



HOUSING MARKET OVERVIEW 2018 Q2

Zillow Economic Research

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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.

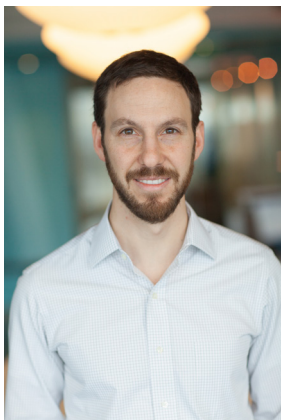
Prior to joining Zillow, Svenja did economic, financial and strategy consulting for Analysis Group and was an Assistant Economist in the Research Group of the Federal Reserve Bank of New York. Svenja has a Bachelor of Arts in economics from the University of Rochester, a Master of Arts in economics from 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. 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.



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.

Zillow Economic Research



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.



Alexander Casey, Policy Advisor

Alexander joined Zillow as a policy analyst in the summer of 2016. He works on the Economic Research team, using Zillow's research to contribute to current public policy concerning housing and the overall economy. Alexander is involved with a variety of policy issues including housing assistance, land use, finance and transportation. Prior to joining Zillow, Alexander worked at the Minnesota Attorney General's Office on consumer protection issues. Alexander holds an M.P.A. from the Evans School of Public Policy and Governance at the University of Washington, and a B.A. in Sociology from the University of Minnesota.

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.

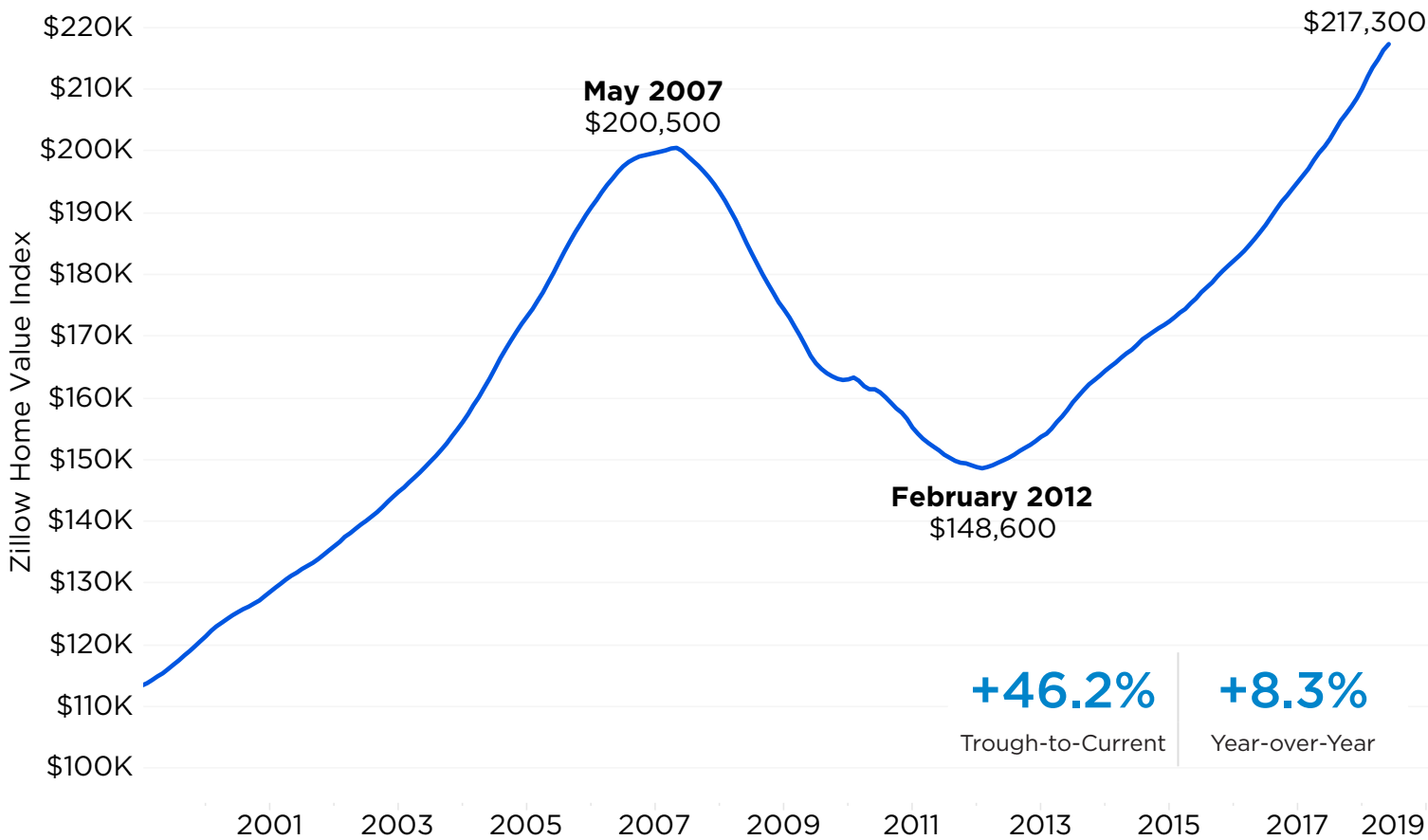
Prior to joining Zillow, Stan spent five years at Expedia, where he ran the advanced analytics team. Before Expedia, Stan served as a researcher and faculty member at the University of Virginia, and was previously a Presidential Management Fellow where he served at NASA, the Office of Science and Technology 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.

HOME VALUES AND RENTS

- U.S. home values are growing at a steady pace, and have surpassed pre-recession highs nationally and in a number of large markets. Driven largely by limited inventory and high demand, 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 U.S. rents has slowed considerably over the past couple of years and has largely stabilized. Pockets of strong rent appreciation remain in the Pacific Northwest and California.

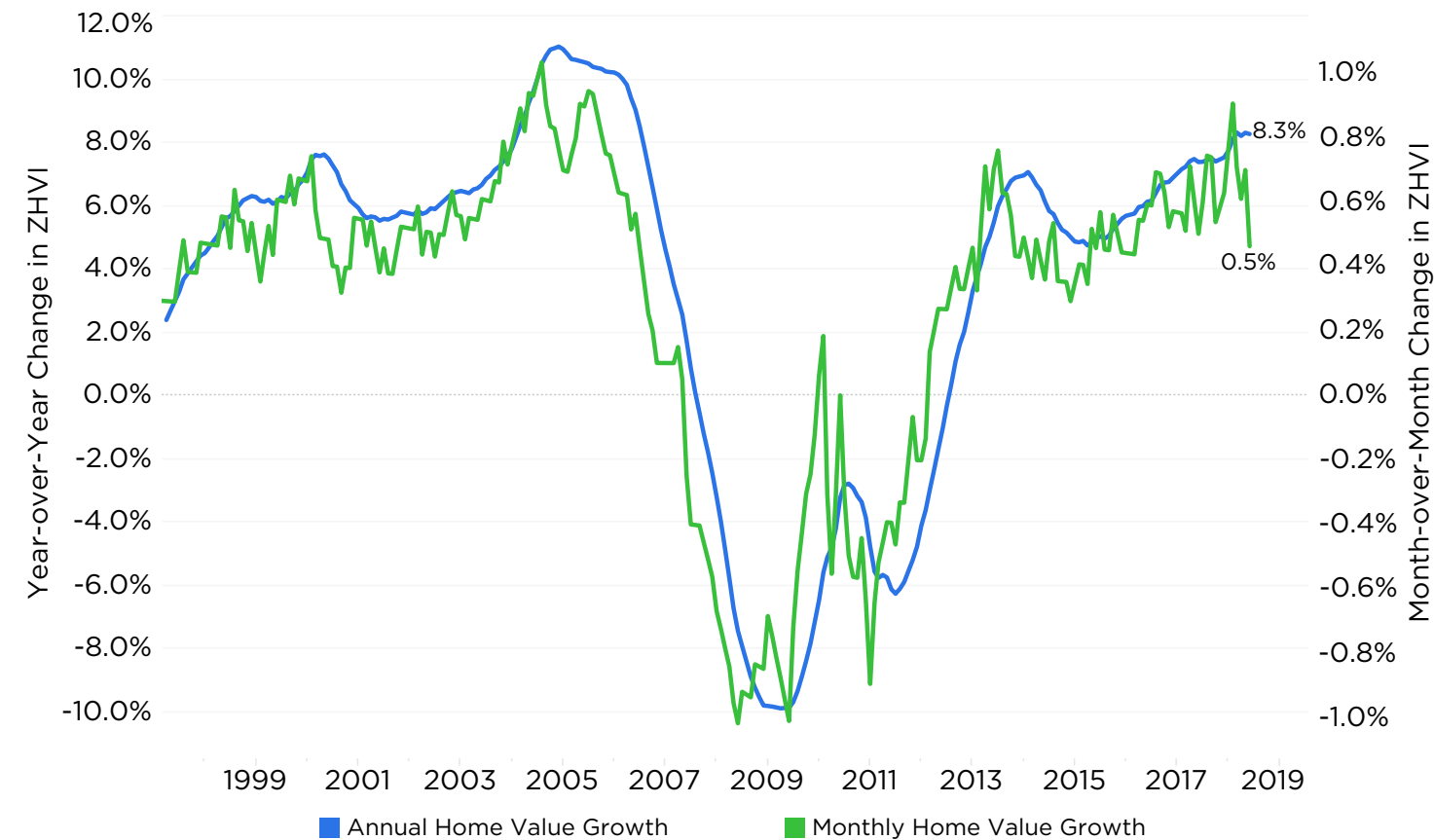
Zillow Home Value Index

U.S. home values have surpassed pre-recession highs.



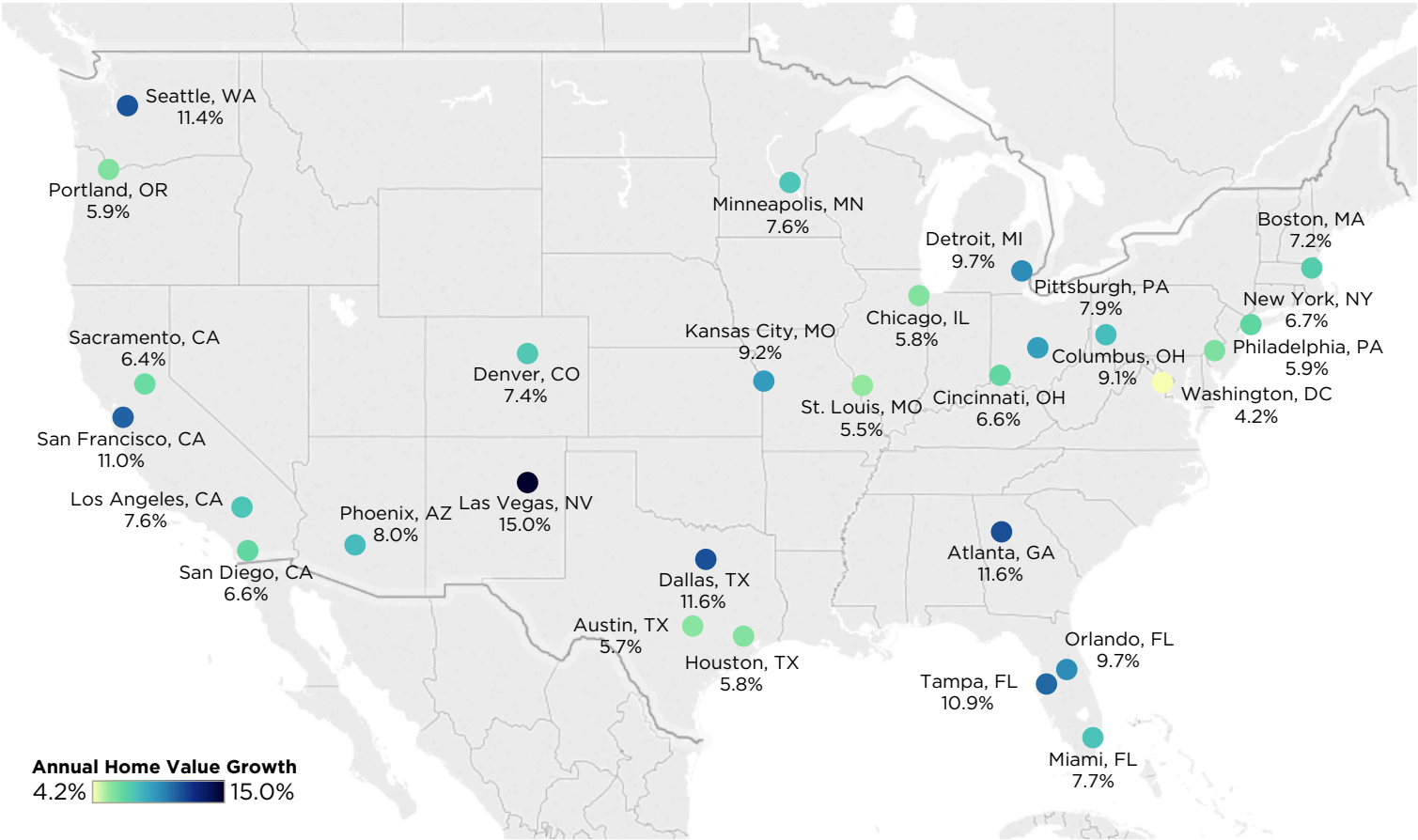
Zillow Home Value Index, Annual and Monthly Growth

The pace of annual U.S. home value growth has accelerated over the past few years.



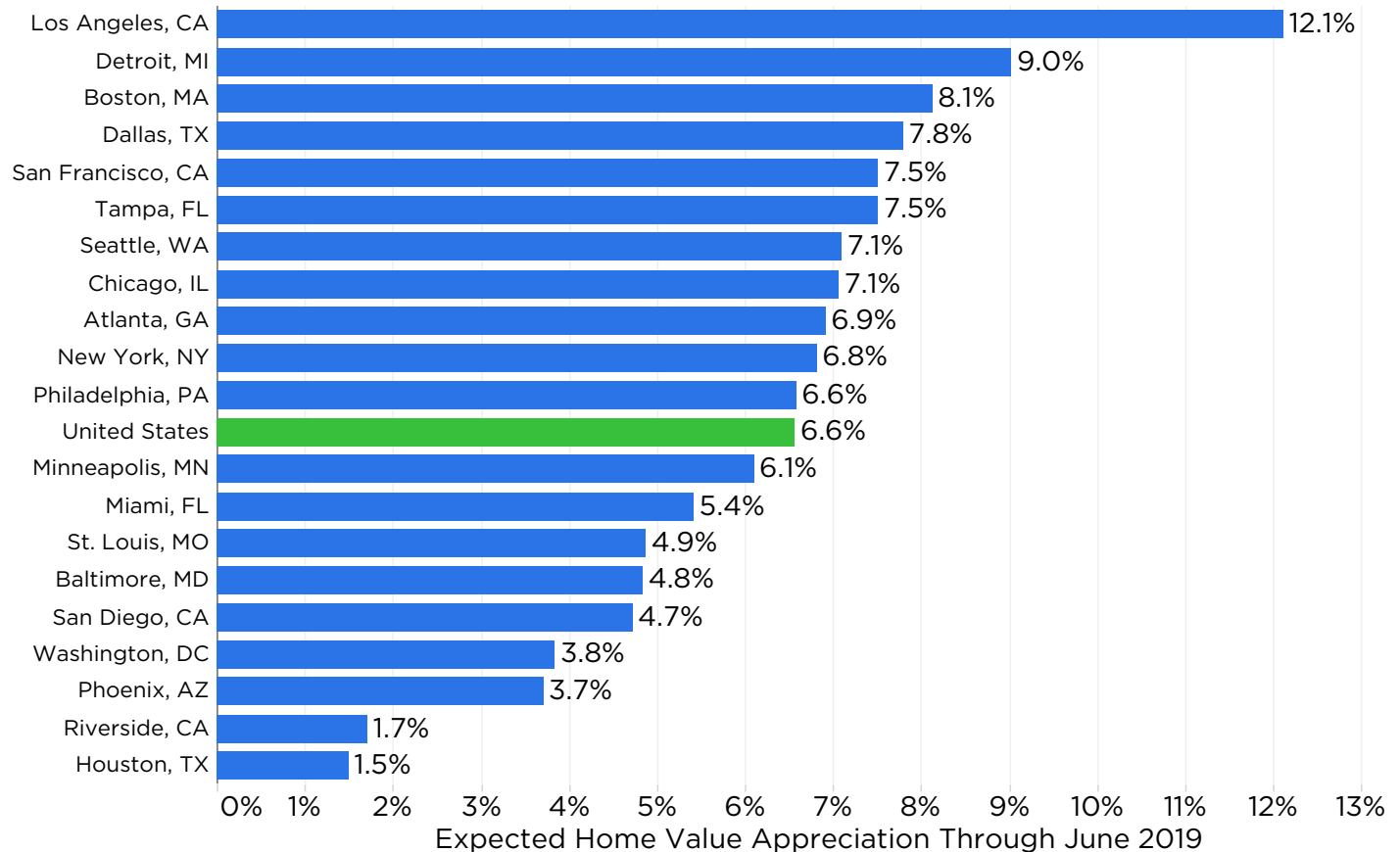
Annual Home Value Growth

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



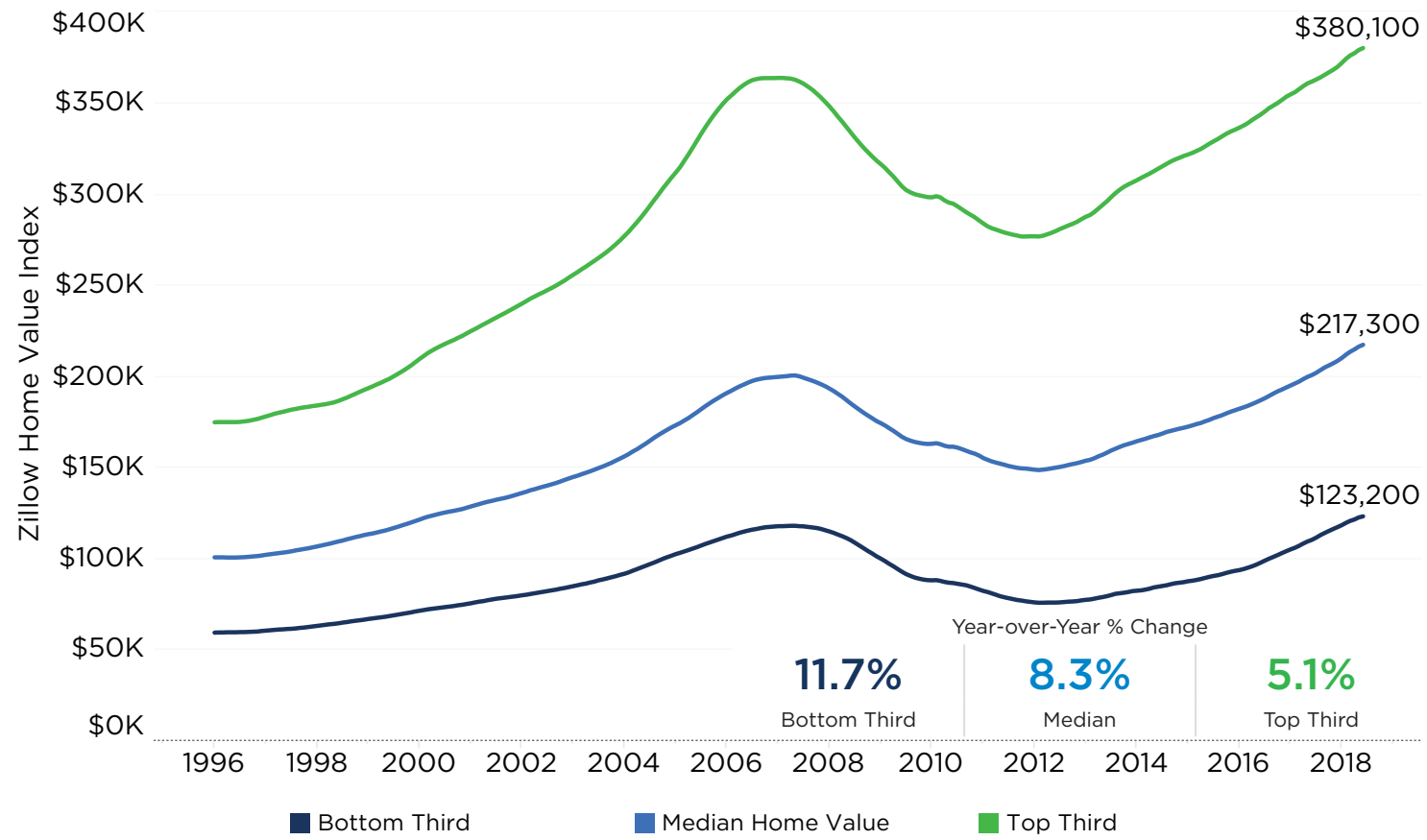
Zillow Home Value Forecast

Home value growth is expected to slow over the next 12 months.



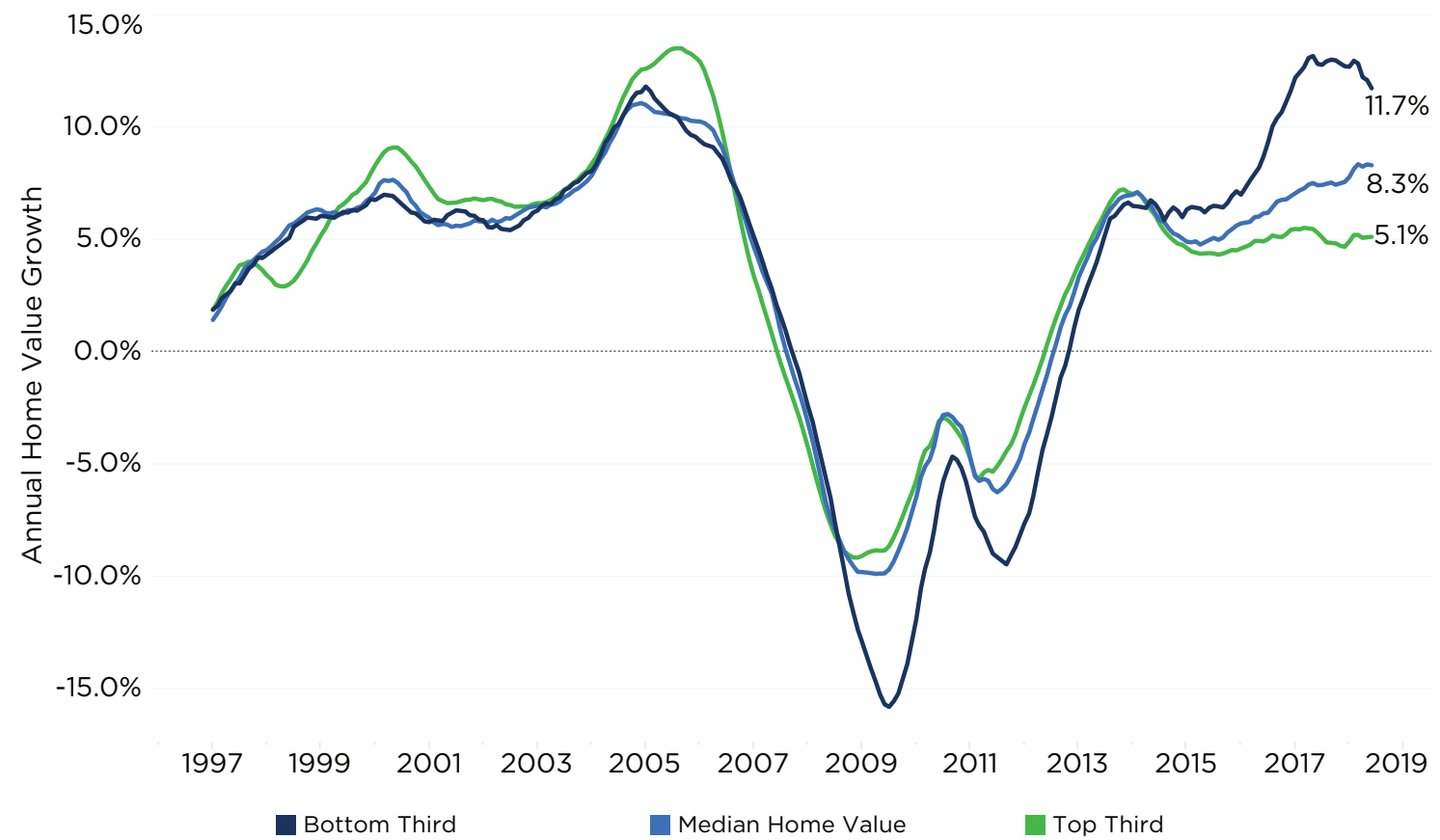
Zillow Home Value Index, by Thirds

Homes valued in the bottom-third of the market are growing in value the fastest.



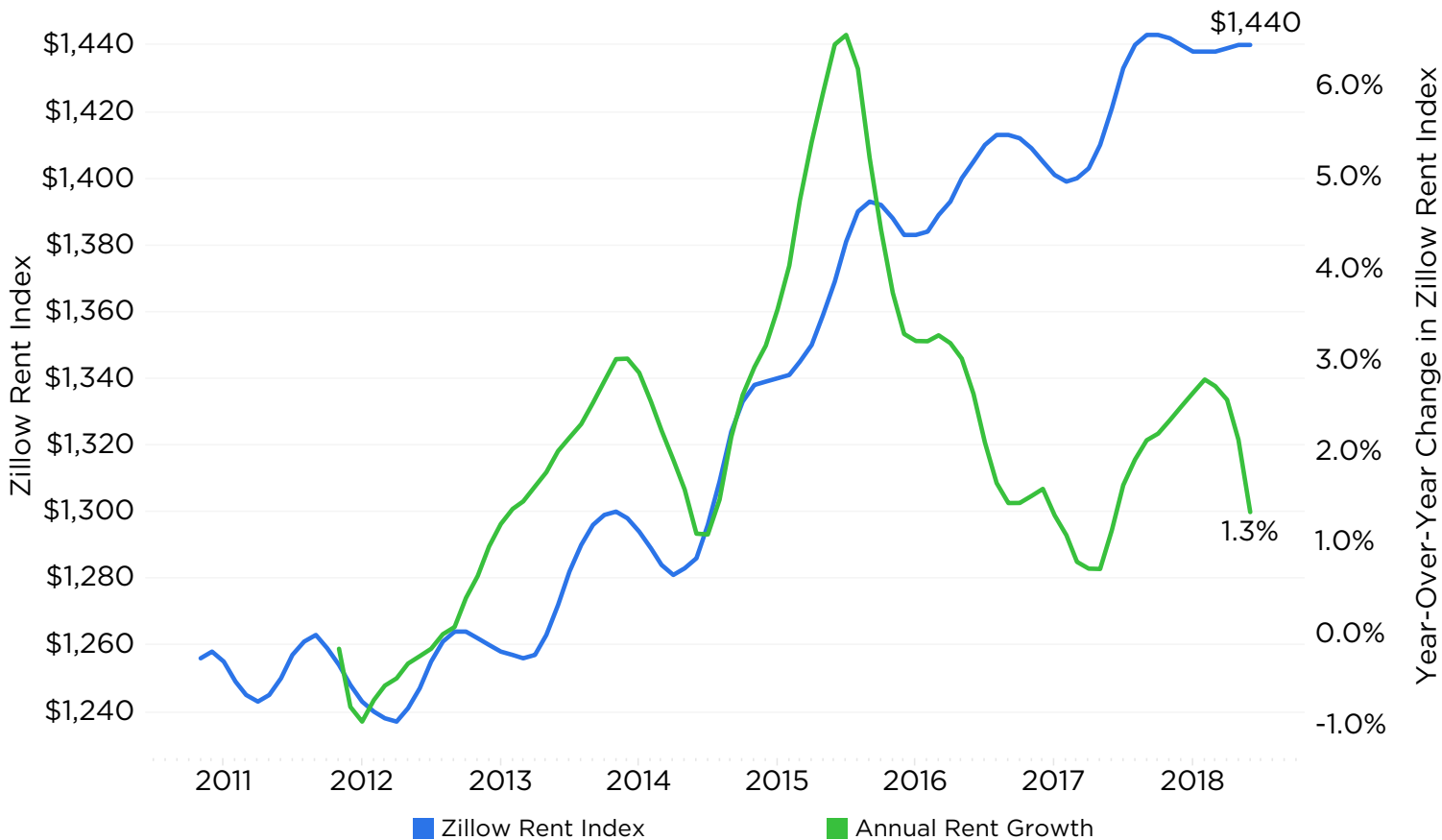
Annual Home Value Appreciation, by Thirds

Home value appreciation among homes valued in the bottom third has slowed somewhat, but the annual pace of growth is still more than double that of top-third homes.



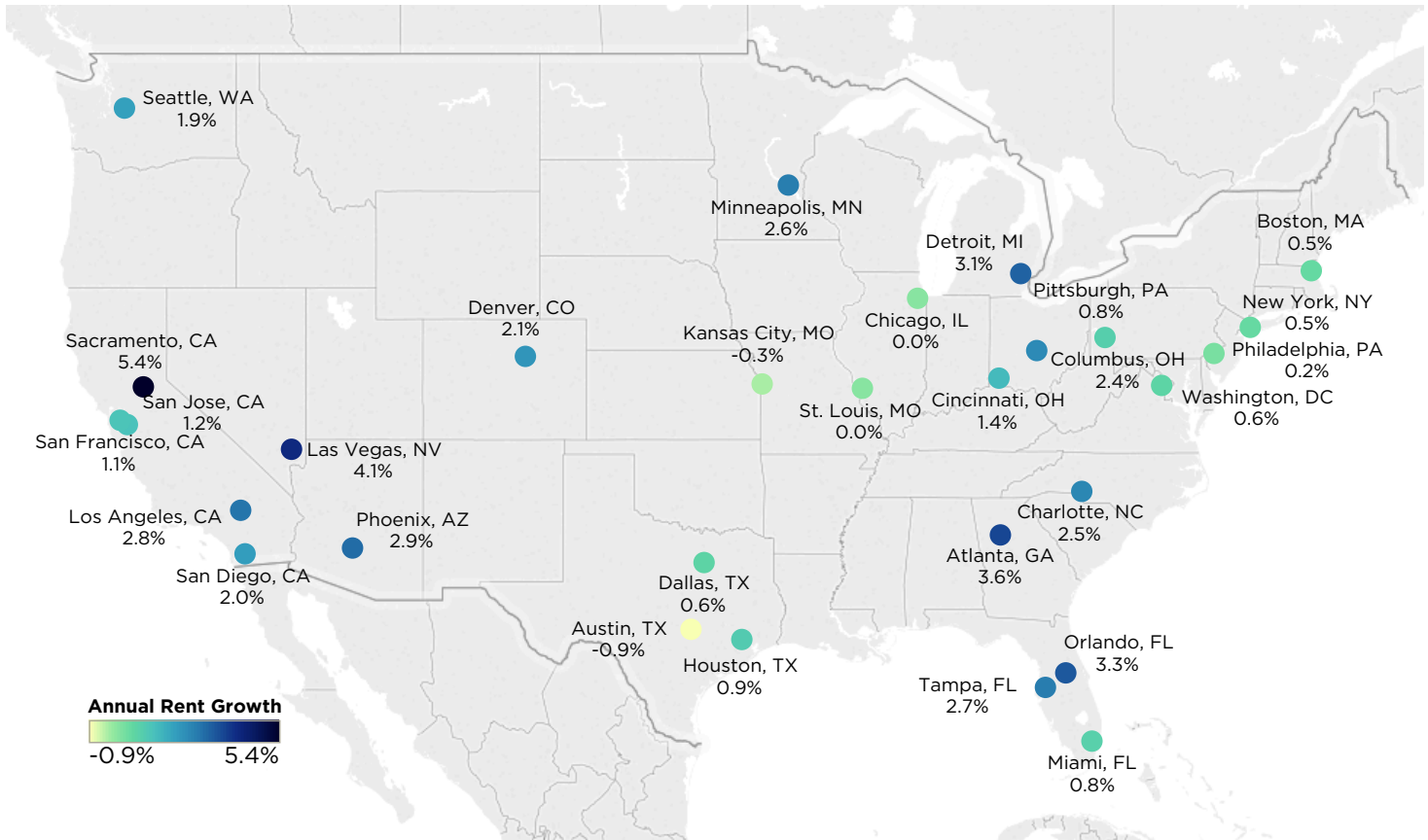
Zillow Rent Index

Annual growth in rents has slowed since the beginning of 2018.



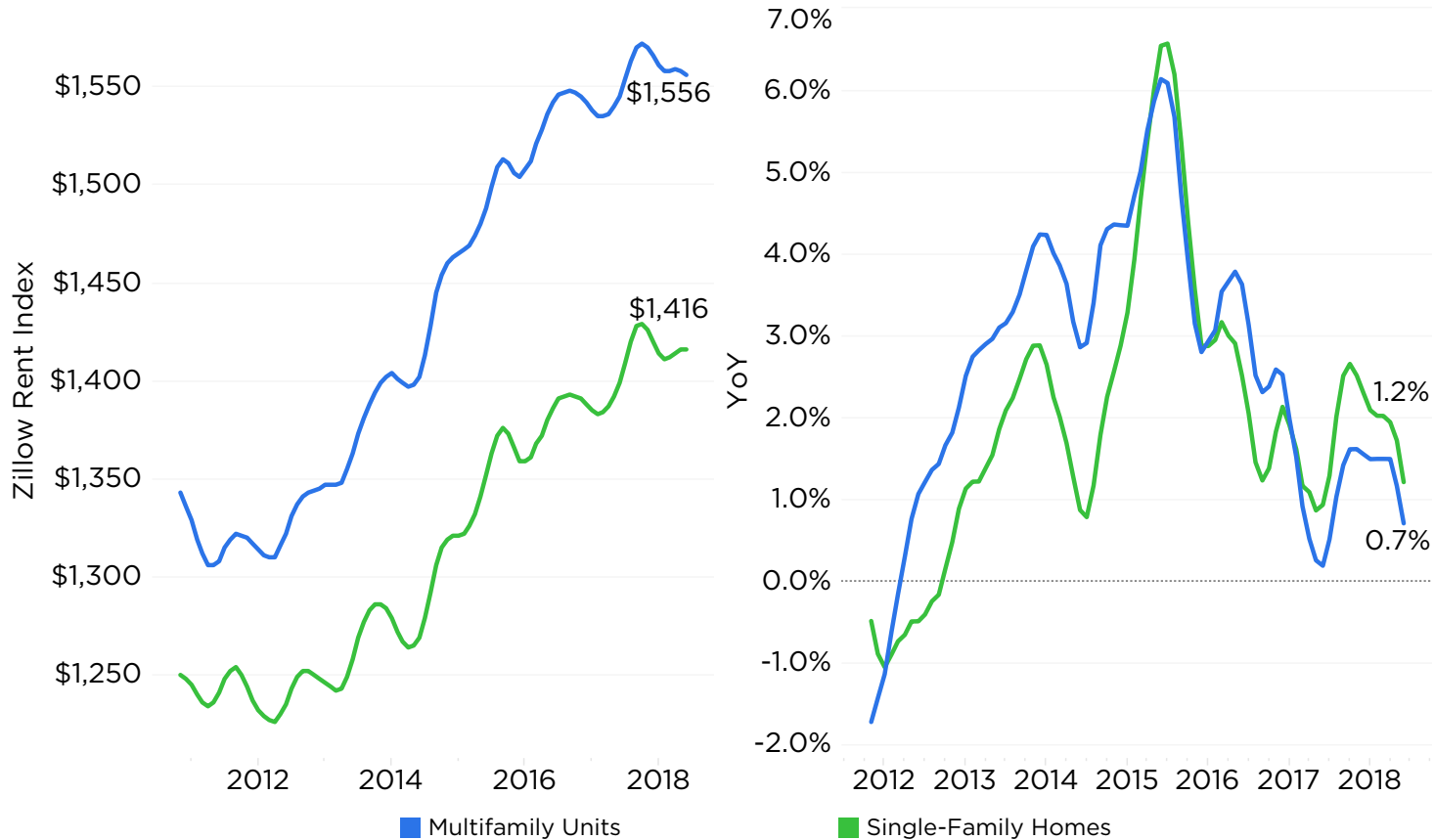
Annual Rent Appreciation

The annual pace of rent growth is largely sustainable in most large markets.



Multifamily and Single-Family Home Rents

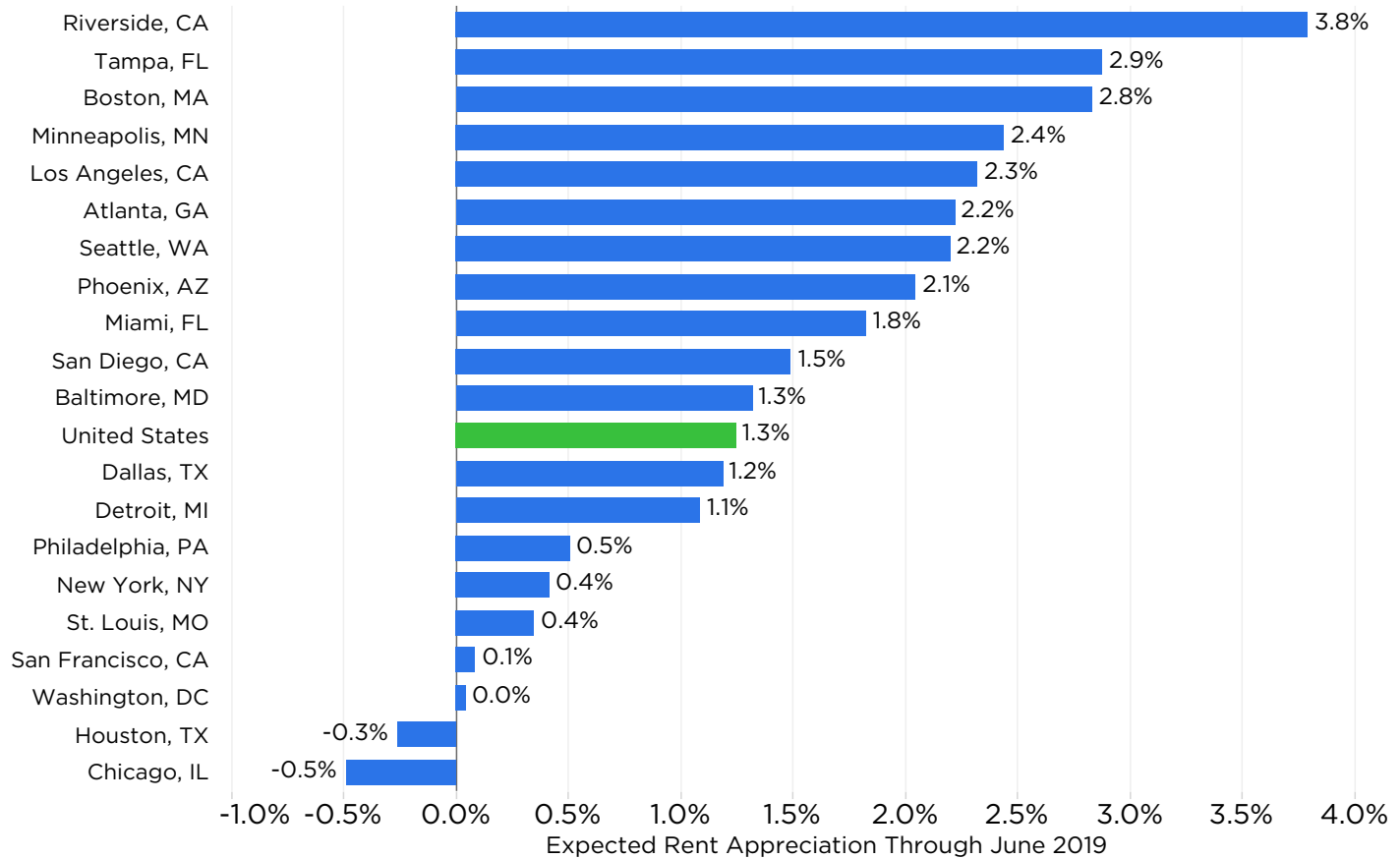
Rents for single-family homes and units in larger multifamily buildings share similar trends.



Source: Zillow Rent Index (June 2018).

Zillow Rent Forecast

Rental appreciation is expected to remain steady over the next year.

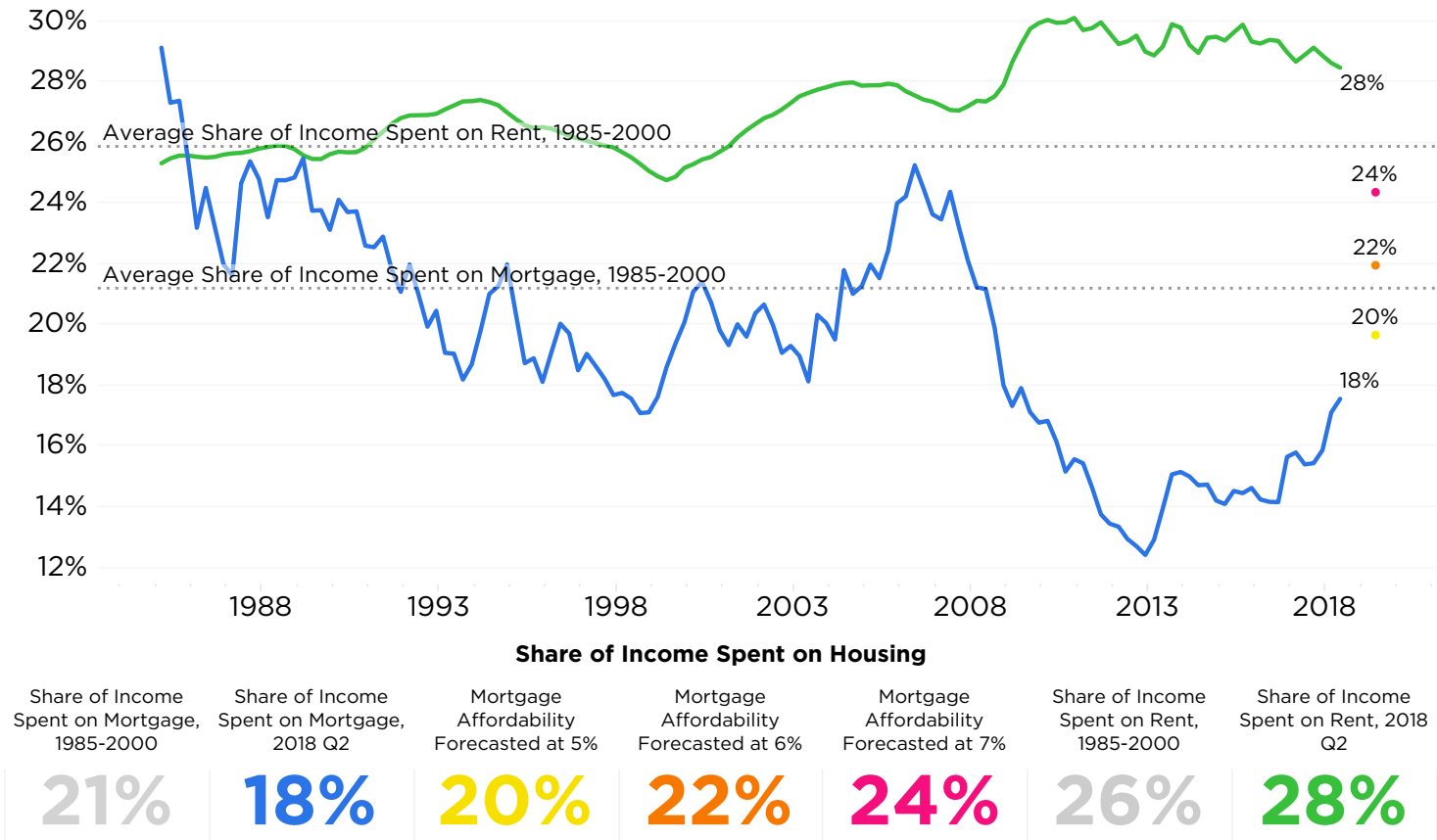


HOUSING AFFORDABILITY

- 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 and interest rates rise and incomes fail to keep pace.
- As mortgage and interest rates rise, some would-be home sellers with lower mortgage interest rates may decide not to sell and instead stay in their current home, choosing not to give up a lower monthly payment. This phenomenon of “mortgage rate lock-in” could end up negatively impacting inventory.
- Unlike mortgage affordability, rental affordability is much worse today than it was historically, though the recent slowdown in rent growth has helped somewhat.
- Poor rent affordability is worrisome, as more money devoted to rent makes it more difficult to save for homeownership.

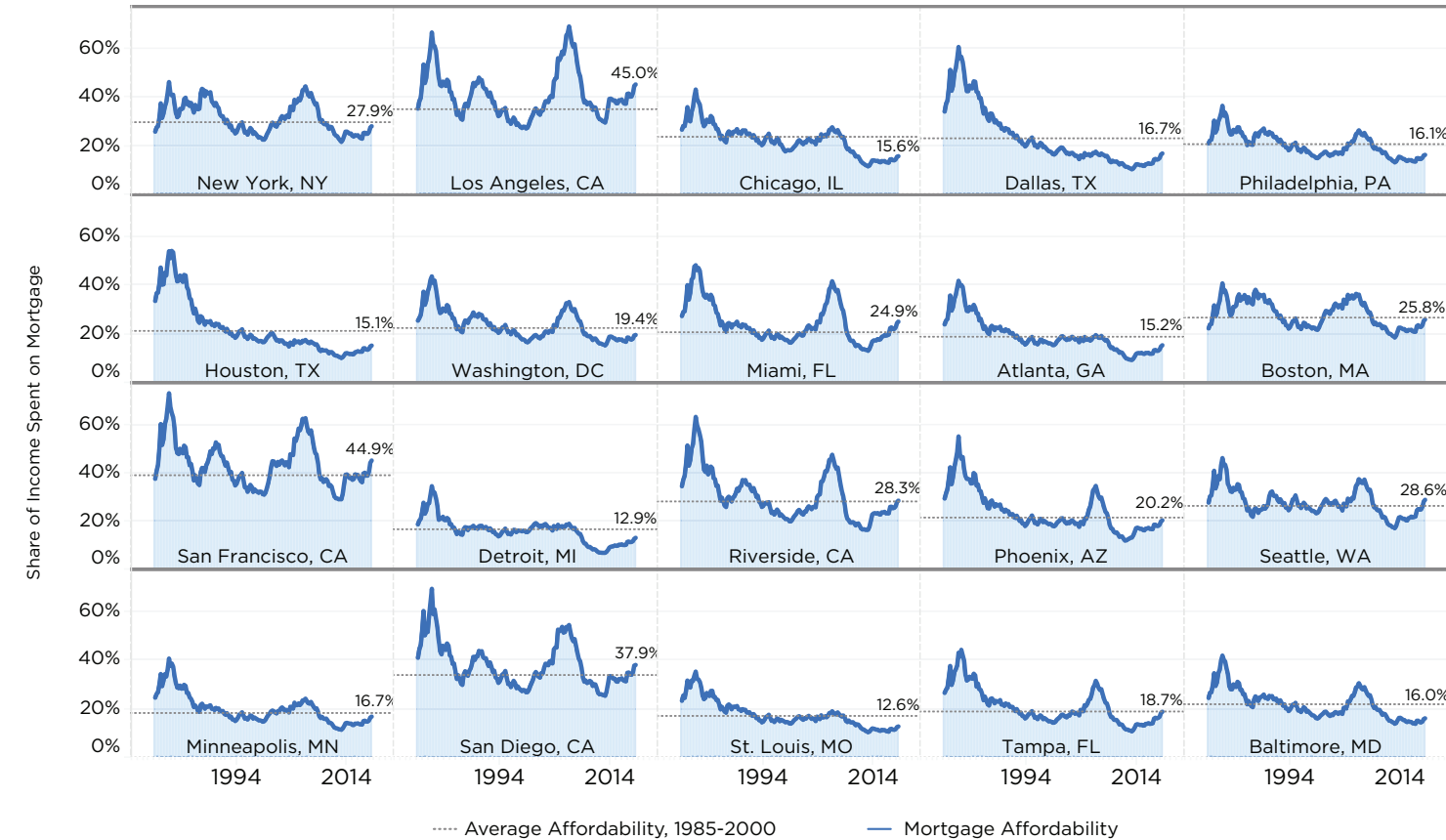
Zillow Mortgage and Rent Affordability

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



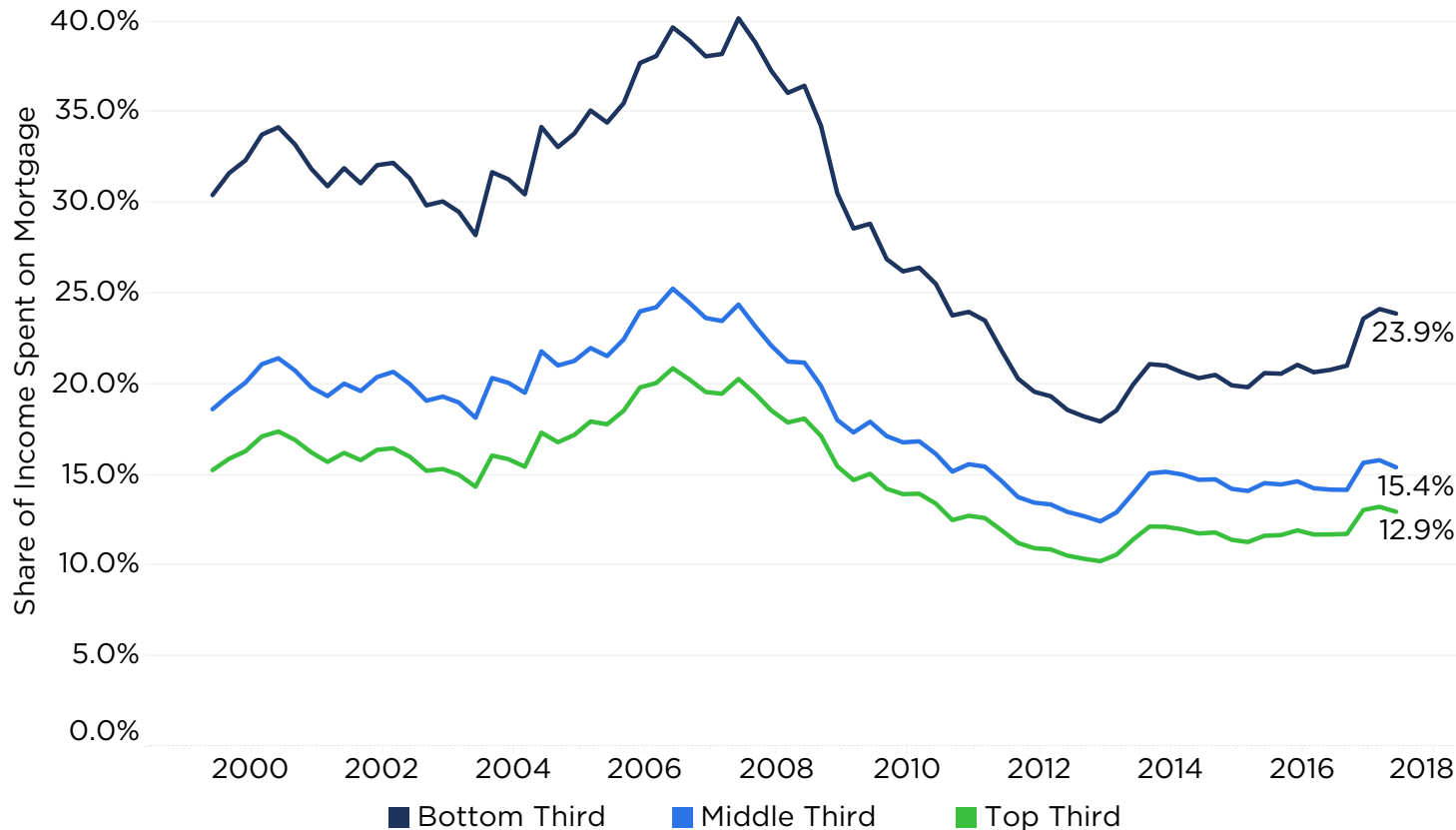
Mortgage Affordability by Metro

In some coastal markets that have seen rapid home value appreciation, share of income spent on a mortgage has surpassed historic norms.



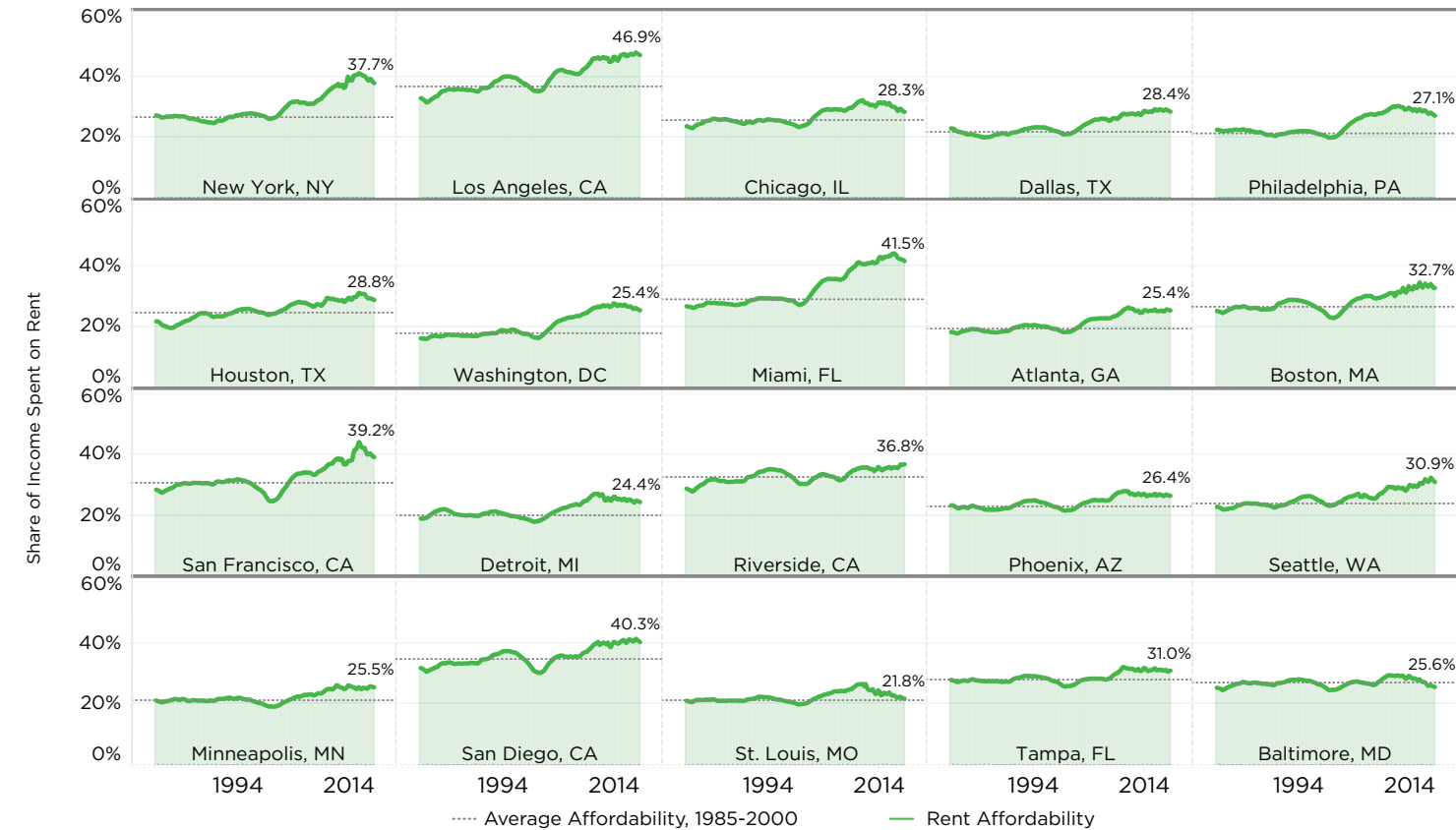
Zillow Mortgage Affordability, by Thirds

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



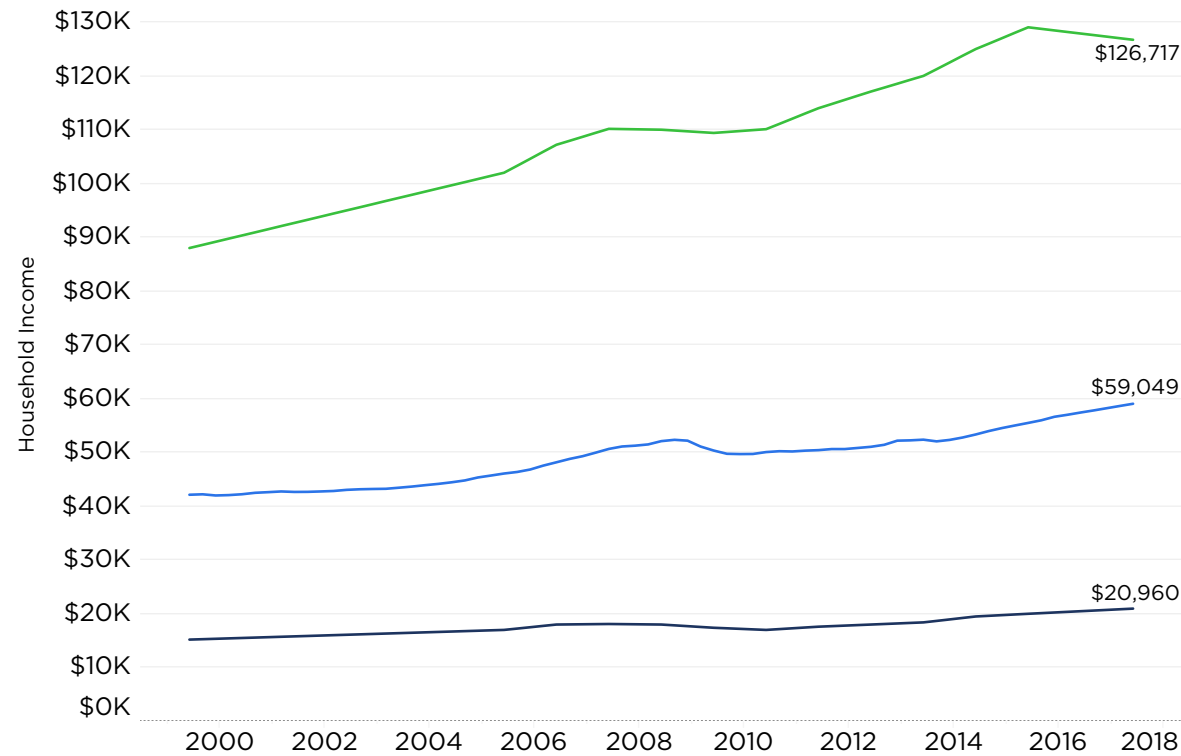
Rent Affordability by Metro

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



Household Income, by Thirds

Income growth for the lowest earners has been especially weak.



Nominal Income Growth, 2000-2016

Top Third
50.5%

Middle Third
35.2%

Bottom Third
30.5%

Housing Affordability Table

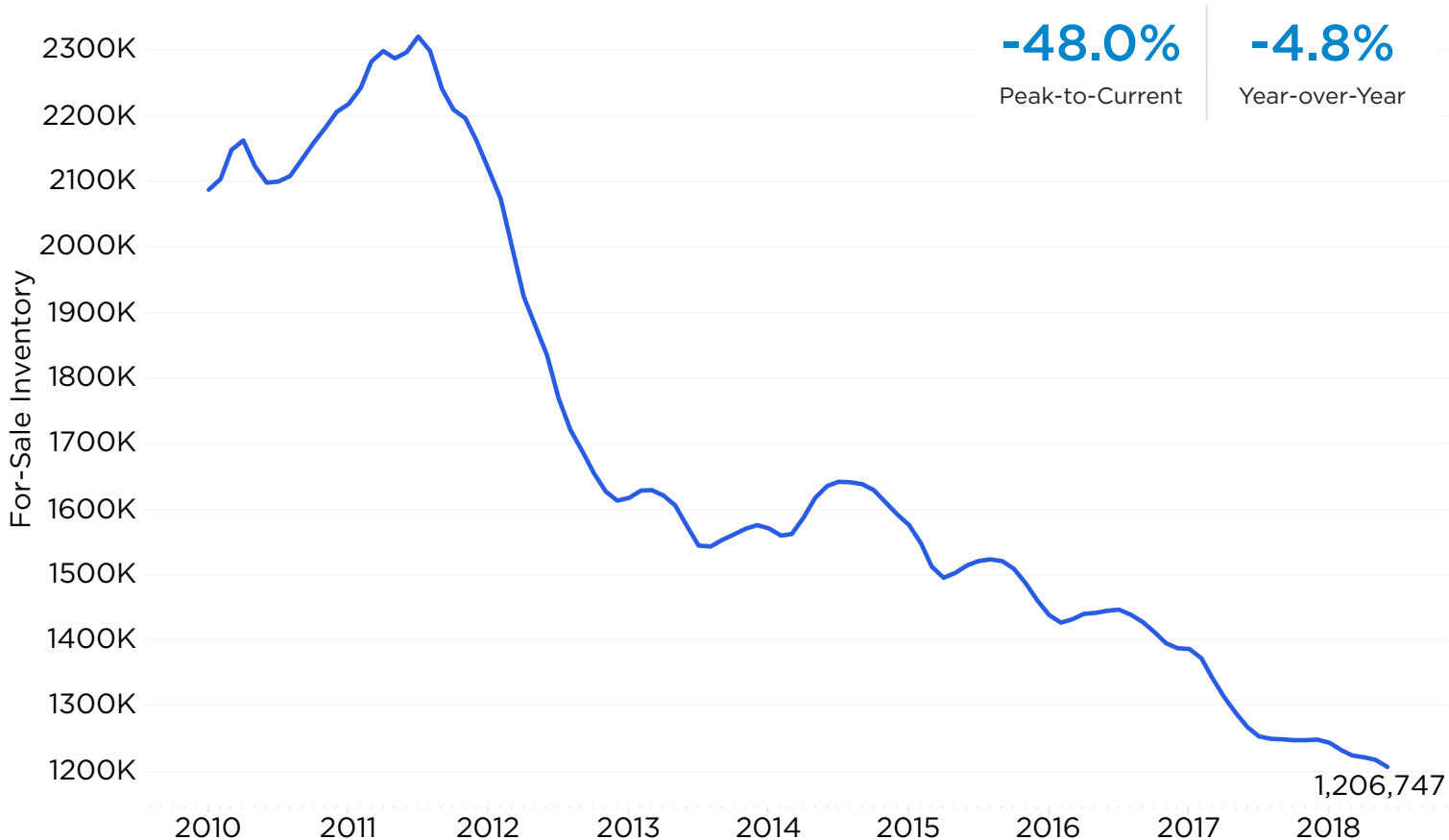
Region Name	Median Income	Mortgage Affordability, 2018 Q2	Historic Mortgage Affordability, 1985-2000	Forecast Mortgage Affordability (5% Interest Rate)	Forecast Mortgage Affordability (6% Interest Rate)	Forecast Mortgage Affordability (7% Interest Rate)	Rent Affordability, 2018 Q2	Historic Rent Affordability 1985-2000
United States	\$60,748	17.5%	21.2%	19.6%	21.9%	24.3%	28.4%	25.8%
New York, NY	\$75,508	27.9%	29.2%	31.3%	35.0%	38.8%	37.7%	26.3%
Los Angeles, CA	\$70,373	45.0%	34.6%	53.1%	59.3%	65.8%	46.9%	36.3%
Chicago, IL	\$69,333	15.6%	23.1%	17.5%	19.6%	21.7%	28.3%	25.3%
Dallas, TX	\$67,348	16.7%	22.9%	18.9%	21.1%	23.5%	28.4%	21.8%
Philadelphia, PA	\$69,336	16.1%	20.4%	18.1%	20.2%	22.4%	27.1%	21.4%
Houston, TX	\$64,575	15.1%	21.1%	16.1%	18.0%	19.9%	28.8%	24.4%
Washington, DC	\$100,739	19.4%	22.3%	21.2%	23.7%	26.3%	25.4%	17.7%
Miami, FL	\$53,775	24.9%	20.3%	27.6%	30.8%	34.2%	41.5%	28.6%
Atlanta, GA	\$65,950	15.2%	18.3%	17.1%	19.1%	21.2%	25.4%	19.3%
Boston, MA	\$86,622	25.8%	26.3%	29.3%	32.7%	36.3%	32.7%	26.4%
San Francisco, CA	\$104,172	44.9%	38.5%	50.7%	56.6%	62.9%	39.2%	30.6%
Detroit, MI	\$58,826	12.9%	16.0%	14.8%	16.5%	18.3%	24.4%	20.0%
Riverside, CA	\$61,860	28.3%	27.9%	30.2%	33.8%	37.5%	36.8%	32.7%
Phoenix, AZ	\$61,975	20.2%	21.1%	22.0%	24.5%	27.2%	26.4%	22.8%
Seattle, WA	\$84,369	28.6%	25.9%	32.2%	36.0%	39.9%	30.9%	23.8%
Minneapolis, MN	\$76,931	16.7%	17.8%	18.6%	20.7%	23.0%	25.5%	21.2%
San Diego, CA	\$75,597	37.9%	33.5%	41.7%	46.5%	51.6%	40.3%	34.7%
St. Louis, MO	\$62,753	12.6%	17.0%	13.9%	15.5%	17.2%	21.8%	21.2%
Tampa, FL	\$53,782	18.7%	18.8%	21.1%	23.5%	26.1%	31.0%	27.6%
Baltimore, MD	\$81,411	16.0%	21.6%	17.6%	19.6%	21.8%	25.6%	27.0%

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.
- Homes that are on the market are selling faster – currently, homes spend ten days 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.

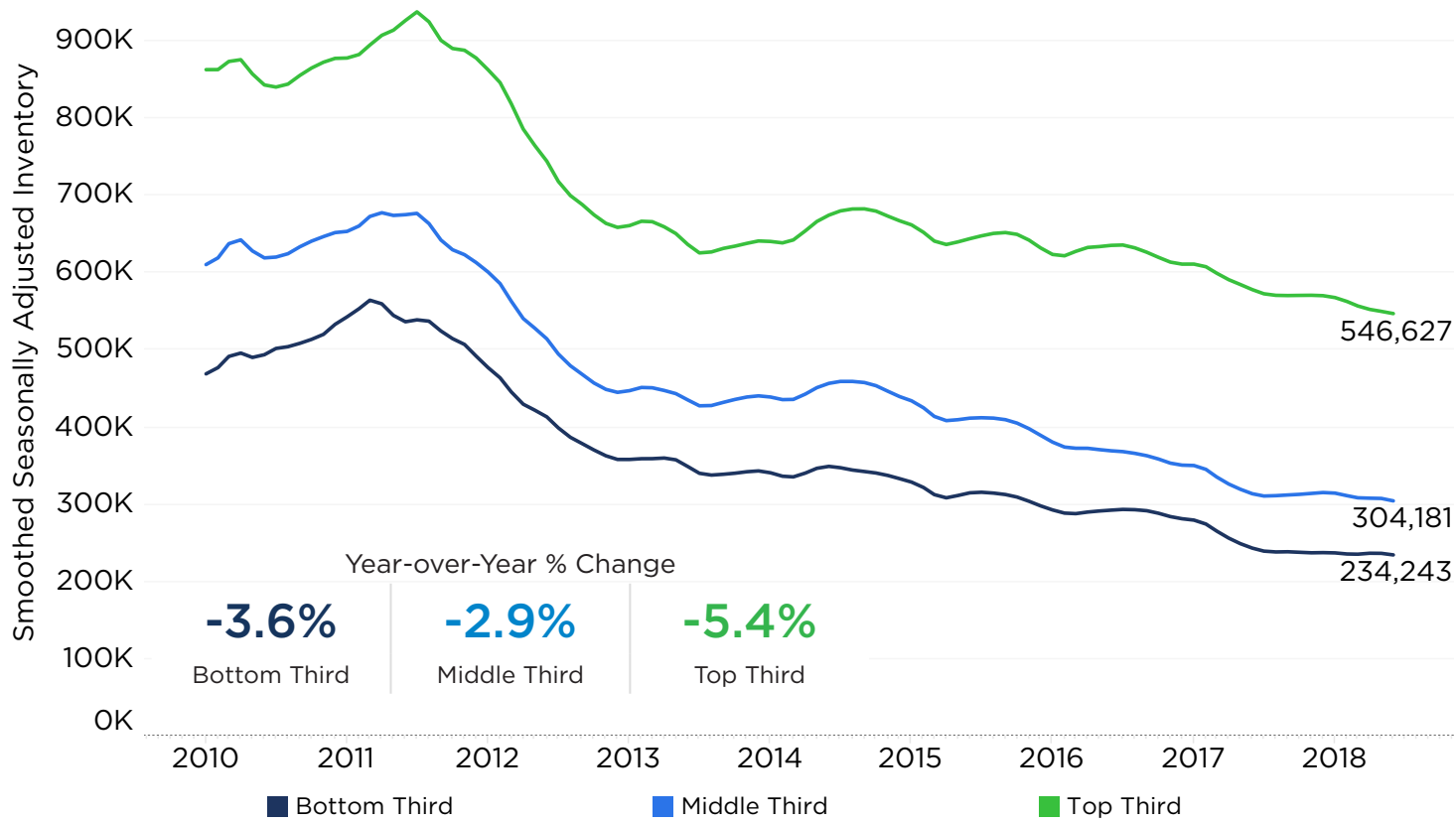
Zillow For-Sale Inventory

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



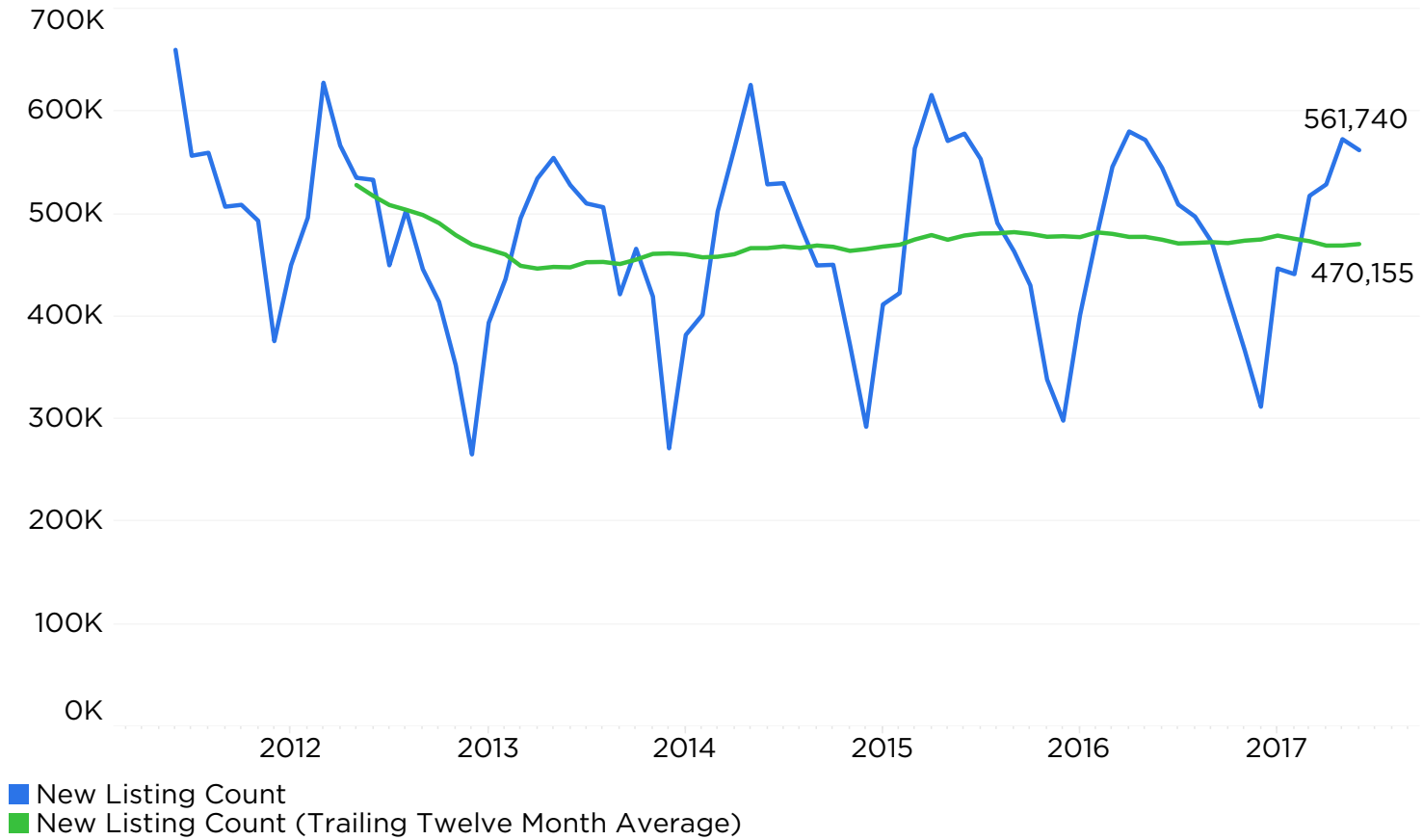
Zillow For-Sale Inventory, by Thirds

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



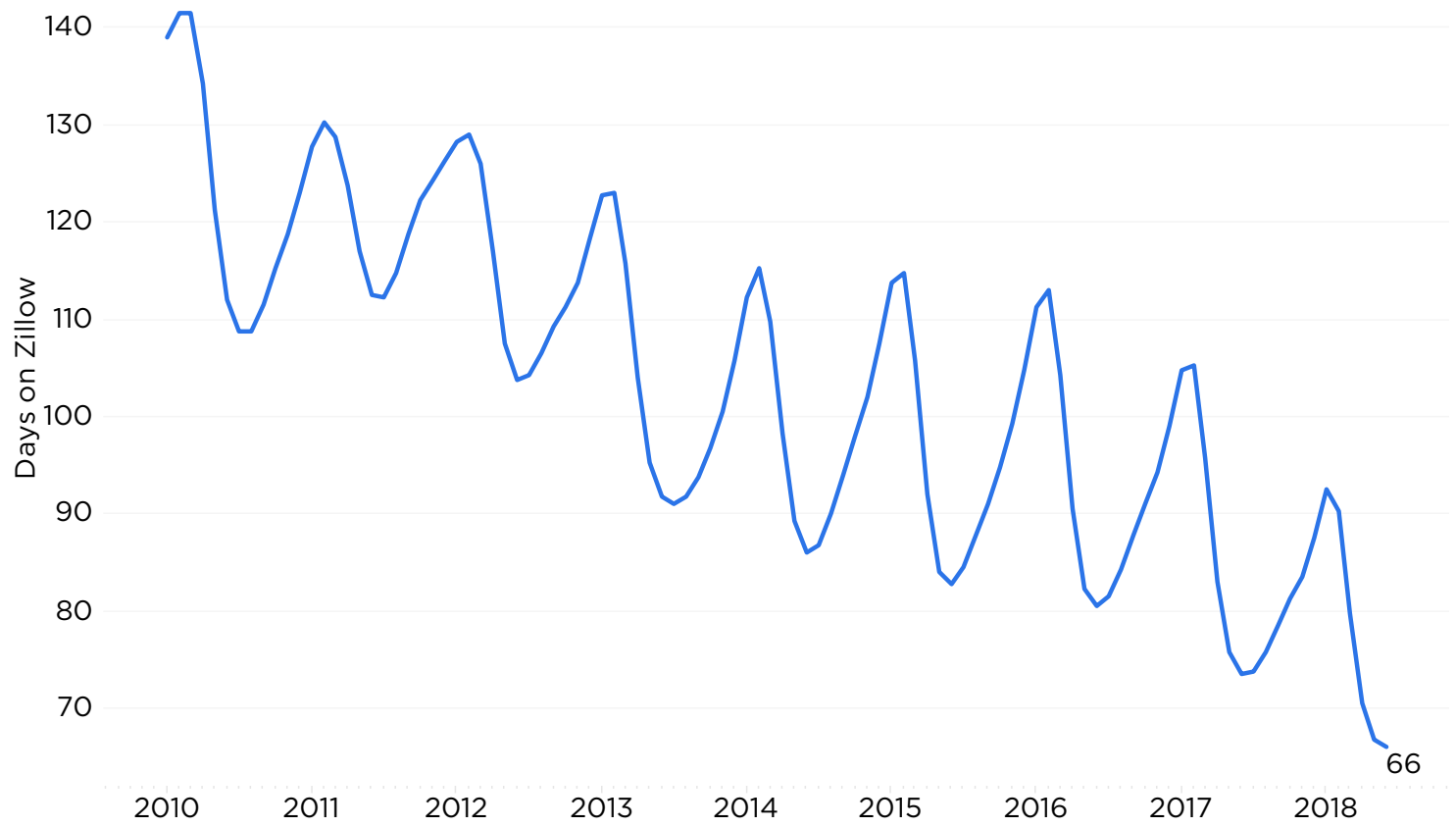
New Homes Listed For Sale

The number of listings hitting the market has remained consistent



Days on Zillow

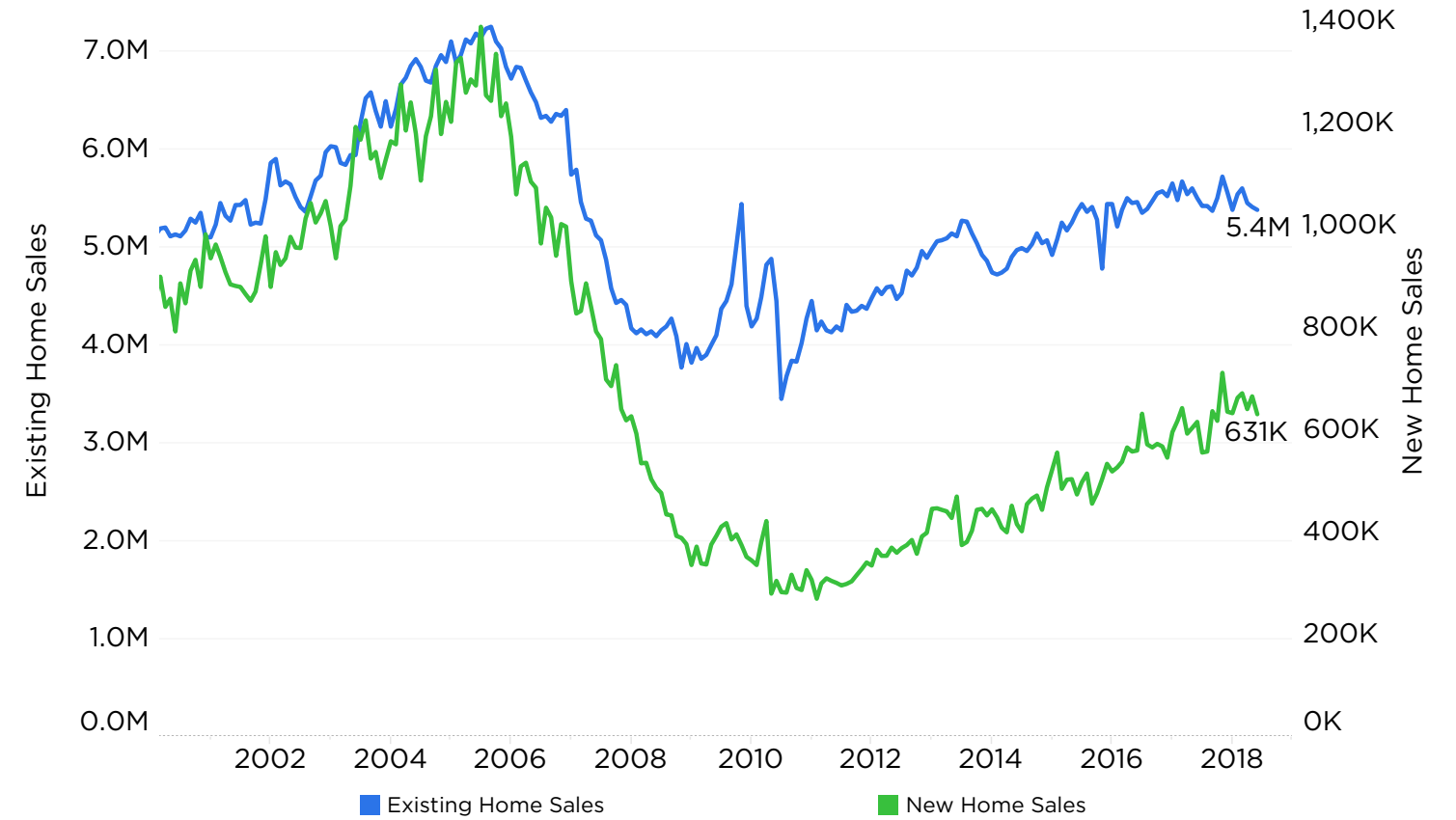
Homes listed for sale are selling more quickly than in the past few years.



Source: Zillow Days on Zillow, Including REOs (June 2018).

Home Sales

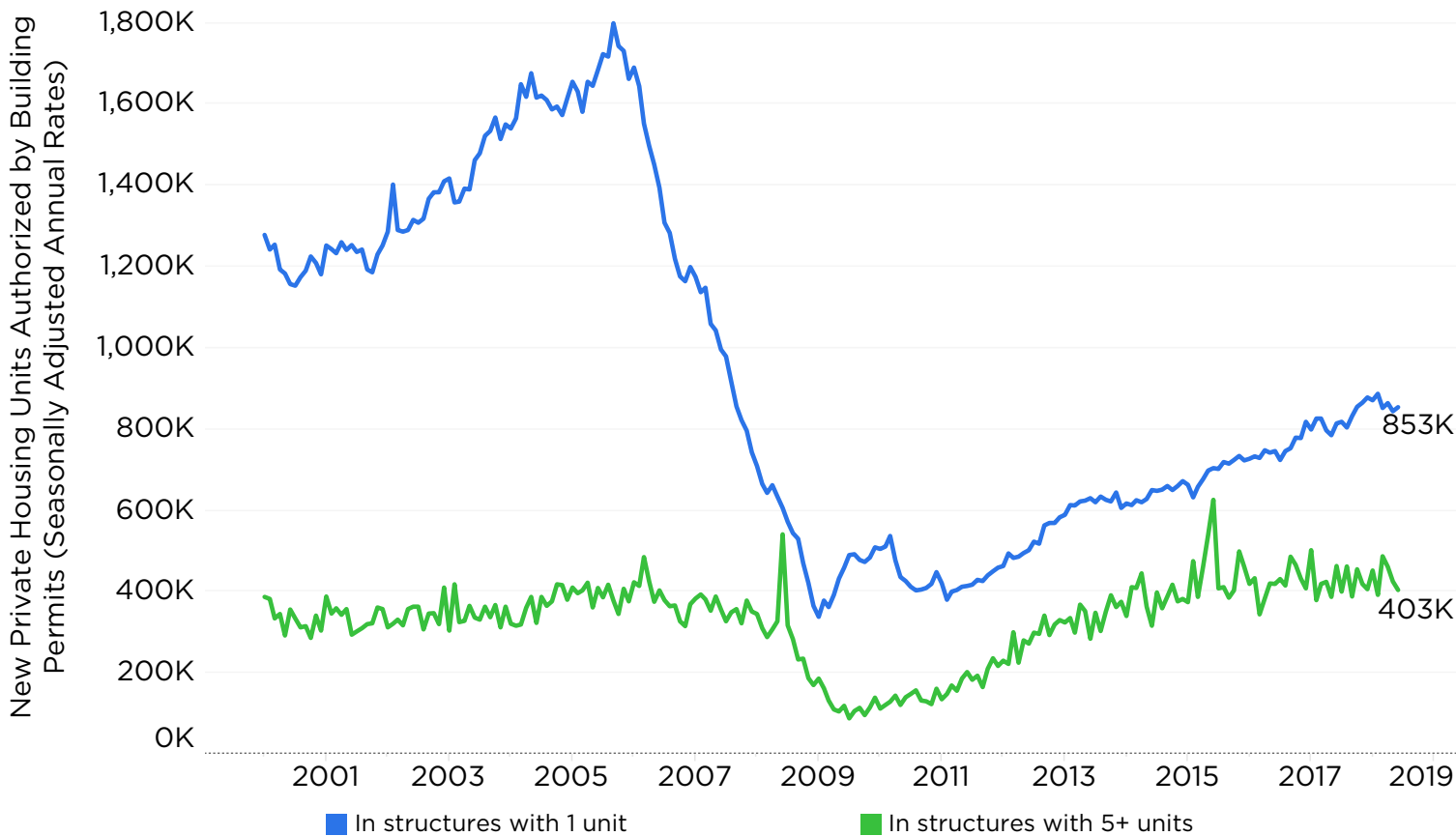
Sales of existing homes largely plateaued in the first half of 2018, while new home sales continue to climb in fits and starts.



Source: National Association of Realtors Existing Home Sales: Single-Family & Condo & Co-op, U.S. Census Bureau New Residential Sales (June 2018).

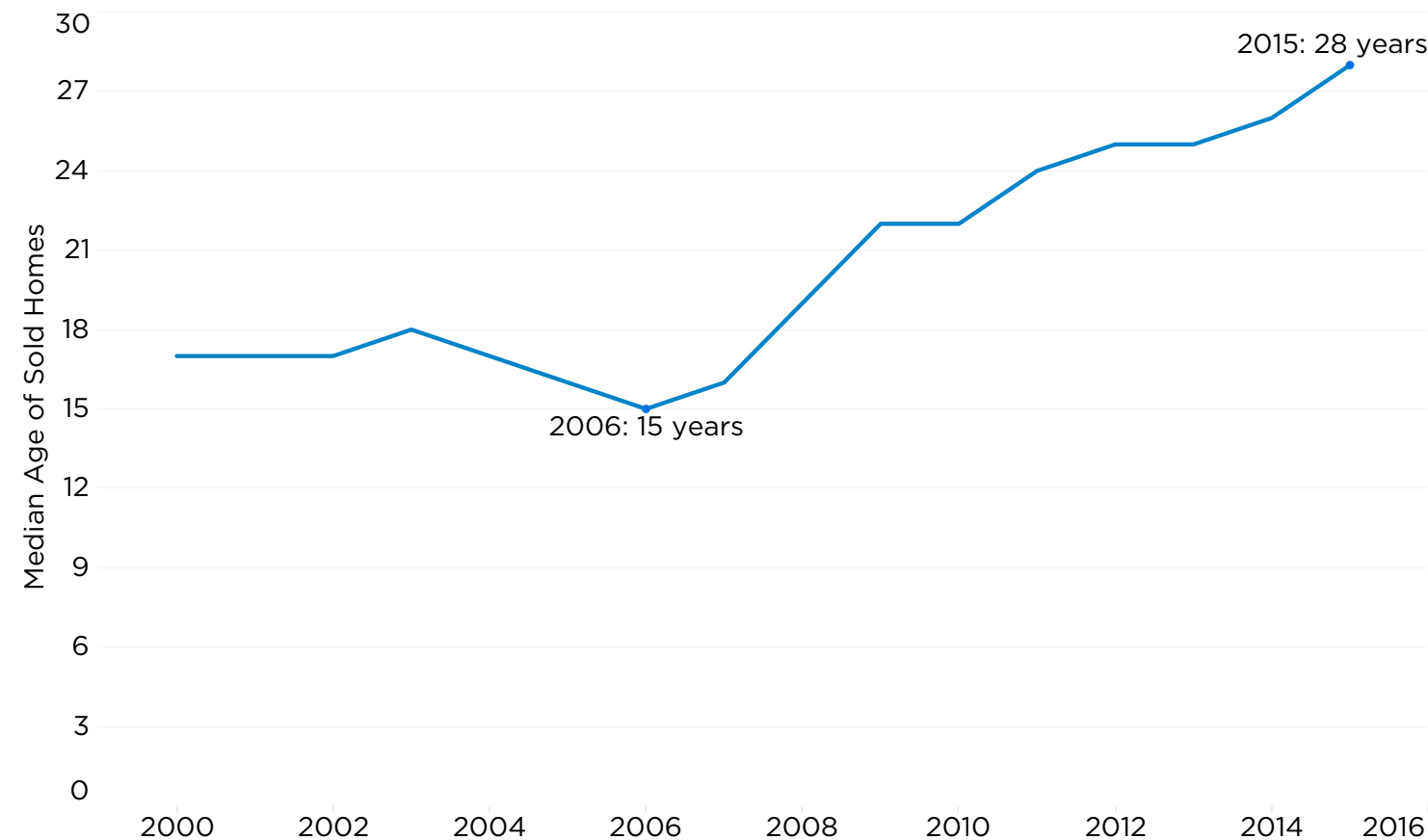
New Residential Construction Permits

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



Age of Sold Homes

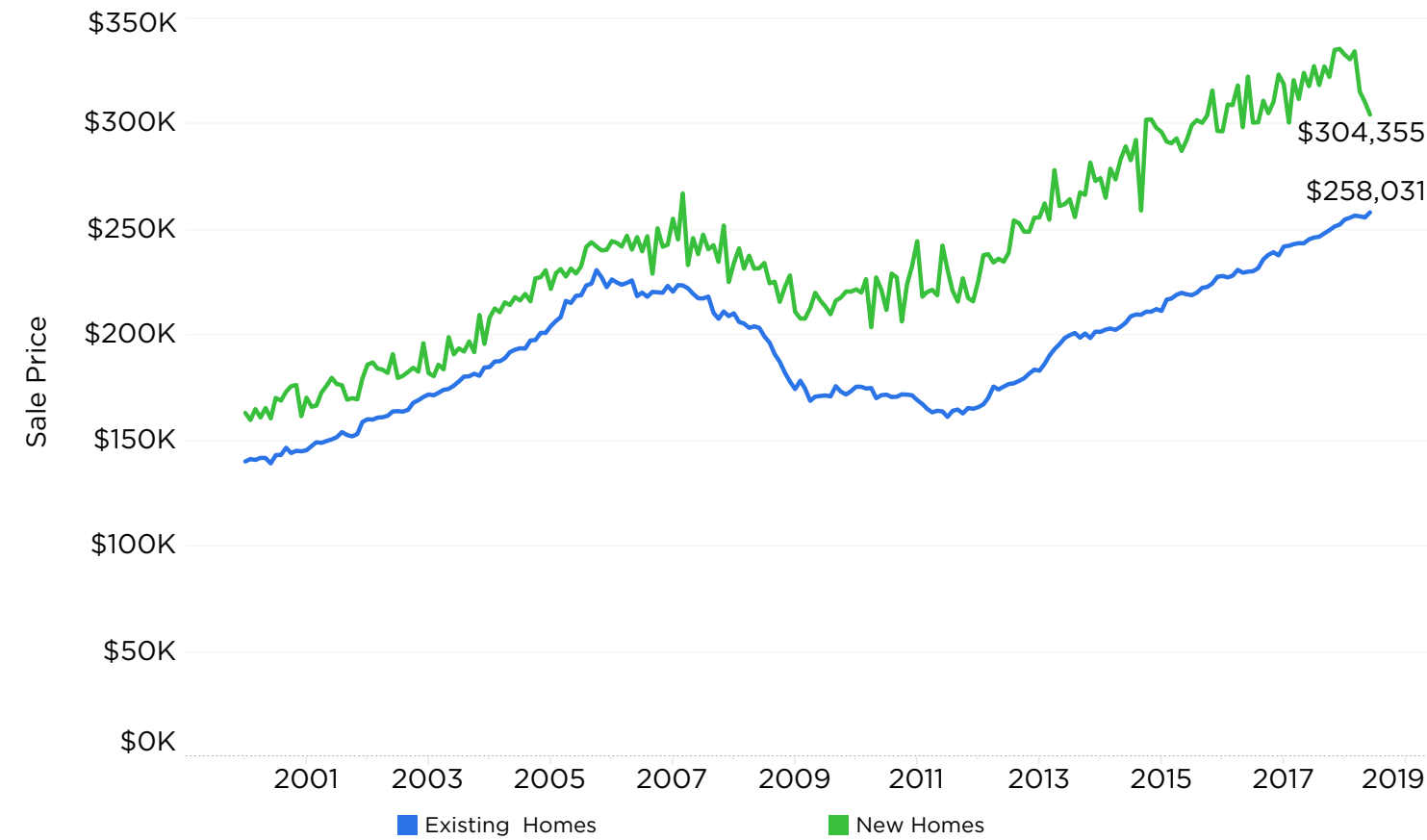
The age of sold homes has almost doubled since the housing collapse, largely because of a lack of new construction.



Source: Zillow analysis of public record transactions, 2015.

Home Sale Prices

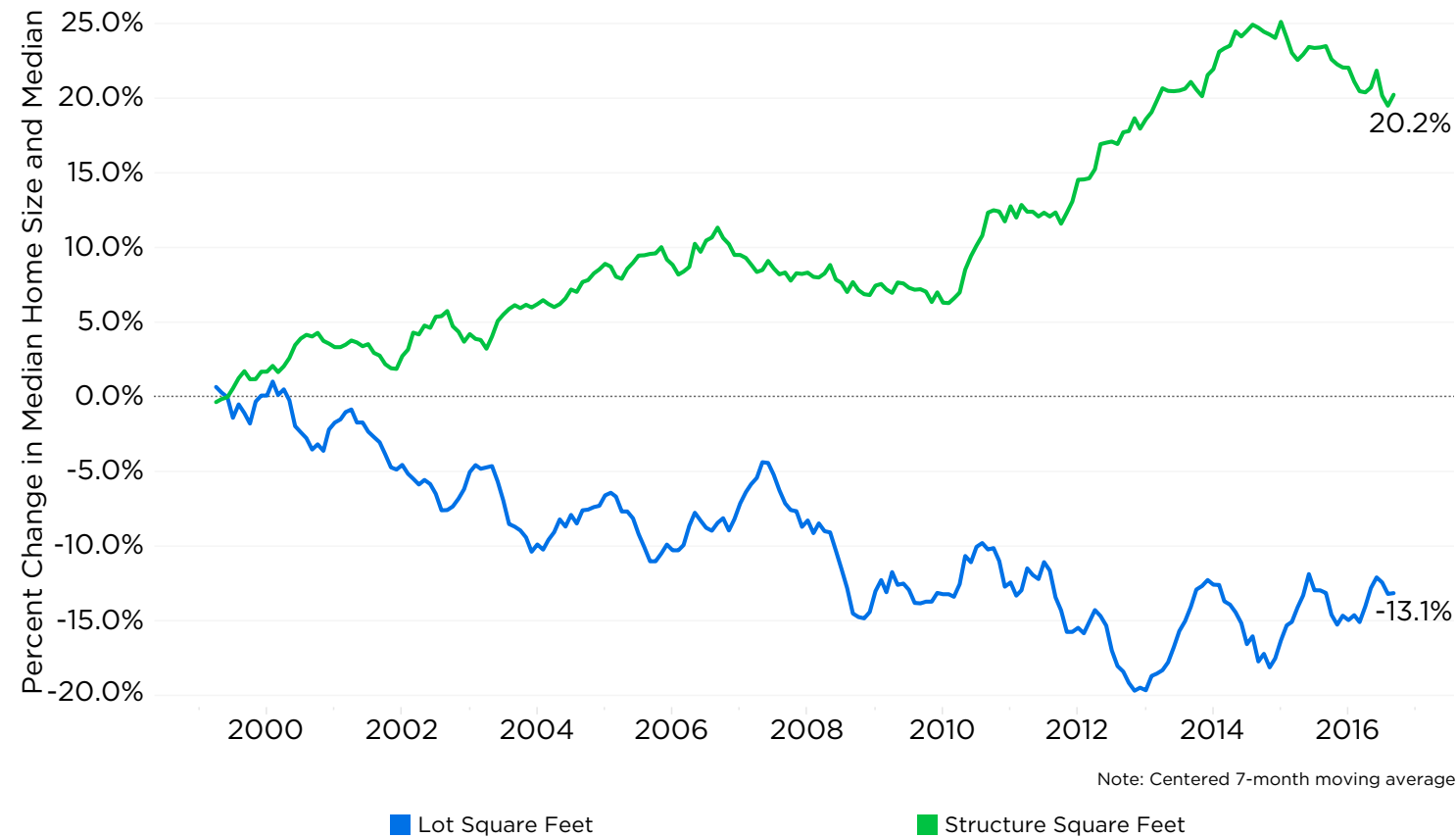
The price gap between newly built and and existing homes has widened over the past decade.



Source: National Association of Realtors and U.S. Census Bureau Construction Review (June 2018).

Home and Lot Sizes

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



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

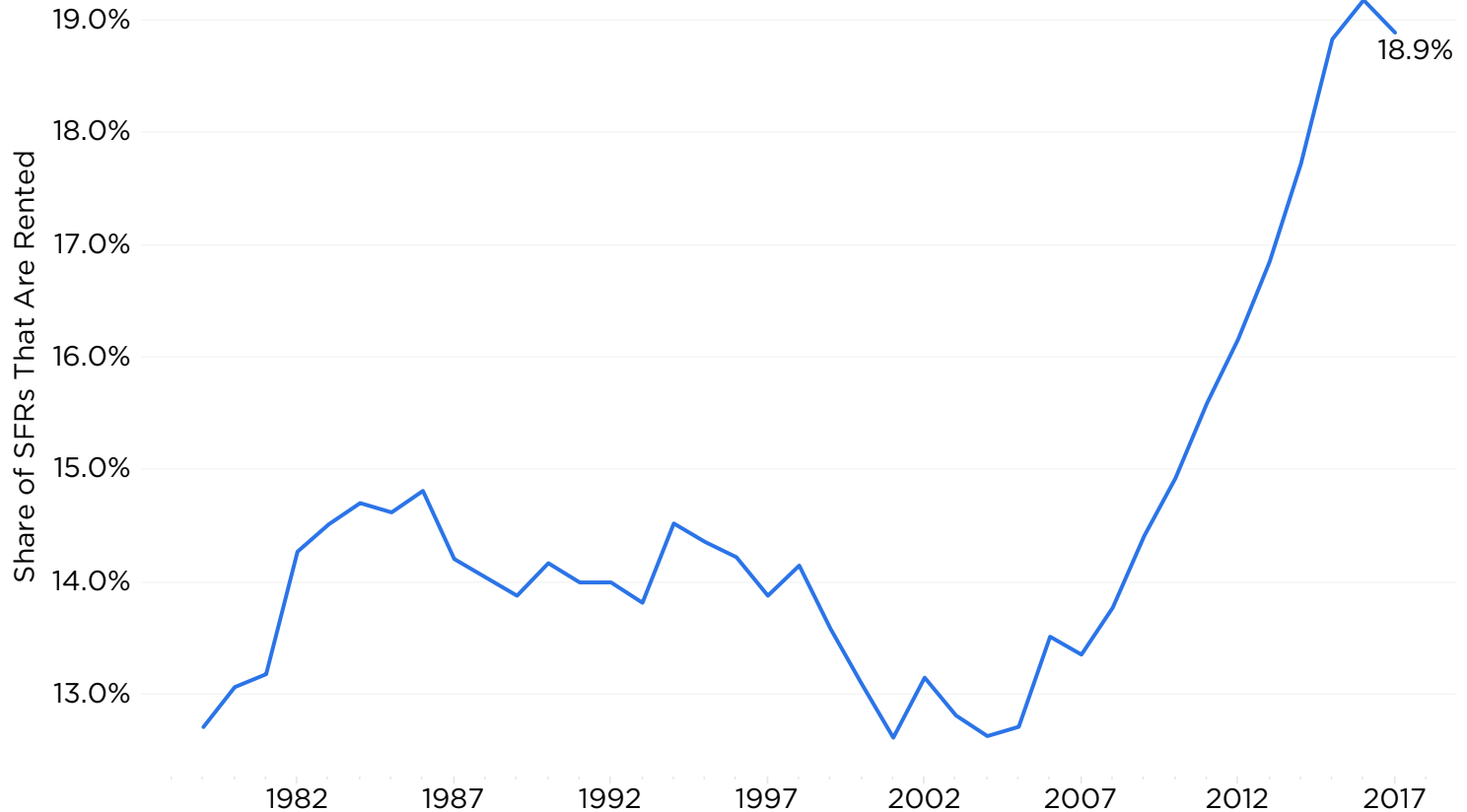
26.2%

Typical Commute Time

25 minutes

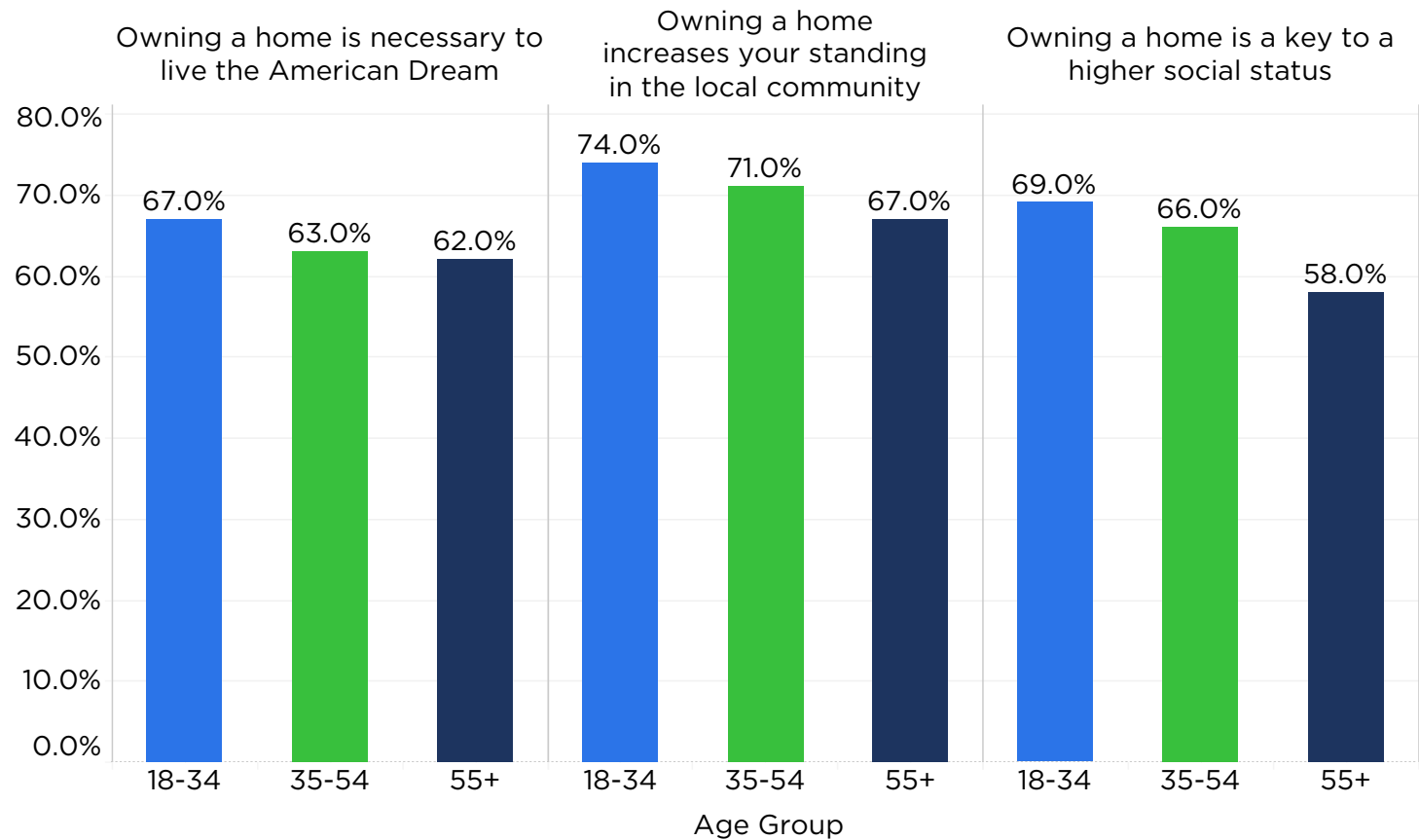
Single-Family Residence Rentals

Renting single-family homes is increasingly popular.



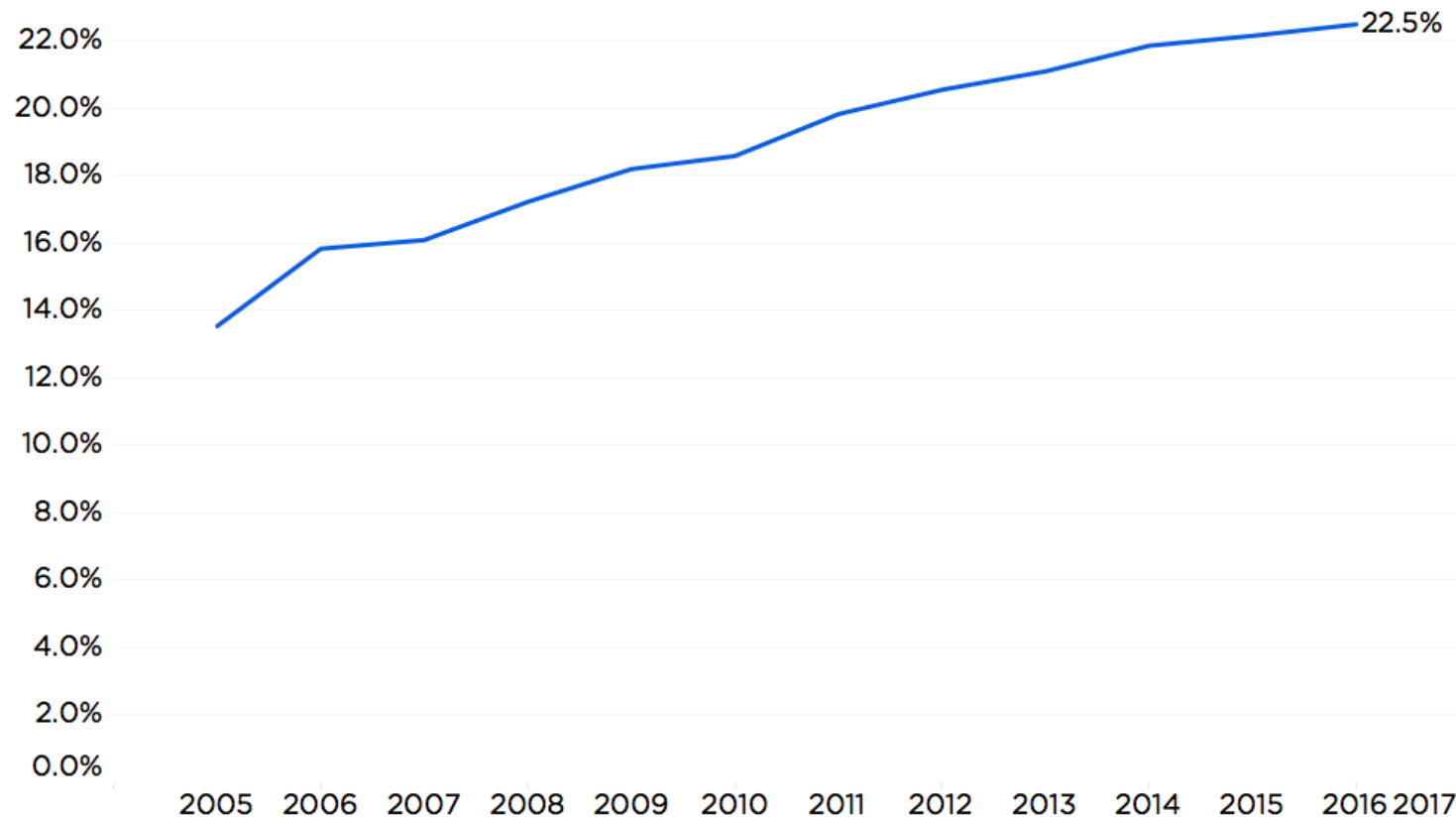
Homeownership Views by Age

Millennials do have positive views of homeownership.



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: Zillow analysis of U.S. Census, American Community Survey, 2005-2016, made available by the University of Minnesota, IPUMS-USA.

Comparing First-Time and Repeat Buyers

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

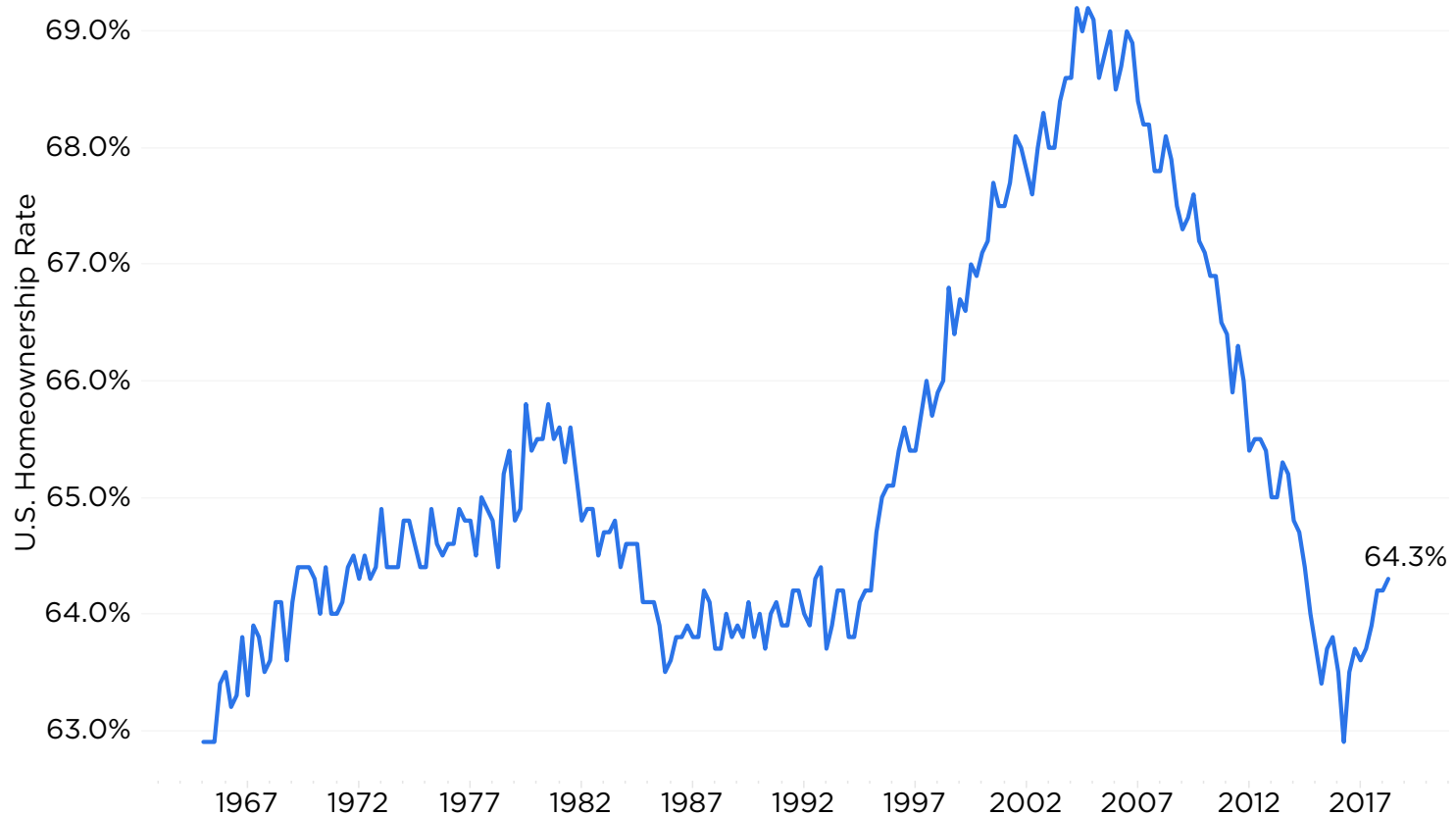
\$54K

NEW IN Q2

- The homeownership rate is at multi-decade lows, as renters stay renting longer and would-be buyers find it difficult to enter the market.
- Birth rates have fallen in markets that have experienced the most home value growth.
- A greater share of rentals are out of reach for black and hispanic households compared to white and Asian households.
- The single-family home in the suburbs remains a mainstream standard of what homeownership should look like but the image of the ideal American home is beginning to evolve, if only slightly. Especially for younger Americans.

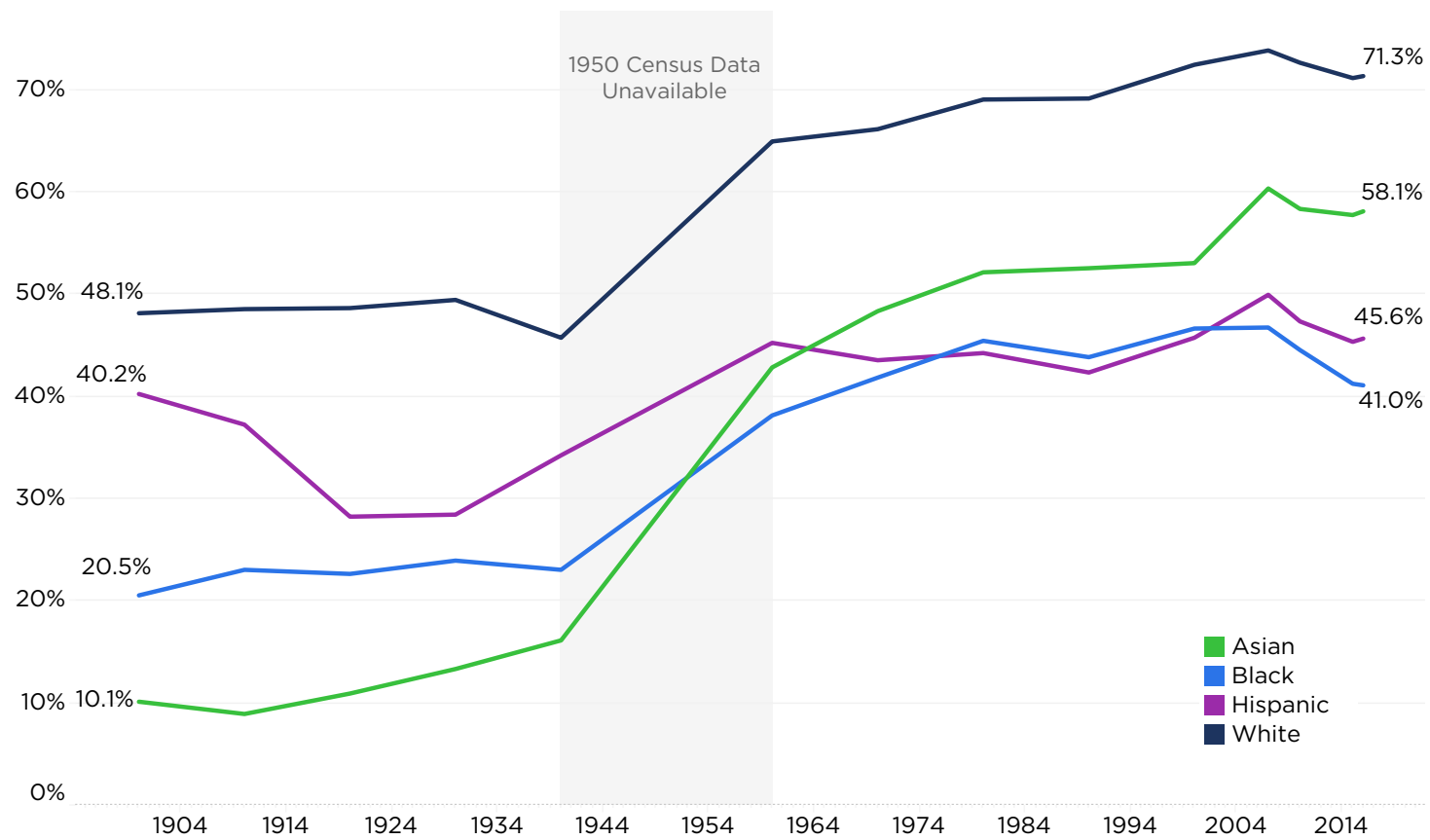
U.S. Homeownership Rate

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



Homeownership Rate by Race

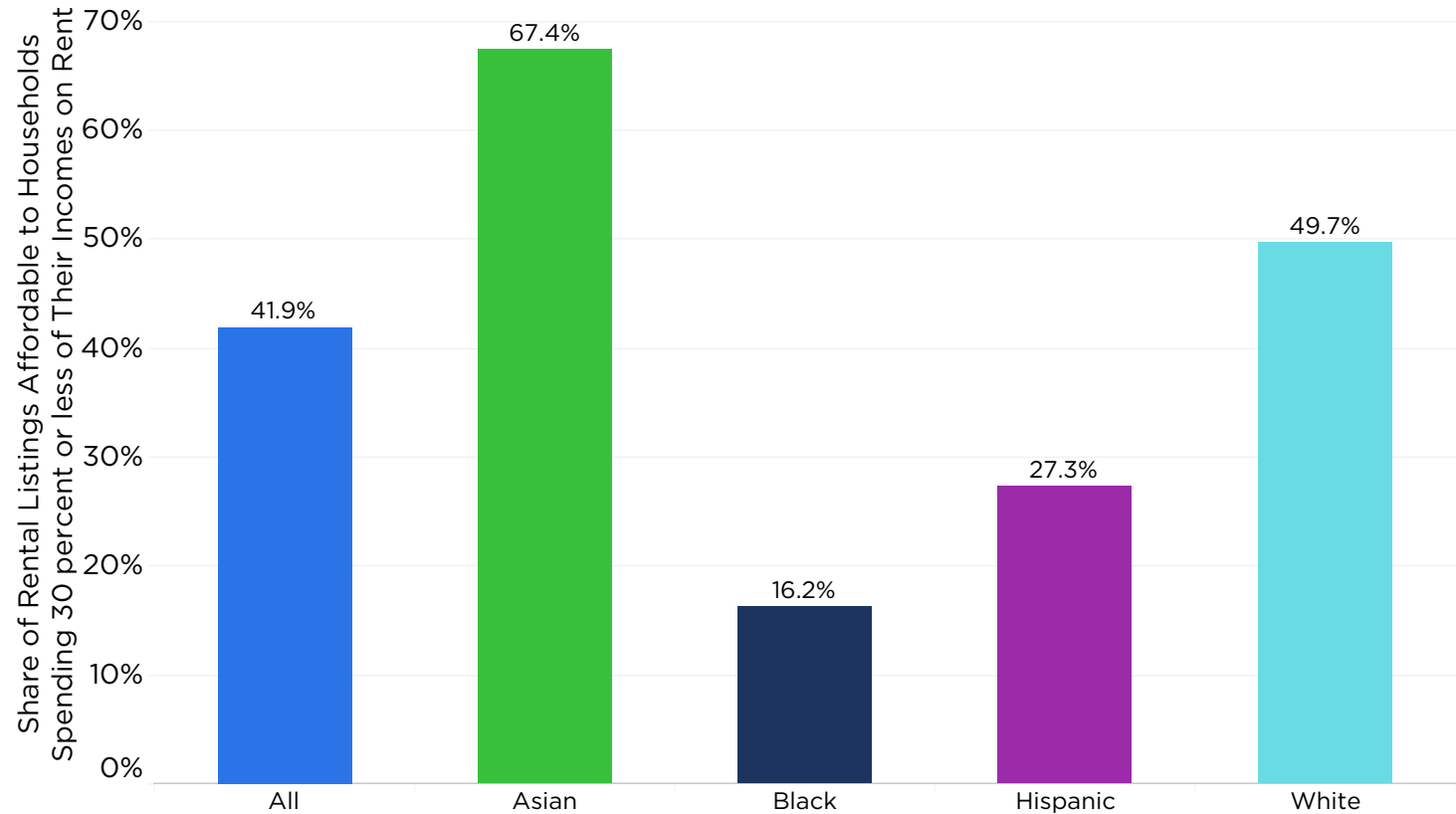
The gap between black and white homeownership rates has widened since 1900



Source: Urban Institute analysis of U.S. Census Bureau, Decennial Census and American Community Survey, 1990-2015, made available by IPUMS-USA, University of Minnesota, www.ipums.org.

Rental Listing Affordability

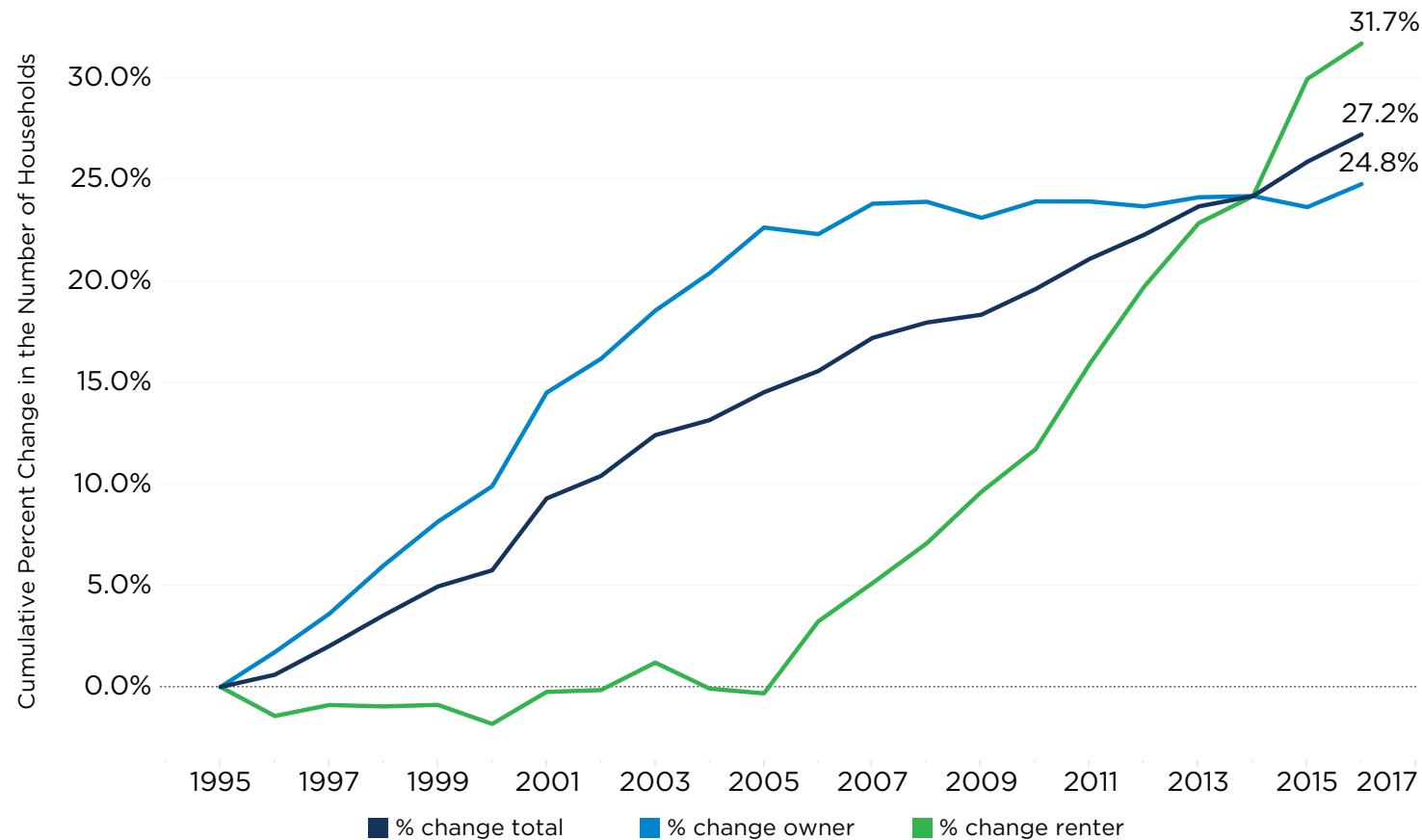
Blacks and Hispanics can afford fewer rental listings.



Source: Zillow analysis of Zillow rental listings in 2017 and median household income data from the U.S. Census Bureau, American Community Survey, 2016, projected forward using the Bureau of Labor Statistics' Employment Cost Index.

Newly Formed Households

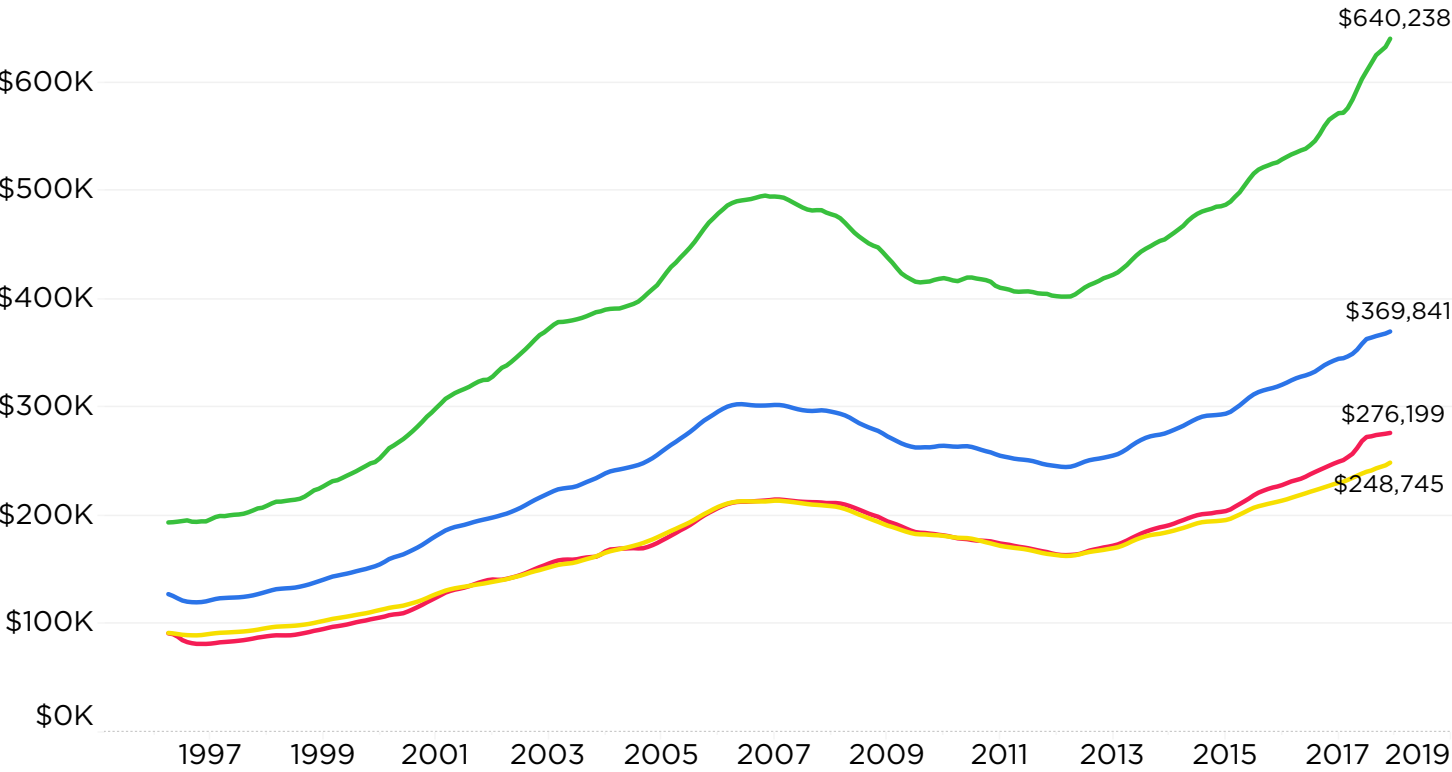
Since 2005, newly formed households have tended to rent.



Home Values in Redlined Areas

Home values in the vast majority of neighborhoods that were “redlined” as hazardous for mortgage lending by the federal government 80 years ago are lower now than in areas rated more highly.

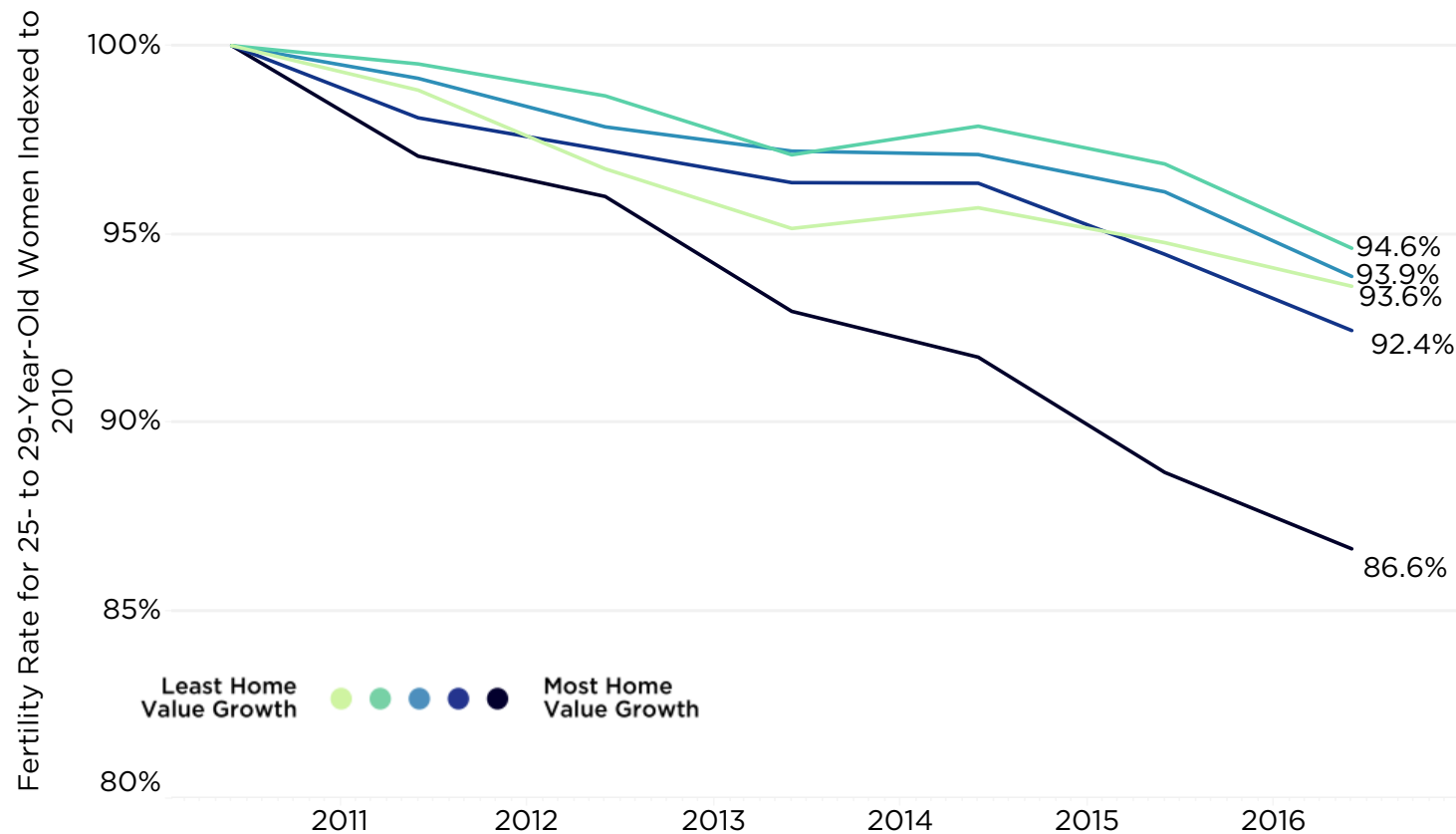
Median home values for areas the government designated **best**, **still desirable**, **definitely declining** and **hazardous** for mortgage lending



Source: Urban Institute analysis of U.S. Census Bureau, Decennial Census and American Community Survey, 1990-2015, made available by IPUMS-USA, University of Minnesota, www.ipums.org.

Fertility and Housing

Birth rates have fallen most in markets that experienced the most home value growth.

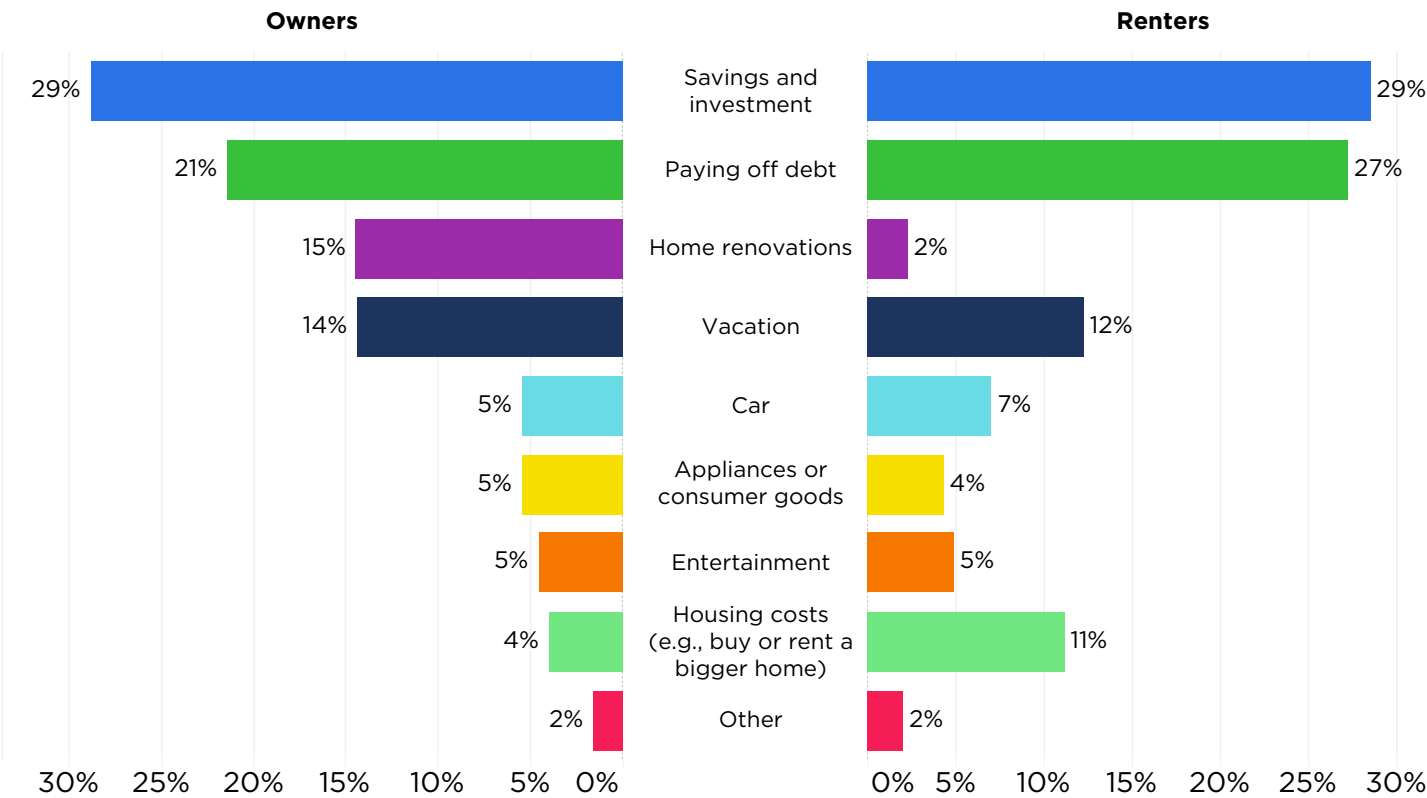


Source: Zillow Home Value Index, 2010-2016, and Zillow analysis of age-specific fertility rates from the Centers for Disease Control and Prevention's National Center for Health Statistics.

The Tax Cuts and Jobs Act

Americans are likely to reinvest billions in tax savings back into housing.

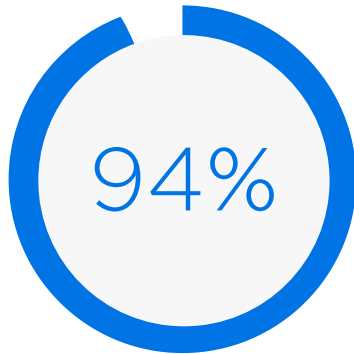
If you were to receive a 4% raise, how much of this money, if any, would you spend on...?



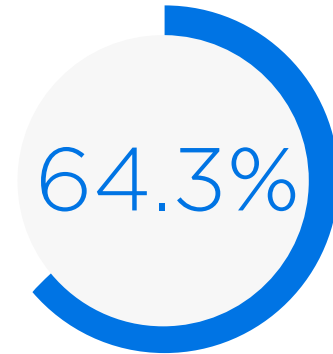
The Evolving American Dream

Americans have a preference for homeownership

A clear preference for homeownership



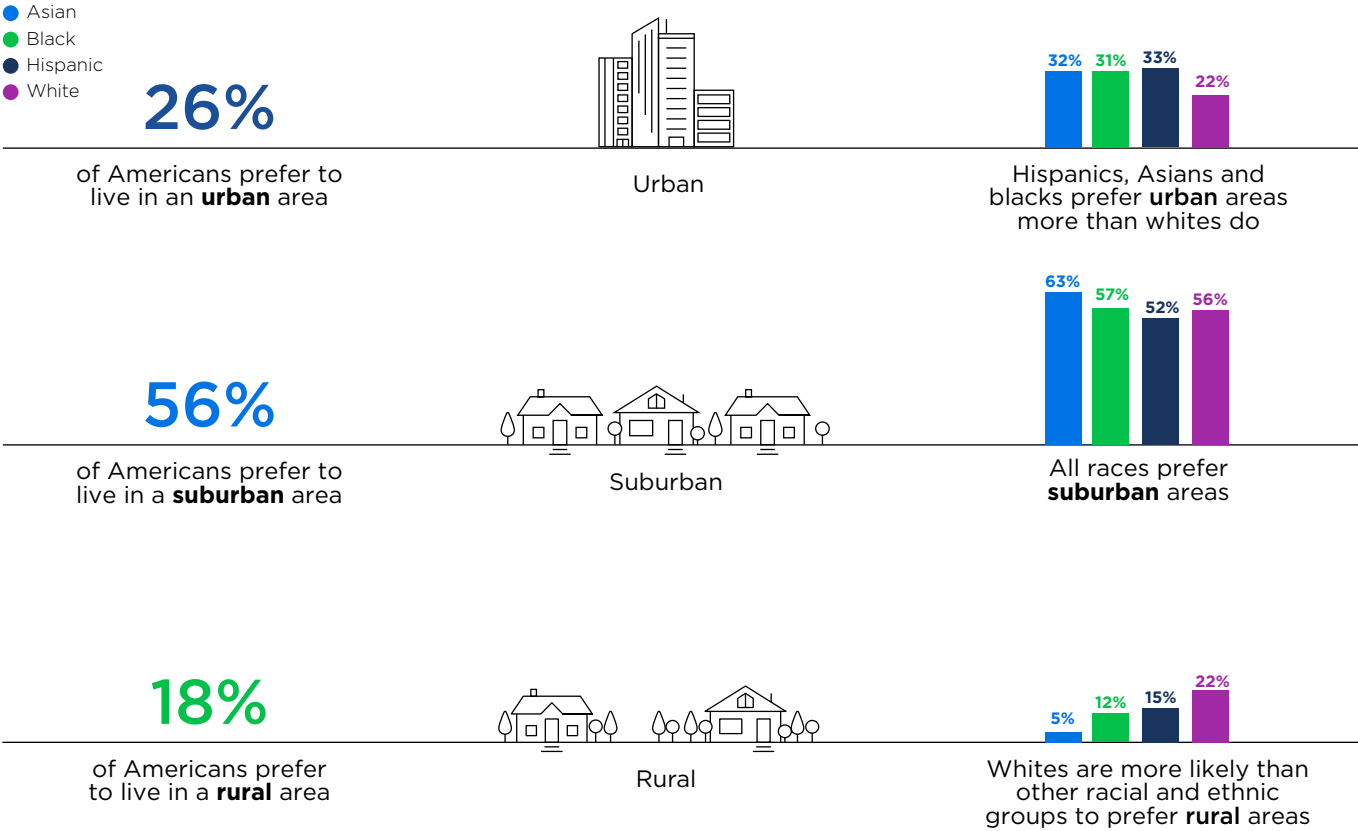
of respondents said that if money were no object, they would own their home



U.S. Homeownership Rate, 2018 Q2

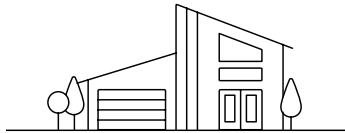
The Evolving American Dream

A majority of Americans prefer to live in the suburbs. This preference holds true across races and ethnicities



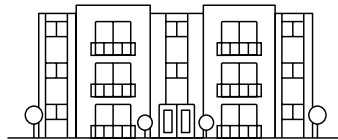
The Evolving American Dream

Americans overwhelmingly aspire to own a detached single-family home



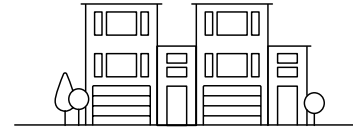
82%

of Americans prefer to live
in a **single-family home**



10%

of Americans prefer to
live in a **condo/co-op**



7%

of Americans prefer
to live in a **townhome**

The Evolving American Dream

The share of people who prefer living close to a highway is almost matched by the share who say they'd prefer not to live near the highway.



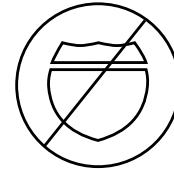
39%

of Americans prefer living close to **major highways**



29%

of Americans prefer living close to **public transit**



32%

of Americans **do not want** to live near major highways or public transit

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 great real estate professionals. In addition, Zillow operates an industry-leading economics and analytics bureau led by Zillow Group'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, Inc. (NASDAQ:Z and ZG), and headquartered in Seattle.

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