserve Board of Governors SCF, 2013

Education Attainment

Percent Share of Population with Bachelors Degree or Higher



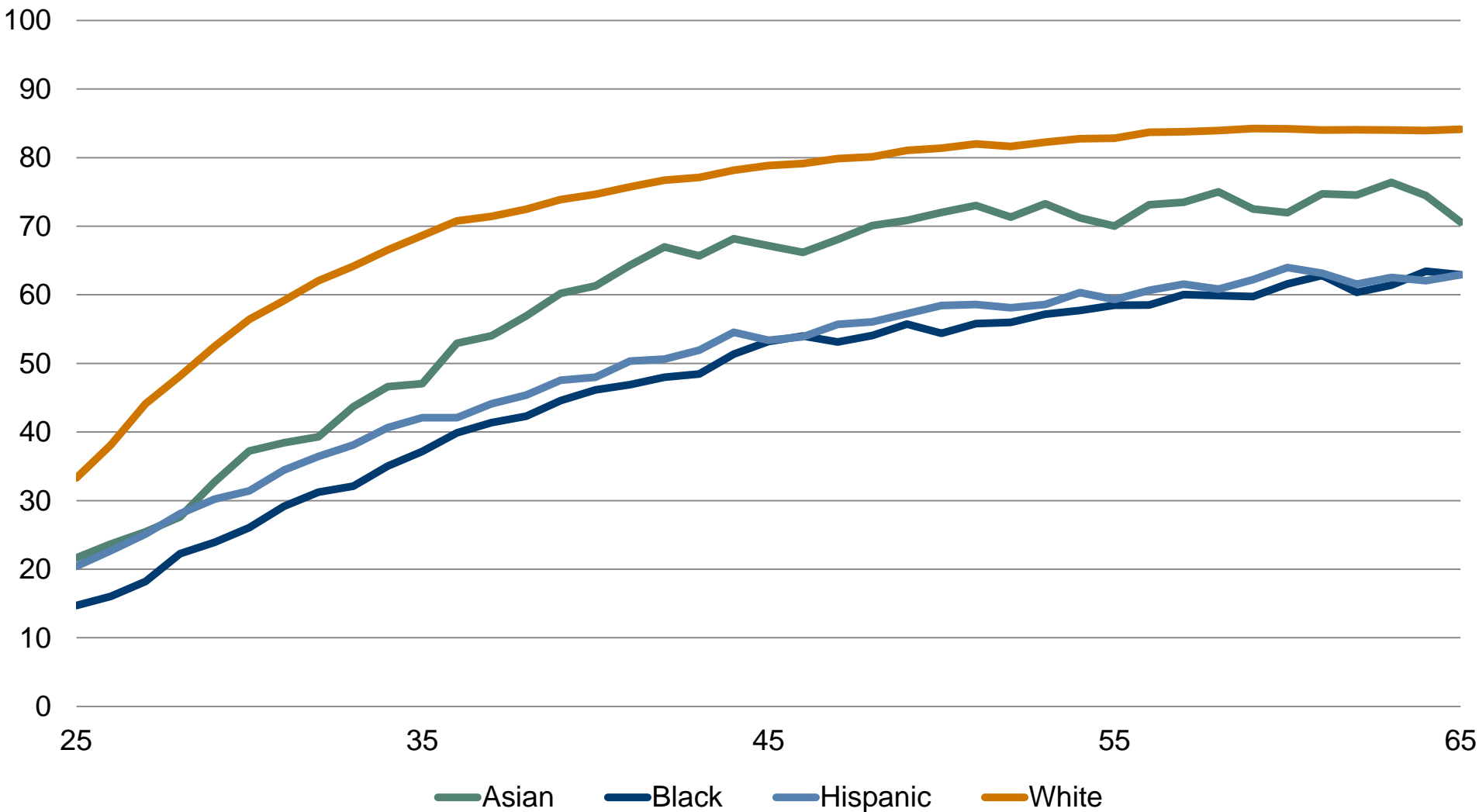
Source: ACS IPUMS, 2015

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With Age Comes Wisdom and Homeownership

Percent of Homeowners



Source: IPUMS CPS,

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The background of the slide is a dark blue gradient with a faint, semi-transparent financial chart. The chart features a candlestick pattern at the top and a line graph at the bottom, both in a lighter blue/green color. The candlesticks show price fluctuations, while the line graph shows a trend over time. The text is centered within a white rectangular frame.

Mind The Gap

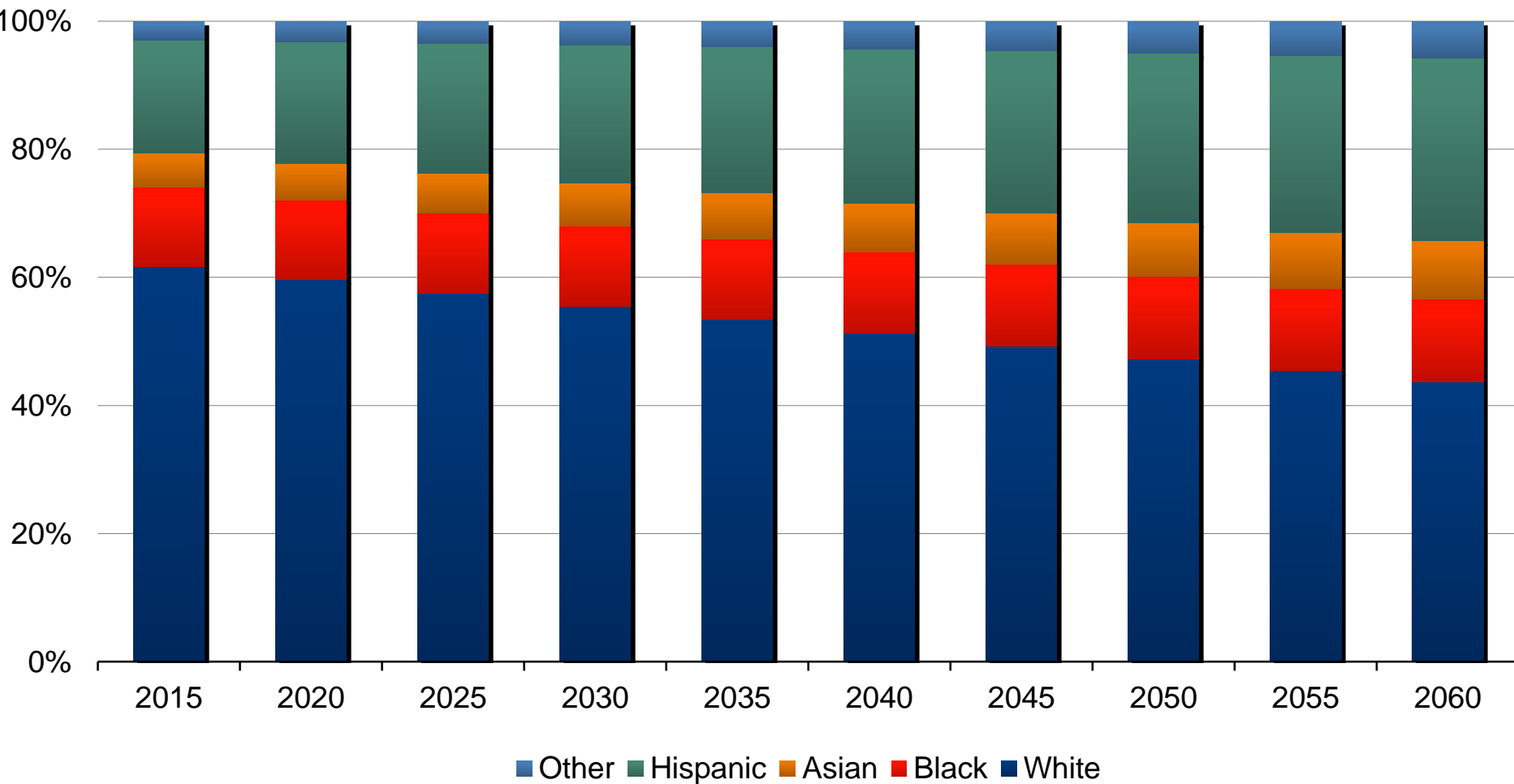
Measuring the Differences in
Homeownership in a
Diversifying Economy



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The Collective Minority Becomes The Majority

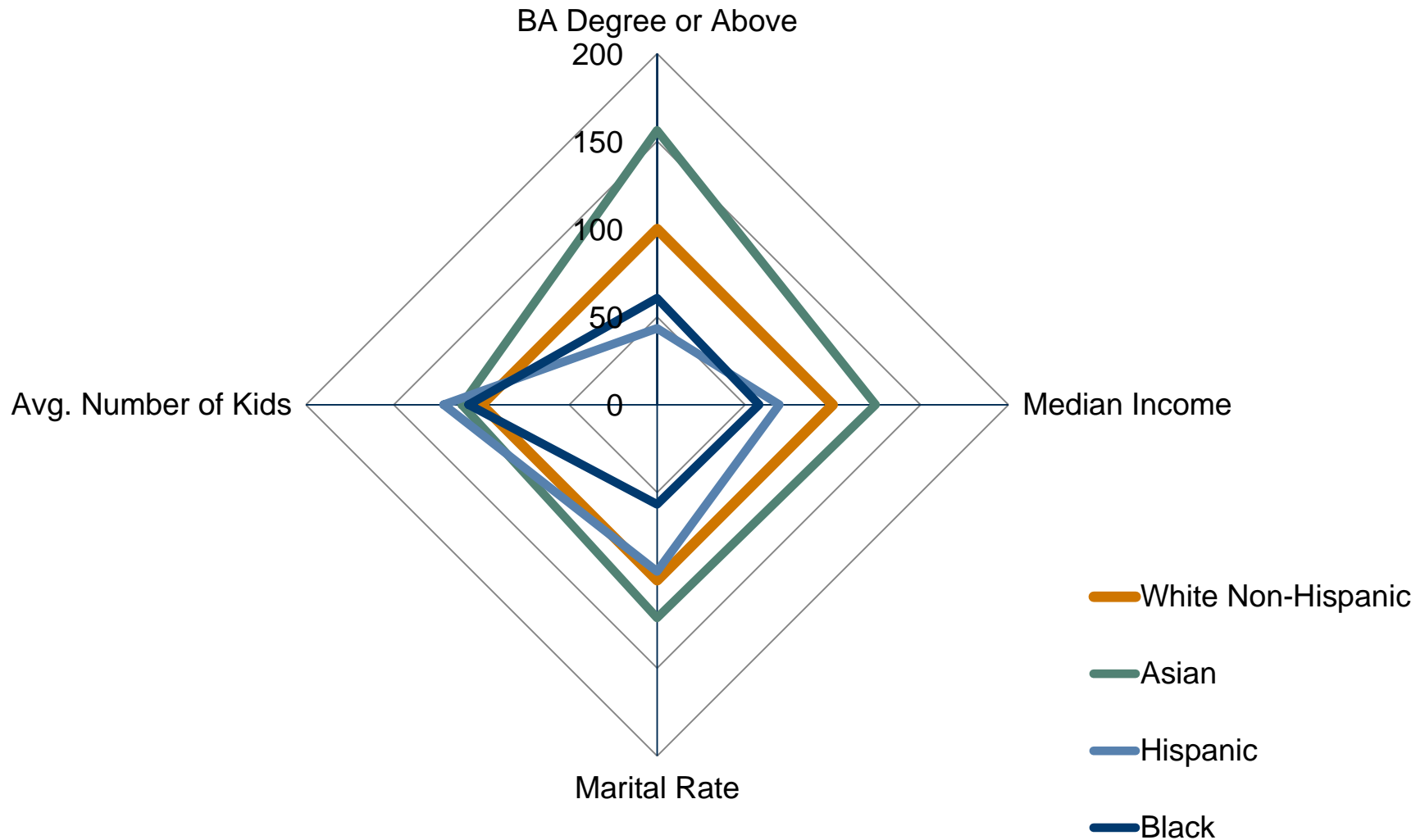
Percent Share of Total U.S. Population



Source: Census Bureau, 2014

What Matters Most To Achieving the American Dream

Attributes of Tenure Choice by Ethnicity (Non-Hispanic White, 2015=100)



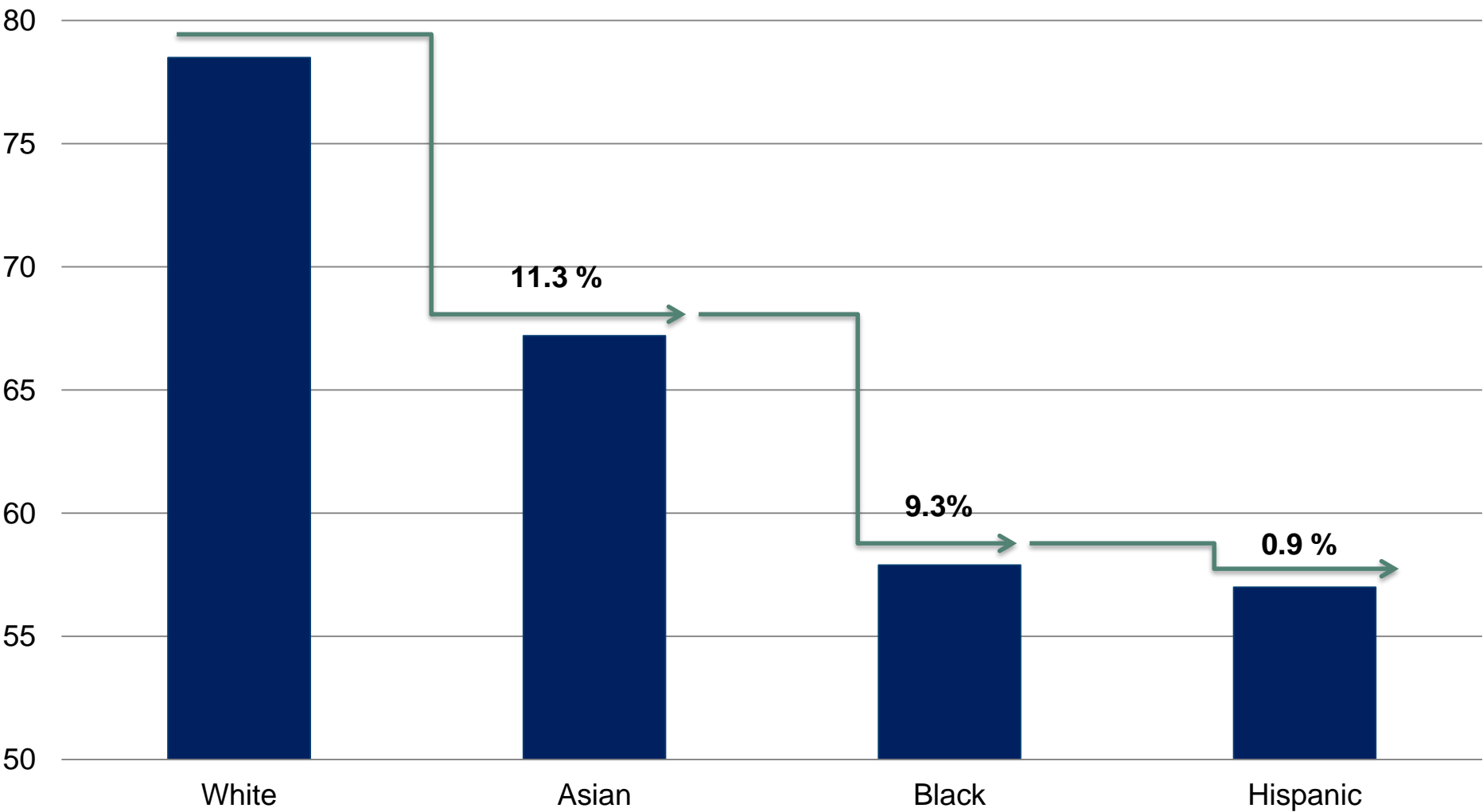
Source: IPUMS CPS, 2015

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Ceteris Paribus Homeownership Rates

Attribute Constant Ethnicity Homeownership Rates, %, 2015

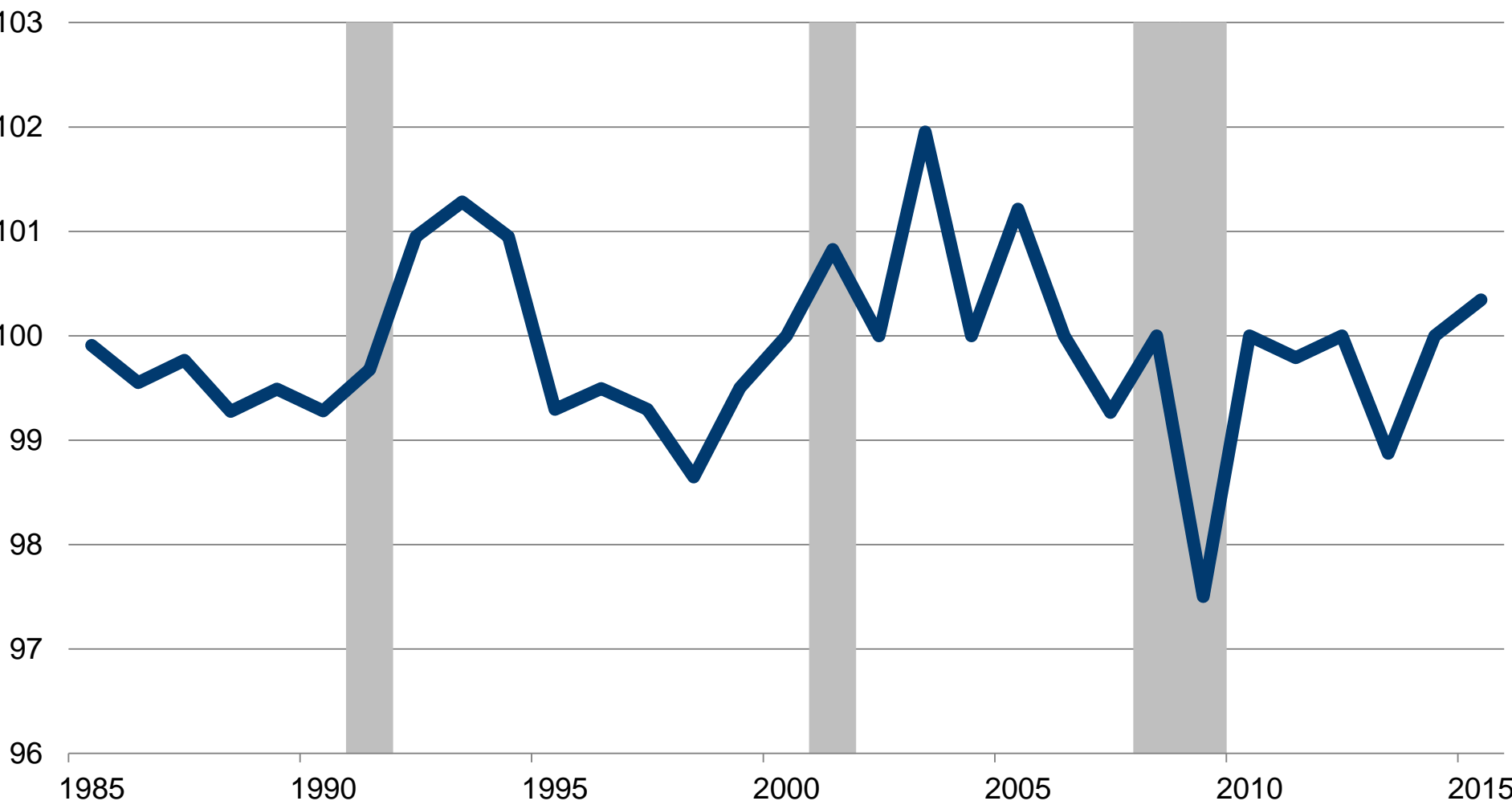



IPUMS CPS, 2015

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The Economics of Homeownership

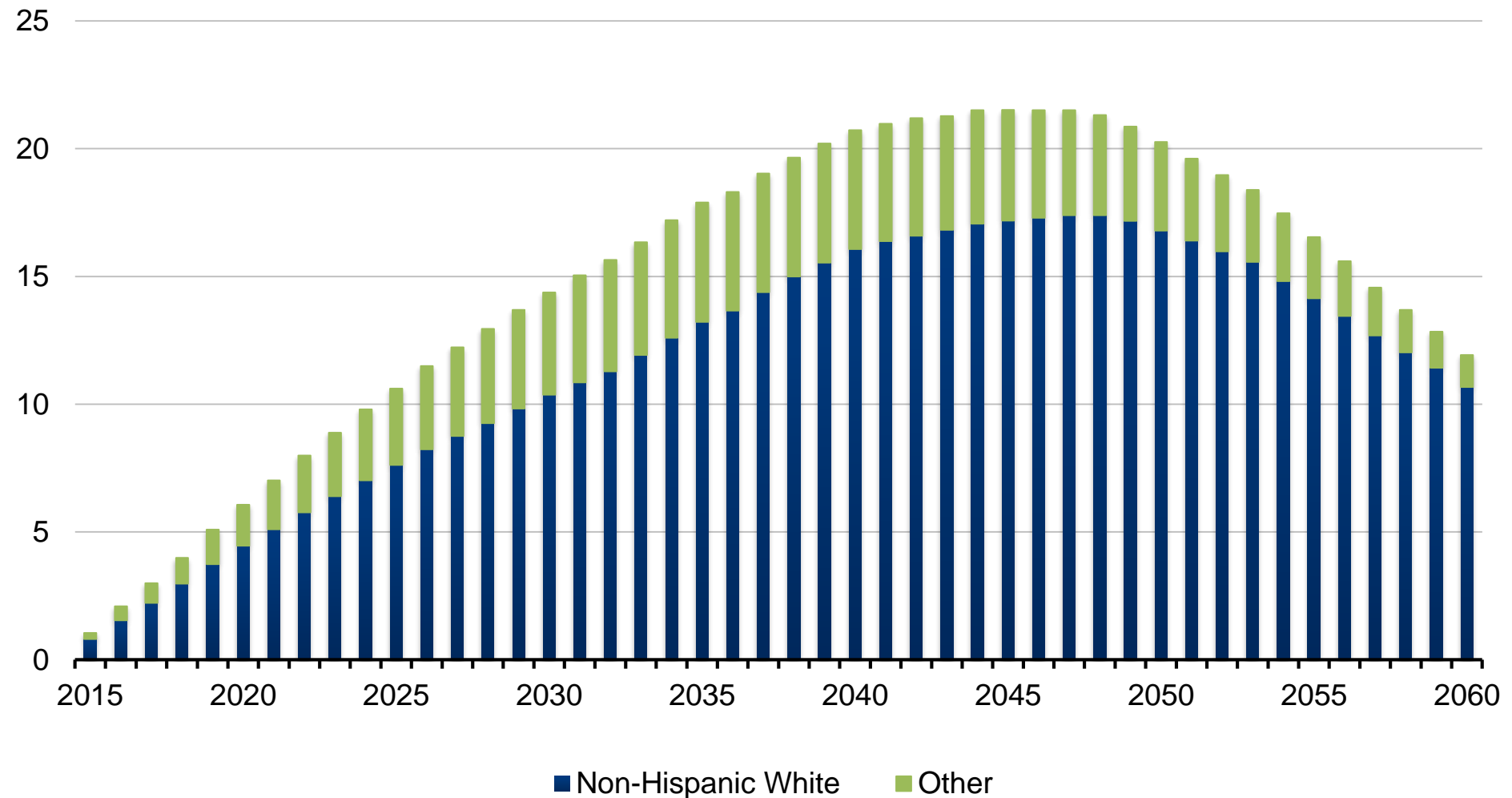
Ceteris Paribus Homeownership Index (2000= 100)



Source: IPUMS CPS, 2015
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The Future of Millennial Housing Demand

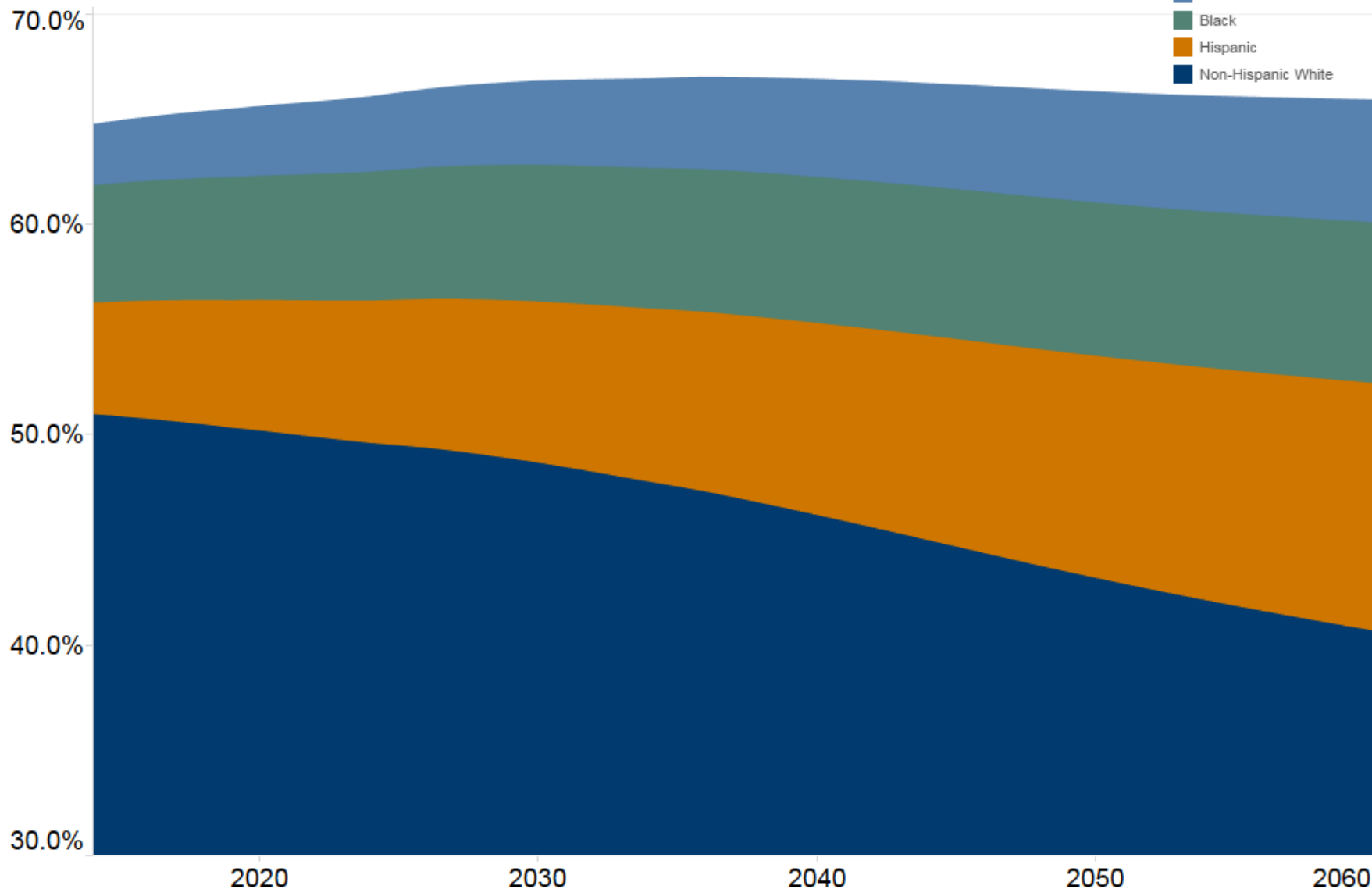
Cumulative Net New Owner-Occupied Households (17-35 Yrs. Old in 2015, Millions)



Source: Census Bureau, FirstAm Calculations, December 2015

Share of Homeownership by Race and Ethnicity

% Homeowners



Forecasting Housing's Future

**Sunny with a few cloudy
periods today and Thursday,
which will be followed by
Friday...**

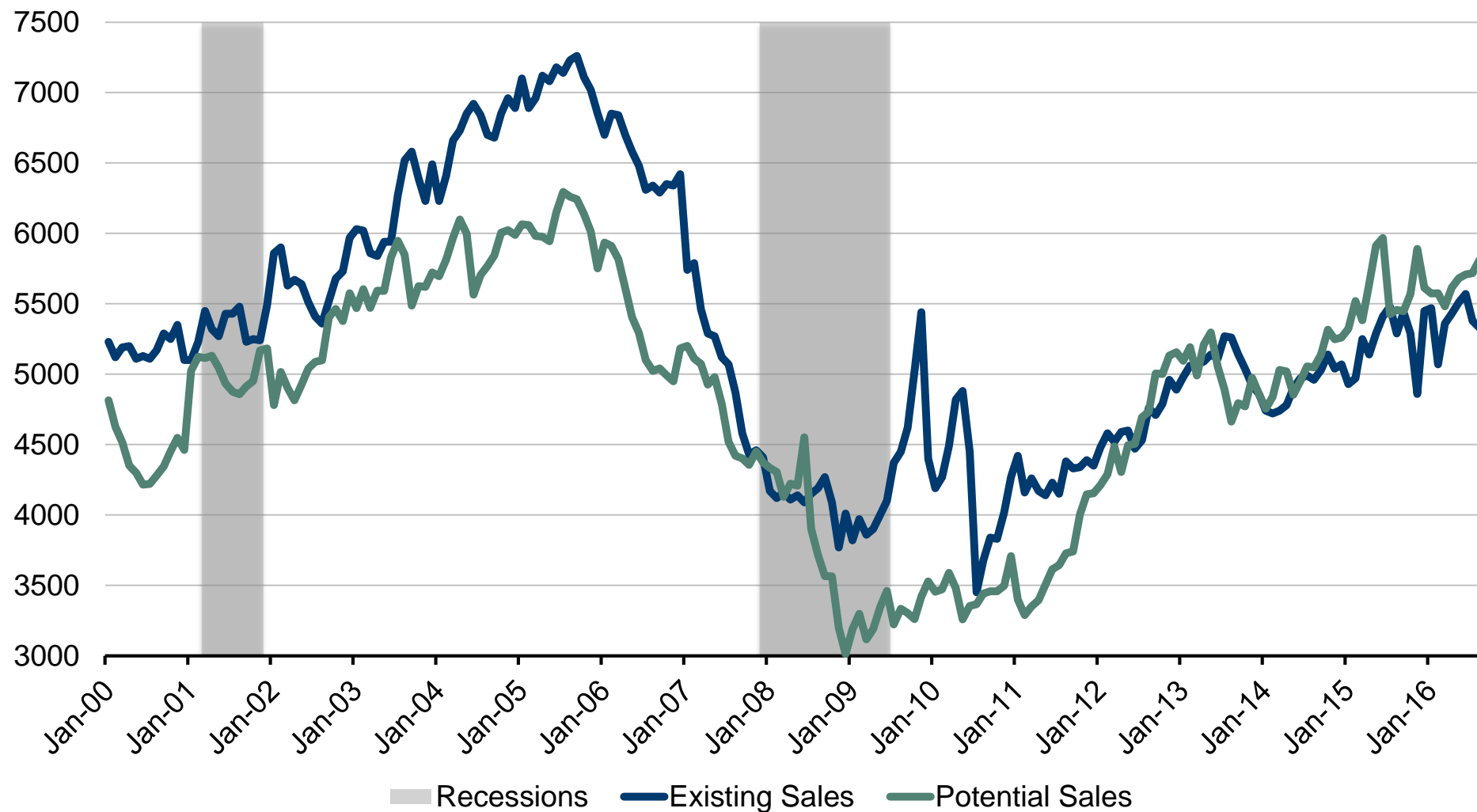
-The Province (Vancouver, B.C.) 6/21/78



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Market Activity Under-Performing Potential

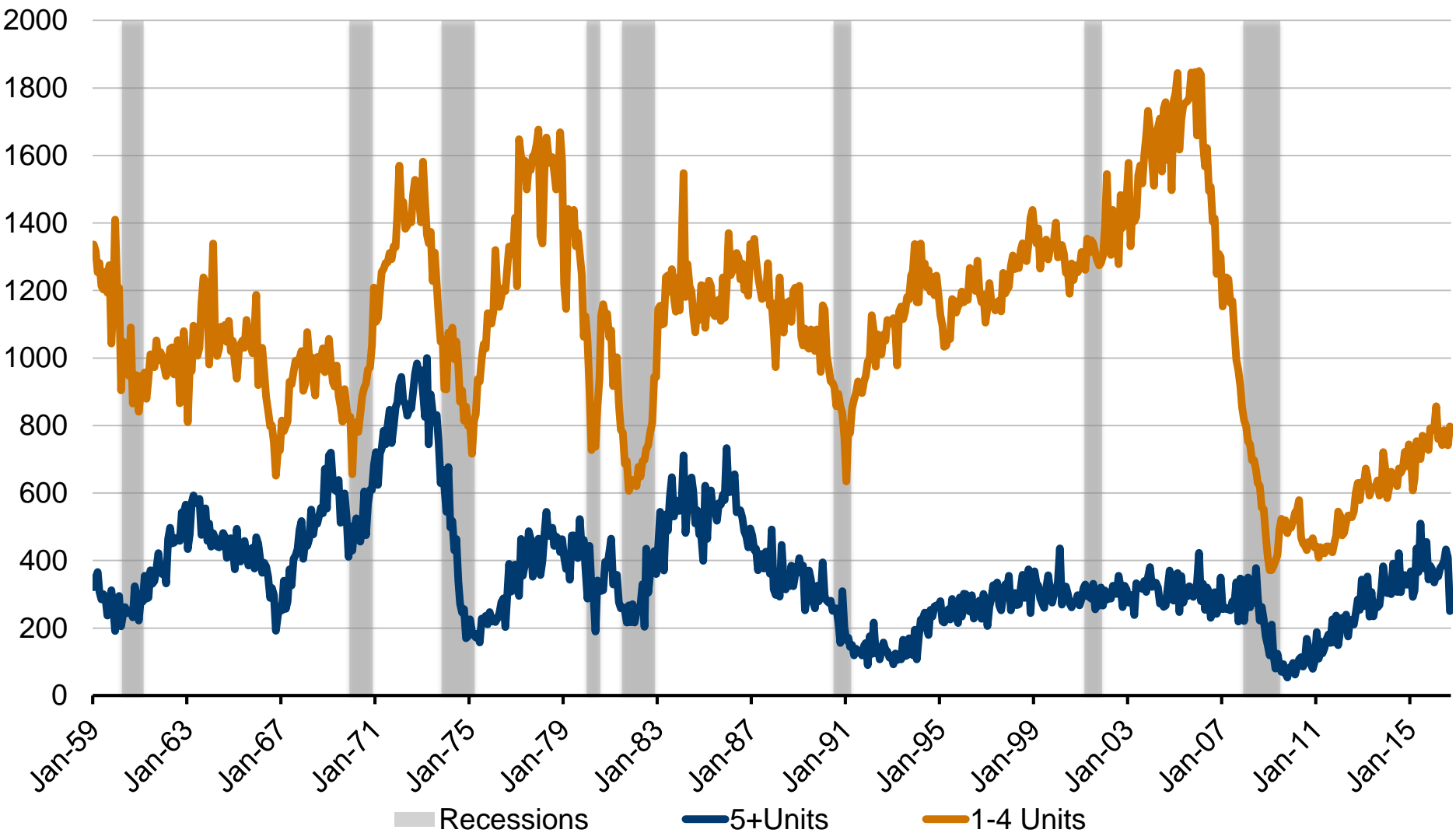
Existing and Potential Home Sales ('000s, SAAR)



Source: NAR, FRB St. Louis, First American Calculations, September 2016

Demographics Drives Building Potential

Single and Multifamily Housing Starts ('000s,Units)

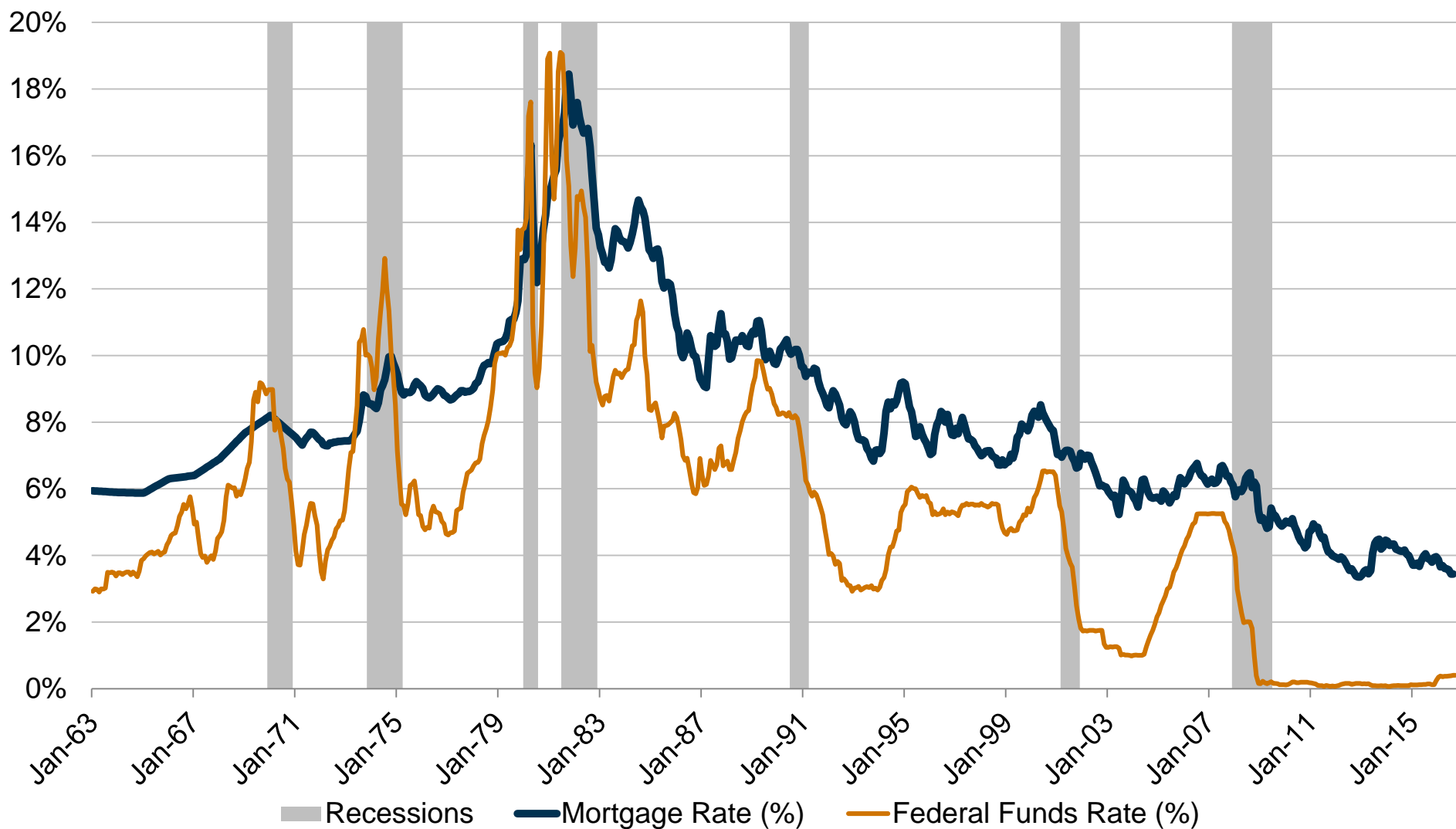


Source: US Census Bureau, FRED, Sept. 2016

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Housing's Quarter-Century Tailwind

30-Year Fixed Rate, Effective Federal Funds Rate, % NSA

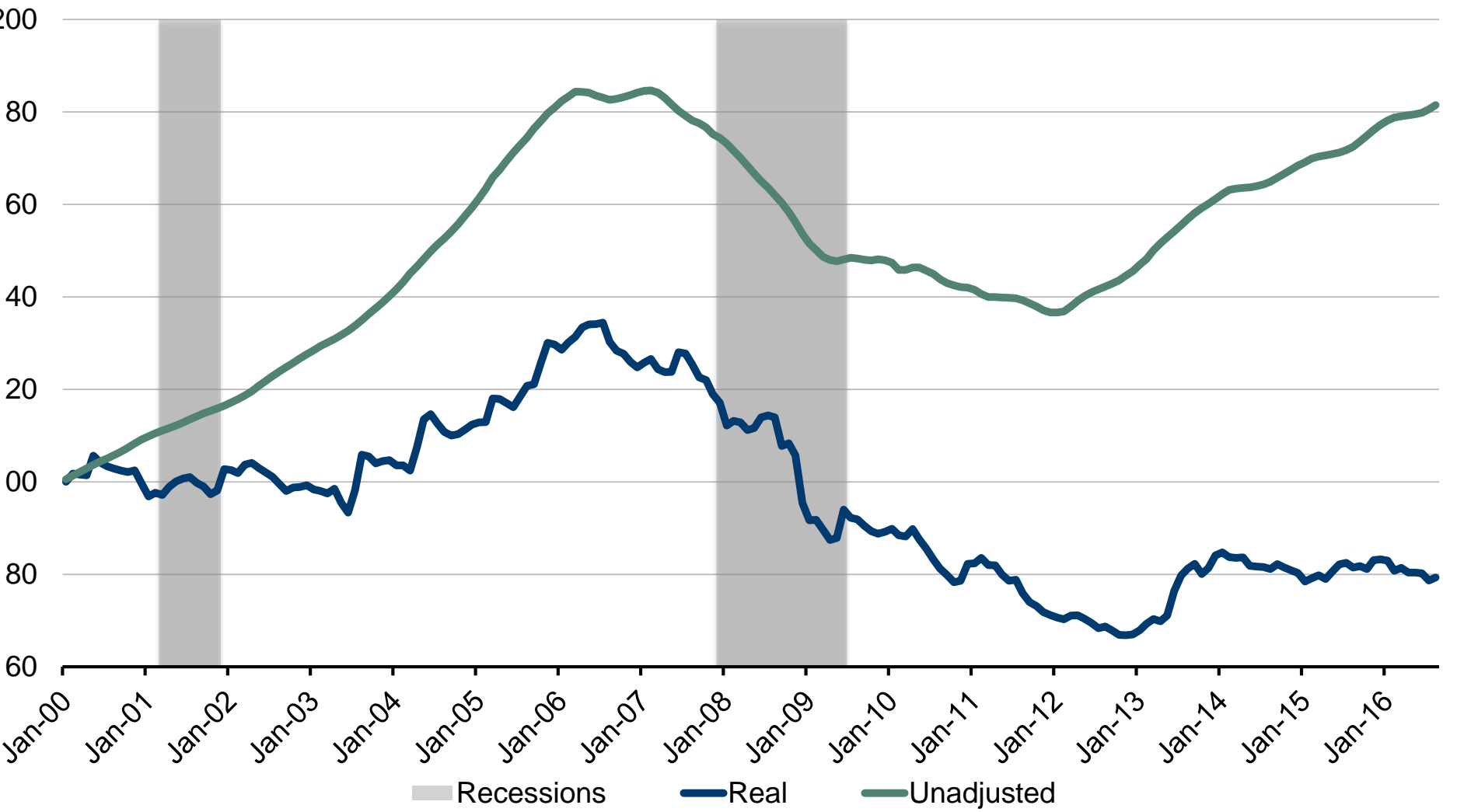


Source: Freddie Mac, FRED, Sept. 2016

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Real Prices Remain Well Below Historic Levels

House Prices (SA, Jan. 2000 = 100)

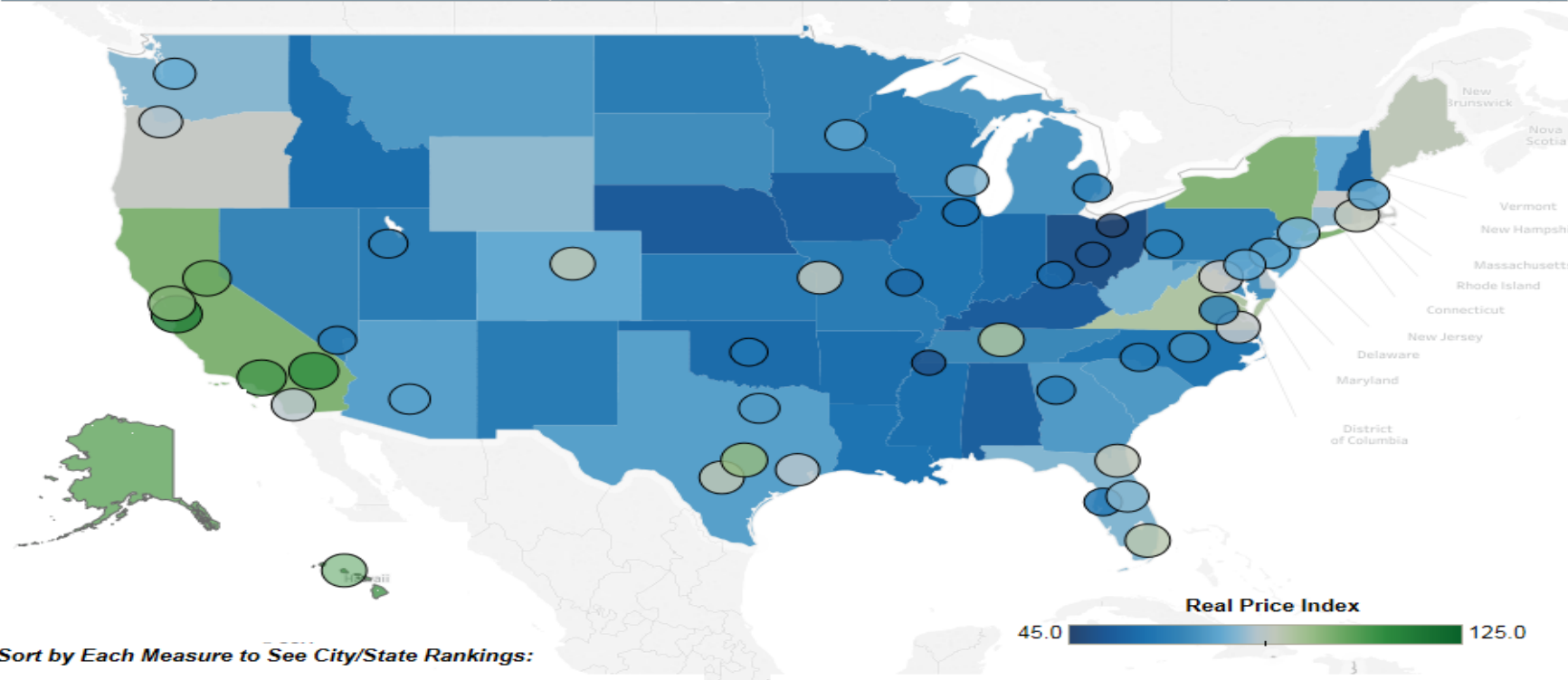


Source: Standard & Poors, First American, August 2016

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Real Prices Remain Low In Most Markets

	Real Price Index	Monthly Change	Quarterly Change	Yearly Change
August 2016	79	0.8%	-1.4%	-2.6%



State	State Index	Monthly Change	Quarterly Change	Yearly Change
MI	71.95	1.4%	1.6%	5.9%
WY	80.22	-0.9%	-4.8%	4.8%
ME	87.34	1.9%	2.8%	3.1%
VT	77.44	1.5%	0.1%	2.5%
CO	76.29	0.6%	-1.3%	1.8%

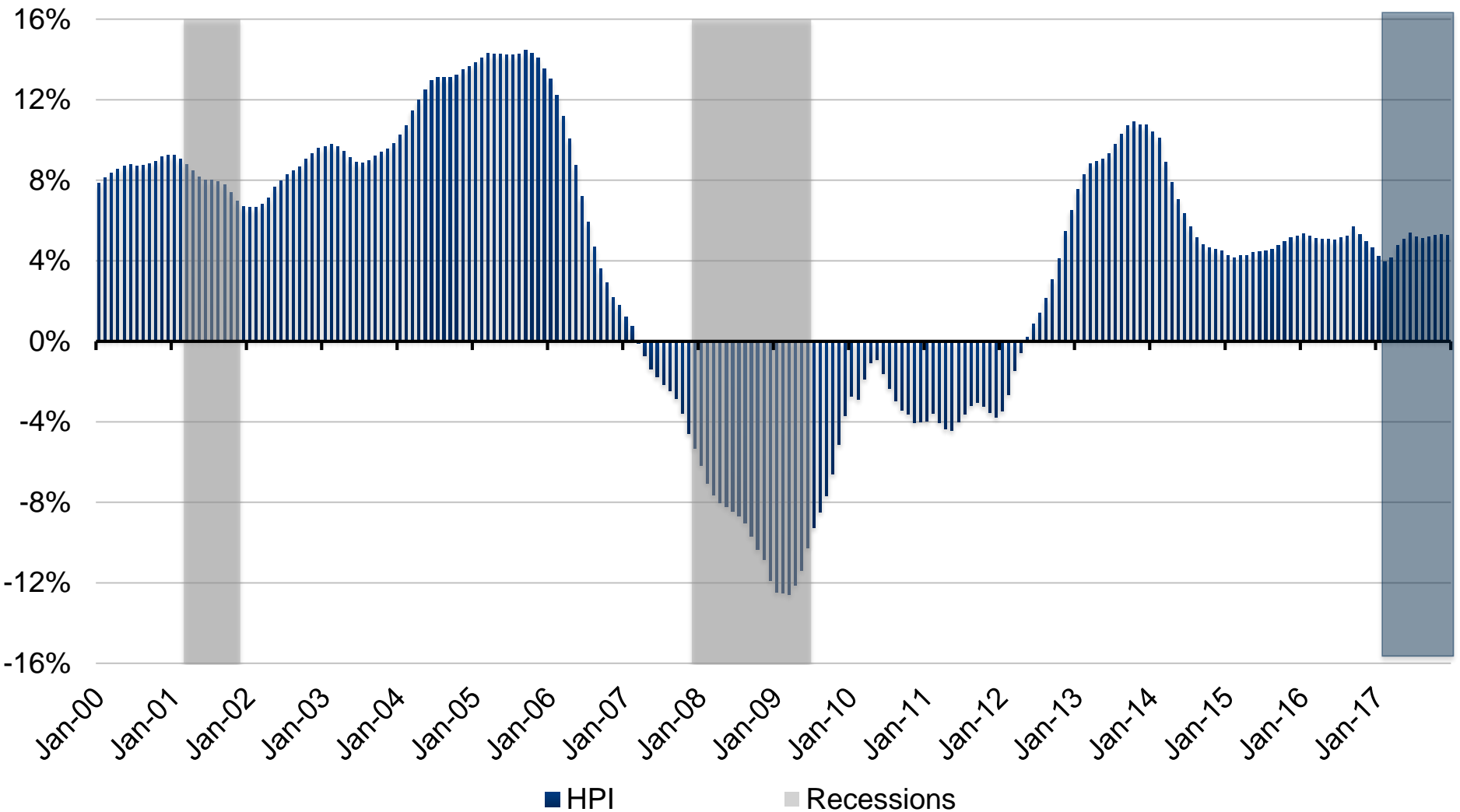
City Name	City Index	Monthly Change	Quarterly Change	Yearly Change
Virginia Beach, VA	84.42	0.4%	-1.8%	-5.5%
Oklahoma City, OK	61.68	0.4%	-1.9%	-4.8%
San Francisco, CA	97.36	0.0%	-3.3%	-4.6%
Milwaukee, WI	79.06	-0.5%	-3.2%	-4.5%
Richmond, VA	66.23	0.9%	-1.3%	-3.6%

Source: FHFA, Freddie Mac, Census, FirstAmEcon, August 2016

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Price Growth Expected to Remain Strong

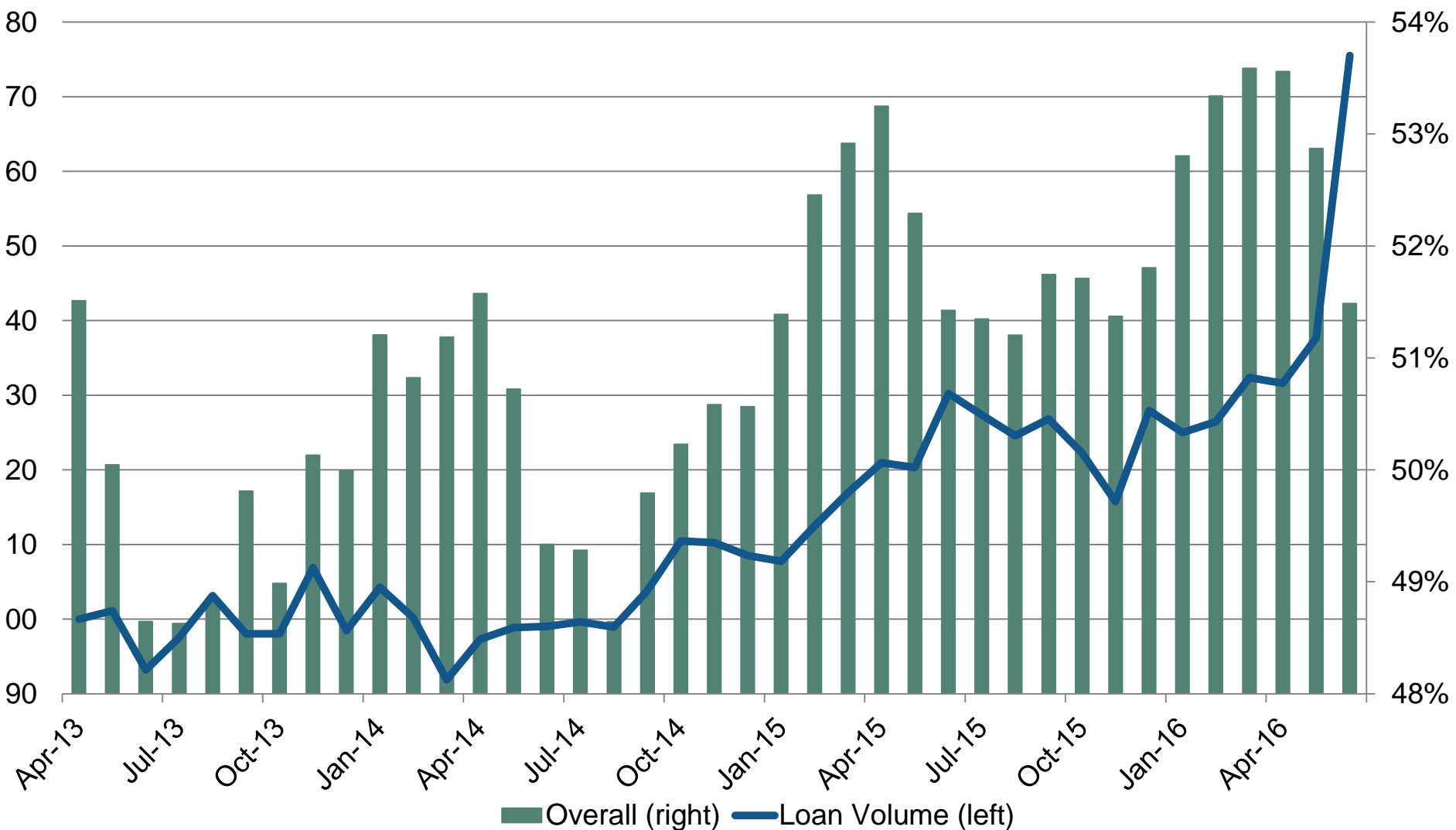
HPI Growth (SA, Year-Over-Year)



Source: NAR, FRB St. Louis, First American Calculations, June 2016

First-Time Buyers Rebounding

First-Time Homebuyer Market Share and Transaction Volume Index (% , Volume- April 2013 = 100)



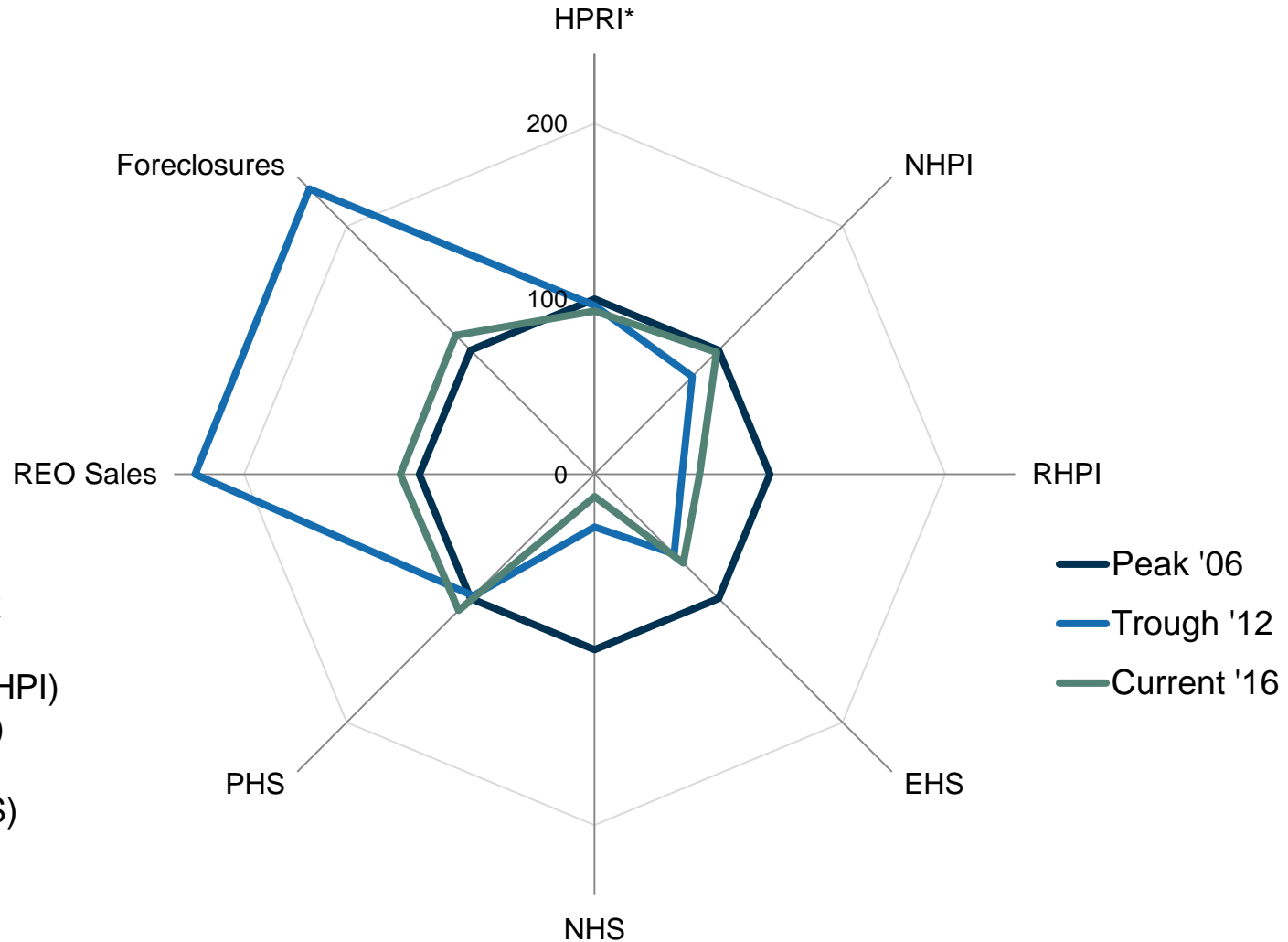
Source: AEI International Center on Housing Risk , July

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Housing Health

June 2006 = 100



Homeownership Progress
Index (HPRI)
Nominal House Price Index
(NHPI)
Real House Price Index (RHPI)
Existing Home Sales (EHS)
New Home Sales (NHS)
Potential Home Sales (PHS)
REO Sales
Foreclosures

Source: First American, May 2016

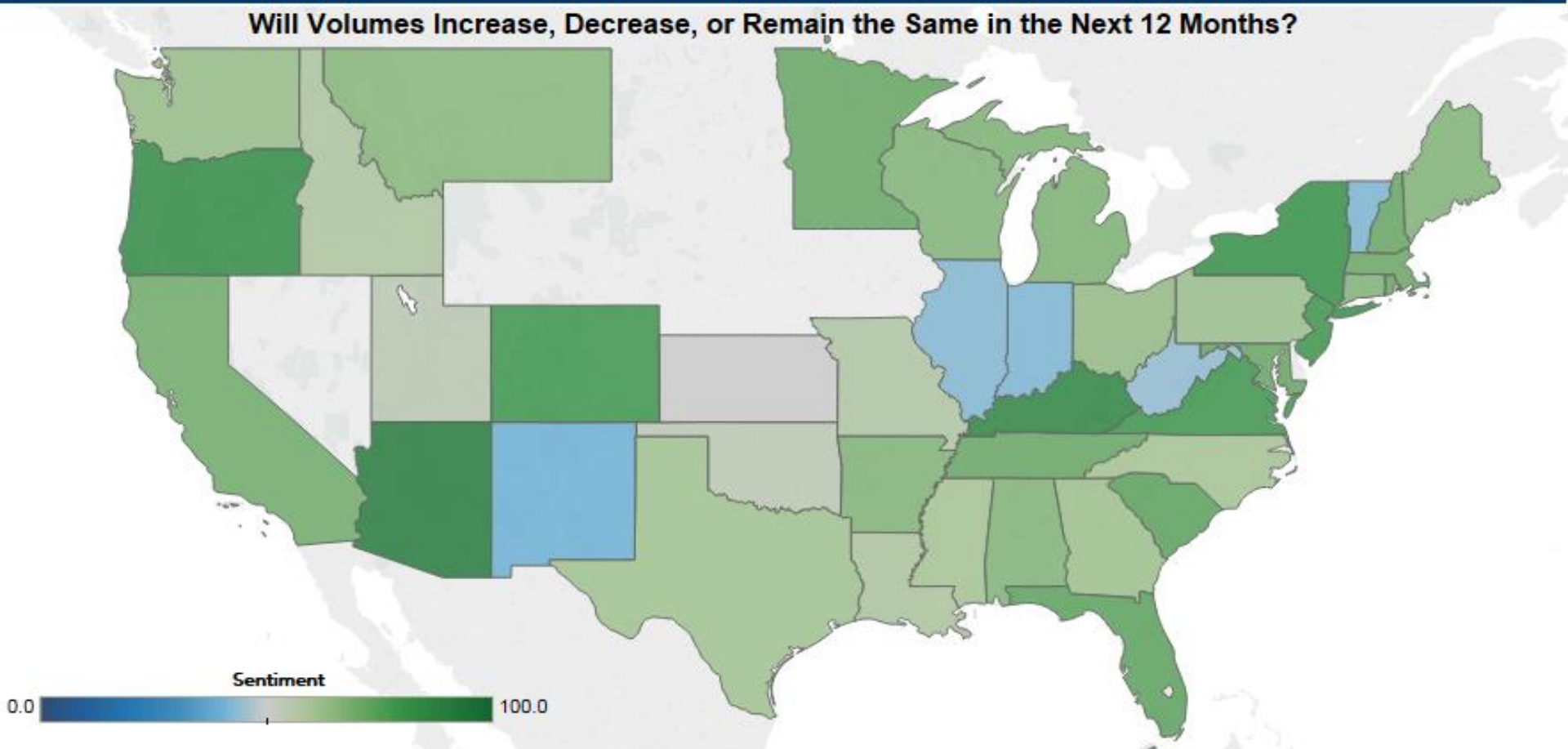
*Annual 2015 Data

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Residential Purchase Transactions Expected To Grow

	Q3 2016	Q2 2016	Quarterly Growth	Annual Growth
Overall Volumes	60.64	60.61	0.05%	7.16%
Purchase Volumes	62.28	66.85	-6.84%	-4.23%
Refinance Volumes	59.00	54.36	8.54%	22.56%

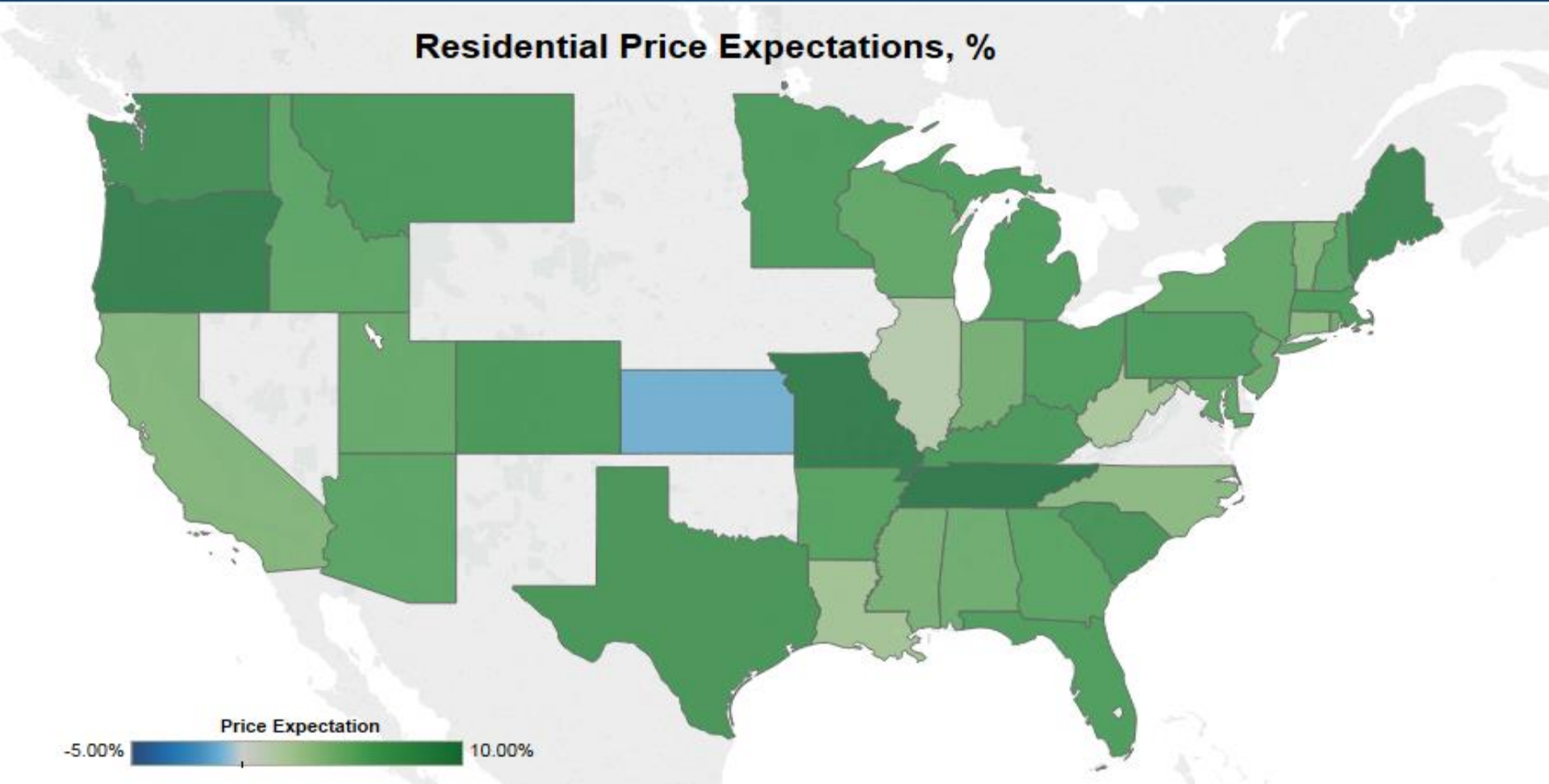


Source: First American Calculations, Q3 2016

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Year Ahead Price Expectation For All Property

	Q3 2016	Q2 2016	Difference
Leading Price Expectation	5.00%	4.00%	1.0



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