



Housing Market Overview 2017 Q1

Zillow Economic Research

About Zillow Economic Research

In-depth research and monthly reports

www.zillow.com/research



Real Estate Metrics

- Zillow Home Value Index
- Zillow Rent Index
- Zillow Home Value Forecast
- Zillow Rent Forecast
- Negative Equity
- For-Sale Inventory
- Age of Inventory
- List Prices
- Sale Prices
- Rental Prices
- Home Sales
- Home Value/Square Foot (\$)
- Price/Square Foot (\$)
- Listings with Price Cuts (%)
- Median Price Cut (%)
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- Homes Foreclosed (out of 10K)
- Foreclosure Re-sales (%)
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- Homes Sold in the Past Year (%)
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- Buy-Rent Breakeven
- Zillow Home Prices Expectations Survey
- 15-minute Mortgage Rate Series: Conventional/Jumbo
- Existing Home Sales Forecast
- New Home Sales Forecast
- Case-Shiller Forecast

Data is available for download at:

www.zillow.com/data

Zillow Economic Research



Dr. Svenja Gudell, Chief Economist
@SvenjaGudell

Svenja joined Zillow in 2011 and leads the company's industry-leading economic research team, a recognized voice of impartial, data-driven economic analysis on the U.S. housing market. Under Svenja's leadership, Zillow produces monthly reports on housing trends for more than 450 metros nationwide, with data often available down to the ZIP-code level. In addition, Svenja and her team publish original research on various real estate topics, ranging from rental and mortgage affordability, negative equity and forecasting, to policy, generational and mortgage research. Svenja has presented to various federal agencies and at numerous industry conferences, and has been widely quoted in national and local media.

Prior to joining Zillow, Svenja did economic, financial and strategy consulting for Analysis Group and was an Assistant Economist in the Research Group of the Federal Reserve Bank of New York. Svenja has a Bachelor of Arts in economics from the University of Rochester, a Master of Arts in economics from New York University, a Master of Science in business administration from the University of Rochester, and a Ph.D. in finance from the University of Rochester. Contact Svenja at svenjag@zillow.com

Zillow Economic Research



Dr. Krishna Rao, Director of Economic Product and Research
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Krishna joined Zillow in the summer of 2013 after finishing a doctorate in economics from Stanford University focused on macroeconomics and finance. He graduated from Columbia University with a bachelor's degree in economics and math. He also worked at the Federal Reserve Bank of New York, where he helped develop structural macroeconomic models to guide monetary policy. At Zillow, Krishna works primarily on building models to analyze market conditions and forecast future market trends and home prices.



Dr. Skylar Olsen, Senior Economist

Skylar joined Zillow in the summer of 2012. Her research is used by consumers, policy makers, and other researchers to understand the real estate markets and make better decisions. While authoring numerous research projects such as A House Divided - How Race Colors the Path to Homeownership, she also creates many of Zillow's real estate metrics, including the Buyer-Seller Index and the Buy-Rent Breakeven Horizon. She holds a Ph.D. in Economics from the University of Washington and specializes in the spatial patterns of housing and demographic change.

Zillow Economic Research



Aaron Terrazas, Senior Economist
@AaronTerraz

Aaron is a Senior Economist at Zillow where his research focuses primarily on mortgage and rental markets. Previously he was an economist at the United States Treasury Department's Office of Economic Policy, and a policy analyst at the Migration Policy Institute in Washington, D.C. He received his bachelor's degree in international relations from Georgetown University and his master's degree in applied economics from Johns Hopkins University.



Sarah Mikhitarian, Economist

Sarah joined Zillow in October 2015, working on unveiling current real estate market conditions, interesting patterns in the housing market and past and future market trends. Prior to joining Zillow, Sarah worked at the Institute for Health Metrics and Evaluation, where she conducted research aimed at understanding and improving national and global health and evaluating the performance of health systems. She received her undergraduate degree in both economics and Hispanic studies from Scripps College, and was awarded a Master of Arts in economics with a specialization in applied microeconometrics from the University of Washington.

Zillow Group



Dr. Stan Humphries, Chief Analytics Officer
@StanHumphries

Dr. Stan Humphries is the chief analytics officer of Zillow Group, a portfolio of the largest and most vibrant real estate and home-related brands on Web and mobile. Stan is the co-author of the New York Times Best Seller “Zillow Talk: Rewriting the Rules of Real Estate.”

As chief analytics officer, Stan oversees Zillow Group financial planning and analysis, corporate strategy, economic research, data science and engineering, marketing and business analytics, and pricing analytics. Stan was one of Zillow’s earliest pre-launch employees and is the creator of the Zestimate and its first algorithm.

Stan also serves as chief economist for Zillow Group. He has built out the industry-leading economics and analytics team at Zillow, a recognized voice of impartial, data-driven economic analysis on the U.S. housing market. Stan is a member of Fannie Mae’s Affordable Housing Advisory Council and the Commerce Department’s Data Advisory Council. Stan also serves on the Visiting Committee of the Department of Economics at the University of Washington.

Prior to joining Zillow, Stan spent five years at Expedia, where he ran the advanced analytics team. Before Expedia, Stan served as a researcher and faculty member at the University of Virginia, and was previously a Presidential Management Fellow where he served at NASA, the Office of Science and Technology Policy in the Executive Office of the President, and the Technology Administration within the Department of Commerce. Stan has also served in the United States Peace Corps, where he taught high school physics and chemistry in the West African country of Benin. Stan has a Bachelor of Arts from Davidson College, a Master of Science in foreign service from Georgetown University and a Ph.D. in government from the University of Virginia.

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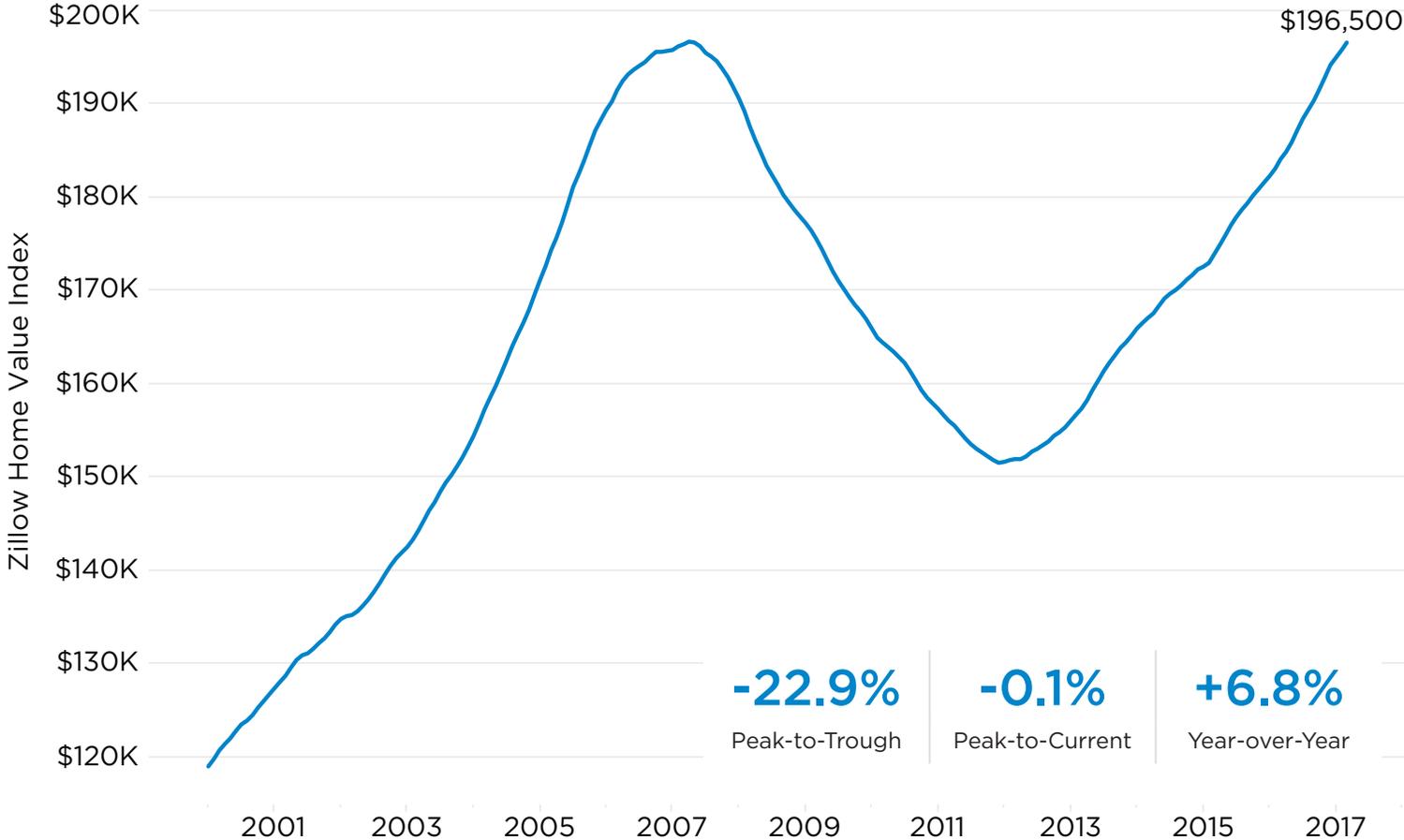
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HOME VALUES AND RENTS

- U.S. home values are growing at a steady pace and are on track to surpass pre-recession highs. Driven largely by limited inventory and high demand for less-expensive homes, home values are growing fastest at the bottom end of the market.
- Regionally, markets in the Pacific Northwest, Texas, Florida and parts of the Southwest continue to outperform slower-moving markets in the Midwest and Mid-Atlantic.
- Growth in national rents flattened in the second half of 2016, though pockets of strong appreciation remain in the Pacific Northwest and California.

Zillow Home Value Index

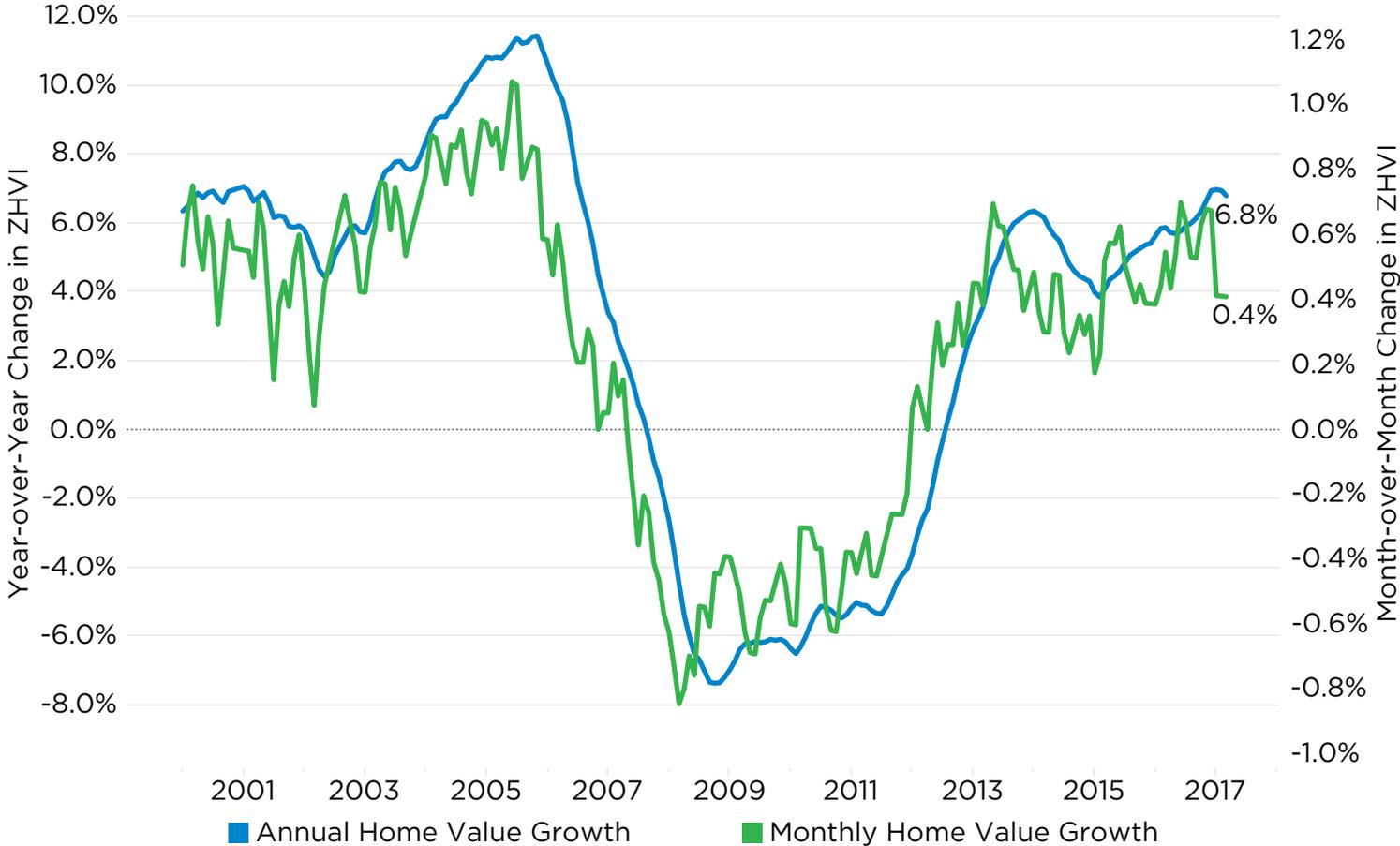
U.S. home values are nearing pre-recession highs.



Source: Zillow Home Value Index (March 2017)

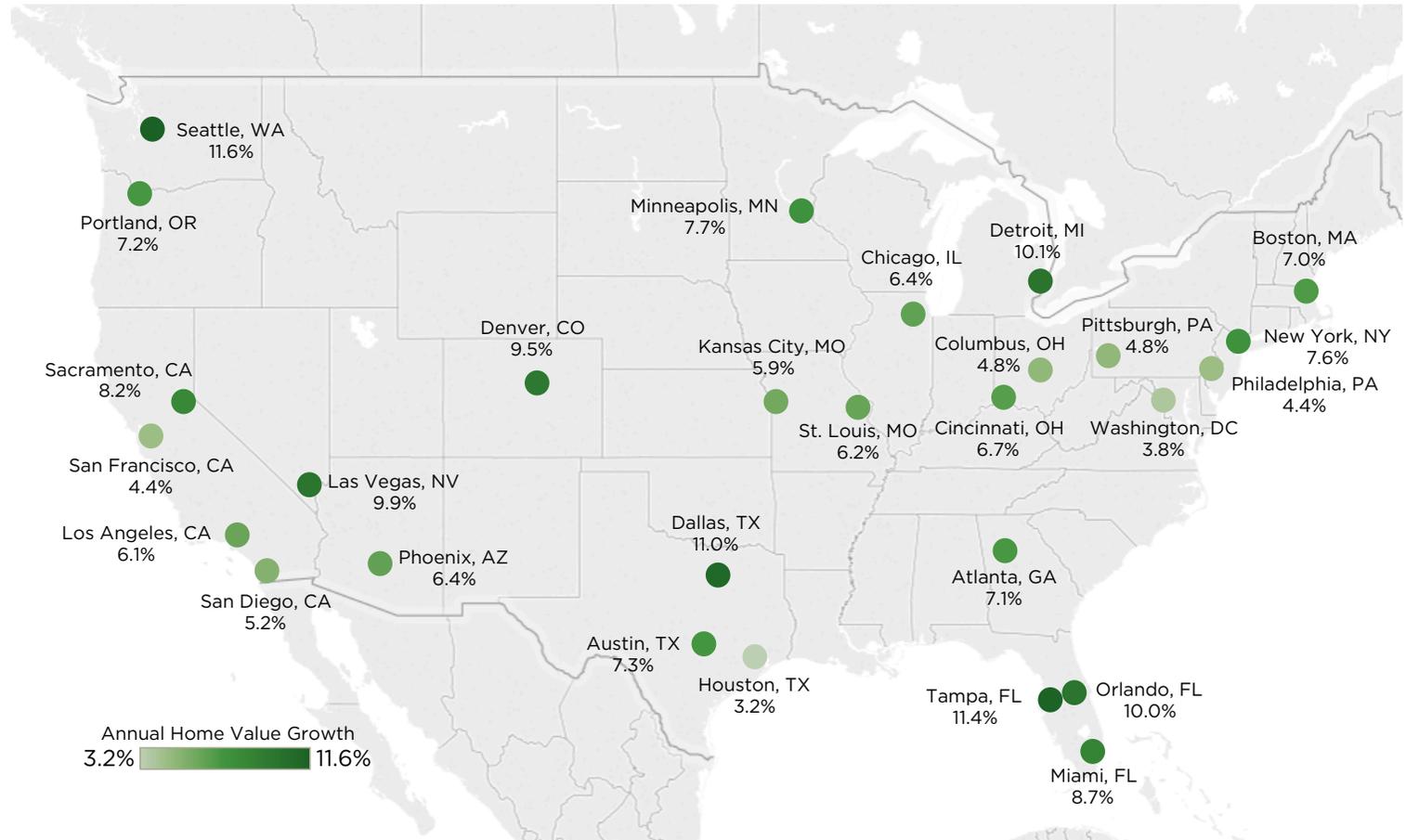
Zillow Home Value Index, Annual and Monthly Growth

Annual U.S. home value appreciation accelerated in the second half of 2016.



Annual Home Value Growth

Markets in the Pacific Northwest, Texas, Florida and parts of the Southwest continue to outperform slower-moving markets in the Midwest and Mid-Atlantic.



Zillow Buy vs. Rent Breakeven Horizon

Depending how long a resident stays in a home, buying is often a better bargain than renting. In many areas, buyers can break even on a home purchase in as little as 1-2 years.

Metros with the Longest Breakevens

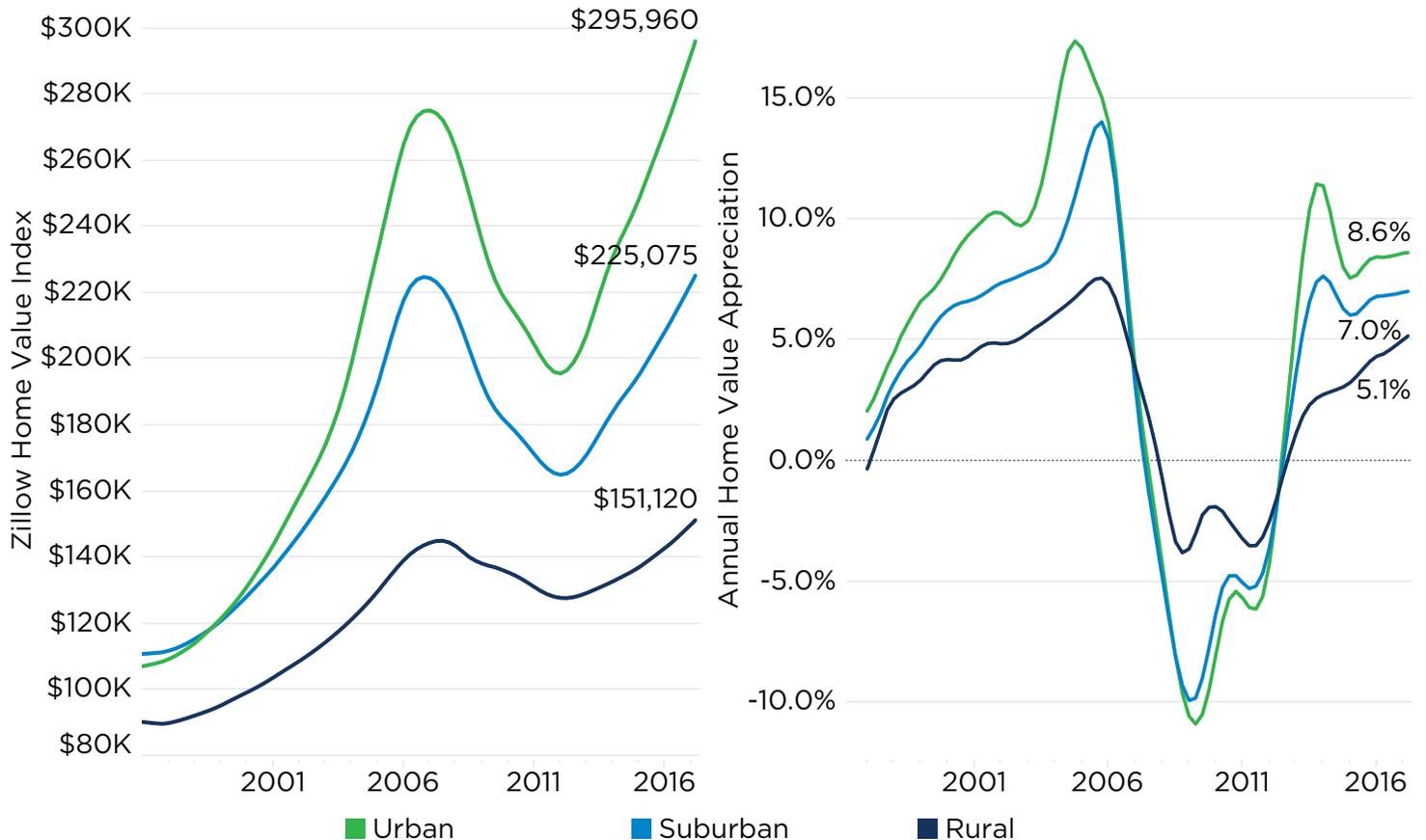
1. Honolulu, HI: **6.8** years
2. San Jose, CA: **5.1** years
3. San Francisco, CA: **4.5** years
4. Santa Rosa, CA: **4.4** years
5. Los Angeles, CA: **4.1** years

Metros with the Shortest Breakevens

1. Memphis, TN: **1.1** years
2. Jackson, MS: **1.3** years
3. Lakeland, FL: **1.3** years
4. Indianapolis, IN: **1.4** years
5. Orlando, FL: **1.4** years

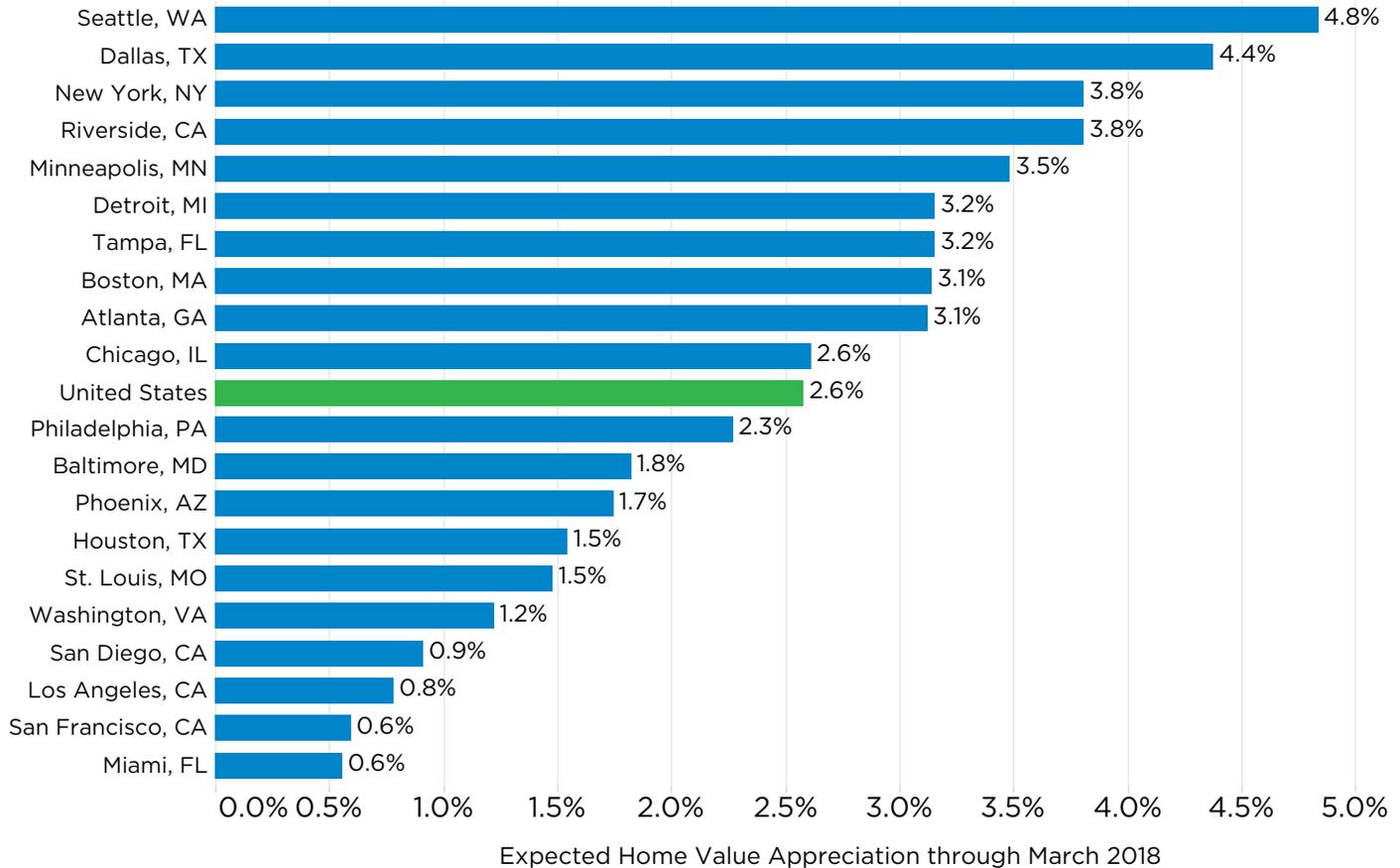
Urban, Suburban and Rural Home Values

Urban homes are worth more than suburban homes and are growing at a faster pace.

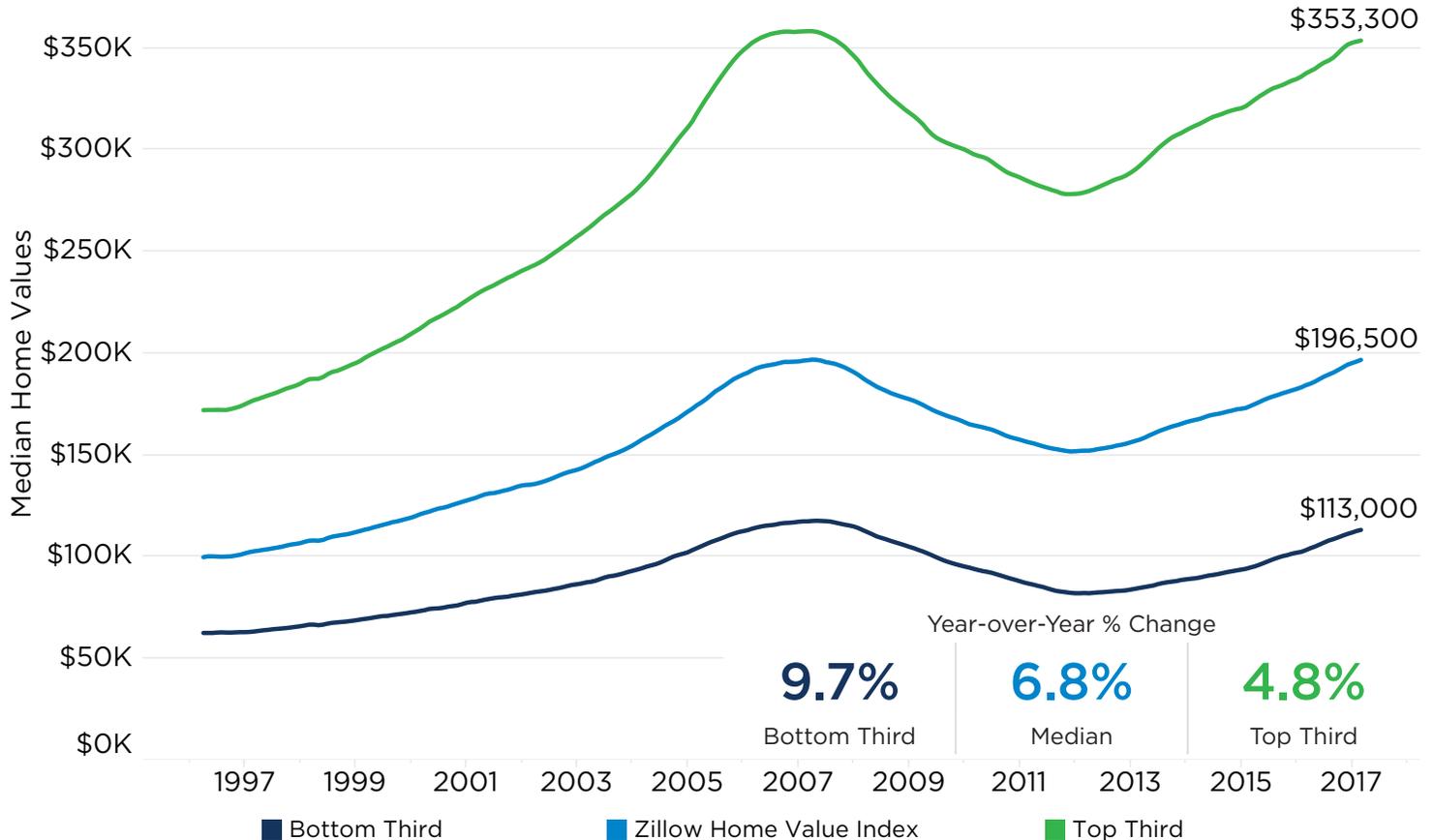


Zillow Home Value Forecast

Home value growth is expected to slow through 2018 Q1

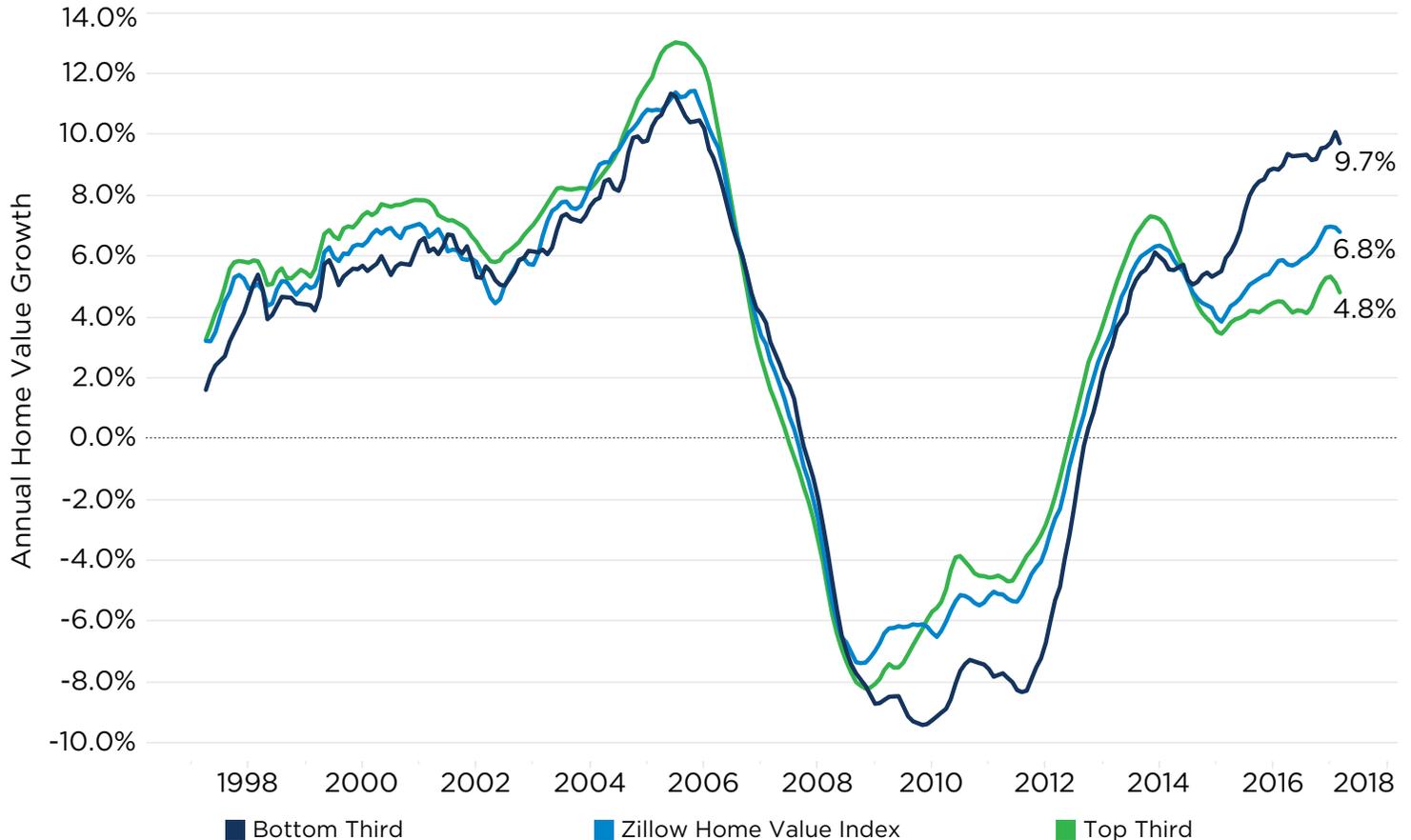


Zillow Home Value Index, by Thirds



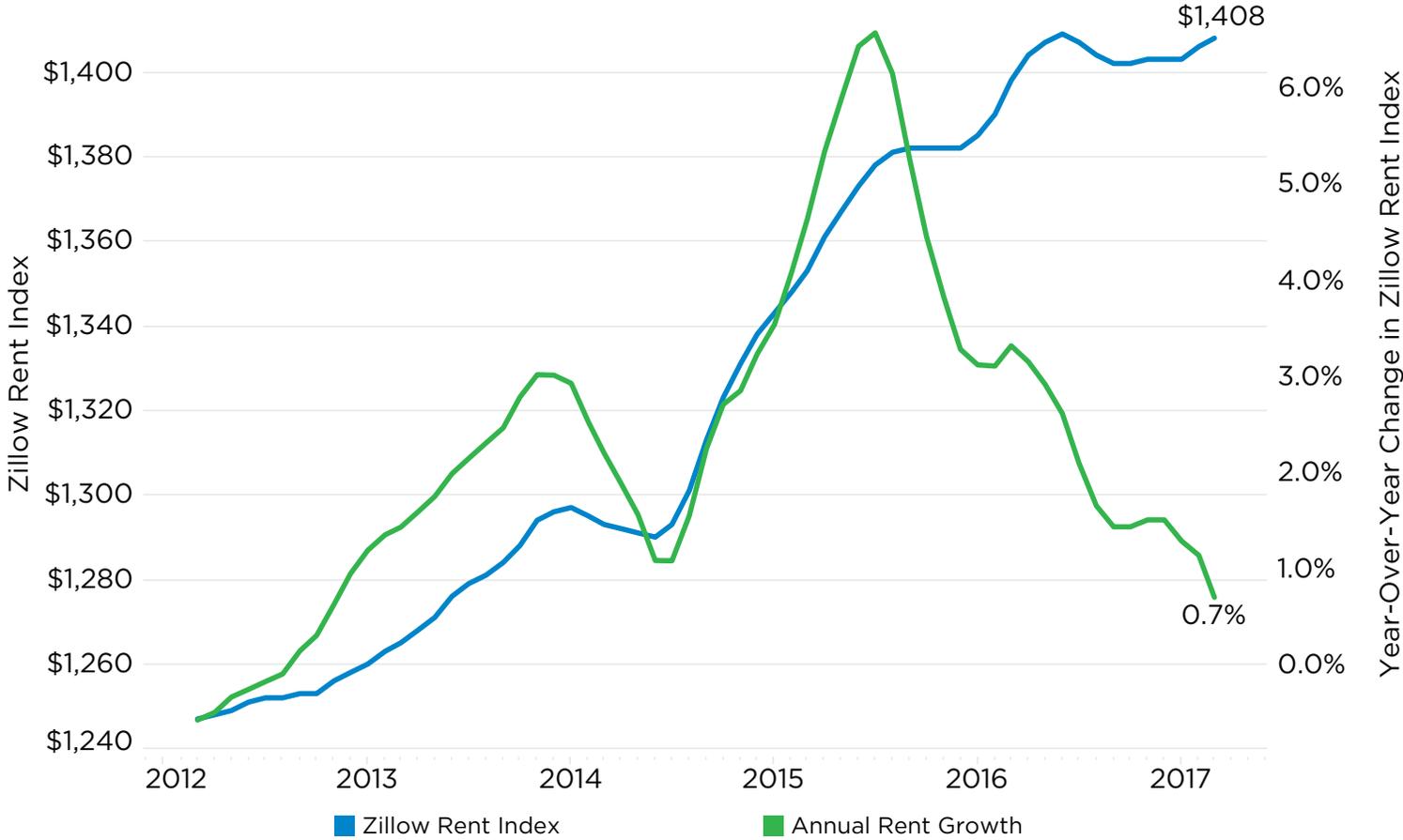
Annual Home Value Appreciation, by Thirds

Home value appreciation for bottom-third homes continues to outpace home value growth in top-third homes.



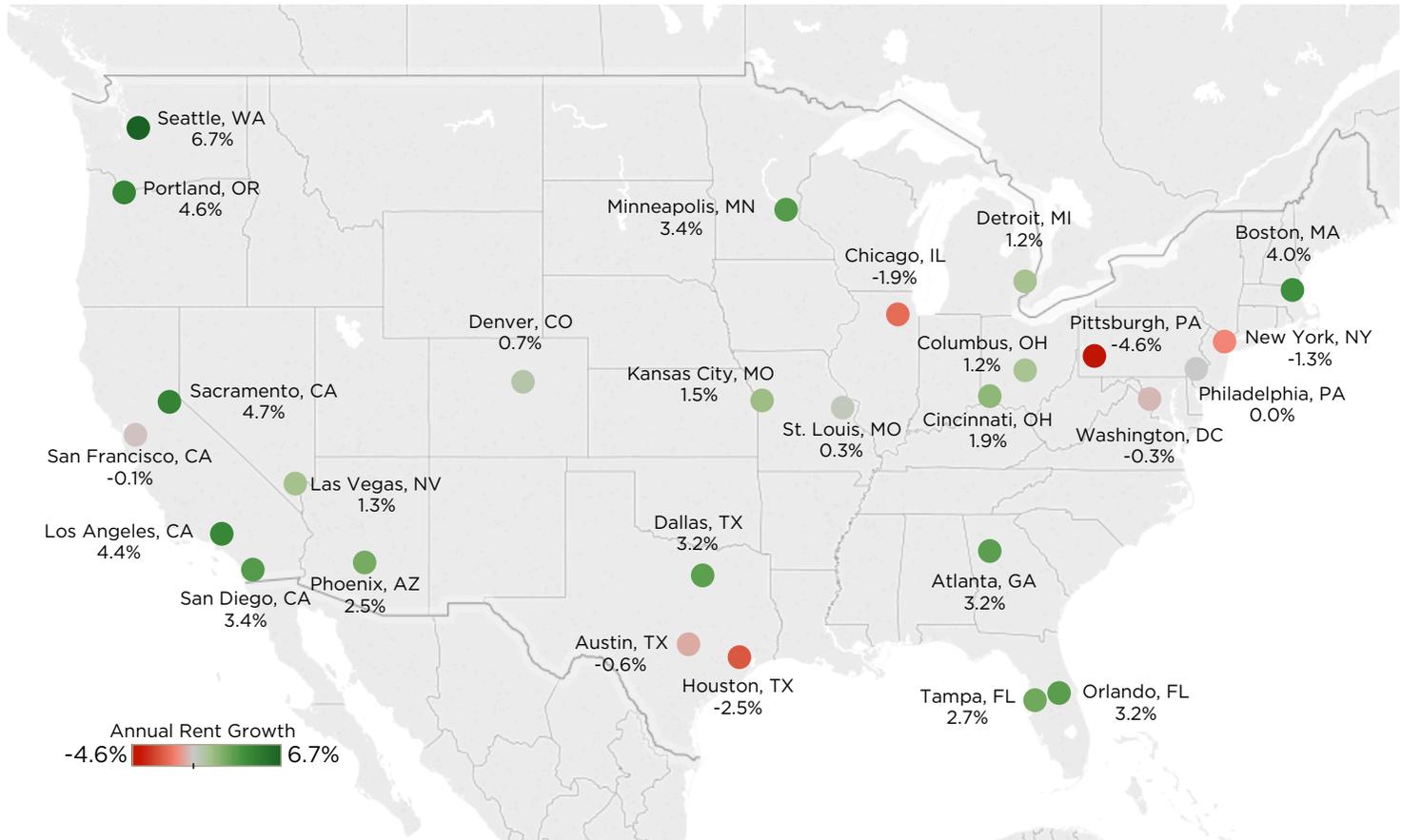
Zillow Rent Index

Growth in rents flattened in the second half of 2016.



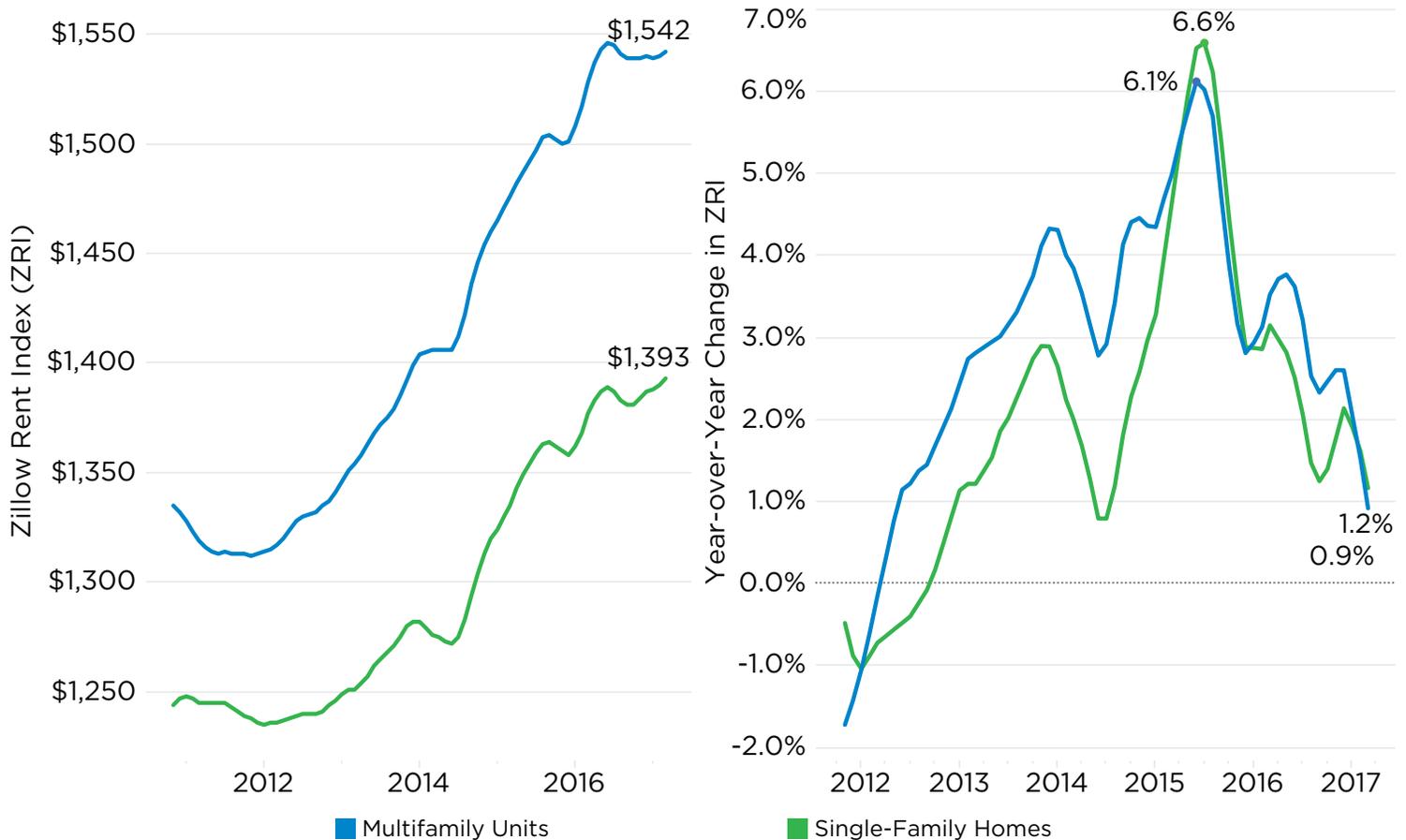
Annual Rent Appreciation

Annual rent growth is strongest in the Pacific Northwest.



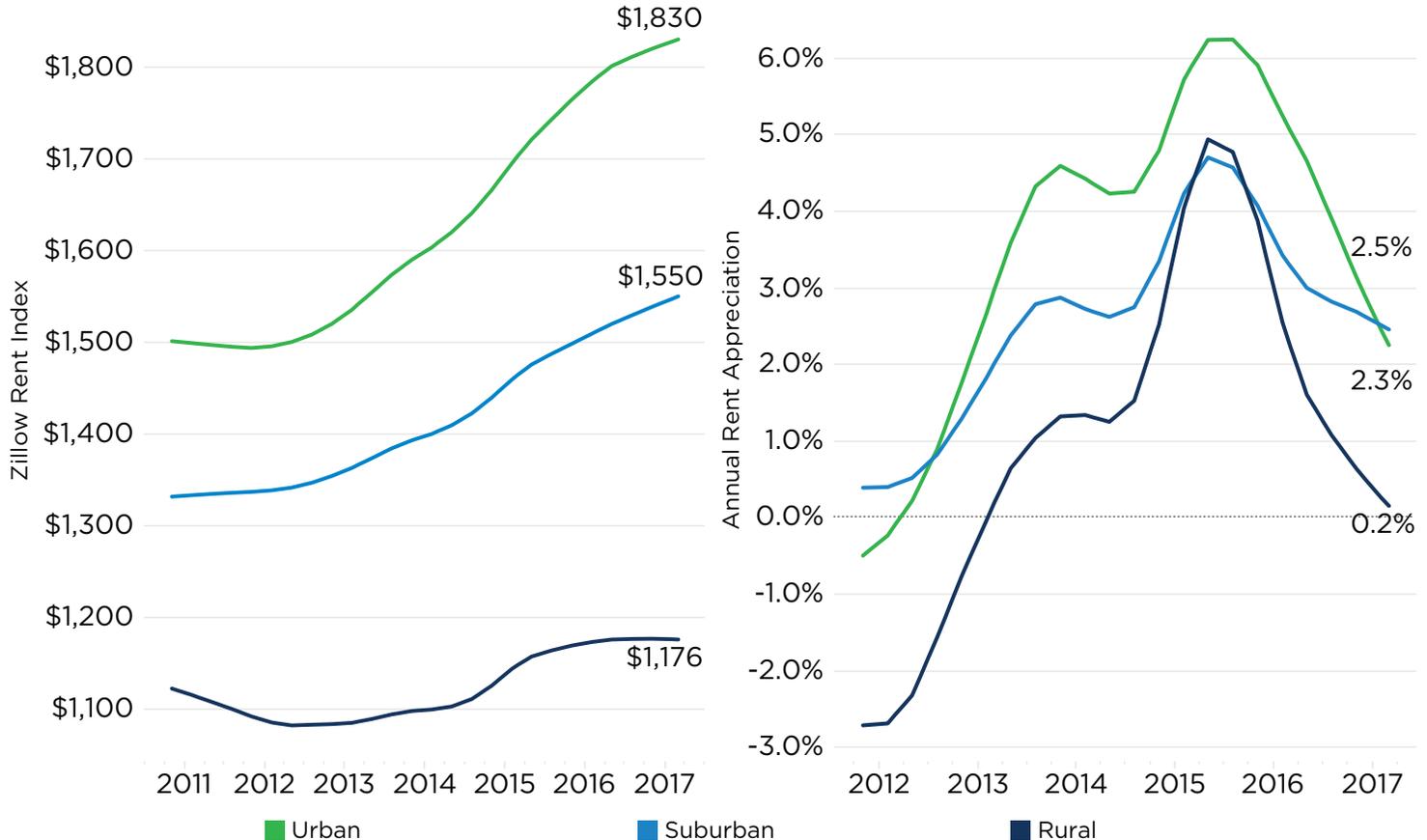
Multifamily and Single-Family Home Rents

Rents for single-family homes and units in larger multifamily buildings share similar trends.



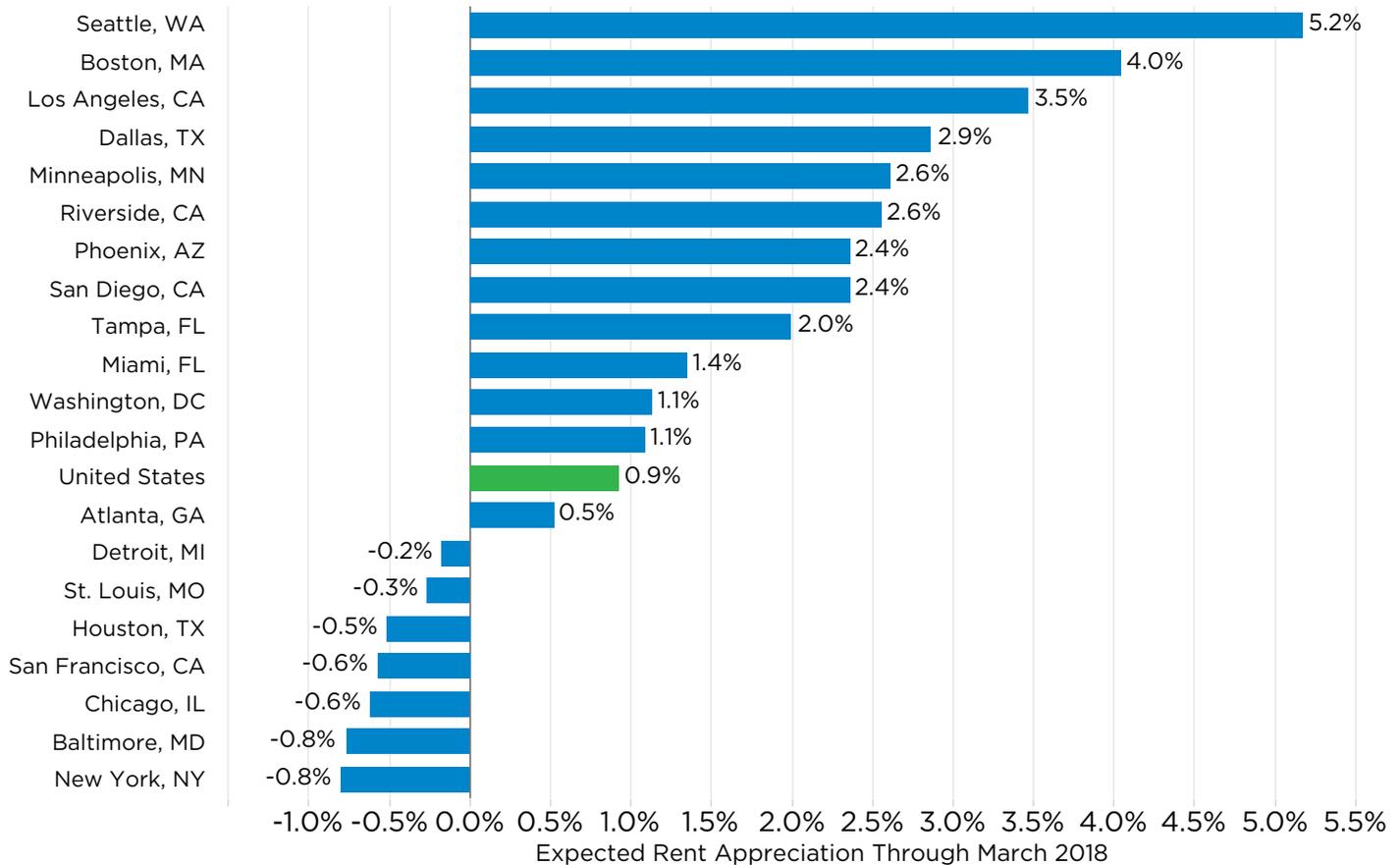
Urban, Suburban and Rural Rents

Rents in the city are higher than rents in the suburbs



Zillow Rent Forecast

Growth in rents over the next year is expected to slow further.

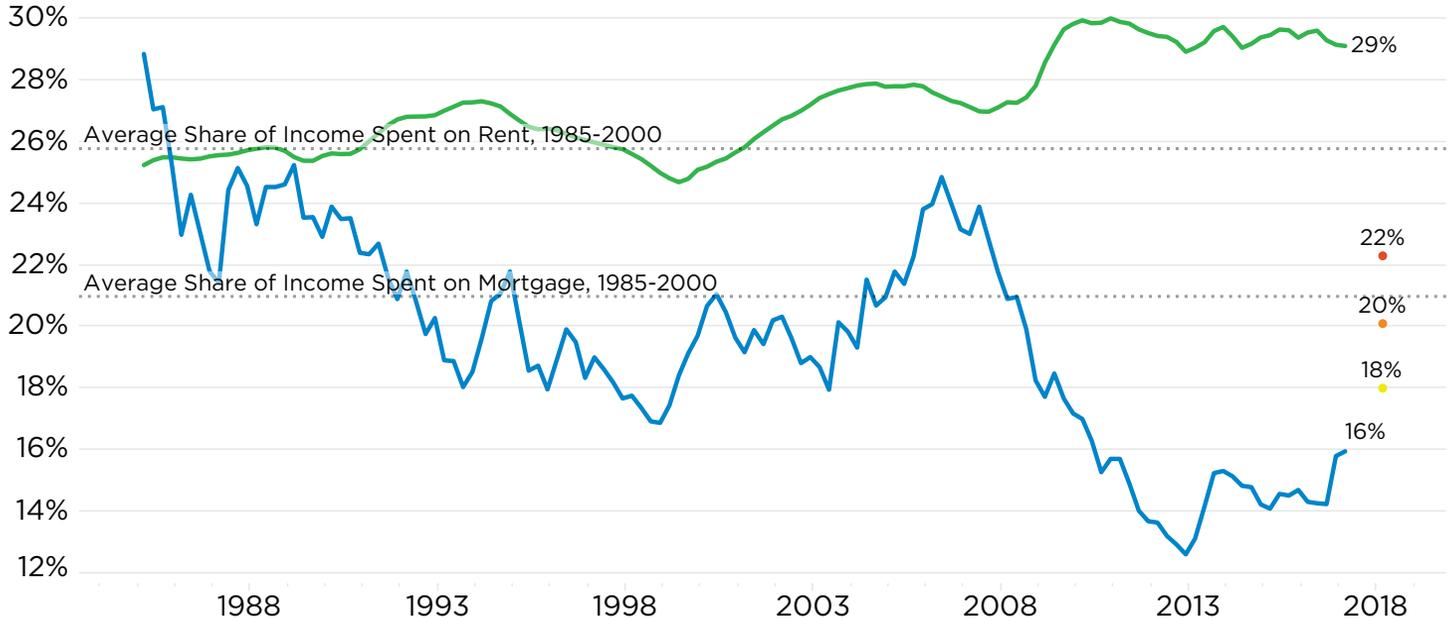


MORTGAGE AND RENT AFFORDABILITY

- Overall, mortgage affordability – the share of income necessary to afford a typical mortgage payment – looks reasonable in most markets. But affordability is suffering, especially at the bottom end of the market, as home values rise and incomes fail to keep pace.
- As mortgage interest rates rise, mortgage affordability will also suffer, although there's some headroom for rates to rise before this really becomes problematic.
- Unlike mortgage affordability, rental affordability is worse than ever in many areas, and is unlikely to significantly improve soon.
- Poor rent affordability is worrisome, as more money devoted to rent makes it more difficult to save for homeownership.

Zillow Mortgage and Rent Affordability

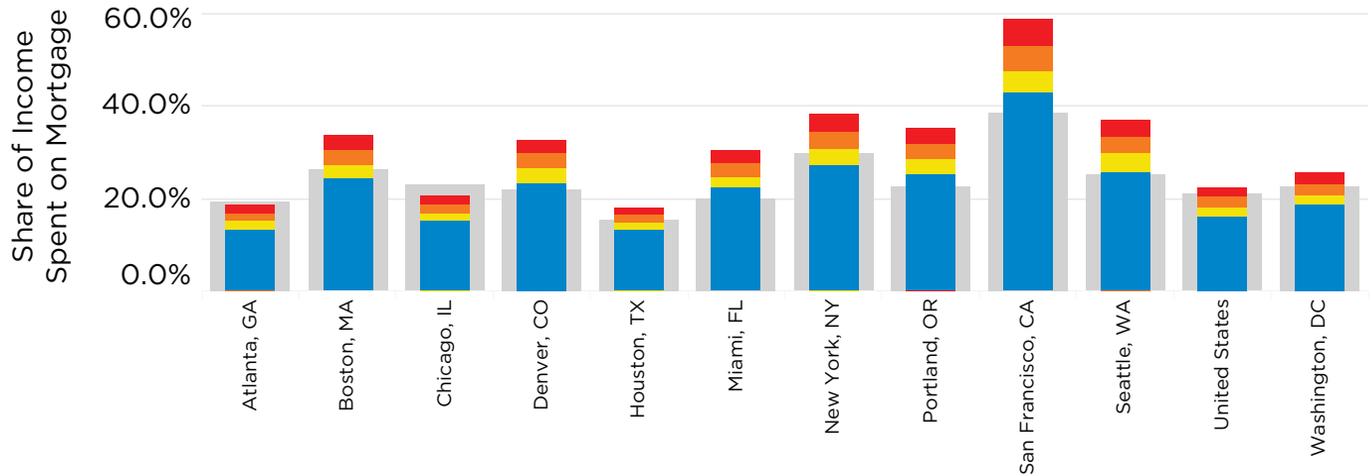
Nationwide, the share of income spent on a mortgage is well below historic norms.



Share of Income Spent on Housing



Mortgage Affordability in the Largest Metro Areas

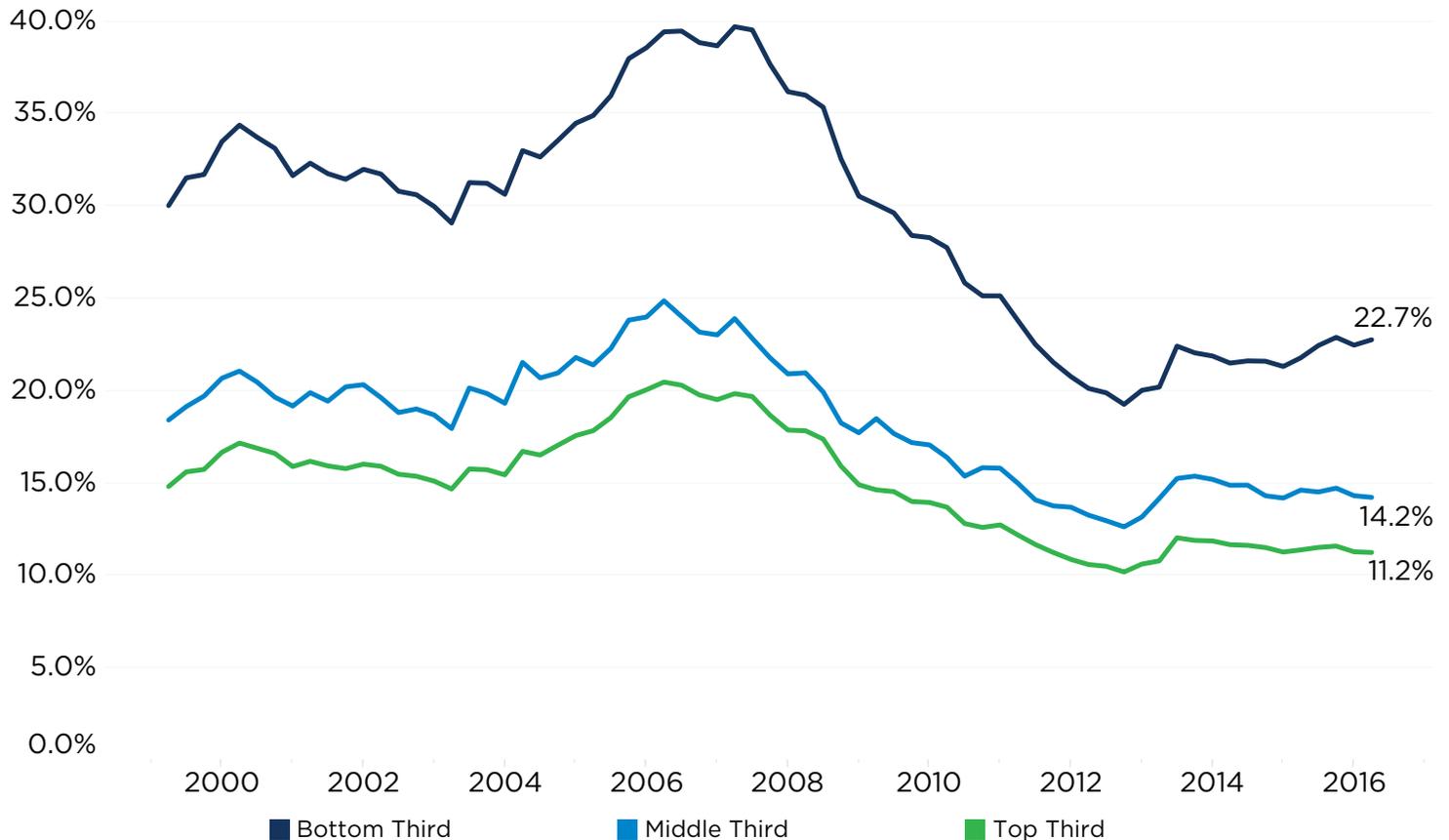


Share of Income Spent on Mortgage, 2016 Q4	13%	24%	15%	23%	13%	22%	27%	25%	43%	26%	16%	19%
Average Share of Incomes Spent on Mortgage, 1985-2000	19%	26%	23%	22%	15%	20%	30%	23%	38%	25%	21%	22%
Forecasted at 5% Rates	15%	27%	17%	26%	15%	25%	31%	28%	47%	30%	18%	20%
Forecasted at 6% Rates	17%	30%	19%	30%	16%	27%	34%	32%	53%	33%	20%	23%
Forecasted at 7% Rates	18%	34%	21%	33%	18%	30%	38%	35%	59%	37%	22%	26%

■ Share of Income Spent on Mortgage, 2017 Q1
 ■ Forecasted at 5% Rates
 ■ Forecasted at 7% Rates
■ Average Share of Income Spent on Mortgage, 1985-2000
 ■ Forecasted at 6% Rates

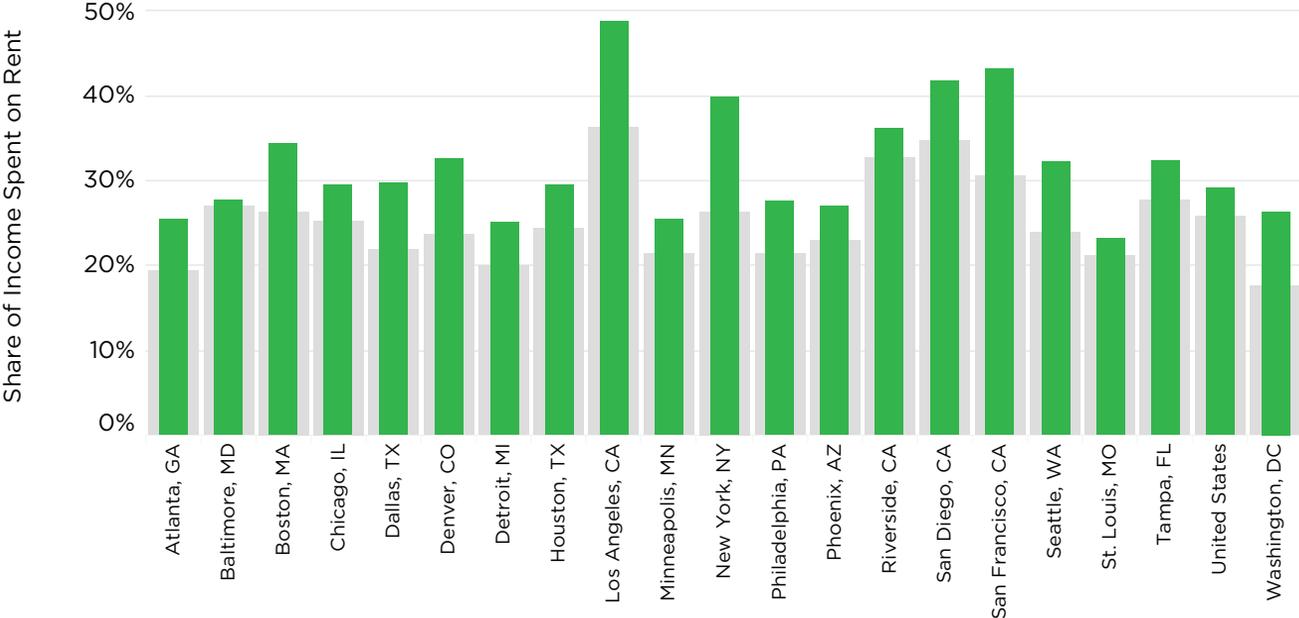
Zillow Mortgage Affordability, by Thirds

Weak income growth and rapid appreciation, even with very low mortgage interest rates, means homes are becoming more unaffordable, more quickly for bottom-third home buyers.



Rent Affordability in the Largest Metro Areas

The share of income spent on rent is higher than the historic average in the nation's 20 largest metros.

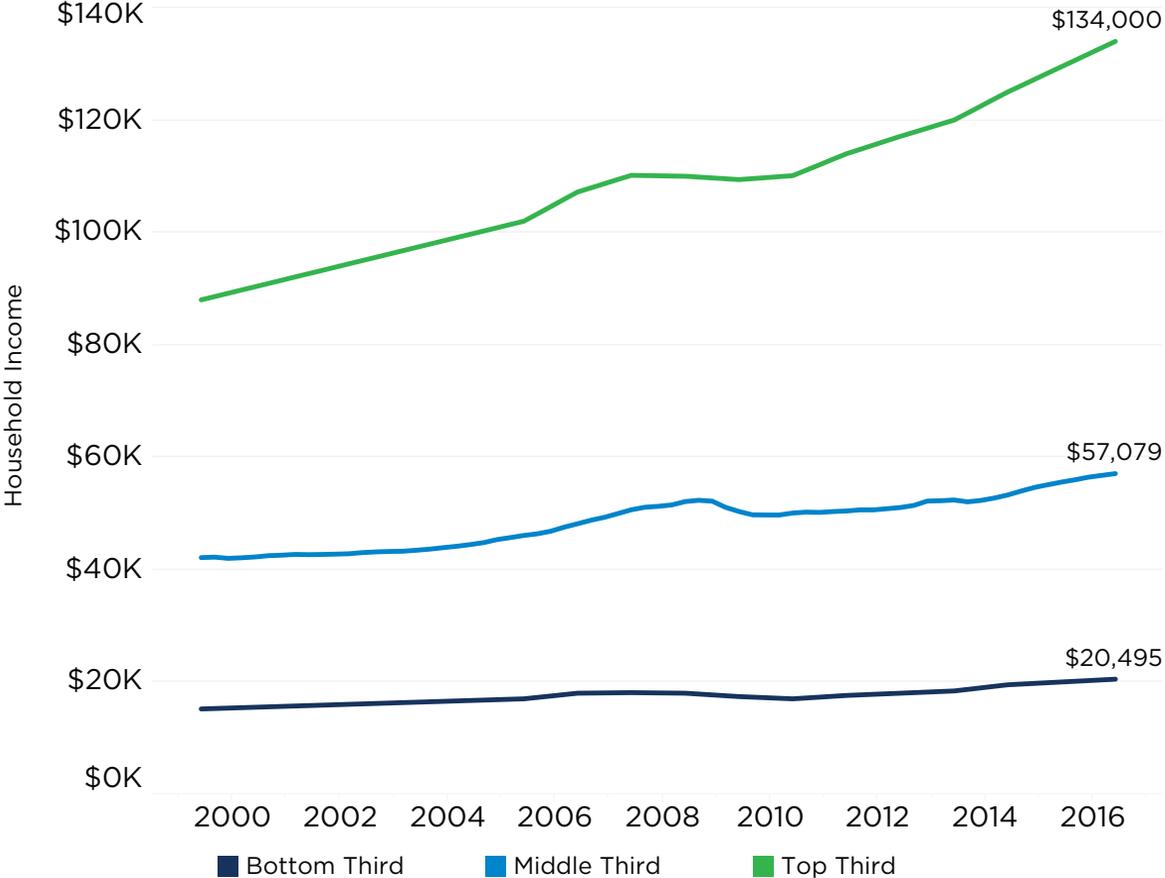


Share of Income Spent on Rent, 2016 Q4	25%	28%	34%	29%	30%	33%	25%	30%	49%	25%	40%	27%	27%	36%	42%	43%	32%	23%	32%	29%	26%
Average Share of Income Spent on Rent, 1985-2000	19%	27%	26%	25%	22%	24%	20%	24%	36%	21%	26%	21%	23%	33%	35%	31%	24%	21%	28%	26%	18%

■ Rent Affordability, 2017 Q1
■ Average Rent Affordability, 1985-2000

Household Income, by Thirds

Income growth for the lowest earners has been especially weak.



Income Growth,
2000-2016

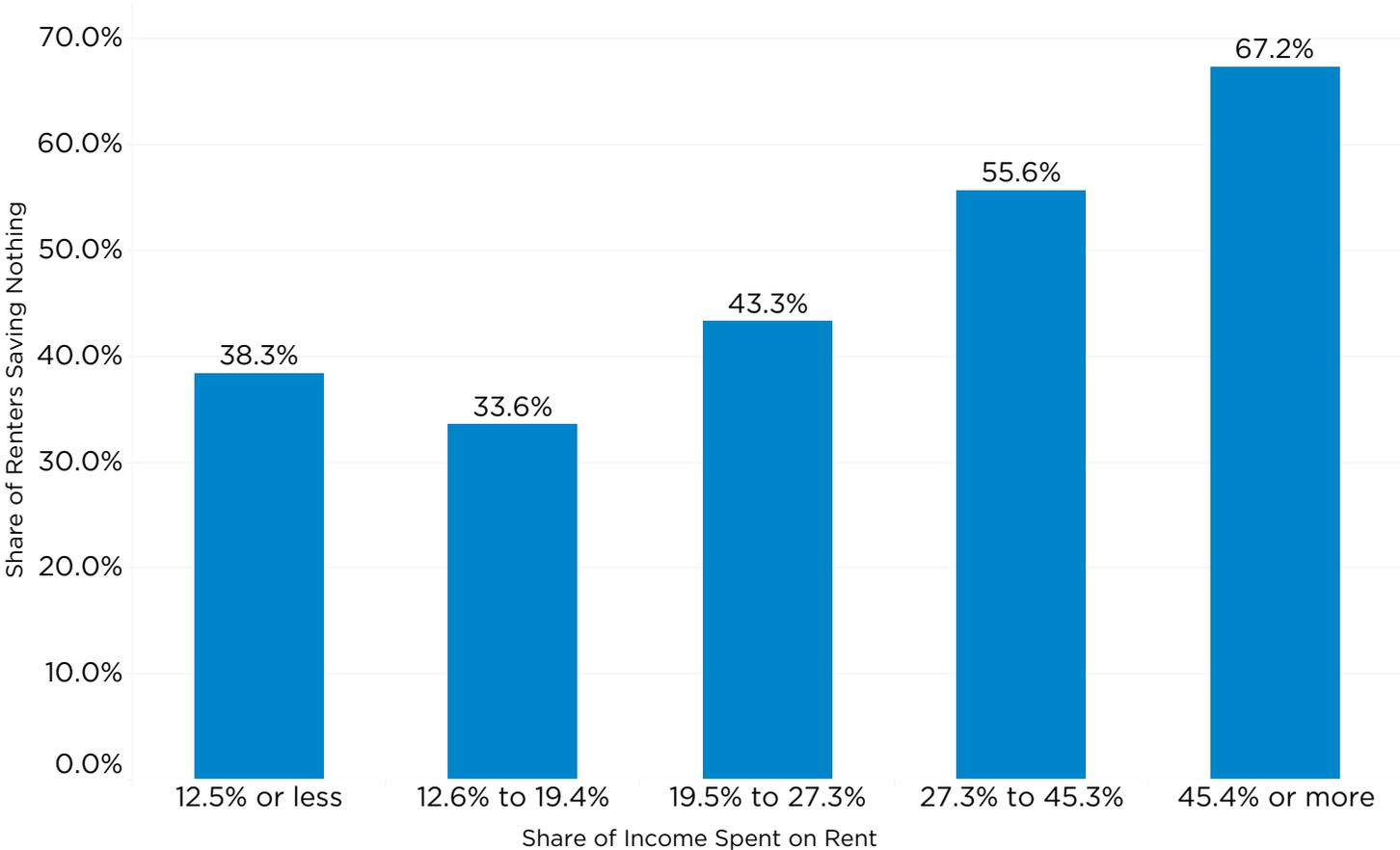
Top Third
48.3%

Middle Third
35.1%

Bottom Third
32.2%

Renters With No Savings

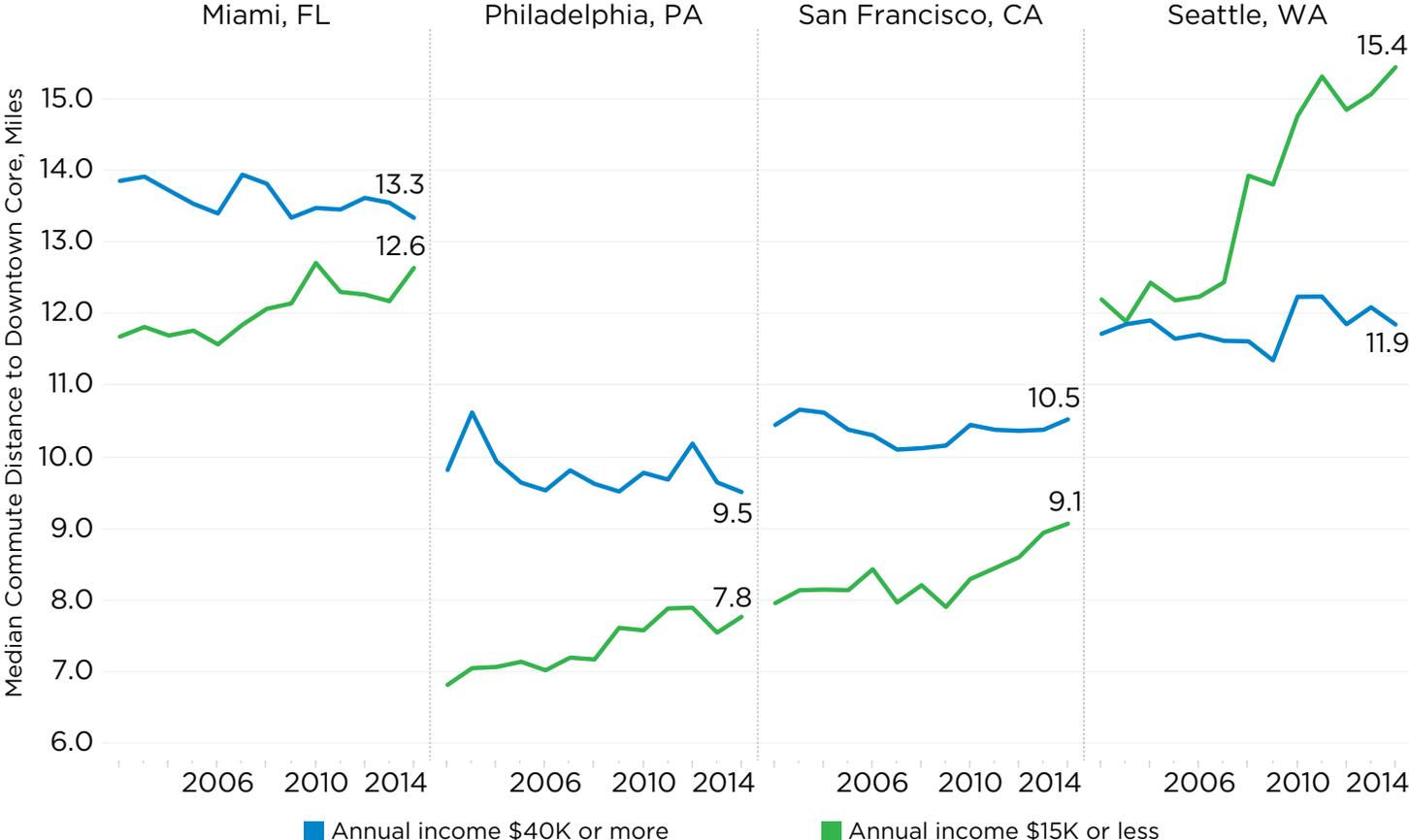
As the share of income spent on rent rises, more renters report saving nothing.



Source: Zillow analysis of data from the Federal Reserve Board, Survey of Household Economics and Decisionmaking 2015 and 2016, and the U.S. Census Bureau, ACS, IPUMS

Commute Distances

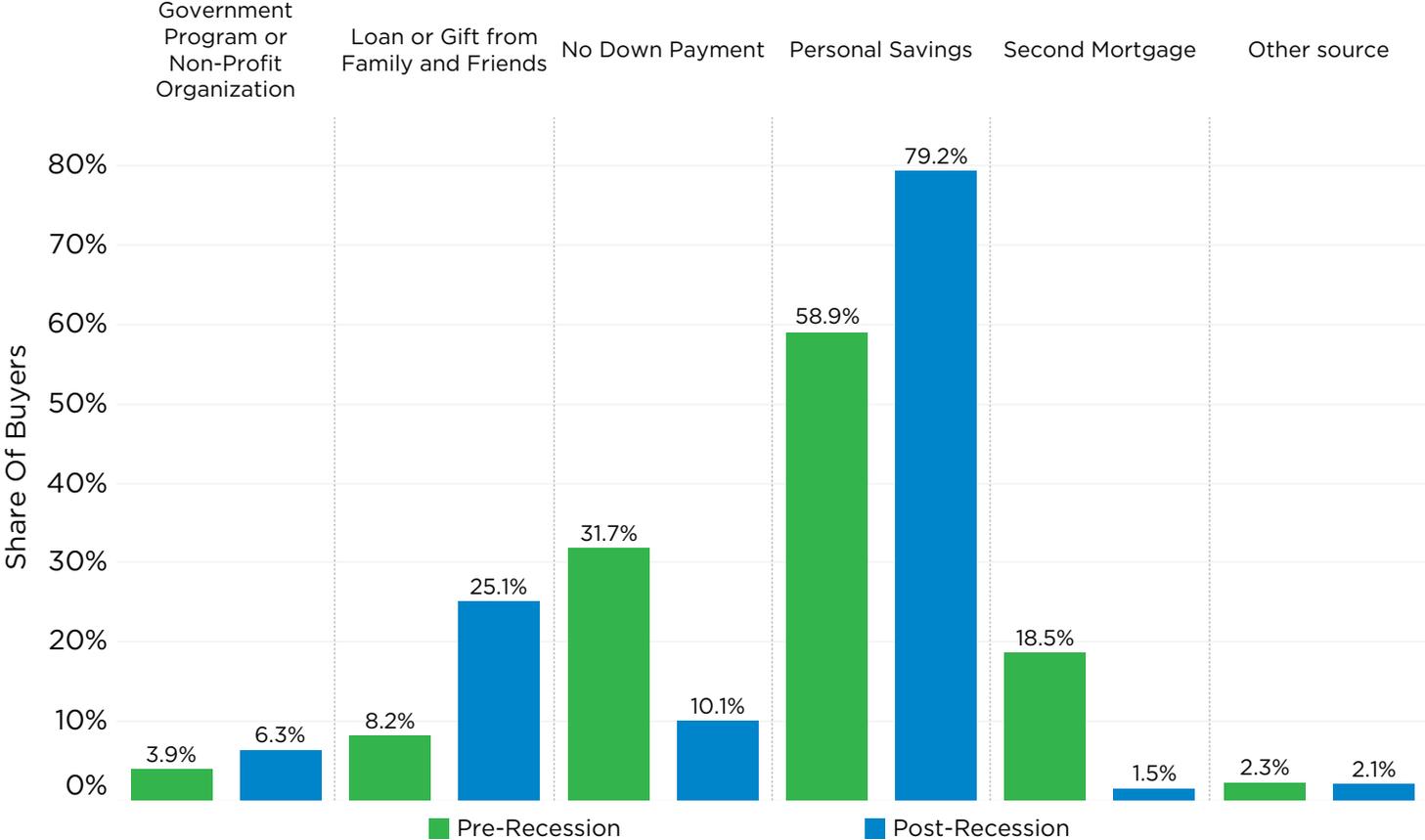
Lower-income workers with jobs in major downtown cores have steadily moved farther away from city centers, sacrificing distance for affordability.



Source: Zillow analysis of U.S. Census Bureau, Longitudinal Employer-Household Dynamics, Origin-Destination Employment Statistics, 2002-2014

Down Payment Sources Among First-Time Homebuyers

Resourceful first-time home buyers are scraping together down payments from a number of different sources.



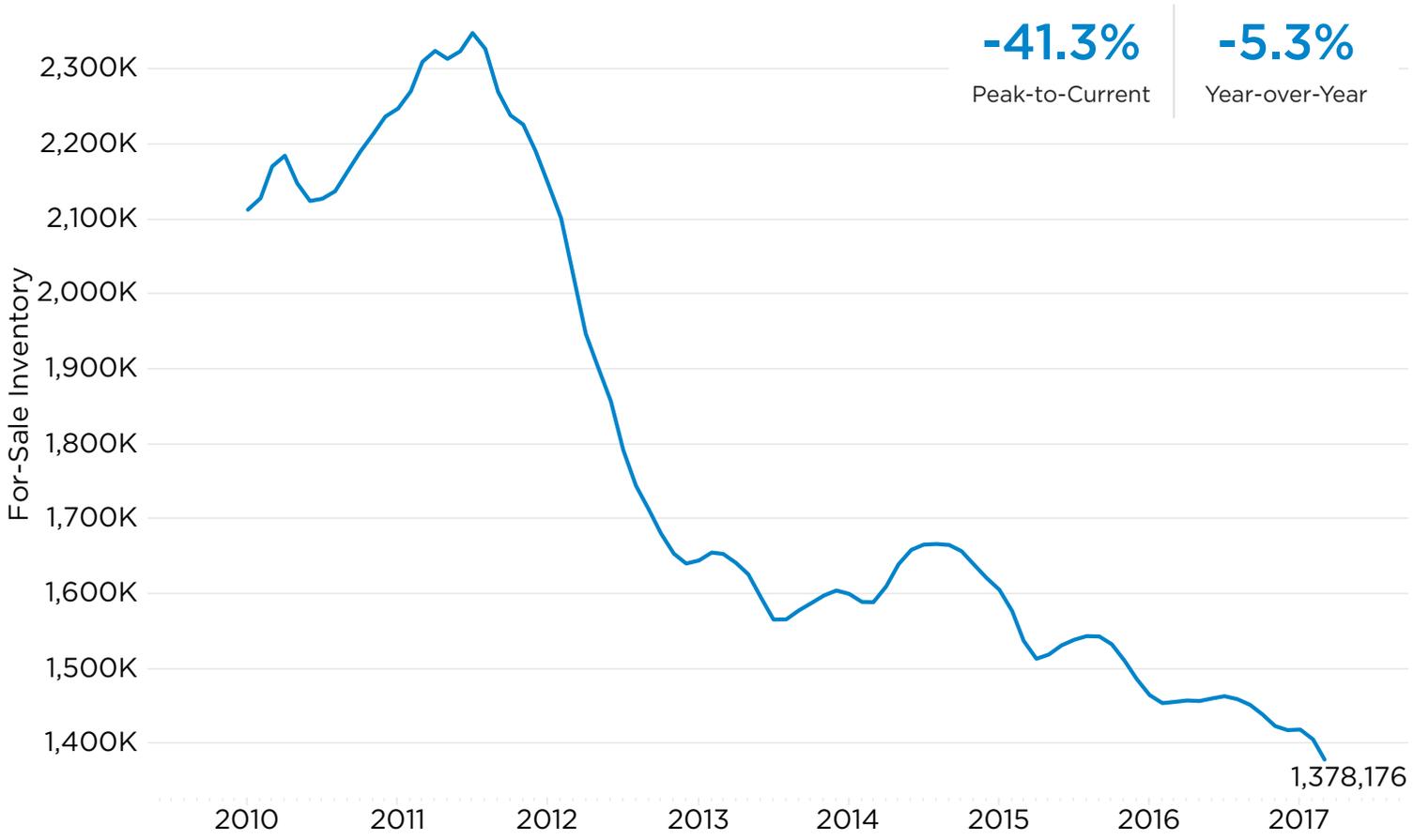
Source: Zillow analysis of Federal Reserve Board, Survey of Household Economics and Decisionmaking, 2014

INVENTORY, CONSTRUCTION AND DEMOGRAPHICS

- Inventory of homes for sale is very low, and getting lower. Inventory constraints are particularly acute among entry-level and median homes – the exact homes sought by first-time homebuyers and young families.
- New construction has thus far failed to get back to pre-recession levels, especially for single-family homes.
- A lack of inventory overall means those homes that are on the market are selling faster – currently, homes spend about a week less on the market before selling than they did a year ago.
- Millennials do value homeownership, but many are finding it difficult to attain, and more young adults are living with their parents.

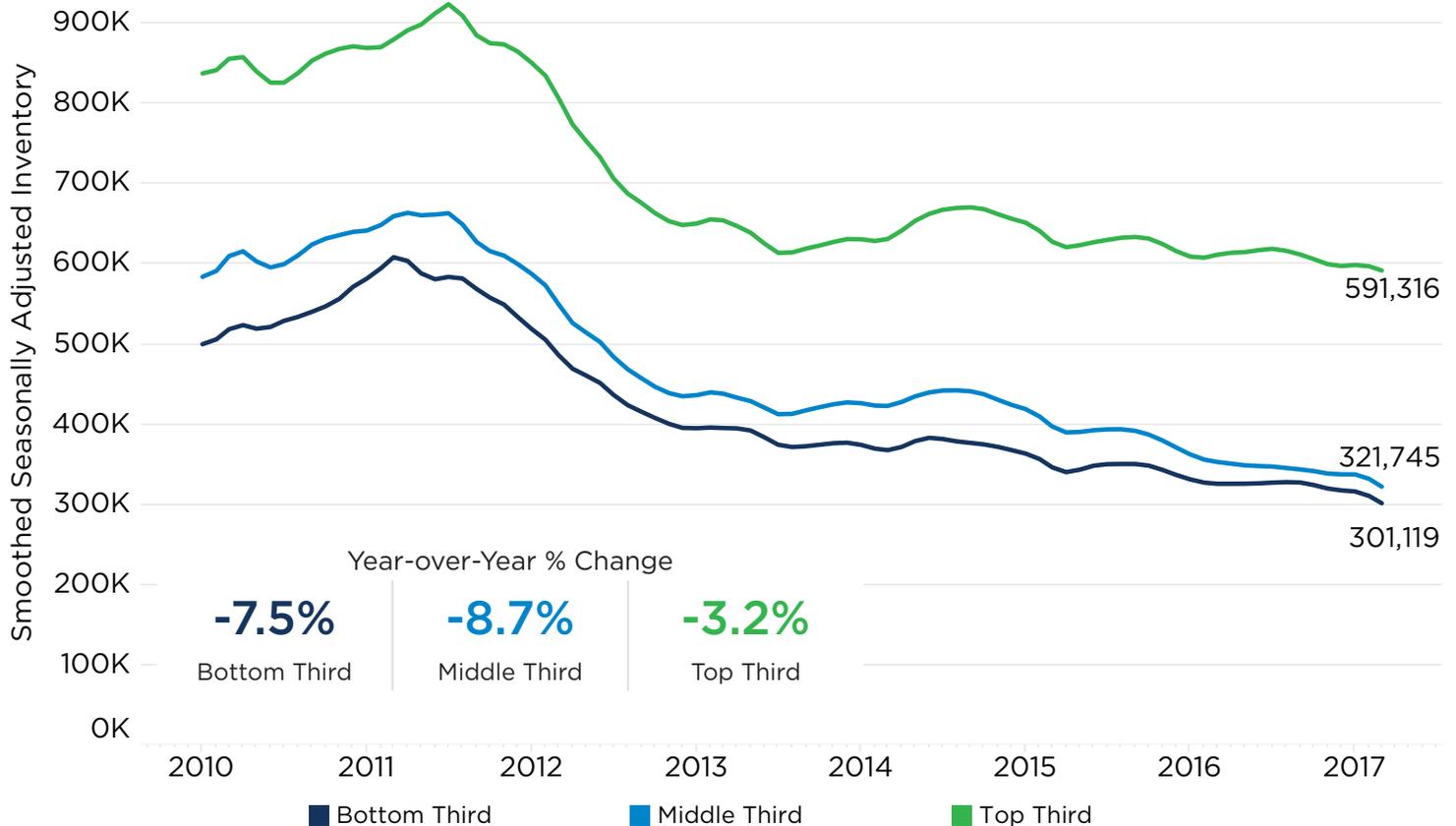
Zillow For-Sale Inventory

The number of U.S. homes for sale is low, and falling.



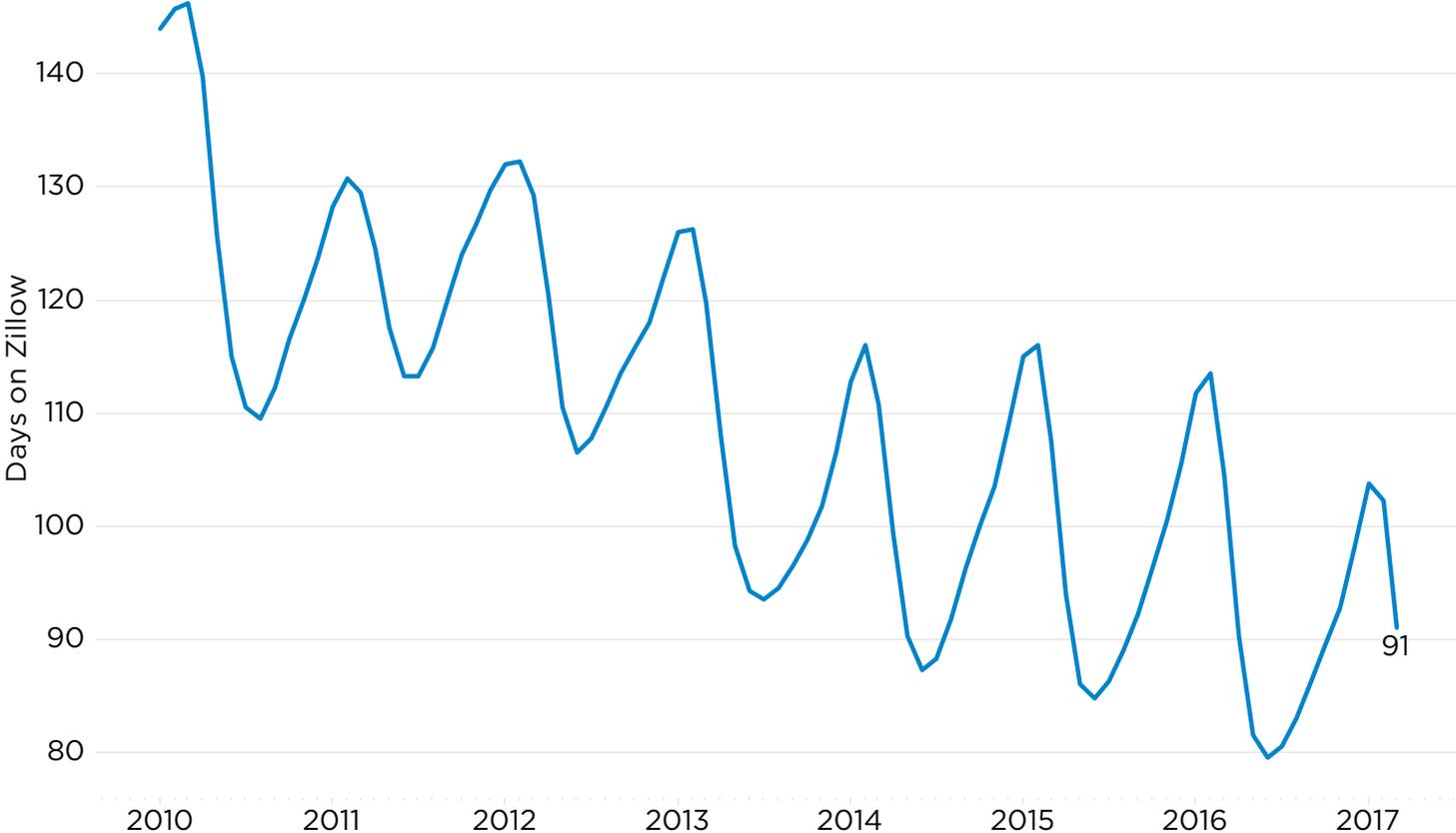
Zillow For-Sale Inventory, by Thirds

Inventory shortages are particularly acute among bottom- and middle-third homes.



Days on Zillow

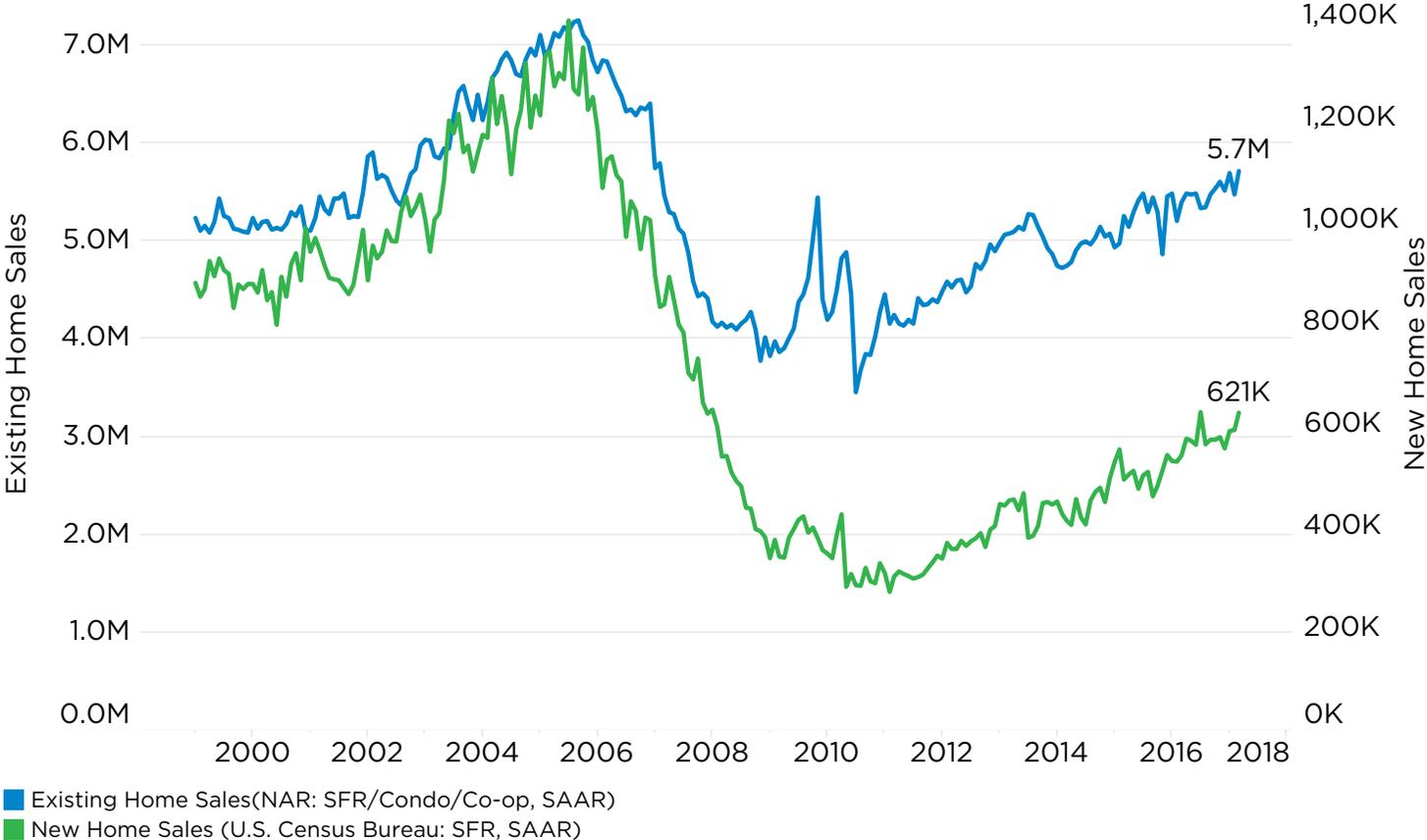
Homes listed for sale are selling more quickly than in the past few years.



Source: Zillow Days on Zillow, Including REOs (March 2017)

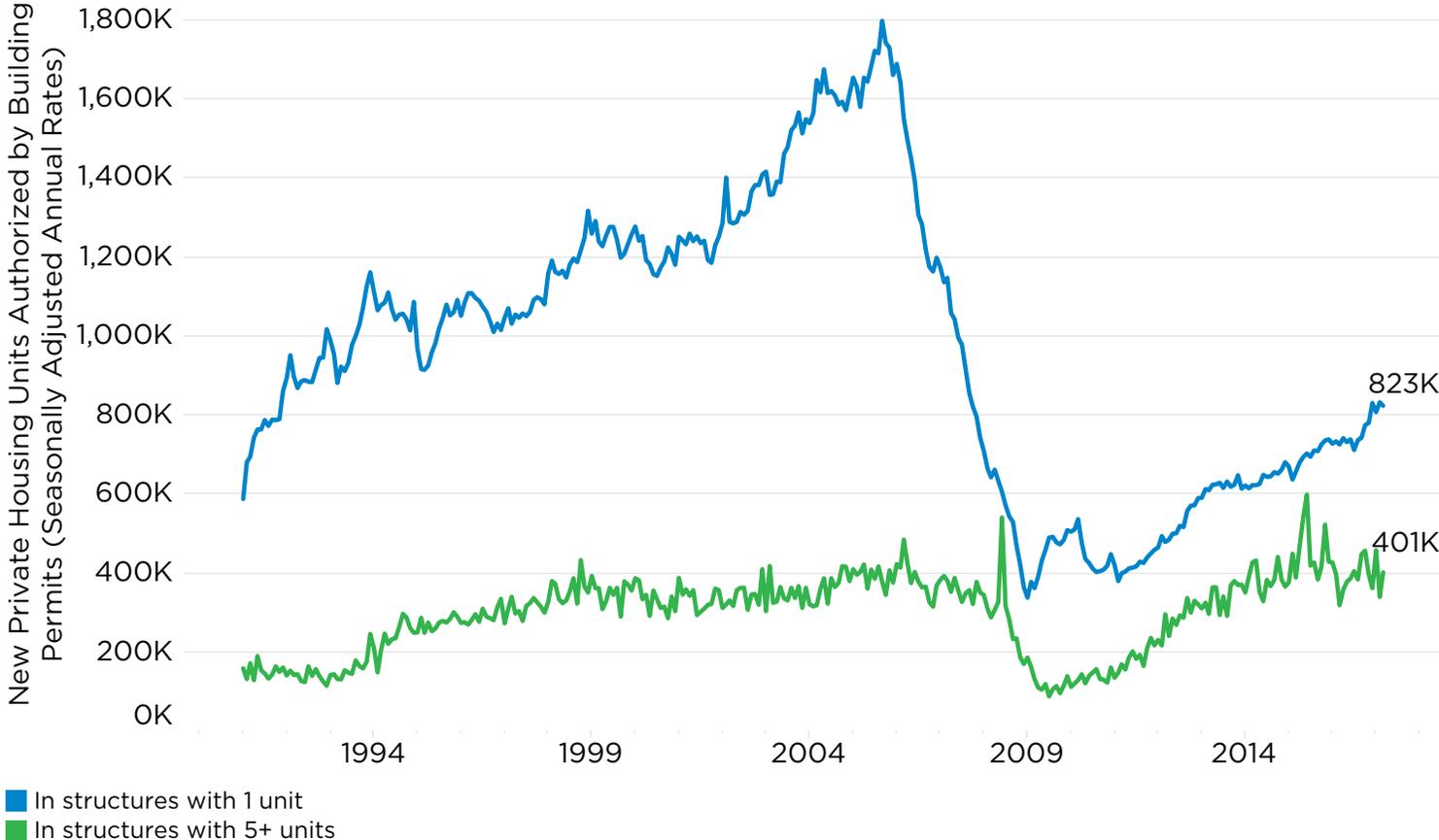
Home Sales

Sales of new homes in particular have struggled to get back to pre-recession levels.



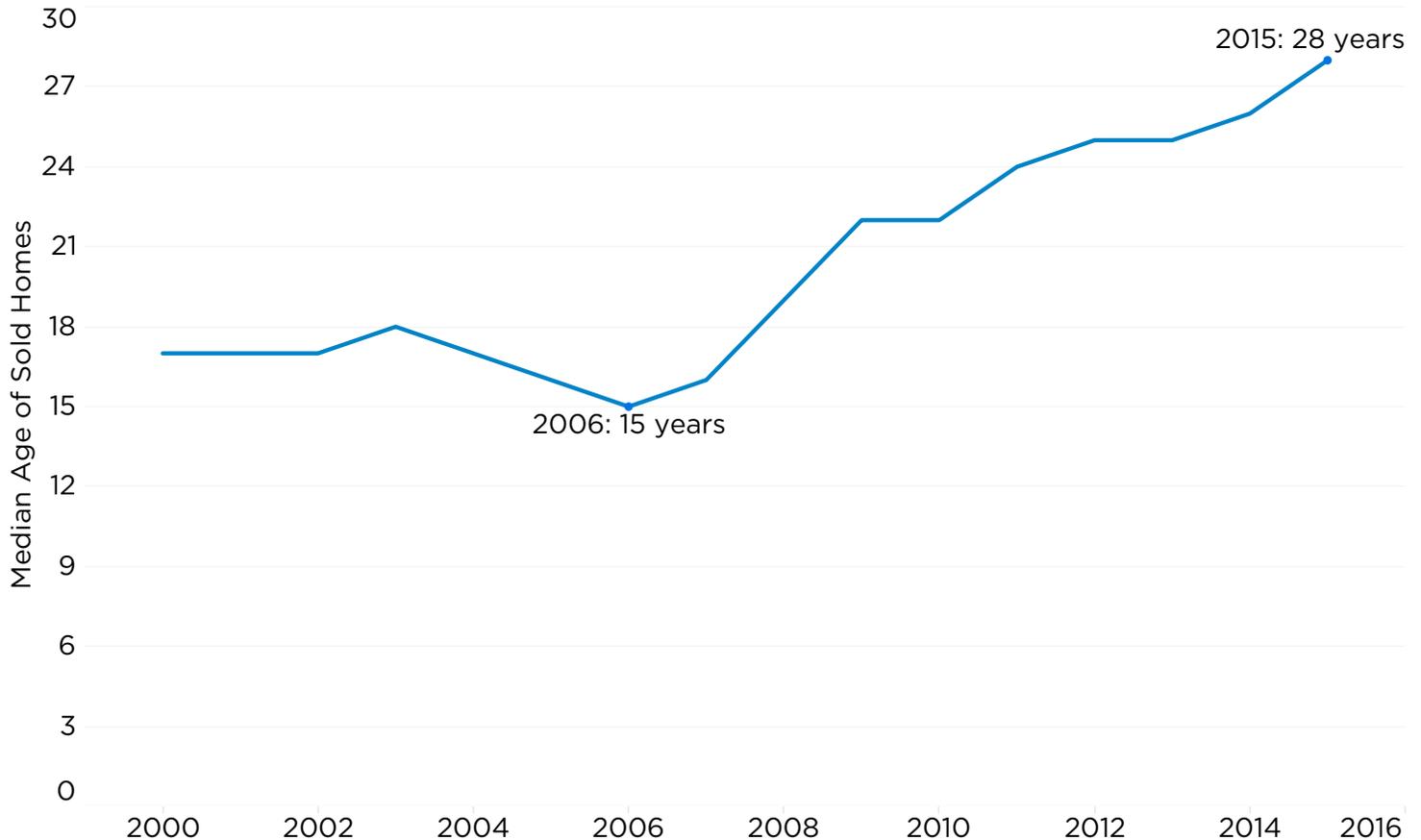
New Residential Construction Permits

Permits for new multifamily projects are near pre-recession levels, while single-family permits remain low.



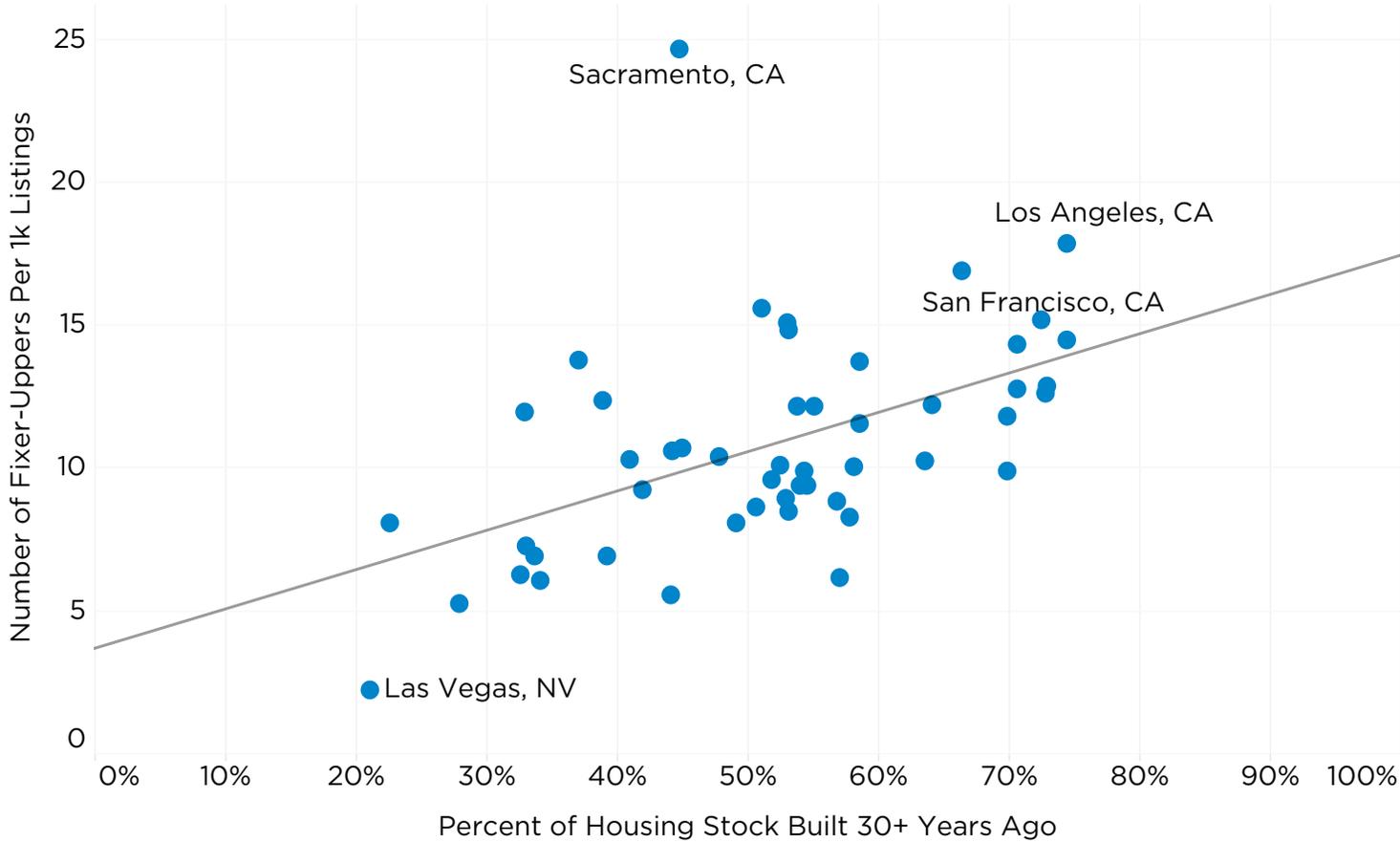
Age of Sold Homes

The age of sold homes has almost doubled since the housing collapse, largely because of a lack of new construction.



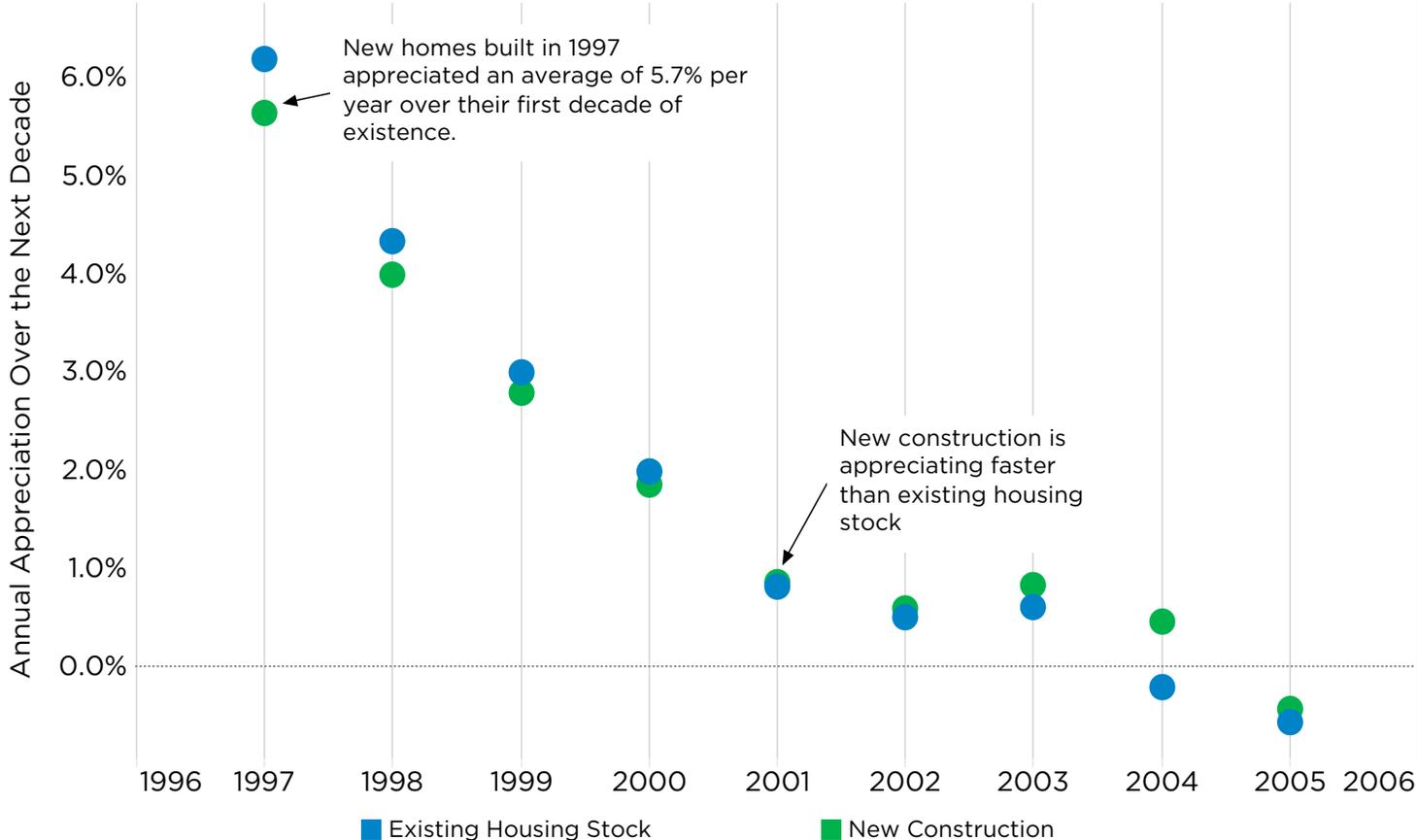
Fixer-Upper Share of Listings

Housing markets with older homes see more listings marketed as fixer-uppers.



New Construction Appreciation by Decade

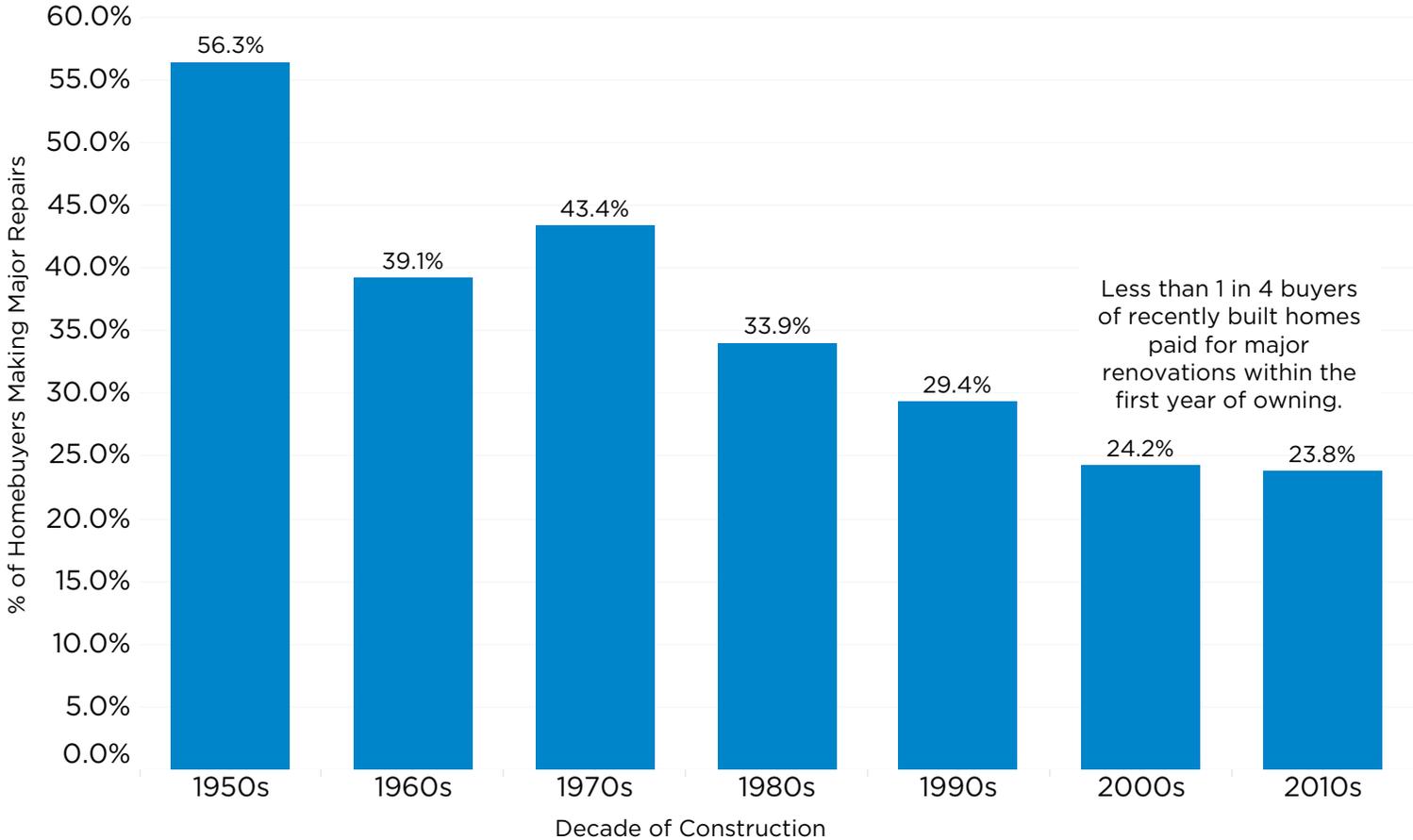
Newly constructed homes held their value better during the recession.



Source: Zillow analysis of home values (Zestimates) appreciation of new and existing homes over time

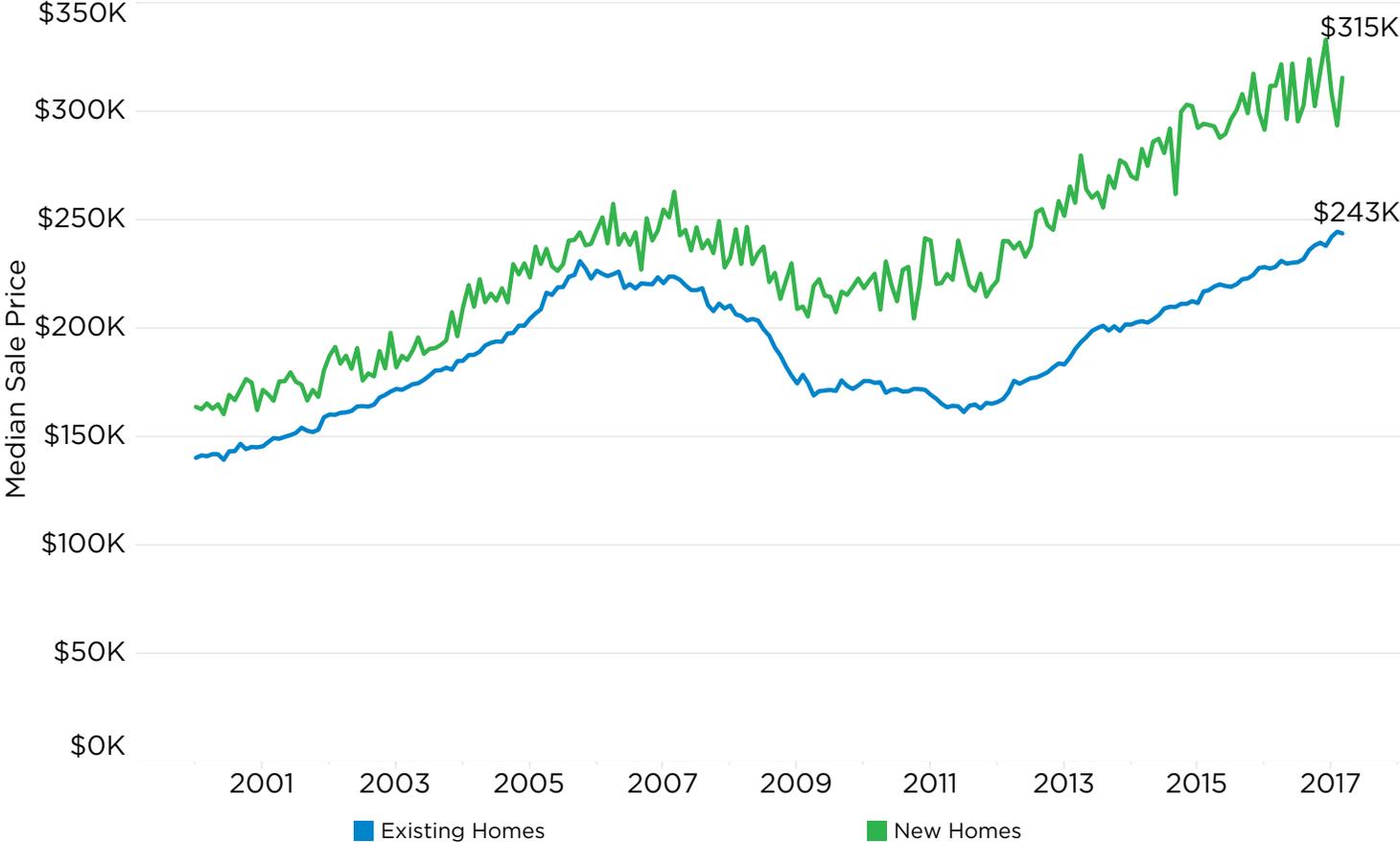
Repairs on New Construction Homes

Buyers of newly constructed homes also pay less in repairs after moving in.



Home Sale Prices

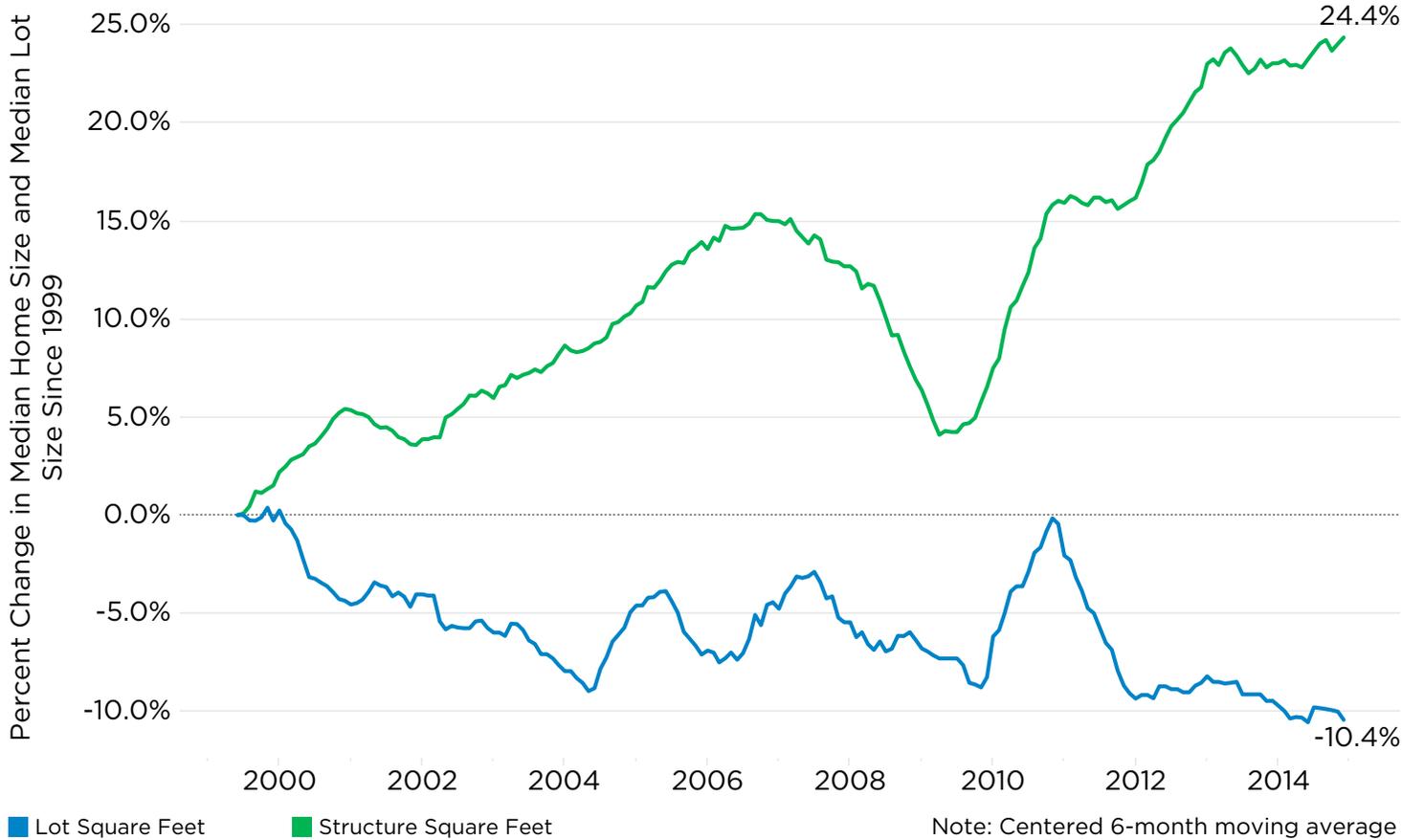
The price gap between newly built and existing homes is widening.



Source: National Association of Realtors and U.S. Census Bureau Construction Review (March 2017)

Home and Lot Sizes

Since 1999, homes have gotten larger while lots have gotten smaller.



Age of Existing Home Buyers and New Construction Buyers

Millennials make up 30% of existing home buyers, and 26.2% of new construction buyers.



Typical Buyer Profile

Existing Homes

Income

\$70K

Marital Status

56.6% married

Have at least one child

40%

Millennial Share

30%

Typical Commute Time

20 minutes

New Construction

Income

\$95K

Marital Status

75.5% married

Have at least one child

46.1%

Millennial Share

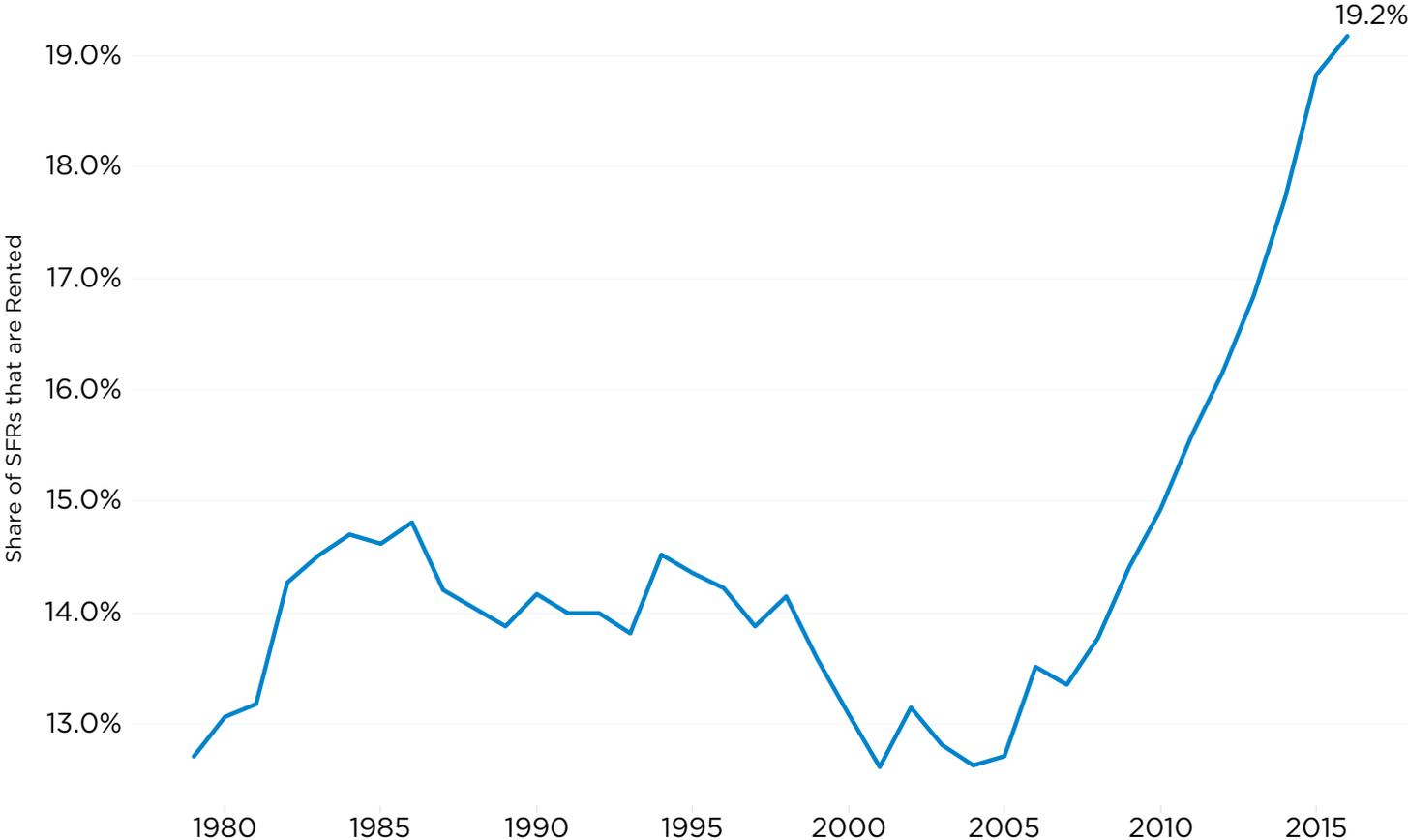
26.2%

Typical Commute Time

25 minutes

Single-Family Residence Rentals

Renting single-family homes is increasingly popular.



Source: Zillow analysis of U.S. Census Bureau, Current Population Survey 2016, made available by University of Minnesota, IPUMS-USA

Homeownership Views by Age

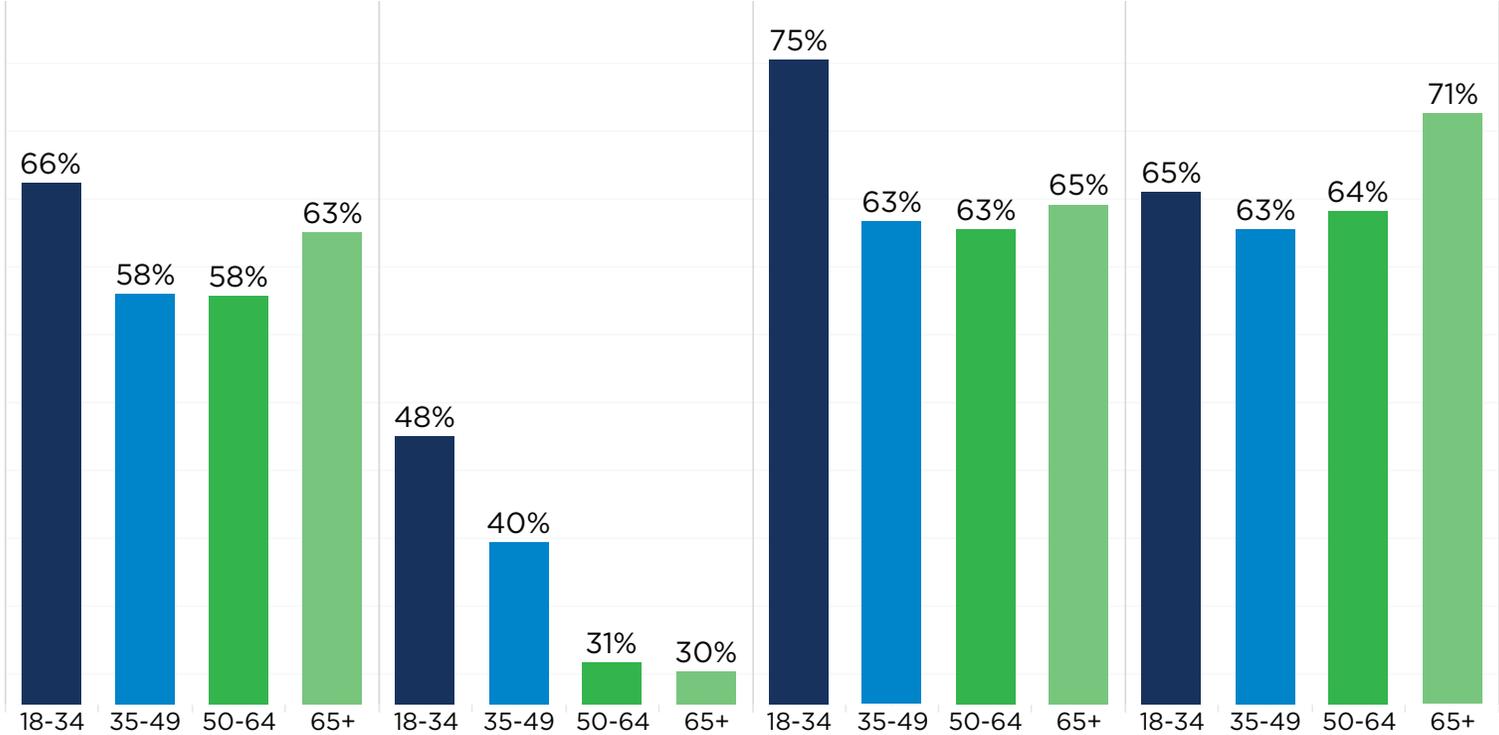
Millennials do have positive views of homeownership and their opinions tend to align most closely with those of their grandparents.

Owning a home is necessary to live The Good Life and The American Dream

Owning a home is necessary to be a respected member of society

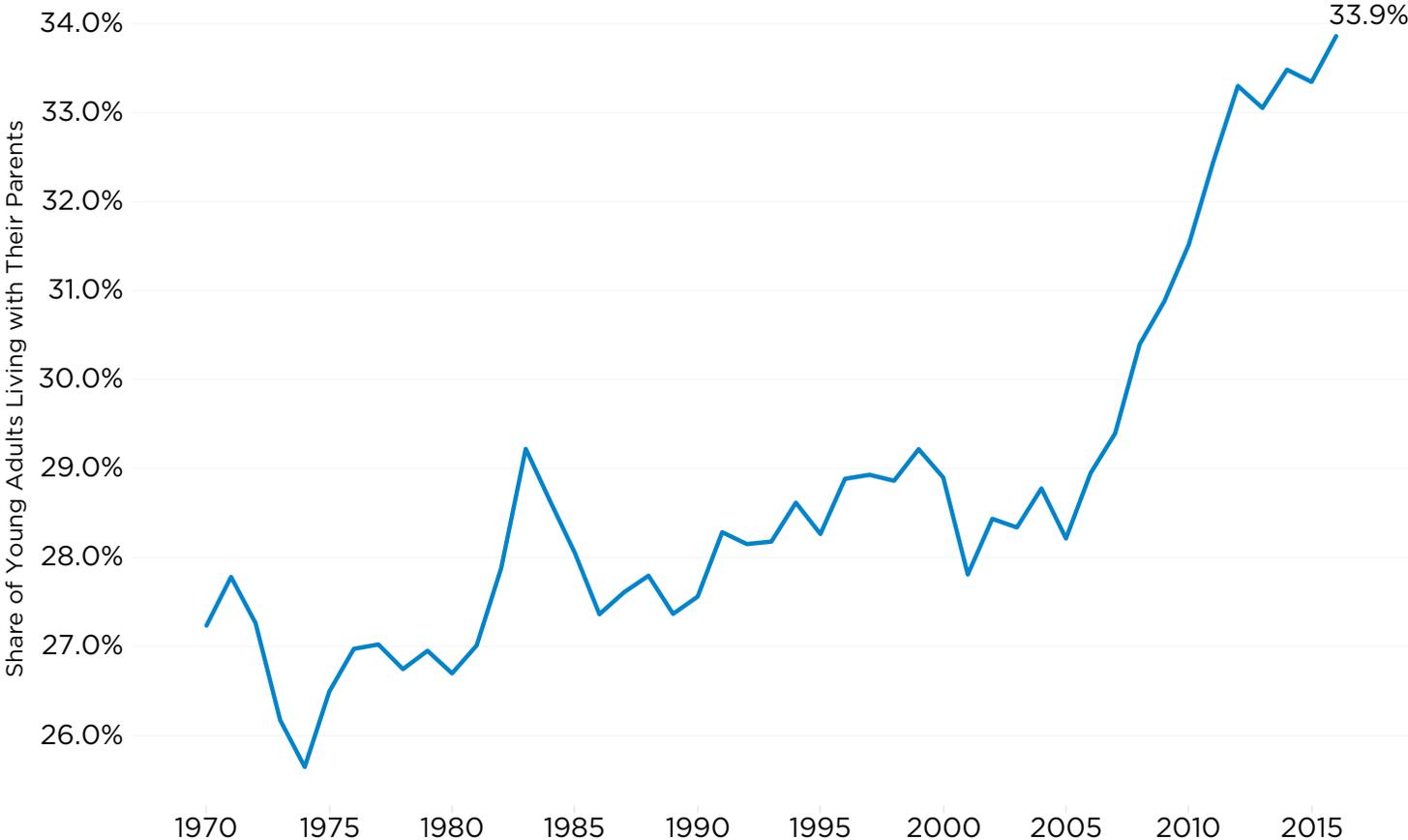
Owning provides a person more freedom

Buying a home is the best long-term investment a person can make



Share of Millennials Living With Their Parents

The share of millennials (age 18-34) living with their parents has increased sharply in the past decade.



Source: U.S. Census Bureau: Current Population Survey, March Supplement, 2016, made available by the University of Minnesota, IPUMS-USA

Comparing First-Time Buyers Now and Then (mid 1970s)

Today's first-time home buyer is more than three years older and typically rents longer before making the jump into homeownership compared to previous generations.

1975-1979

Average age

29 years old

Household size

2.6 people

Years renting before buying

4.6 years

Home value in today's dollars

\$99K

Income in today's dollars

\$55K

2010-2013

Average age

32.5 years old

Household size

2 people

Years renting before buying

6 years

Home value in today's dollars

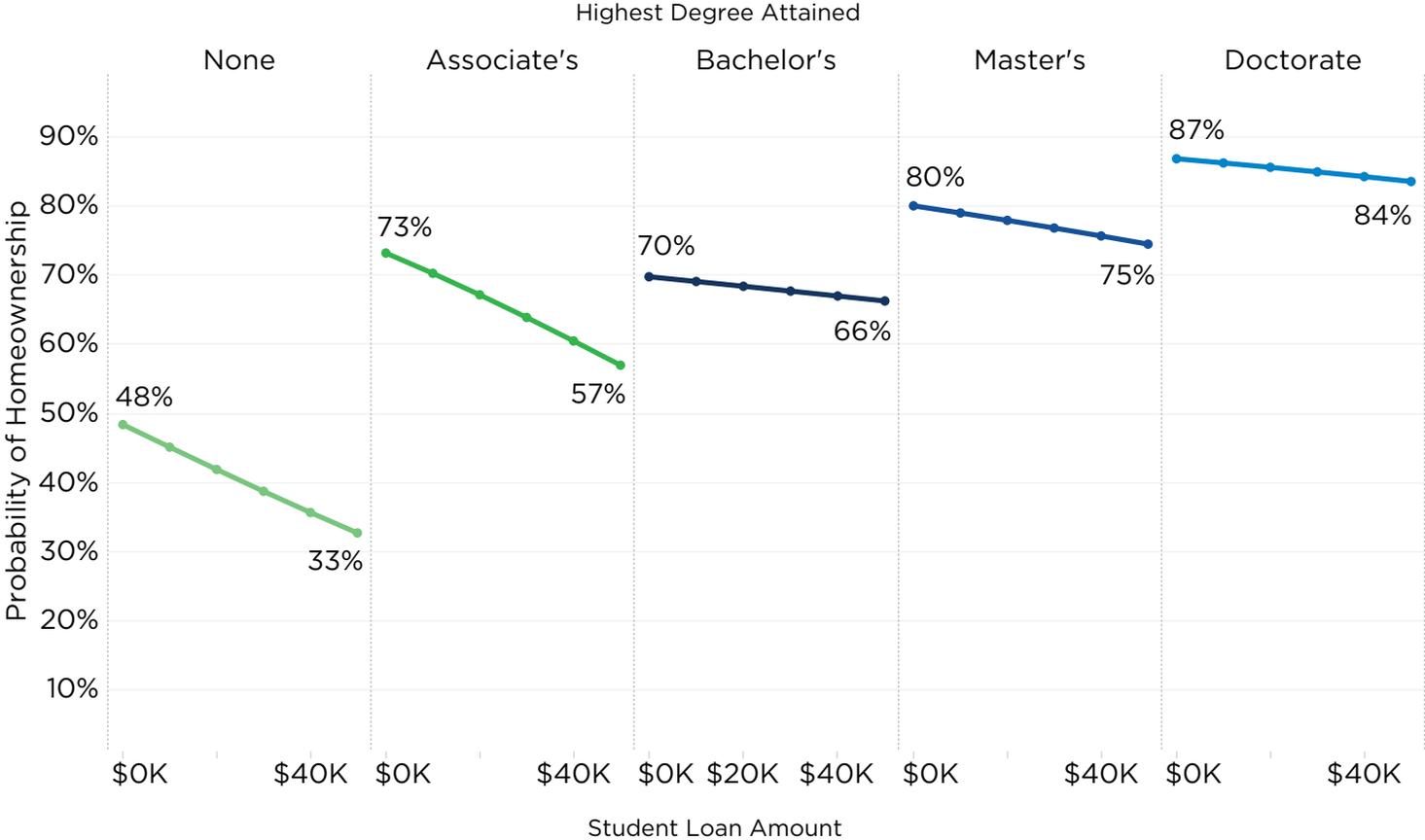
\$140K

Income in today's dollars

\$54K

Student Debt and Homeownership

Generally, more completed education corresponds with better homeownership odds, regardless of debt level.



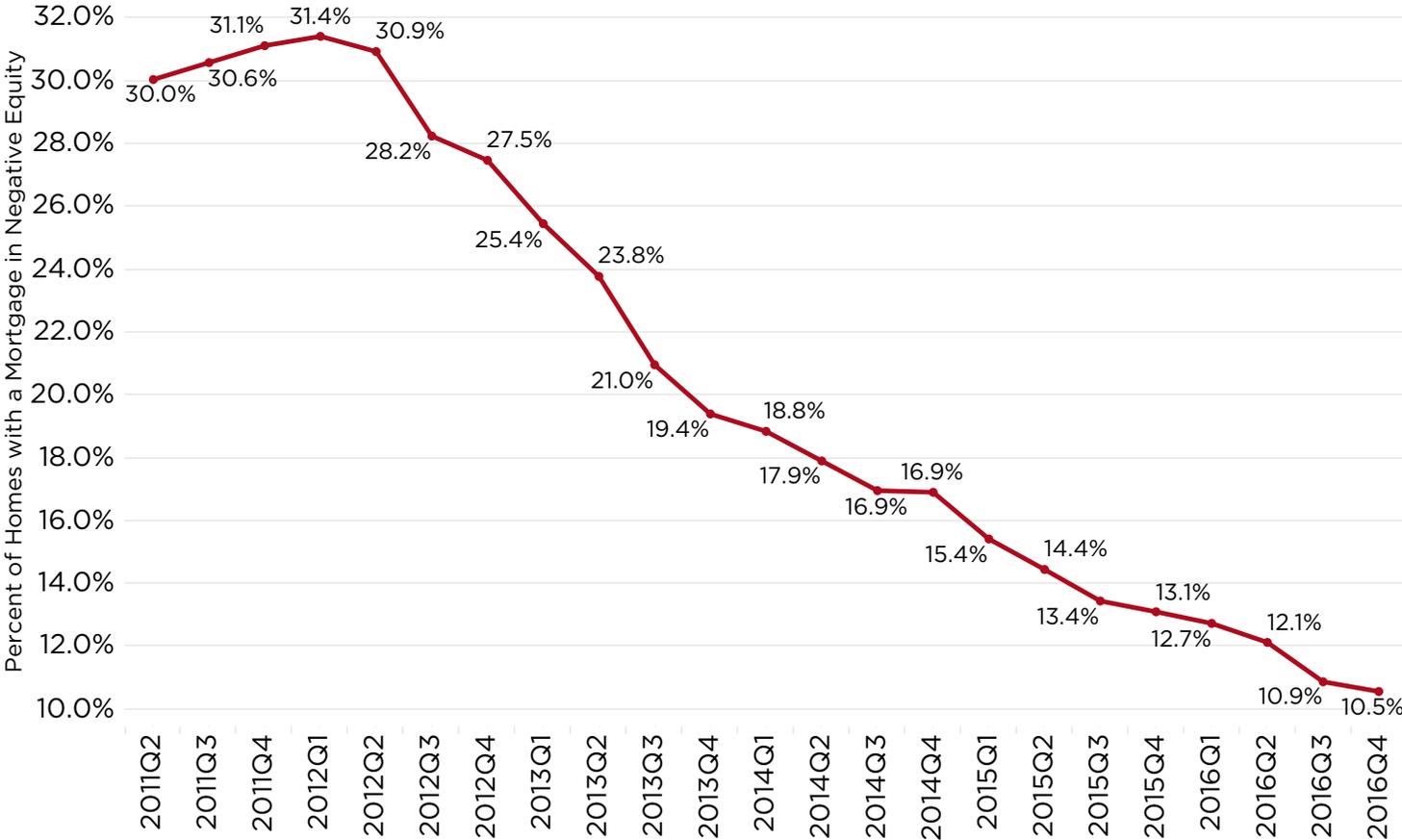
Source: Zillow analysis of University of Michigan Panel Survey of Income Dynamics, 2013

JOBS, NEGATIVE EQUITY & BROADER ECONOMIC TRENDS

- The U.S. negative equity rate has fallen consistently for four years, but more than 5 million homeowners remain trapped underwater. These homeowners are more likely to live in less expensive homes, contributing to inventory shortages.
- The homeownership rate is at multi-decade lows, as renters stay renting longer and would-be buyers find it difficult to enter the market.
- For the homeownership rate to climb meaningfully, it will need to be driven by younger and minority Americans finding ways to successfully buy homes.

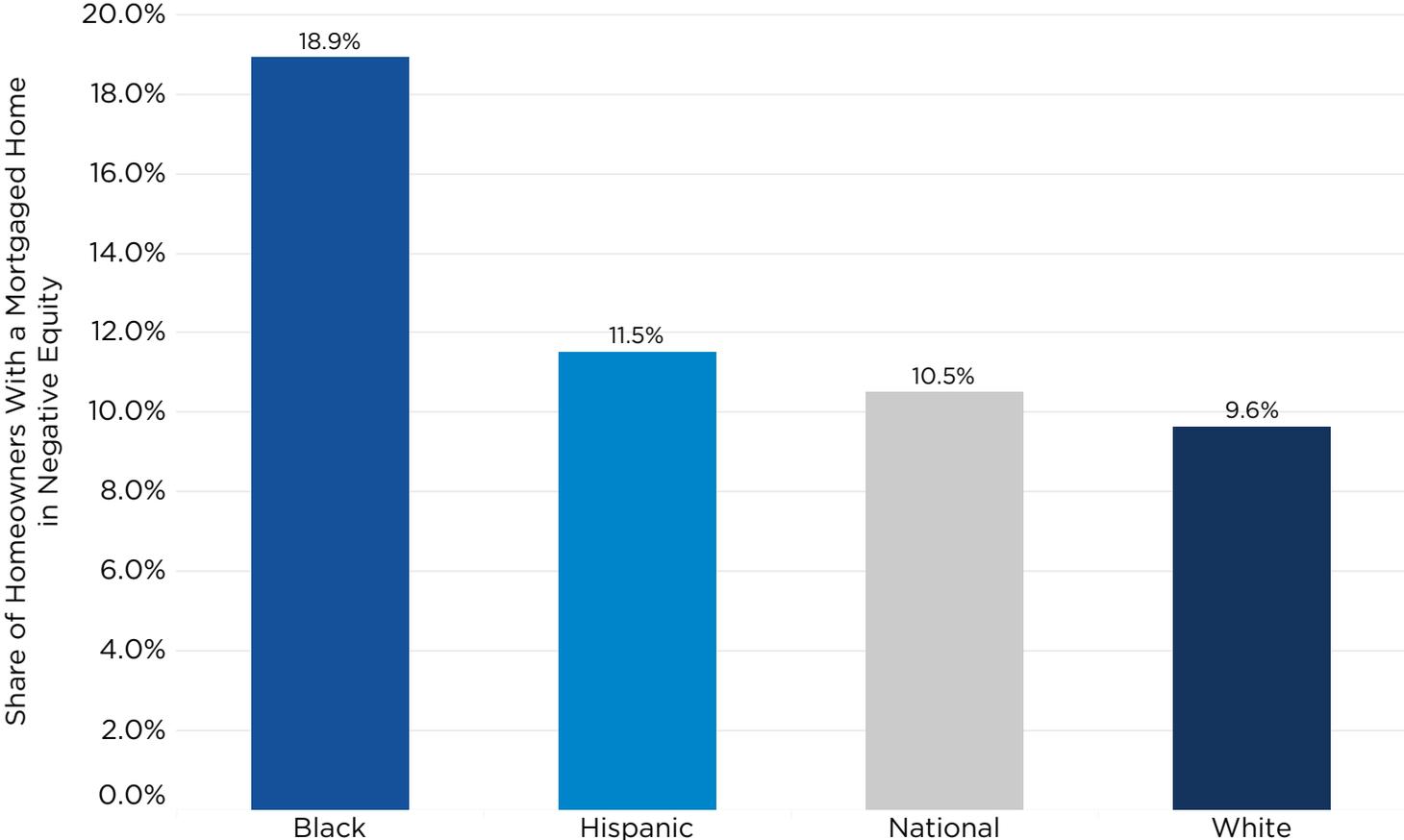
Negative Equity

Negative equity has declined steadily since early 2012.



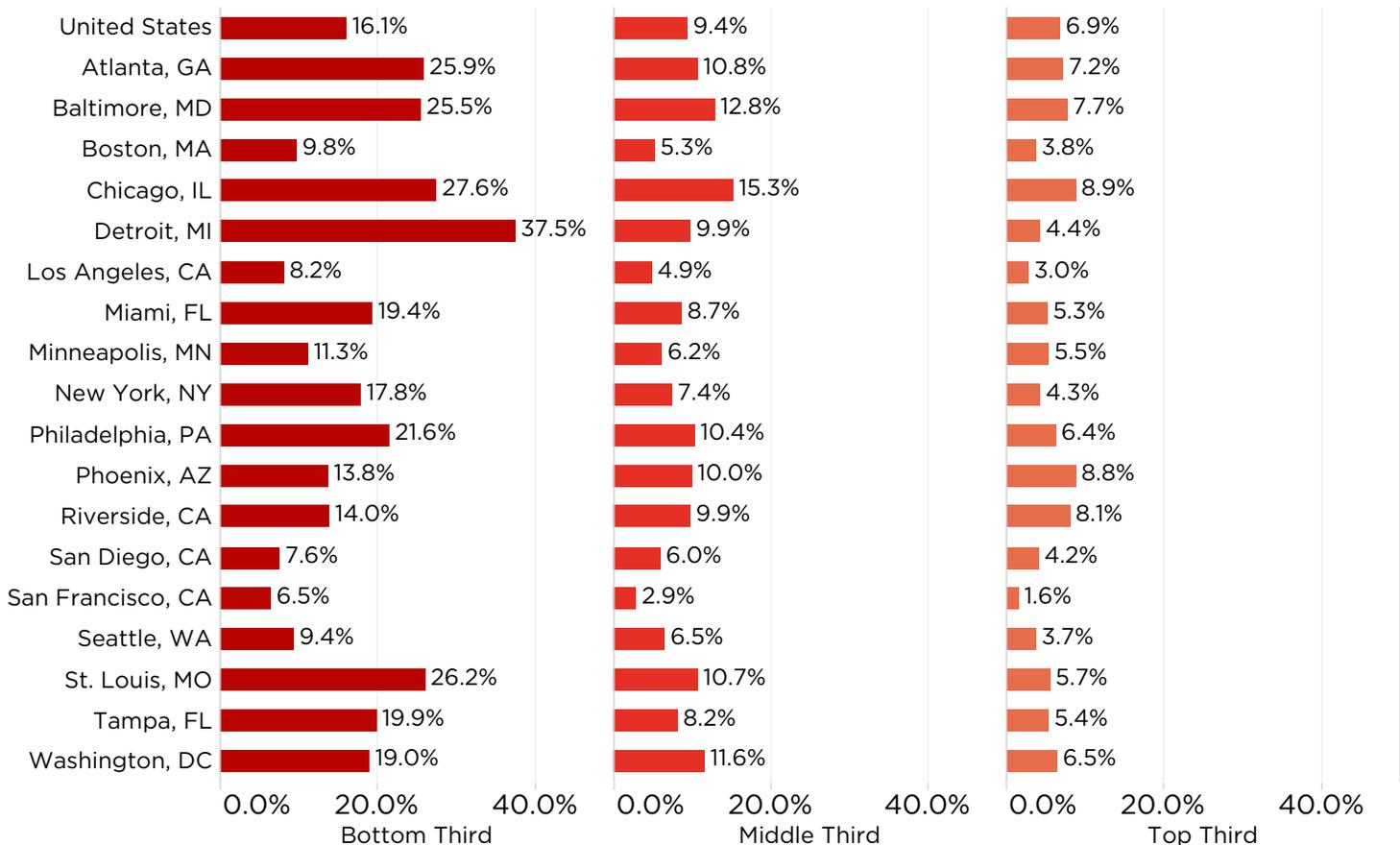
Negative Equity, by Race

The negative equity rate in largely black communities is more than twice as high as the negative equity rate in predominantly white communities.



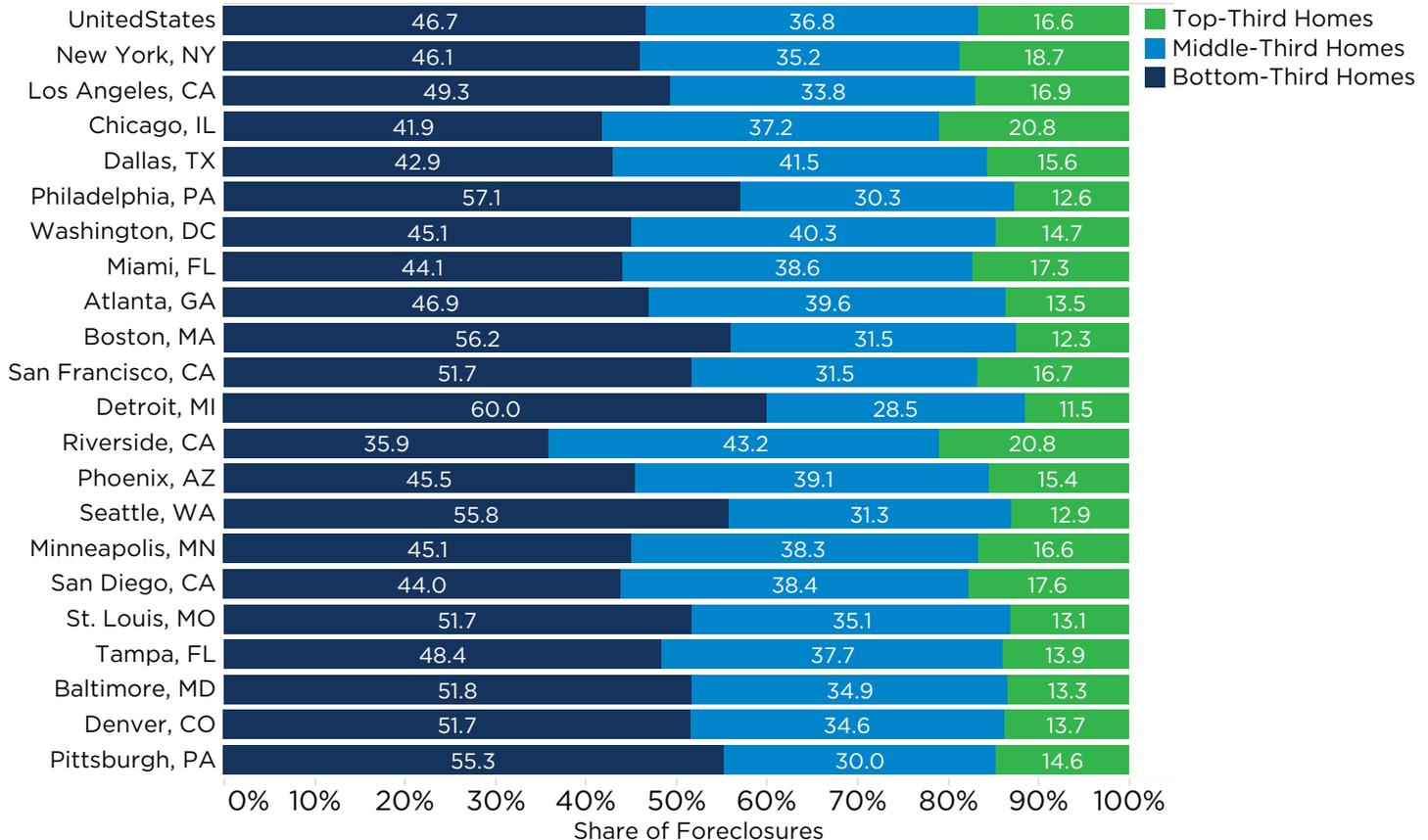
Negative Equity, by Thirds

Negative equity is worst among bottom-third homes.



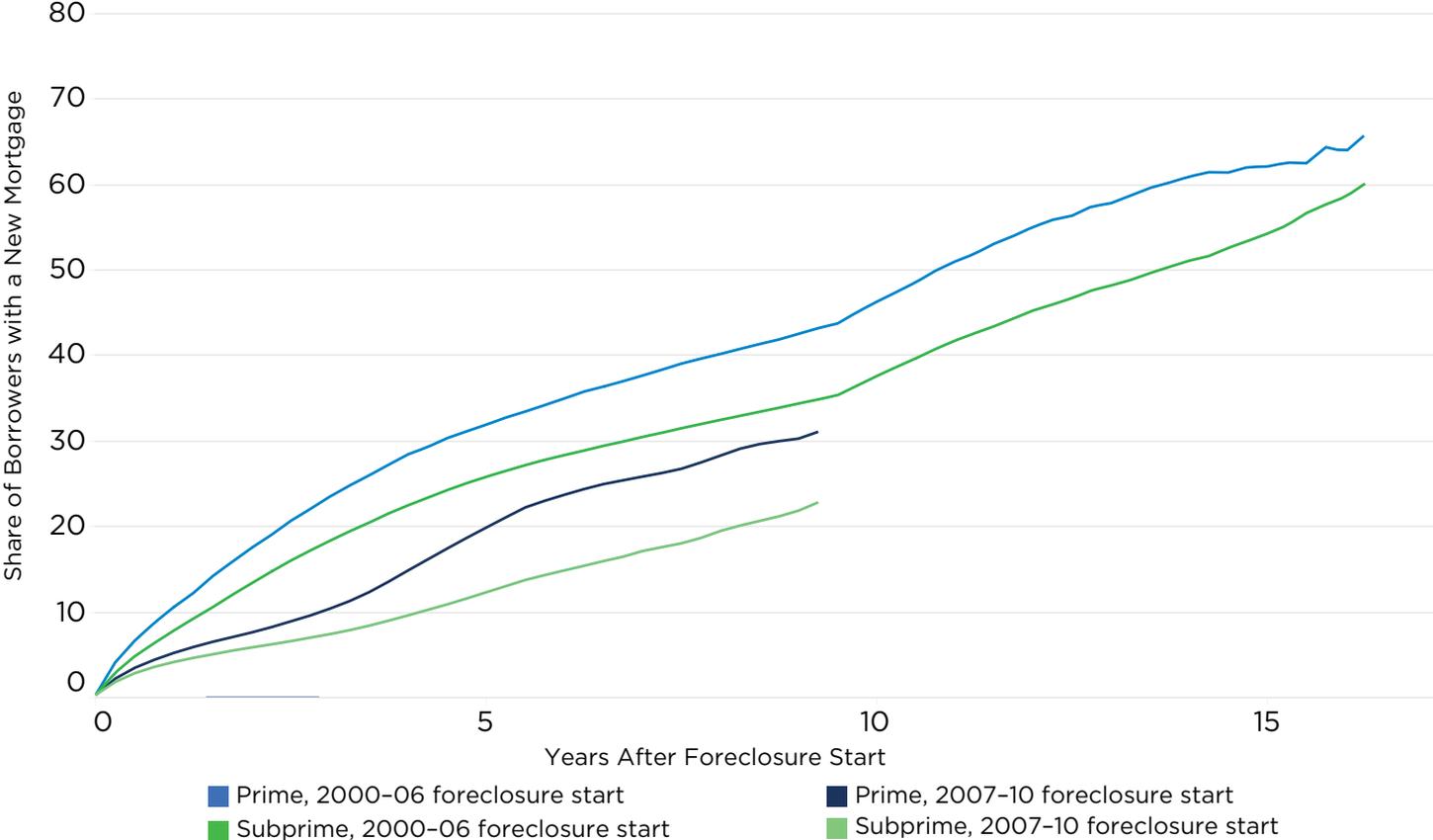
Foreclosure Thirds

Owners of the least expensive homes were hit hardest by the foreclosure crisis.



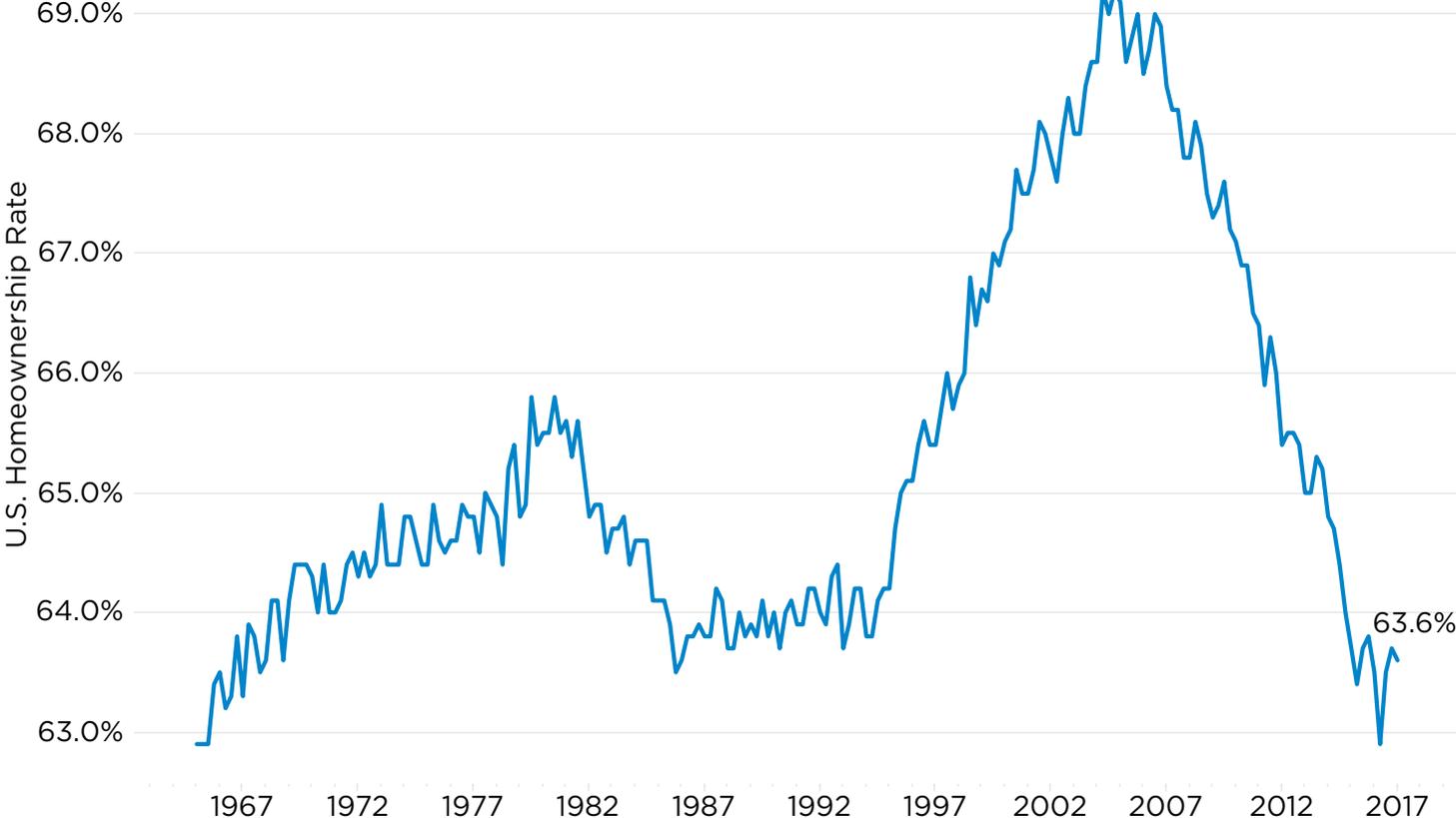
Boomerang Buyers

Homeownership rates for individuals foreclosed upon during the recession have been slower to recover than for those foreclosed upon before the recession.



U.S. Homeownership Rate

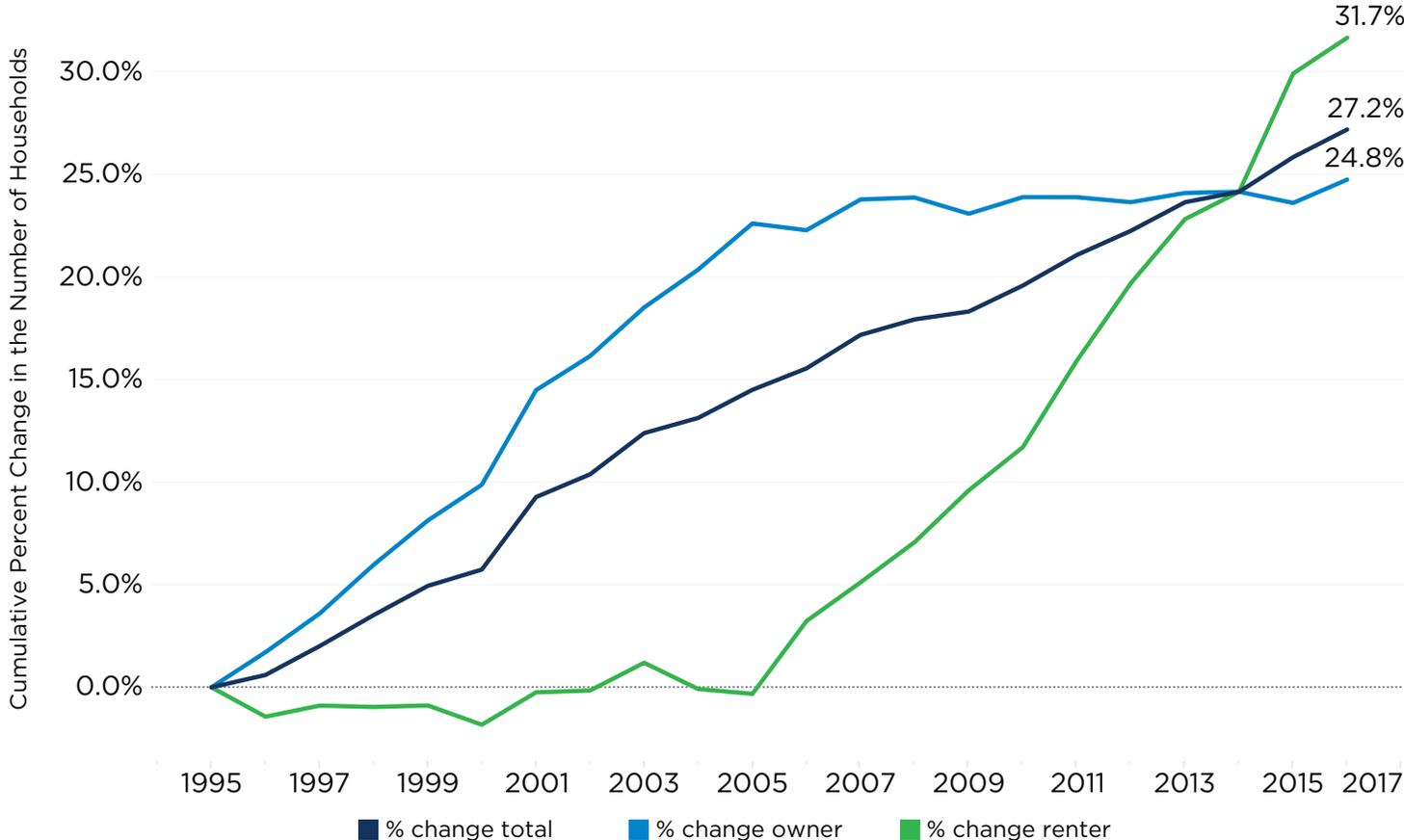
The U.S. homeownership rate is near historic lows.



Source: U.S. Census Bureau Homeownership Rate for the United States (2017 Q1)

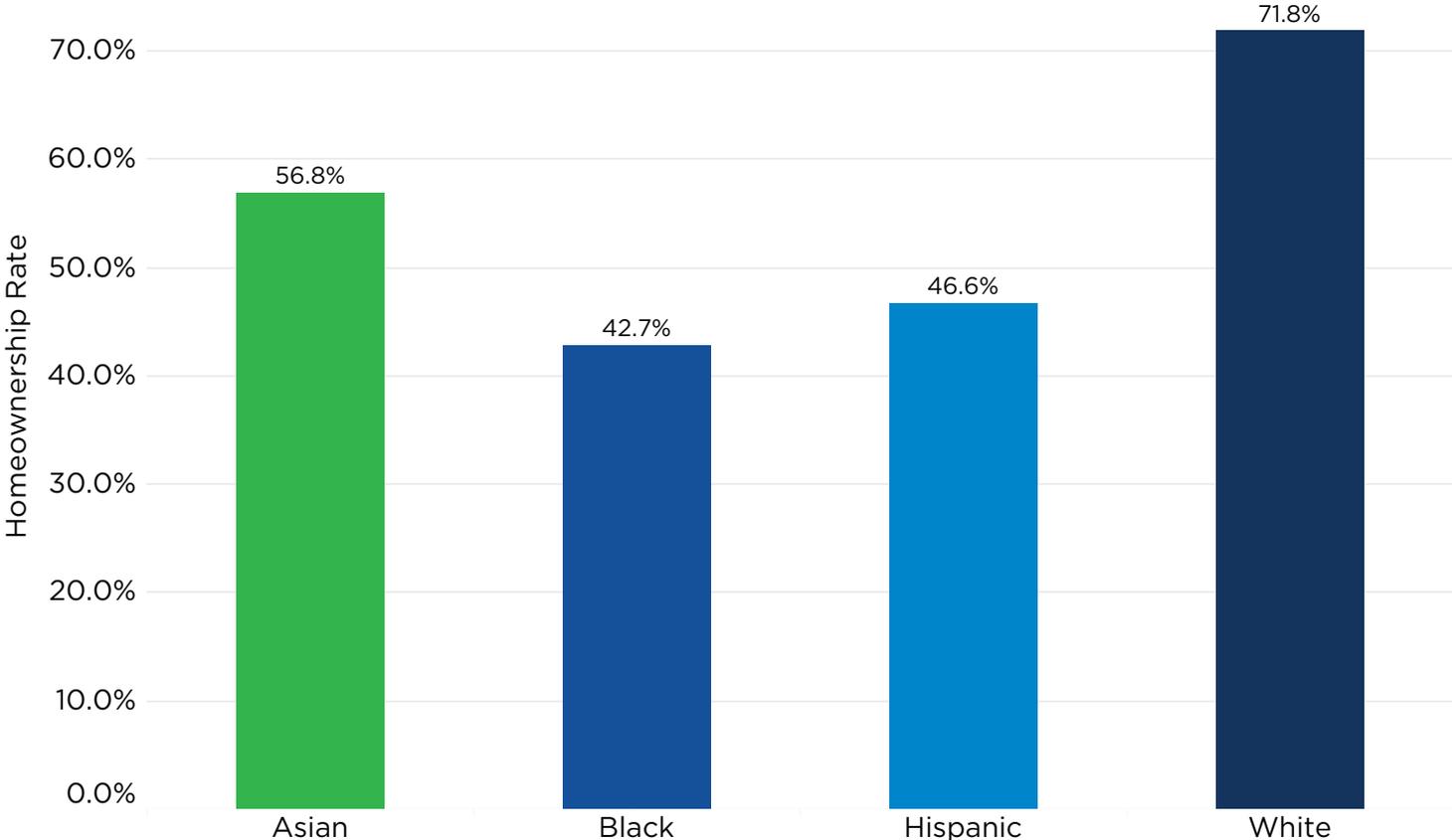
Newly Formed Households

Since 2005, newly formed households have tended to rent.



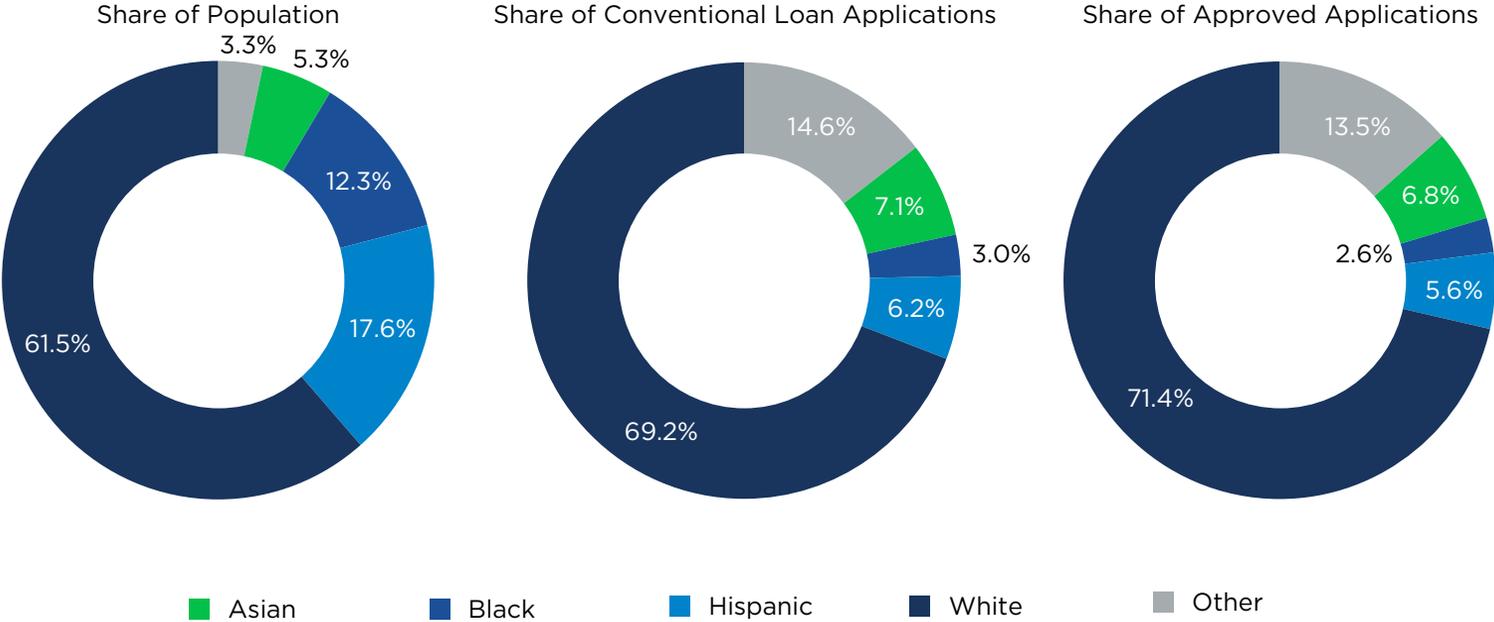
U.S. Homeownership Rate, by Race

Blacks have the lowest homeownership rate.



Loan Applications

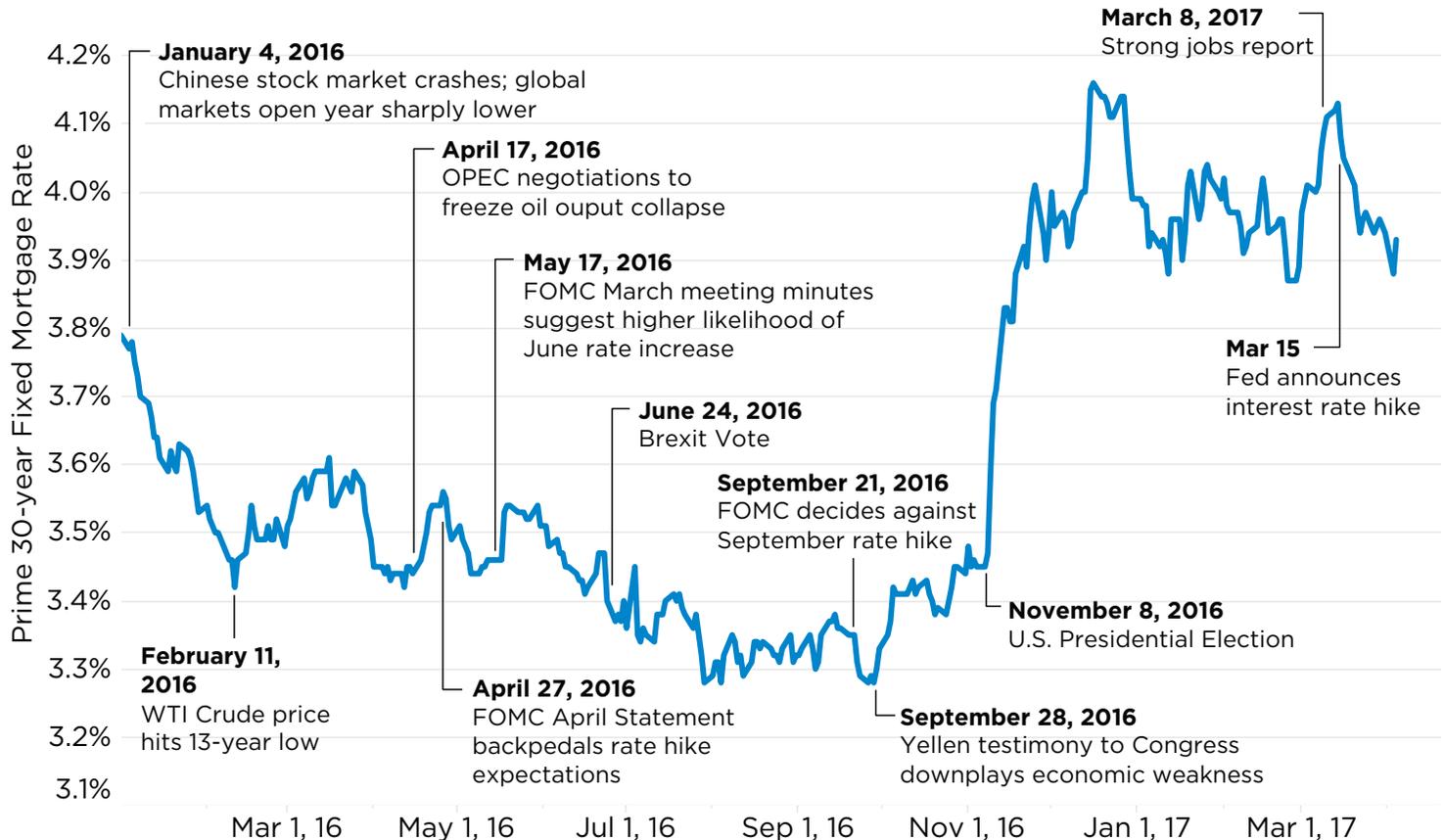
Blacks and Hispanics are underrepresented among loan applications and approvals.



Source: Zillow analysis of the U.S. Census Bureau, American Community Survey, 2015 and the Home Mortgage Disclosure Act data, 2015

The Year in Mortgage Rates: 2016

Mortgage interest rates spiked at the end of 2016 after staying low for much of the year in the face of global uncertainty.



About Zillow

Zillow® is the leading real estate and rental marketplace dedicated to empowering consumers with data, inspiration and knowledge around the place they call home, and connecting them with the best local professionals who can help. In addition, Zillow operates an industry-leading economics and analytics bureau led by Zillow's Chief Economist Dr. Svenja Gudell. Dr. Gudell and her team of economists and data analysts produce extensive housing data and research covering more than 450 markets at Zillow Real Estate Research. Zillow also sponsors the quarterly Zillow Home Price Expectations Survey, which asks more than 100 leading economists, real estate experts and investment and market strategists to predict the path of the Zillow Home Value Index over the next five years. Launched in 2006, Zillow is owned and operated by Zillow Group (NASDAQ: Z and ZG), and headquartered in Seattle.

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