



HOUSING SUPPLY CHARTBOOK

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Contents

Introducing the Housing Supply Chartbook	5
Overview	10
Occupied Housing Units	11
Residential Housing	12
Population-Adjusted Residential Housing	14
Housing Stock and Inventory	16
Housing Stock	17
Single-Family Housing Stock	19
Multifamily Housing Stock	21
Manufactured Homes	23
Single- and Multifamily Housing Stock by Region: 2018	25
Manufactured Homes by Region: 2018	27
Single- and Multifamily For-Sale Inventory	29

Housing Production	31
Single-Family Production	32
Multifamily Production	34
Manufactured Housing Shipments	36
Single- and Multifamily Housing Permits by Region: 2018	38
Manufactured Housing Shipments by Region: 2018	40
Housing and the Economy	42
Residential Construction Costs	43
Labor Market Conditions	44
Land Values and Structure Costs	47
Lot Sizes	49
One-to-Four-Unit Residential Construction Lending	51
The Contribution of Housing and Utilities to GDP	53
The Contribution of Residential Fixed Investment to GDP	55
Stay Connected to Our Research	57
About the Authors	58
Acknowledgments	59

Introducing the Housing Supply Chartbook

Since 2009, housing demand has outstripped supply, quite significantly in some areas. In 2018—the latest full year for which we have comprehensive data¹—we estimate that 1.2 million households were formed. This compares with net new production of 850,000 units (1.2 million new single-family and multifamily housing units were completed, and 100,000 new manufactured housing units were shipped, but roughly 450,000 units go obsolete each year, for a net addition to the housing stock of 850,000 units). This created a 350,000-unit shortage in 2018 alone. This shortage has increased home prices and rents, a trend that will continue for the foreseeable future absent policy changes.

¹ The data concepts used in this chartbook were obtained from information compiled by the National Association of Home Builders, the US Census Bureau, the US Department of Housing and Urban Development, the Bureau of Labor Statistics, the Federal Deposit Insurance Corporation, the Federal Reserve Board, the National Association of Realtors, the American Enterprise Institute, and the National Bureau of Economic Research.

The good news is that housing as an issue has been elevated in the national consciousness, and several presidential candidates have released housing plans that recognize how critical supply is to solving the affordability crisis.² This is a significant departure from past elections. In addition, many policies governing the levers that could boost housing supply, such as zoning rules and building codes, are often determined by state and local governments. In addition, builders face labor cost and availability challenges as well as other barriers to construction.

² Karan Kaul and John Walsh, "How 2020 Candidates Plan to Increase Nationwide Housing Supply," *Urban Wire* (blog), Urban Institute, December 19, 2019, <https://www.urban.org/urban-wire/how-2020-candidates-plan-increase-nationwide-housing-supply>.

To help people understand the state of the nation's housing supply, we have created this Housing Supply Chartbook. The chartbook seeks to answer a broad range of questions, such as these:

- How much housing do we have, and how much is attributable to single-family homes, town homes and condominiums, apartments, and manufactured homes?
- How does what we have today compare with what we have had in past decades, and how has this changed since the Great Recession?
- How much and what kind of new housing are we producing?
- Are we producing enough of the kind of housing we need?
- How old is our housing stock?
- What are the regional differences in housing supply?
- Is it more expensive today to build homes and apartment buildings than it was in the past, and if so, why?
- What is happening to the cost of labor, construction supplies, and land, and how expensive are these inputs compared with past decades?
- What does housing contribute to the national economy (today and historically)?

As you peruse the following pages, you will see the story of our current supply crisis unfold.

Growth in the total US housing stock has been muted. The nation's housing stock expanded 20 percent to 138 million homes between 2000 and 2018, but after taking population growth into account, the total housing stock has expanded only 3 percent and has actually contracted 0.2 percent since 2008. See slide 15.

Housing production is significantly lower than its average between 2000 and 2003, the last period generally considered normal (before the run-up to the crash). New housing production has increased 123 percent since 2009 but remains 28 percent below its 2000–03 average annual level of 1.87 million units. Single-family starts and manufactured housing shipments remain 35 and 48 percent below their respective 2000–03 annual averages, but multifamily starts are 10 percent higher. See slide 15.

Single-family construction remains low, but costs per unit are elevated. At \$284 billion in 2018, total private single-family residential construction spending is 33 percent below its 2005 peak of \$434 billion. Spending per single-family home completed in 2018 was \$338,260, 28 percent above its 2005 level of \$264,998. See slide 43.

The number of multifamily units completed has recovered, but these units are in larger buildings. At \$60 billion in 2018, total private multifamily residential construction spending is 14 percent above its 2006 peak of \$53 billion. Per unit, total multifamily spending is 8 percent higher (\$175,038 versus \$162,471). When adjusted for the number of multifamily *building* completions, total spending is 186 percent greater (\$5.0 million versus \$1.8 million). See slide 43.

As a share of gross domestic product (GDP), residential fixed investment (RFI) is highly variable and tends to lead business cycles. RFI falls heading into a recession and accelerates out of one. In 2018 and the first half of 2019, real RFI fell, sparking fears of a recession. But more recent numbers have partially alleviated these concerns. See slide 55.

Overview

Occupied Housing Units

	2007		2009		2018	
	Owner occupied	Renter occupied	Owner occupied	Renter occupied	Owner occupied	Renter occupied
Single-family	66,032,715	11,668,135	65,584,718	12,918,483	68,594,887	14,710,848
Detached units	61,605,279	9,560,184	61,188,542	10,617,607	64,012,933	11,959,155
Attached units	4,427,436	2,107,951	4,396,176	2,300,876	4,581,954	2,751,693
Multifamily	4,258,803	23,392,103	4,163,433	23,020,683	4,249,835	27,163,098
2-to-4-unit buildings	1,770,329	7,275,600	1,681,781	7,374,780	1,650,794	7,615,659
5-to-9-unit buildings	607,522	4,615,873	597,150	4,661,338	590,975	5,068,624
10-to-19-unit buildings	487,209	4,290,786	470,329	4,397,218	481,043	4,805,393
20-to-49-unit buildings	507,643	3,124,939	501,922	3,237,116	527,498	3,868,131
50-or-more-unit buildings	886,100	4,084,905	912,251	4,350,231	999,525	5,805,291
Manufactured housing	5,155,077	1,770,619	5,023,996	1,797,961	4,779,322	1,890,011
Total	75,515,104	36,862,873	74,843,004	38,773,225	77,624,044	43,763,957

Source: American Community Survey.

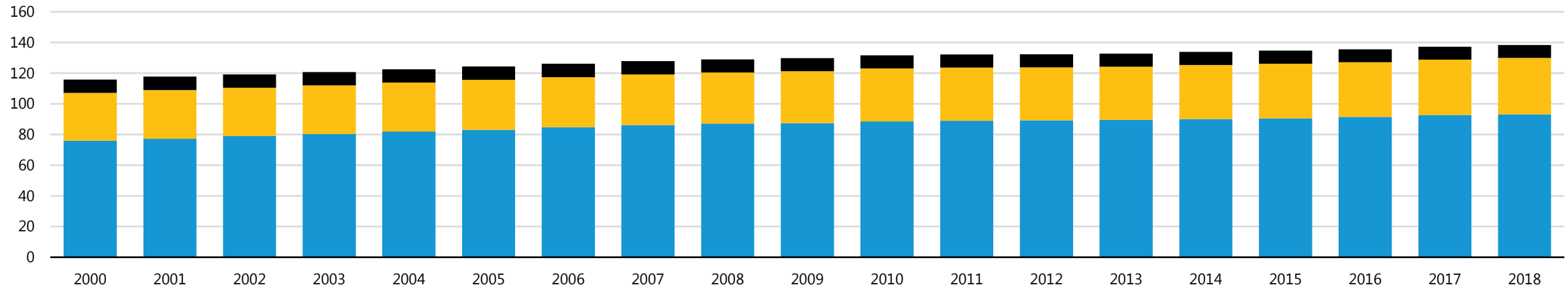
Residential Housing

According to the American Community Survey, there were 138 million homes nationwide as of 2018. Sixty-seven percent were single-family units, 27 percent were multifamily units, and 6 percent were manufactured housing units. Since 2000, the housing stock has grown at a slow but steady pace. The 20 percent growth over the past 19 years has increased the number of single-family homes 22 percent and multifamily units 18 percent, while the number of manufactured homes has decreased 2 percent. In contrast, housing production, measured as residential starts and manufactured home shipments, has been more volatile. The 2001 recession notwithstanding, total production has generally fallen heading into recessions and risen before the recession's end. In this way, housing output is typically a leading indicator of broader economic conditions. Housing production declined sharply heading into the Great Recession, but its recovery has been anemic, limiting the amount of housing added to the total stock.

Housing Stock

■ Single-family homes ■ Multifamily homes ■ Manufactured homes

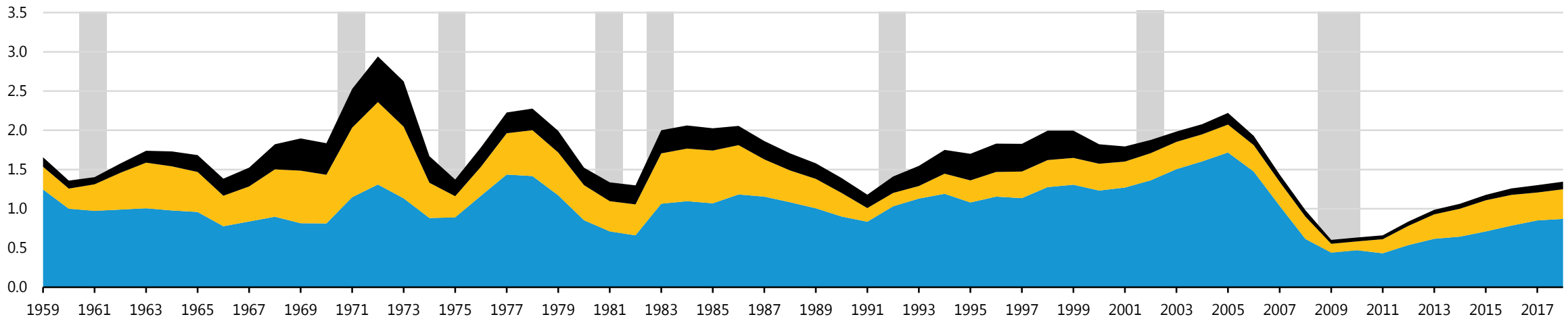
Millions



Housing Production

■ Single-family starts ■ Multifamily starts ■ Manufactured home shipments

Millions



Sources: American Community Survey, US Census Bureau, the US Department of Housing and Urban Development, and the National Bureau of Economic Research.

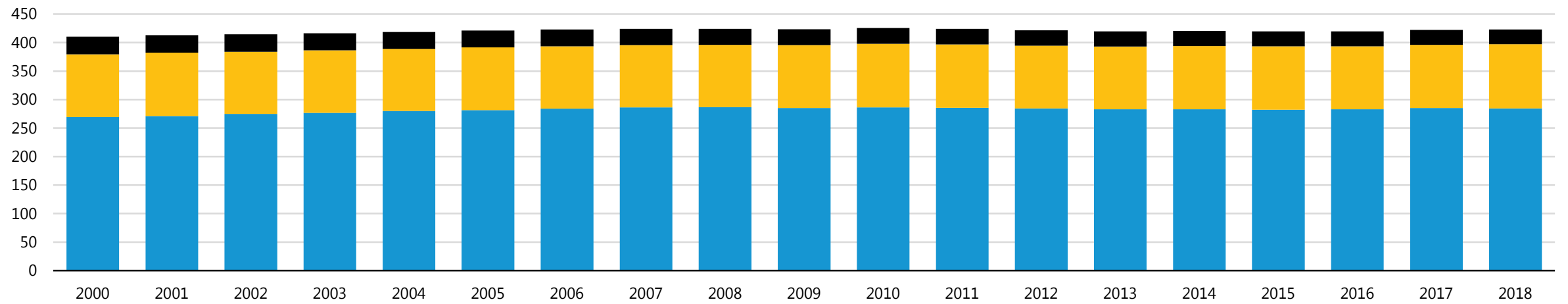
Note: Gray shading indicates a recession.

Population-Adjusted Residential Housing

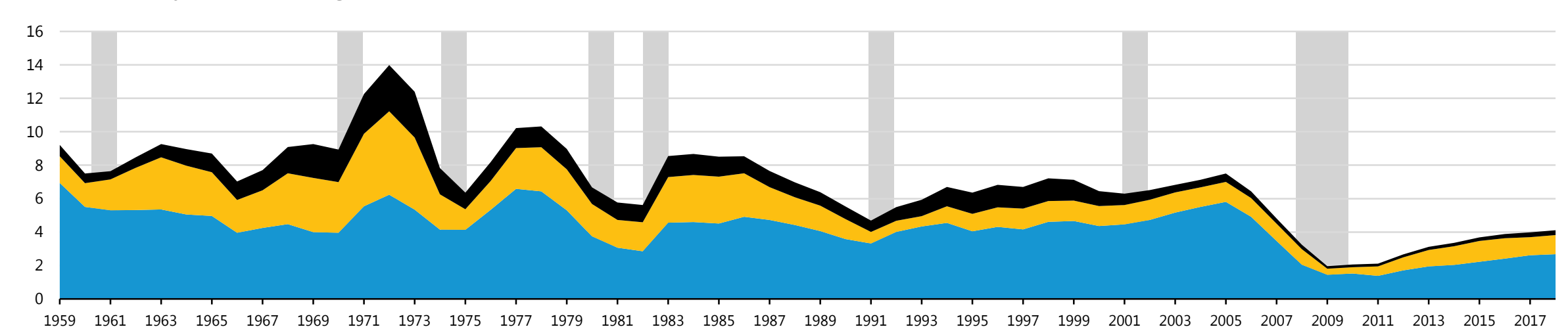
Although the housing stock has grown since 2000, when adjusted for the total population, the number of homes has remained largely stable. This suggests that the rate of obsolescence (through demolition, conversions, and damage) relative to the population largely offsets growth. In 2000, there were 410 homes for every 1,000 people. By 2018, there were 423 homes for every 1,000 people. Despite adjusting housing output for population, production remains variable around business cycles. But adjusting production for the underlying population further illuminates a lack of construction since the Great Recession. In 2018, 2.68 single-family homes were built per 1,000 people and 0.29 manufactured homes were shipped. Although these figures represent a continued improvement, they remain below the minimum level recorded between 1959 and 2007. The number of multifamily starts relative to the population has returned to its mid-2000s level.

Population-Adjusted Housing Stock

Per 1,000 people



Population-Adjusted Housing Production



Sources: American Community Survey, US Census Bureau, the US Department of Housing and Urban Development, and the National Bureau of Economic Research.

Note: Gray shading indicates a recession.

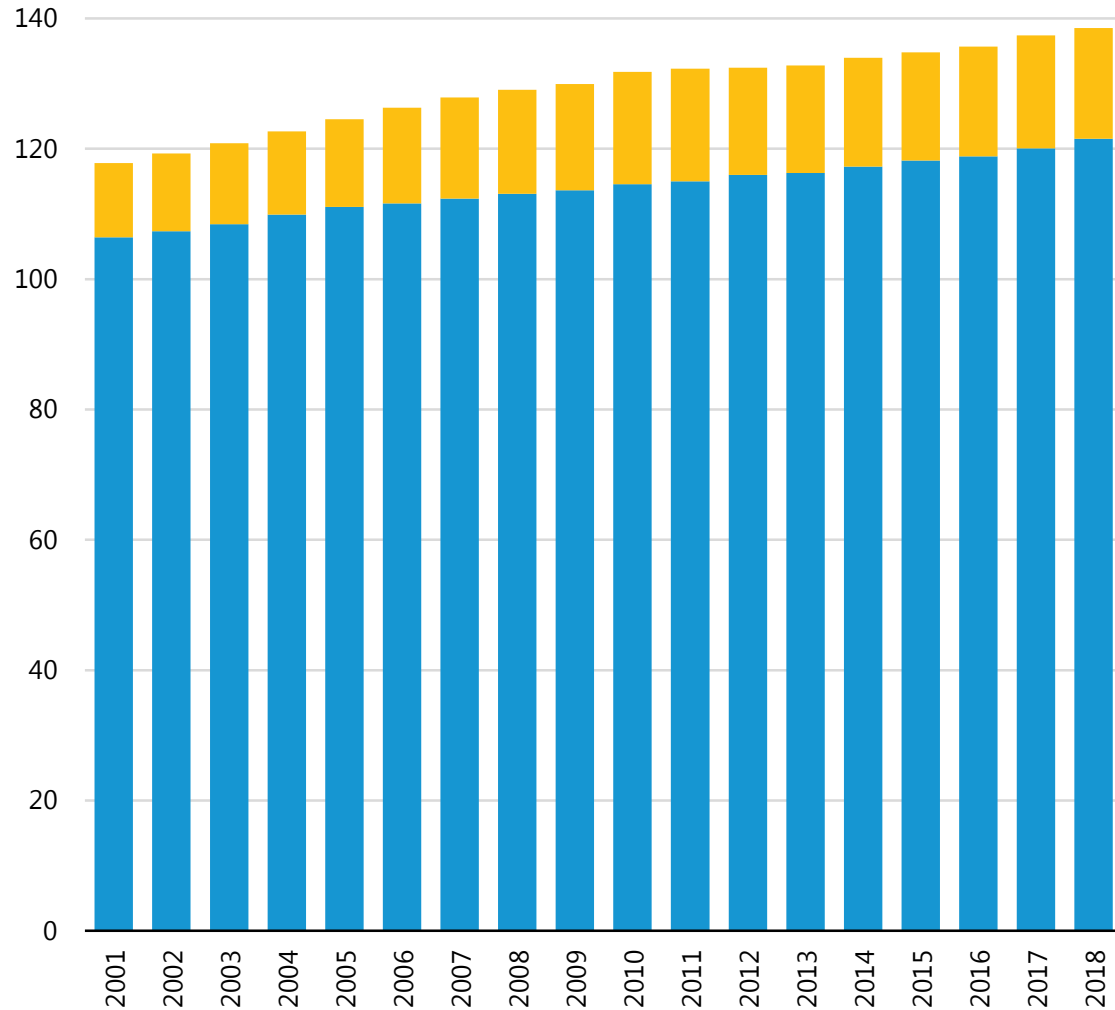
Housing Stock and Inventory

Housing Stock

Occupied units account for nearly 9 in 10 units overall. The number of occupied homes increased 14 percent between 2001 and 2018, from 106 million to 122 million. The number of vacant homes has increased 49 percent over the same period. Growth in the number of vacant homes since 2006 has been concentrated among homes for seasonal or recreational use and other vacant homes. The increase in these two categories has been offset by fewer vacant homes rented or sold but not by occupied and vacant homes for rent or for sale.

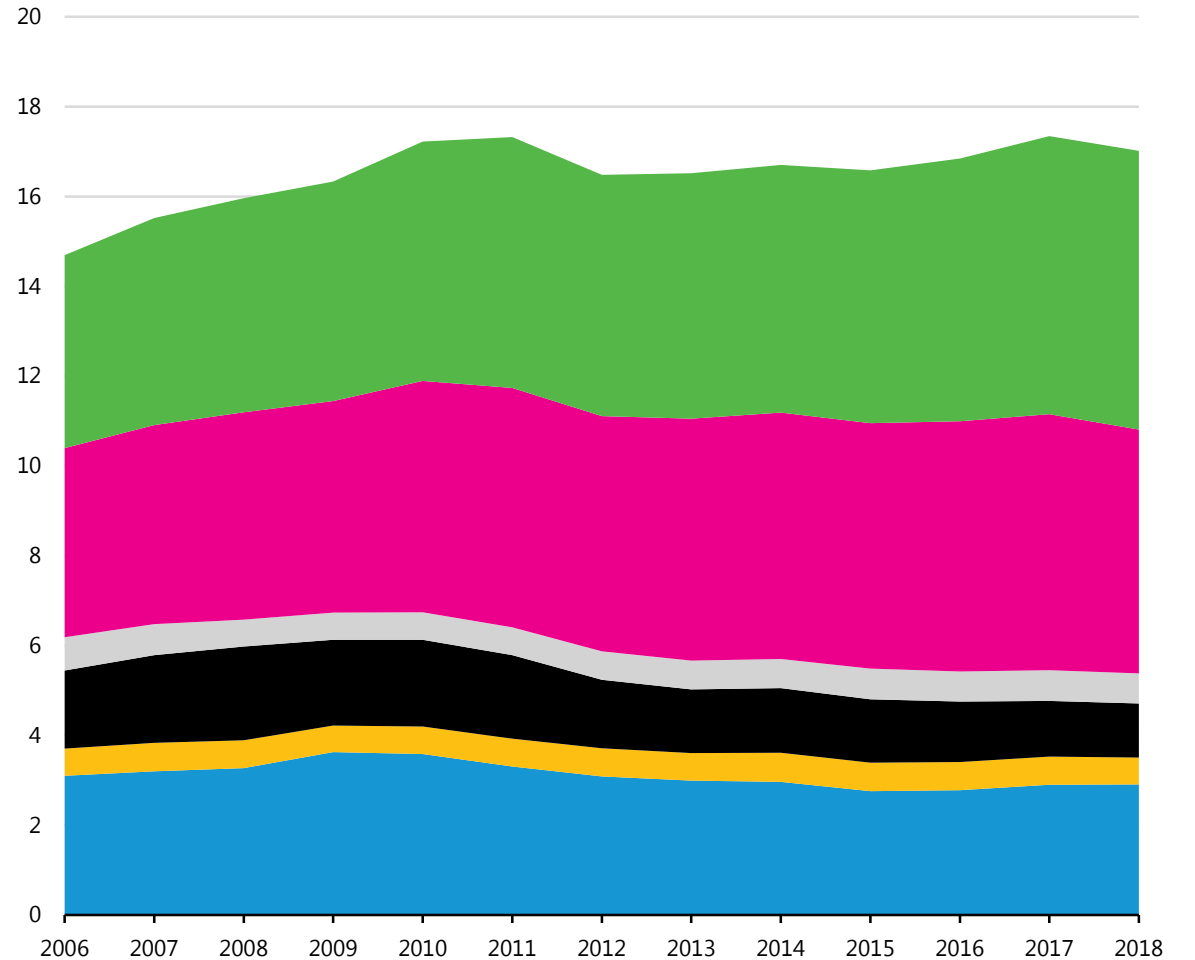
All Housing Units, by Occupancy Status

Millions ■ Occupied units ■ Vacant units



All Vacant Units, by Vacancy Type

Millions ■ For rent ■ Rented, not occupied ■ For sale ■ Sold, not occupied ■ For seasonal, recreational, or occasional use ■ Other vacant units

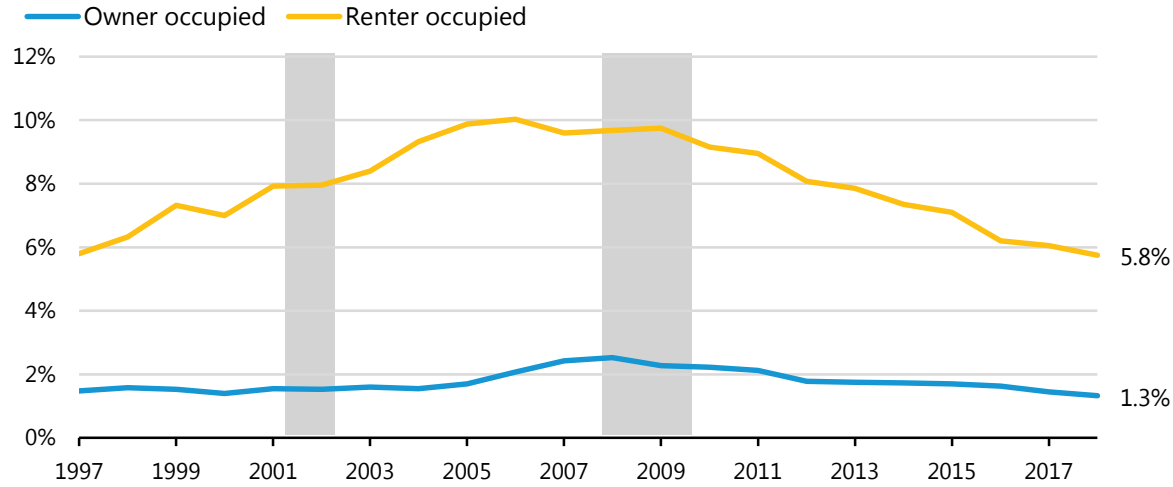


Source: American Community Survey.

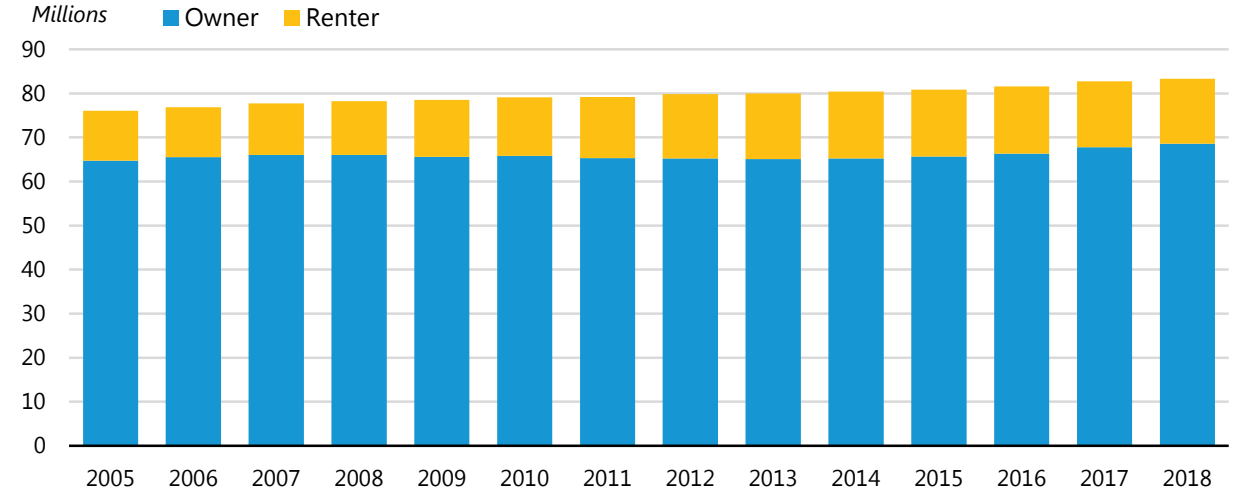
Single-Family Housing Stock

Occupancy rates have risen since 2009 and are at historic highs, and vacancy rates have fallen, accordingly, to historic lows. Across the occupied single-family housing stock, homes are typically owner occupied and typically detached. The number of owner-occupied single-family homes held steady at 66 million between 2006 and 2016. In contrast, the number of renter-occupied single-family homes rose 31 percent, from 11.3 million to 15.3 million. Between 2016 and 2018, the number of owner-occupied single-family homes increased 3.5 percent to 68.6 million. In contrast, the number of renter-occupied single-family homes declined 3.6 percent to 14.7 million. Overall, 54 percent of the occupied single-family housing stock was built before 1980. Fifty-two percent of owner-occupied homes and 64 percent of renter-occupied homes were built before 1980.

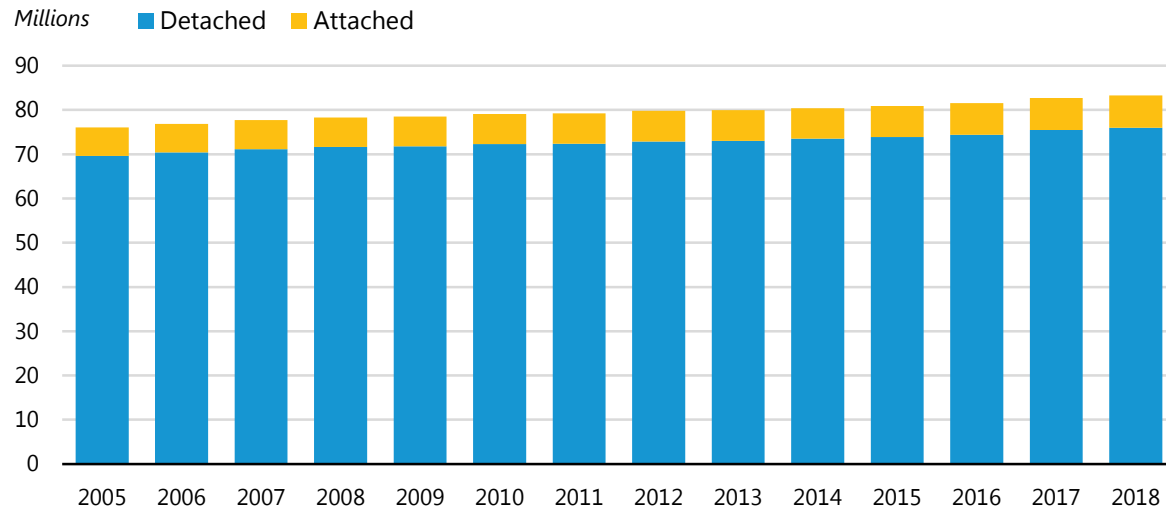
Single-Family Vacancy Rates



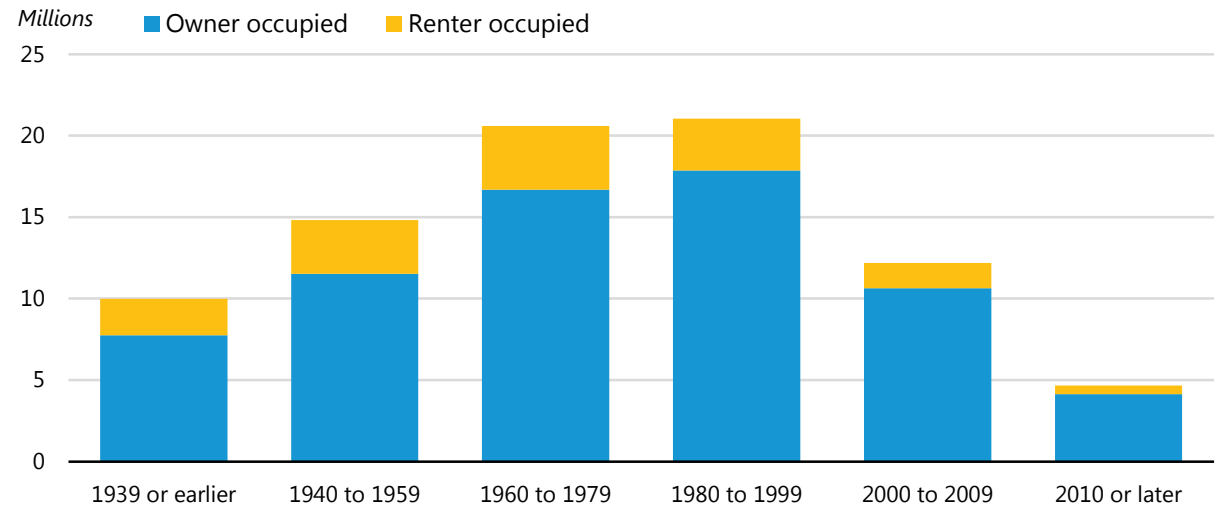
Occupied Single-Family Units, by Tenure



Occupied Single-Family Units, Detached versus Attached



Occupied Single-Family Units, by Year Built



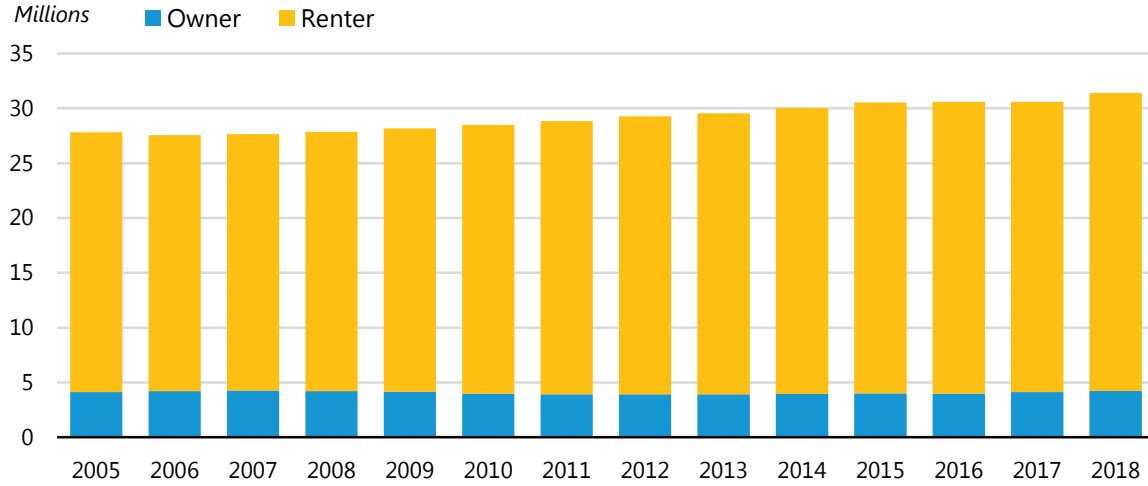
Sources: US Department of Housing and Urban Development, American Community Survey, and National Bureau of Economic Research.

Note: Gray shading indicates a recession.

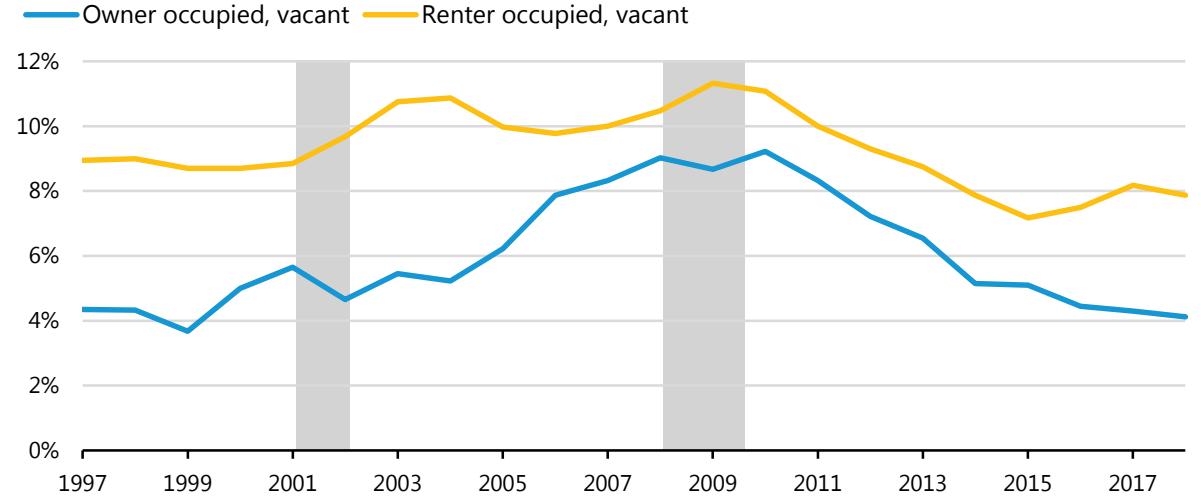
Multifamily Housing Stock

As of 2018, owner-occupied and renter-occupied multifamily housing vacancy rates are at historic lows. Among the occupied multifamily housing stock, units are concentrated among renters. After the Great Recession, the number of owner-occupied multifamily homes held steady while the number of renter-occupied homes rose. Between 2007 and 2018, the number of owner-occupied homes fell slightly from 4.26 million to 4.25 million. In contrast, the number of renter-occupied homes increased 16 percent, from 23.4 million to 27.2 million. The distribution of occupied multifamily homes is roughly uniform for different numbers of units. But since 2007, the share of 2-to-4-unit occupied multifamily housing has fallen from 33 percent of all occupied multifamily units to 29 percent. In contrast, the share of 20-or-more-unit occupied multifamily housing increased from 31 percent to 36 percent. The shift in the size of multifamily buildings is also reflected in the data about building age. Fifty-one percent of multifamily units in buildings with 5 or more units were built in 1980 or later, while 34 percent of units in buildings with 2 to 4 units were built in 1980 or later. A plurality of multifamily units built before 1960 were in 2-to-4-unit buildings, which differs from the composition of building in the decades since then.

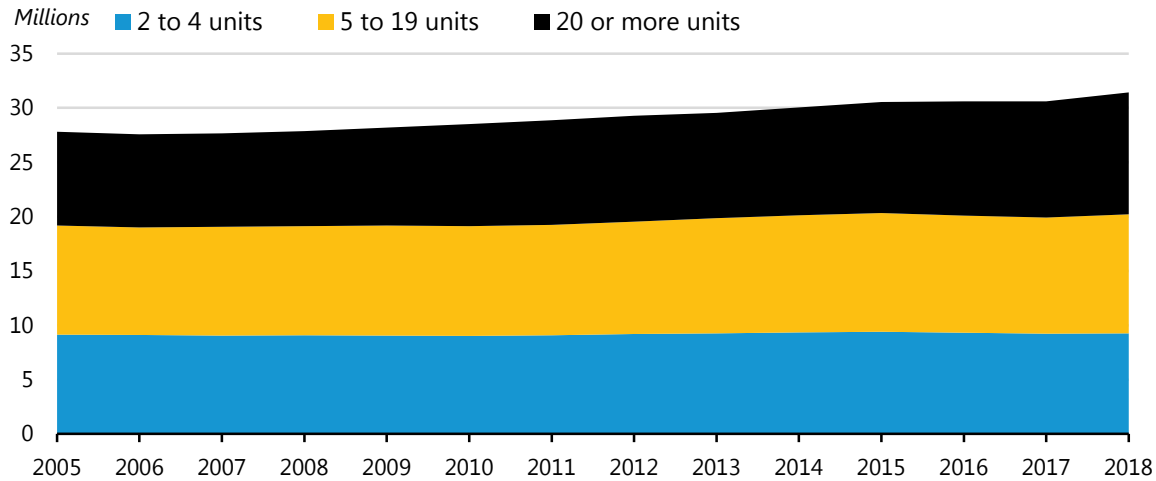
Occupied Multifamily Units, by Tenure



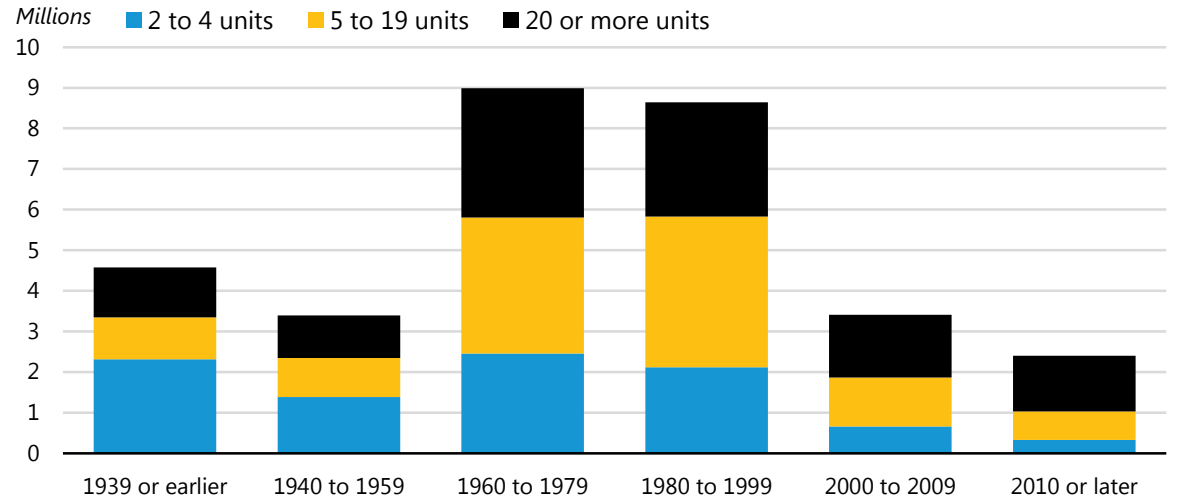
Multifamily Vacancy Rates



Occupied Multifamily Units, by Building Size



Occupied Multifamily Units, by Year Built



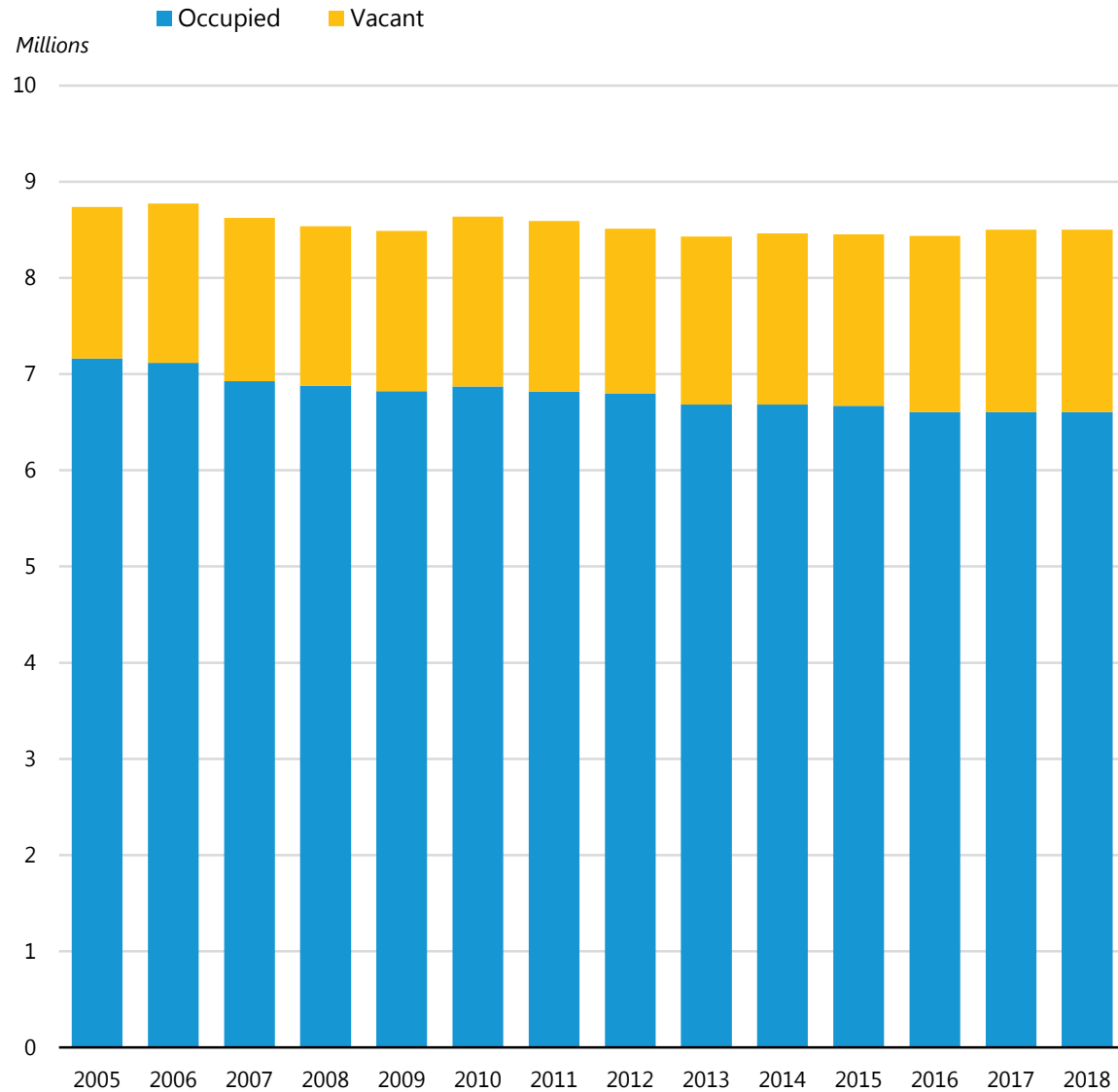
Sources: US Department of Housing and Urban Development, American Community Survey, and National Bureau of Economic Research.

Note: Gray shading indicates a recession.

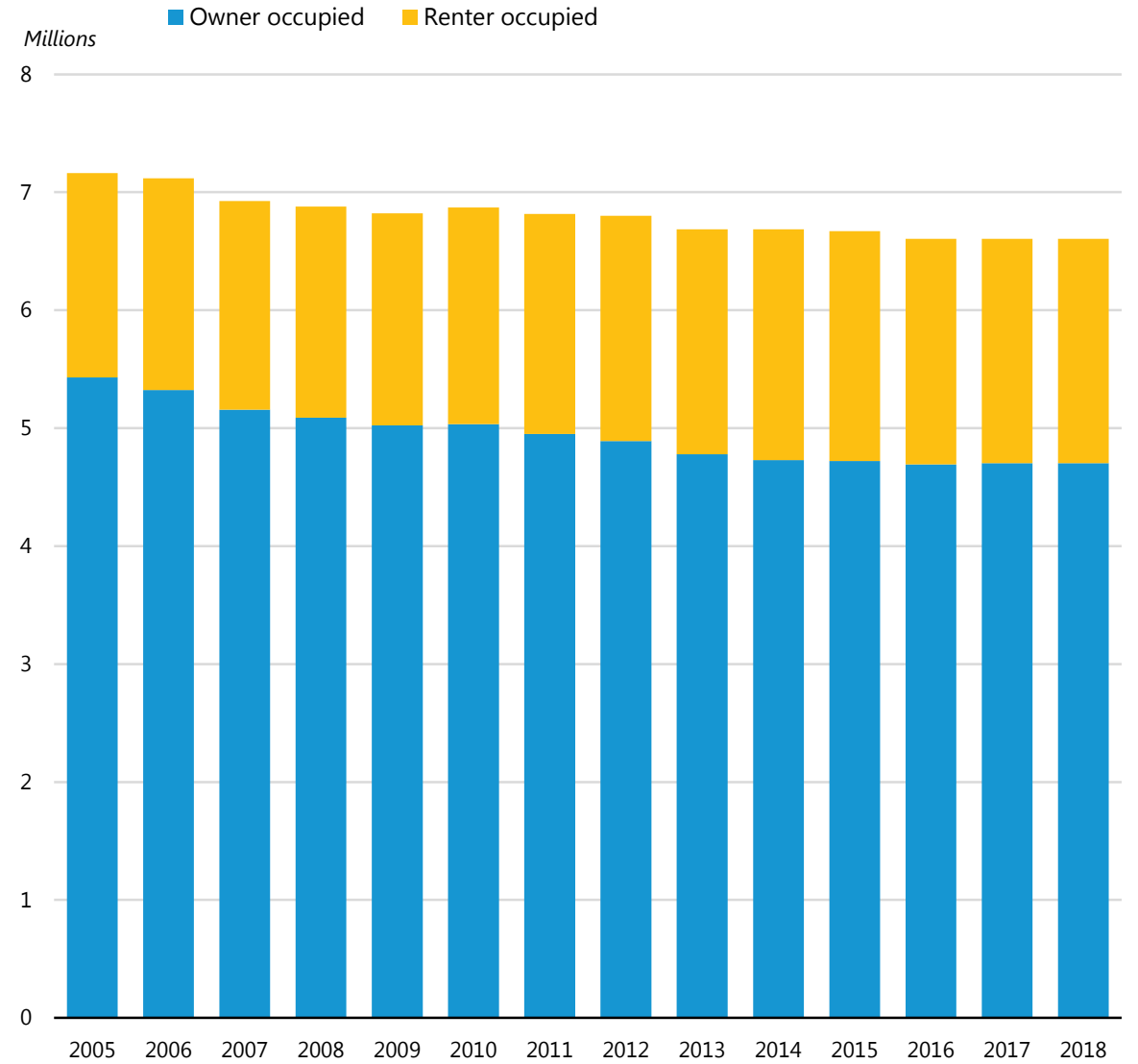
Manufactured Homes

The stock of manufactured homes has been characterized by two trends since 2005: an increase in the number of vacant manufactured homes and a decline in the number of occupied manufactured homes. Between 2005 and 2017, the number of vacant homes increased 20 percent, from 1.6 million to 1.9 million units. In contrast, the number of occupied homes declined from 7.2 million to 6.6 million. But in 2018, the trends reversed, and the number of vacant homes fell to 1.8 million while the number of occupied homes increased to 6.7 million. The broader decline in the number of occupied manufactured homes is because of a decline in the number of owner-occupied homes. Between 2005 and 2017, the number of owner-occupied homes fell 13 percent to 4.7 million. The drop in the stock of owner-occupied homes has been partially offset by a 10 percent increase in the number of renter-occupied homes to 1.9 million. In 2018, the number of owner-occupied manufactured homes rose to 4.8 million, while the number of renter-occupied manufactured homes remained steady.

Number of Manufactured Homes



Number of Occupied Manufactured Homes, by Tenure



Source: American Community Survey.

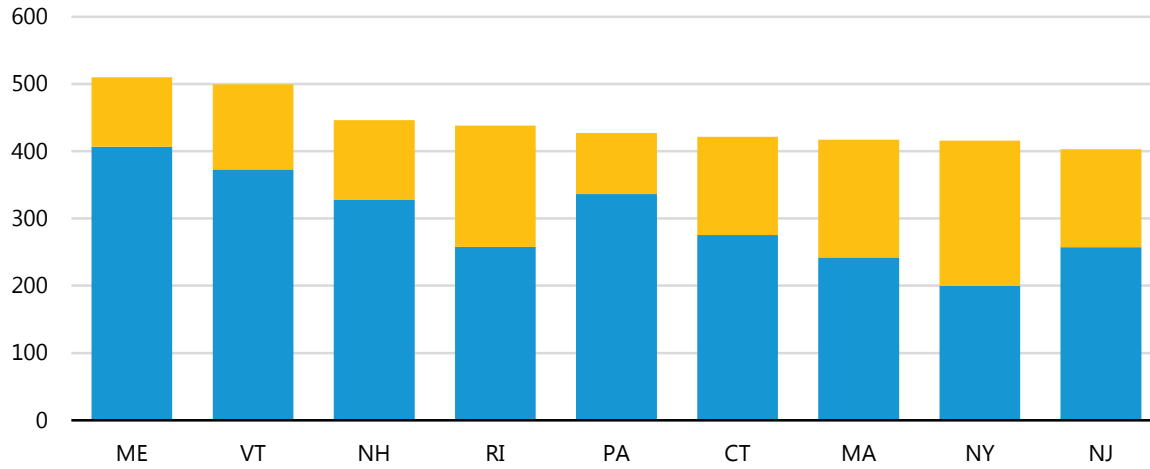
Single- and Multifamily Housing Stock by Region: 2018

Nationwide, there were 423 homes for every 1,000 people in 2018, but this national average masks regional variation. There were more than 400 homes for every 1,000 people in all 9 northeastern and all 12 midwestern states. Two northeastern states—Maine and Vermont—had 500 or more homes for every 1,000 people. Meanwhile, 8 of the 17 southern states (includes Washington, DC) and 9 of the 13 western states had fewer than 400 homes for every 1,000 people. By housing type, 5 of the 9 northeastern states—Connecticut, Massachusetts, New Jersey, New York, and Rhode Island—had a multifamily share of at least 35 percent. Only Washington, DC (South), and Hawaii (West) had such high multifamily shares. Multifamily units in Illinois (Midwest) account for 34 percent of the housing stock.

Northeast

Per 1,000 people

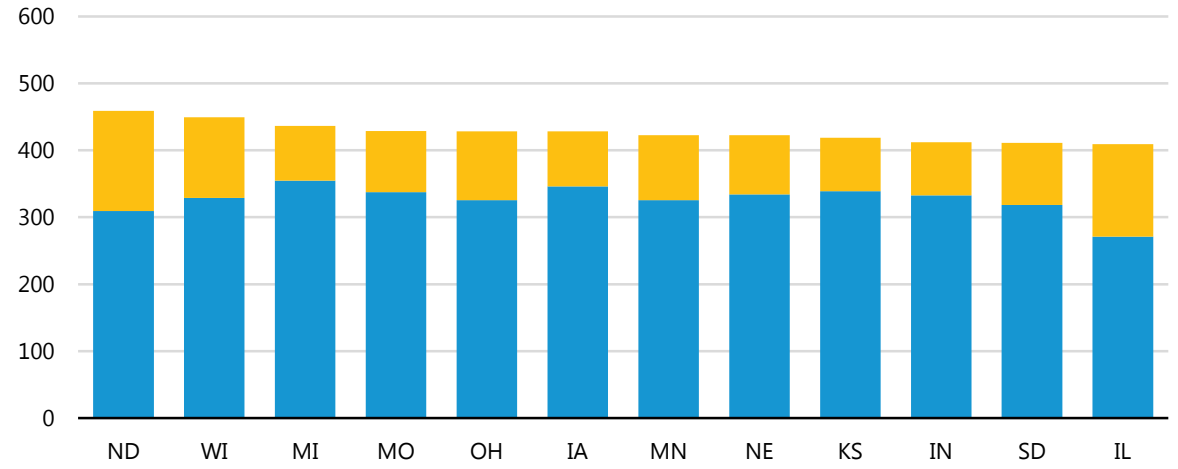
Single-family Multifamily



Midwest

Per 1,000 people

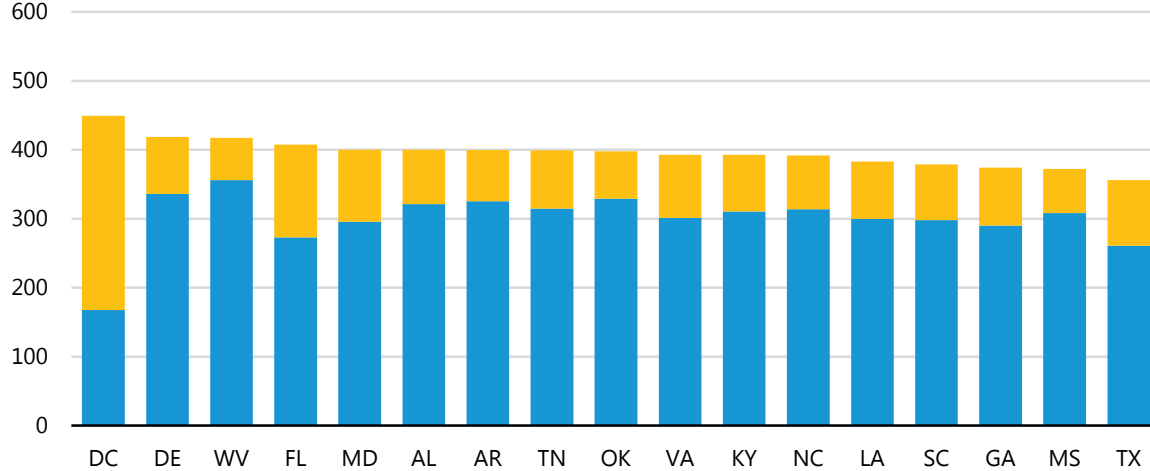
Single-family Multifamily



South

Per 1,000 people

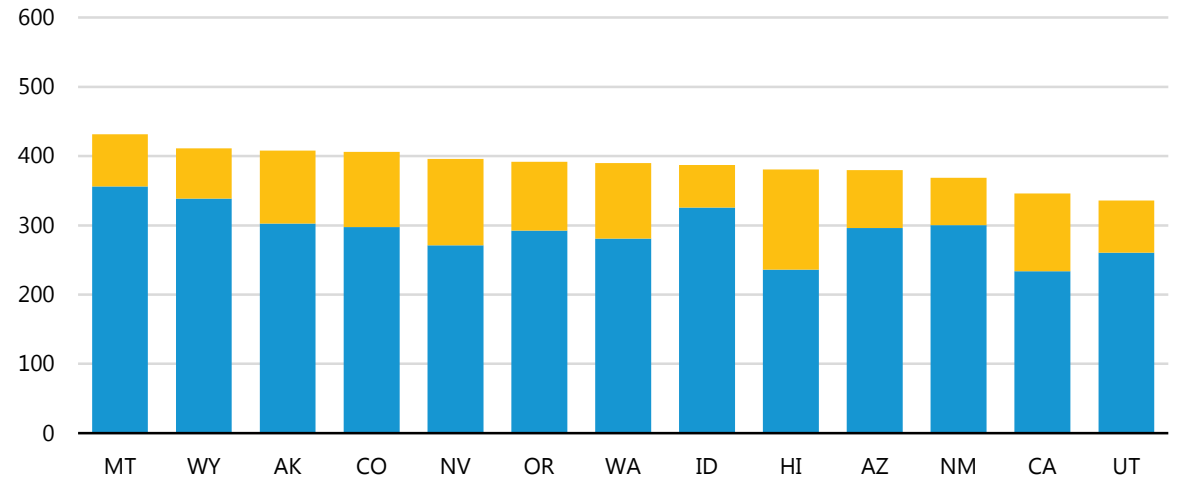
Single-family Multifamily



West

Per 1,000 people

Single-family Multifamily



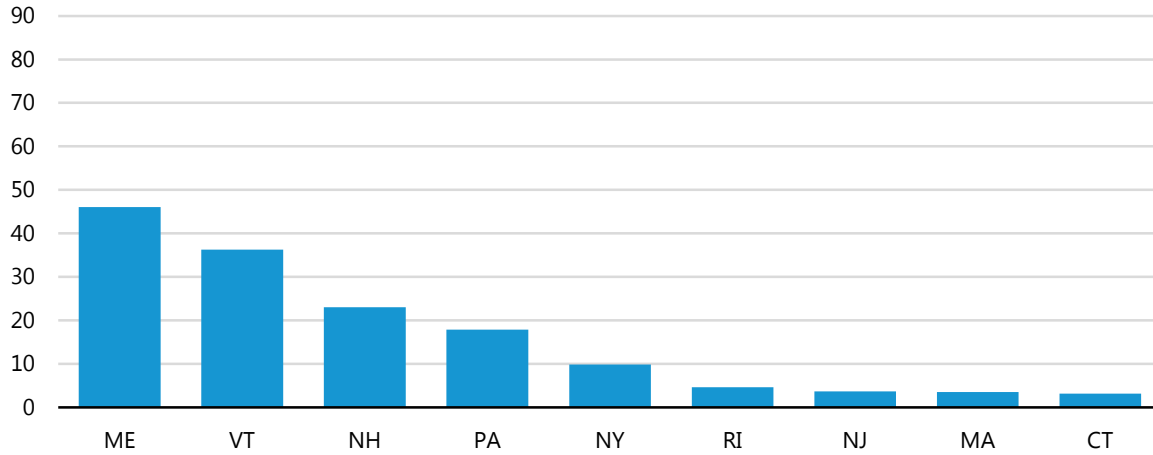
Sources: American Community Survey and the US Census Bureau.

Manufactured Homes by Region: 2018

Examining the stock of manufactured homes by population is one way to compare the number of homes across different areas. The states with 50 or more manufactured homes per 1,000 people were located exclusively in southern and western states in 2018. These two regions also had the widest range of manufactured housing stock relative to the underlying population of each state. Of the nine states with fewer than 10 manufactured homes per 1,000 people, five were in the Northeast and accounted for most states in that region. The other four with fewer than 10 manufactured homes per 1,000 people were Hawaii, Illinois, Maryland, and Washington, DC.

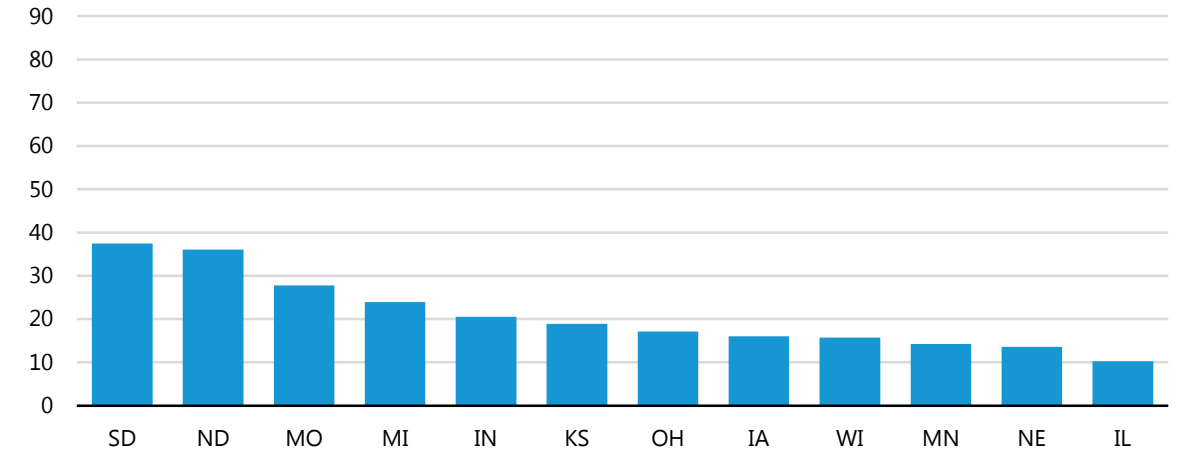
Northeast

Per 1,000 people



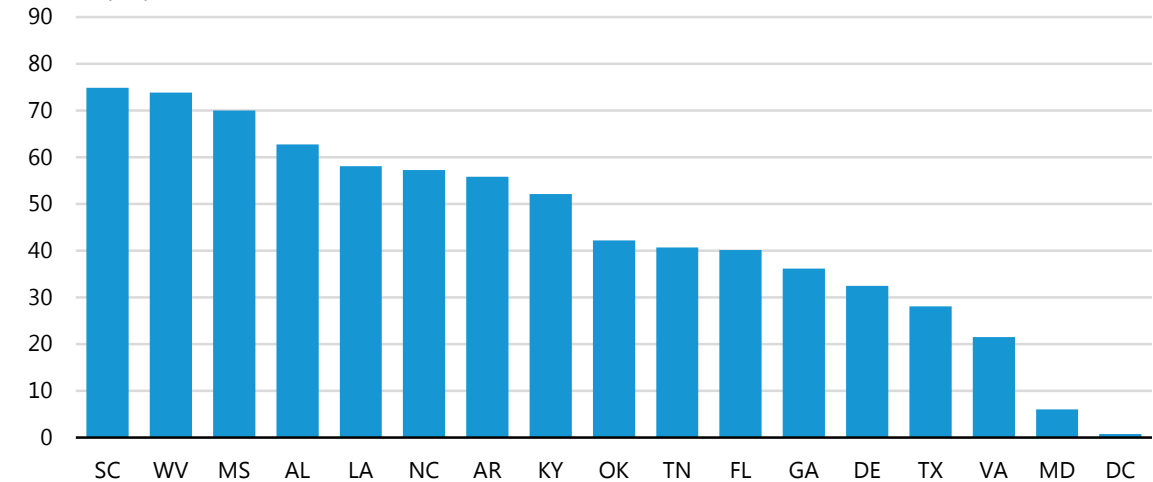
Midwest

Per 1,000 people



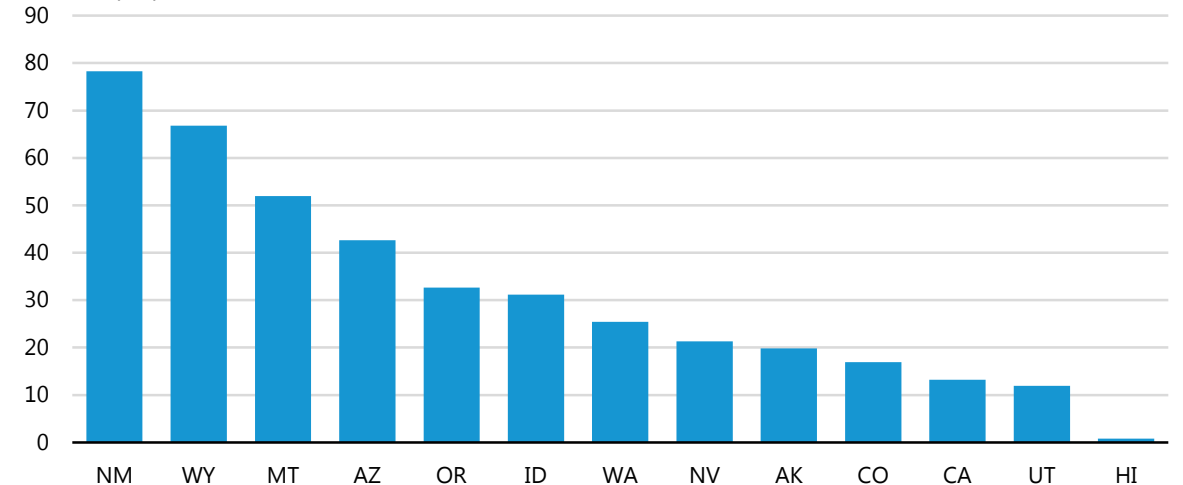
South

Per 1,000 people



West

Per 1,000 people

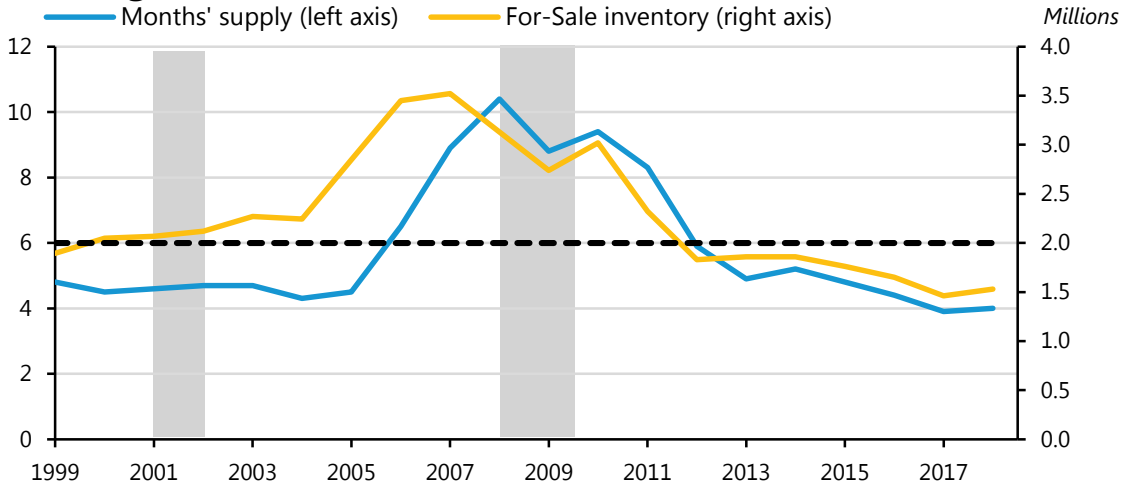


Sources: American Community Survey and the US Census Bureau.

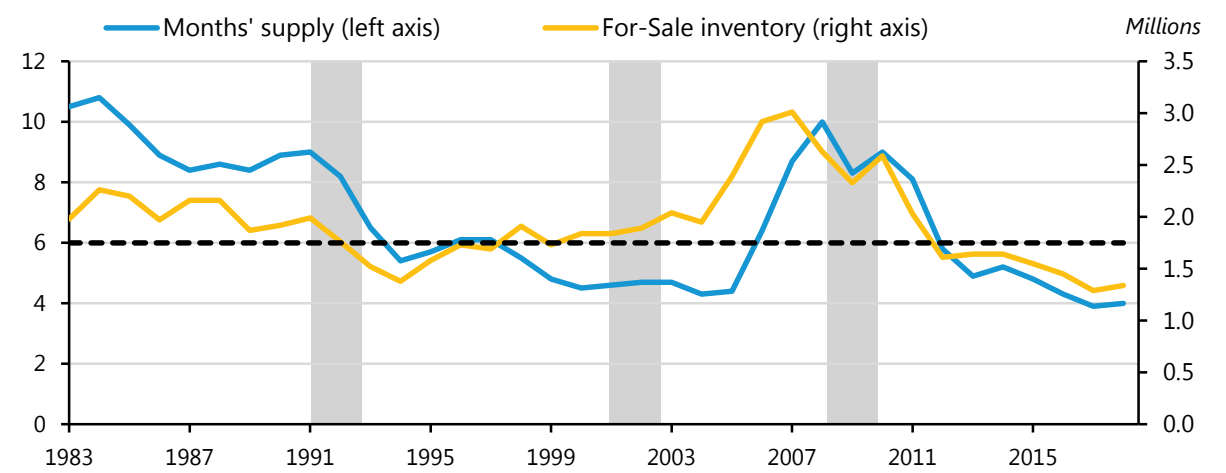
Single- and Multifamily For-Sale Inventory

Months' supply, which scales the pace of sales with the inventory of homes for sale, suggests a shortage of homes for sale. The months' supply of existing homes continues to trend below 6.0 months, the level typically associated with a balanced market. The low inventory is particularly acute for existing homes, at 4.0 months. The months' supply of existing single-family homes sat at 4.0 months in 2018, while the months' supply of existing condos and co-ops was 4.1 months. A bright spot in 2018 was an increase in the months' supply of new homes, which modestly surpassed 6.0 months, on average, over the year. The increase in months' supply partly reflects more inventory. But higher rates likely dampened the pace of sales. At the same time, new homes tend to be more expensive, all else equal, so the increase in new home inventory likely provided a smaller boost to affordable housing.

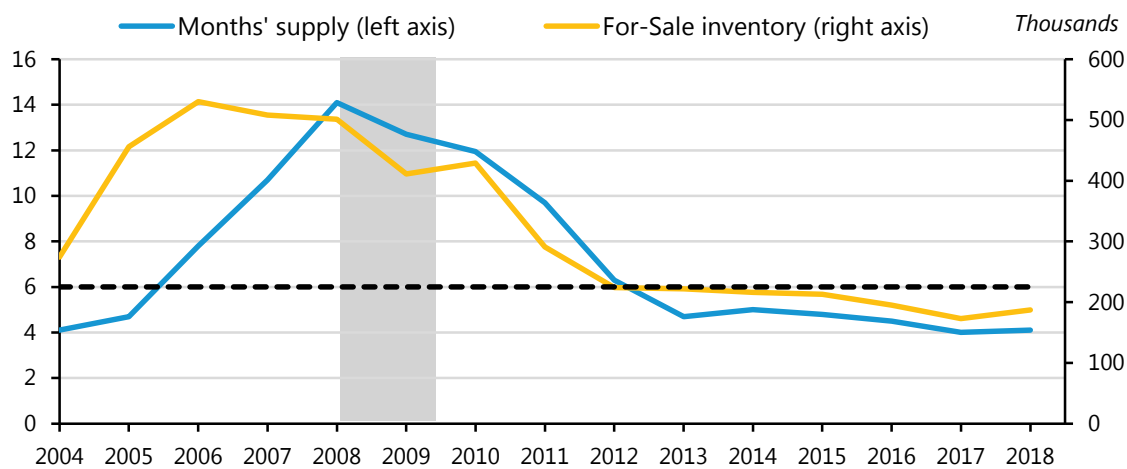
Existing Homes



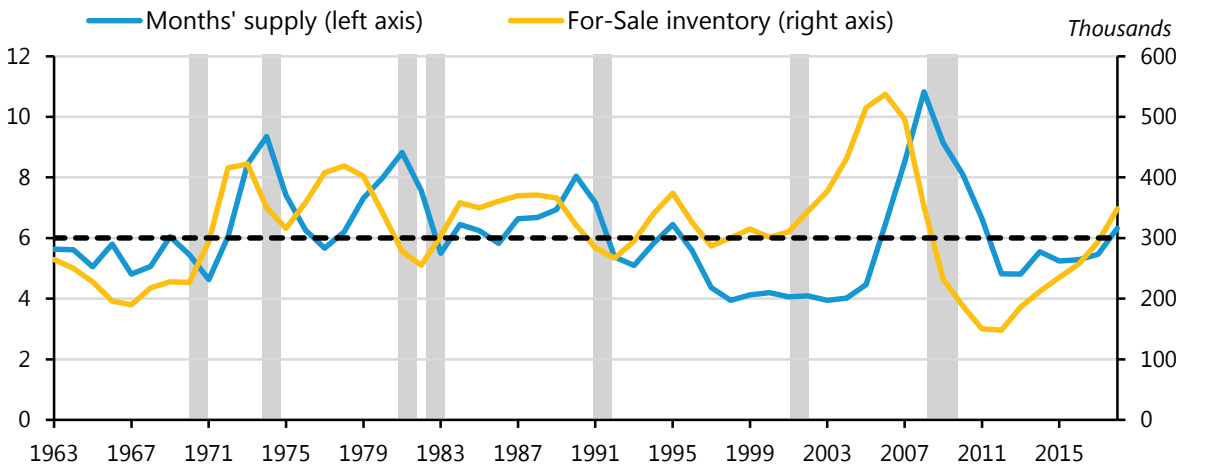
Existing Single-Family Homes



Existing Condos and Co-ops



New Homes (Single-Family Only)



Sources: National Association of Realtors, the US Census Bureau, the US Department of Housing and Urban Development, and the National Bureau of Economic Research.

Note: Gray shading indicates a recession.

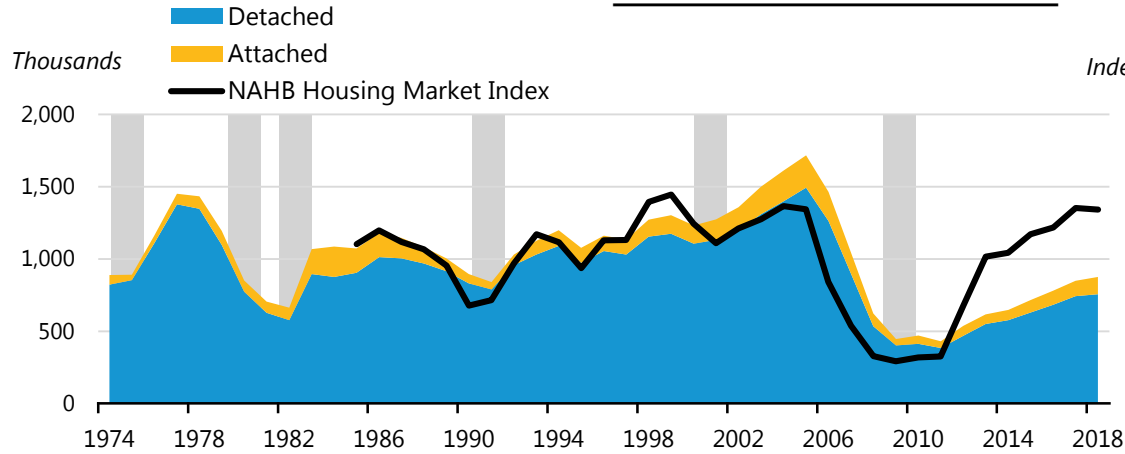
Housing Production

Single-Family Production

After falling to a low of 431,000 units in 2011, single-family starts have increased, but growth has not matched the improvement in builder sentiment. Single-family starts more than doubled to 876,000 in 2018, the highest level since the Great Recession. But before 2008, the last time single-family starts were this low was in 1991. Single-family town homes (“attached”) account for a smaller proportion of single-family starts but have been increasing faster since 2011. Separately, most single-family units are built for sale. As of 2018, 3 in 4 one-unit homes started were built for sale, a larger share since 2010 but below its 2005 peak. Despite a growing interest in building technologies (e.g., modular, panelized, and precut homes), the share of single-family completions has fallen over the business cycle. The size of single-family homes has grown, as measured by floor area, which has contributed to higher prices. But in recent years, the median and average floor areas of single-family units started have shrunk modestly as the town home share has risen. This reflects fewer starts of large homes and more starts of small and entry-level homes. At the same time, median and average floor areas remain above the levels that prevailed before the recession.

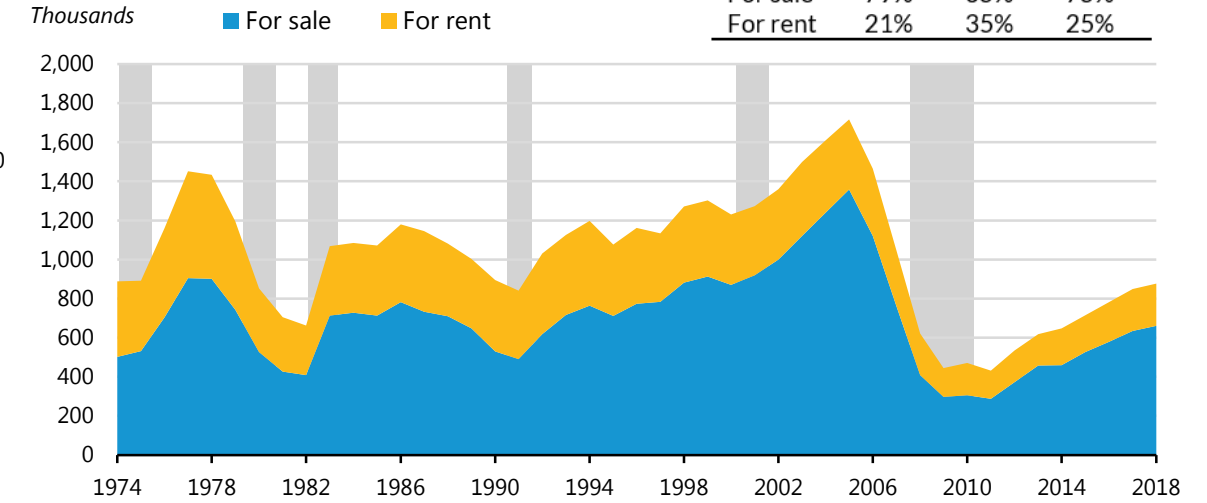
Single-Family Starts, by Design and Builder Sentiment

	2005	2011	2018
Detached	87%	89%	86%
Attached	13%	11%	14%

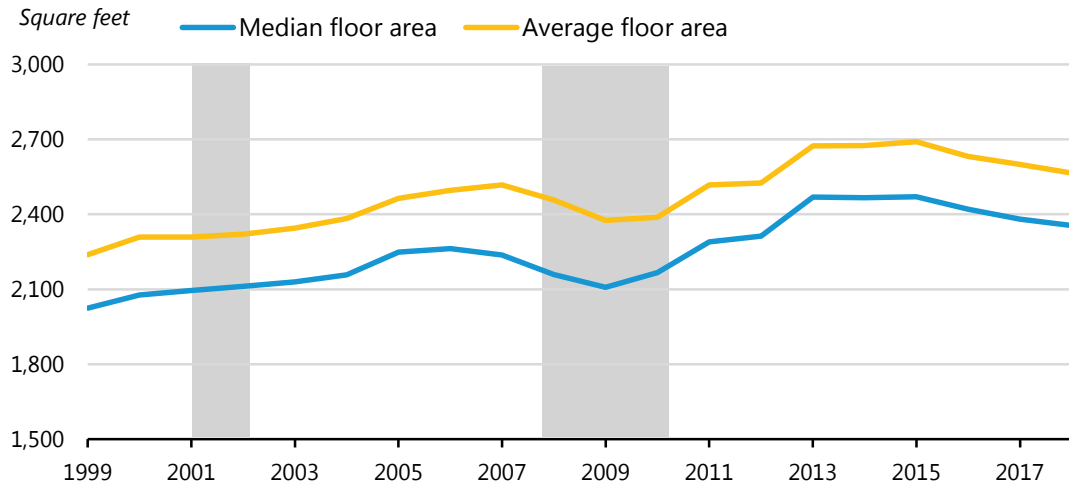


Single-Family Starts, by Purpose

	2005	2010	2018
For sale	79%	65%	75%
For rent	21%	35%	25%

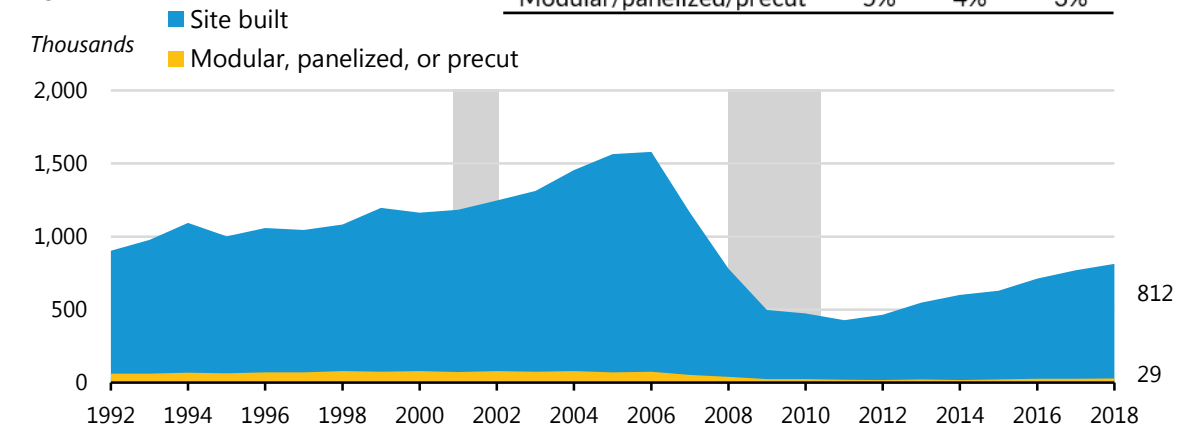


Single-Family Starts, by Floor Area



Single-Family Completions, by Method

	2005	2011	2018
Site built	95%	96%	97%
Modular/panelized/precut	5%	4%	3%



Sources: US Census Bureau, the US Department of Housing and Urban Development, the NAHB, and the National Bureau of Economic Research.

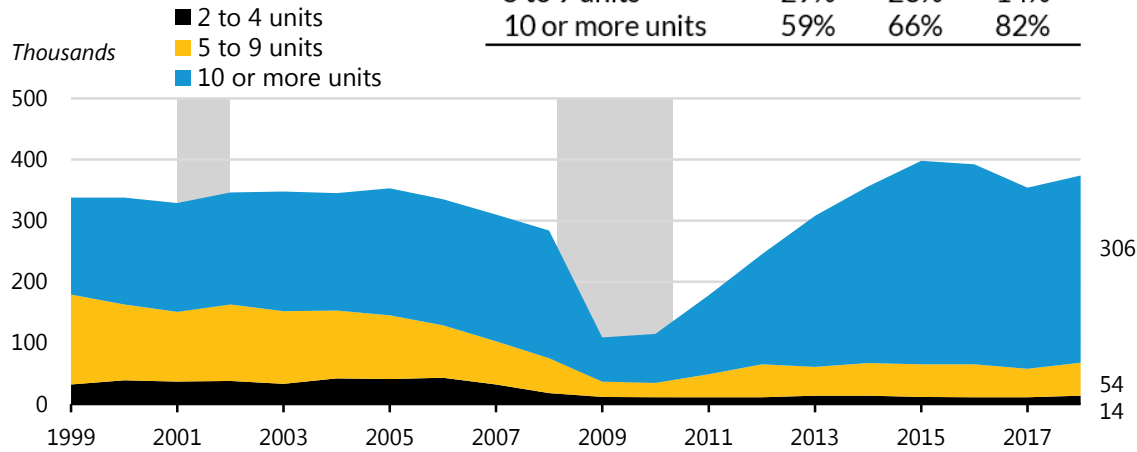
Notes: NAHB = National Association of Home Builders. Gray shading indicates a recession.

Multifamily Production

Multifamily starts rose in 2018 to 374,000, well above the average of 343,000 from 1999 to 2005. Since the 2009 low, multifamily starts have risen 243 percent. But growth since 2008 has been highly concentrated in larger buildings that have 10 or more units (specifically, buildings with 50 or more units). By construction purpose, multifamily starts are concentrated in units for rent. These units are, on average, smaller than the ones built during the housing boom years, 2004 to 2007. In contrast, starts in smaller buildings with fewer than 10 units remain below their 2008 levels. Similarly, the number of units built for sale remains below its 2008 level. While the number of multifamily units in aggregate rose in 2018, the number of multifamily buildings fell. The recovery in the number of multifamily units since the recession has coincided with a still-low number of multifamily buildings. This further confirms that multifamily construction has been increasingly concentrated in large buildings, which typically charge higher rents. Second, building technologies, which are purported to lower building costs, have actually shrunk as a share of all multifamily buildings since 2006 and do not contribute meaningfully to multifamily construction.

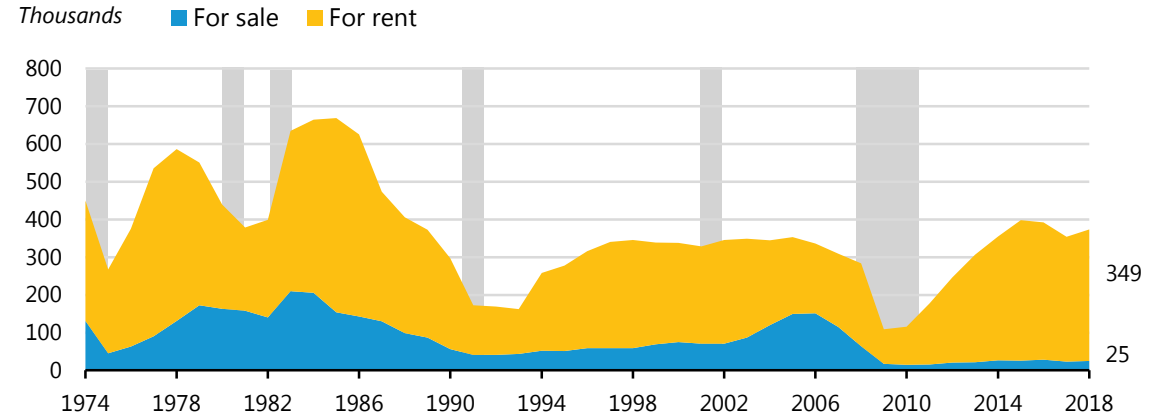
Multifamily Unit Starts, by Building Size

	2005	2009	2018
2 to 4 units	12%	11%	4%
5 to 9 units	29%	23%	14%
10 or more units	59%	66%	82%

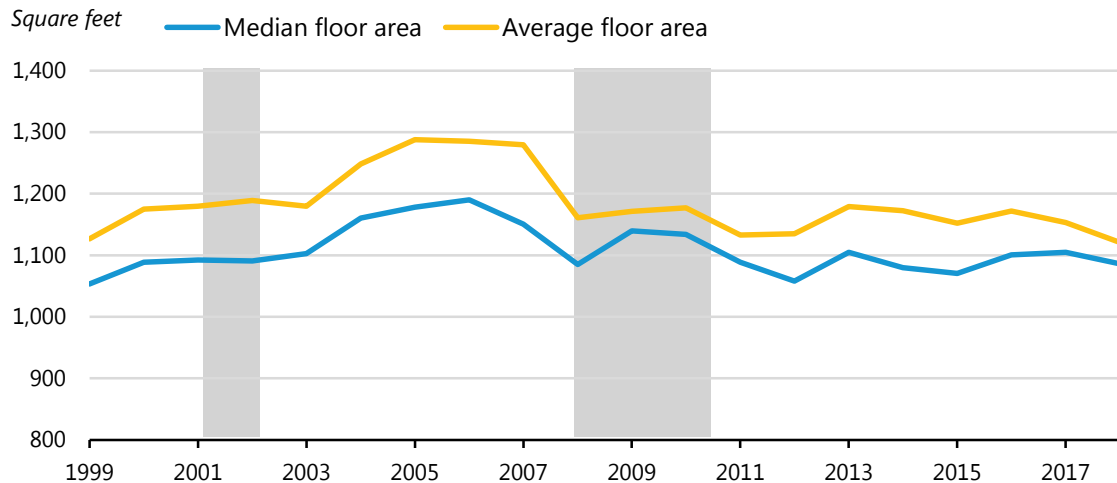


Multifamily Unit Starts, by Purpose of Construction

	2005	2009	2018
For sale	43%	16%	7%
For rent	57%	84%	93%

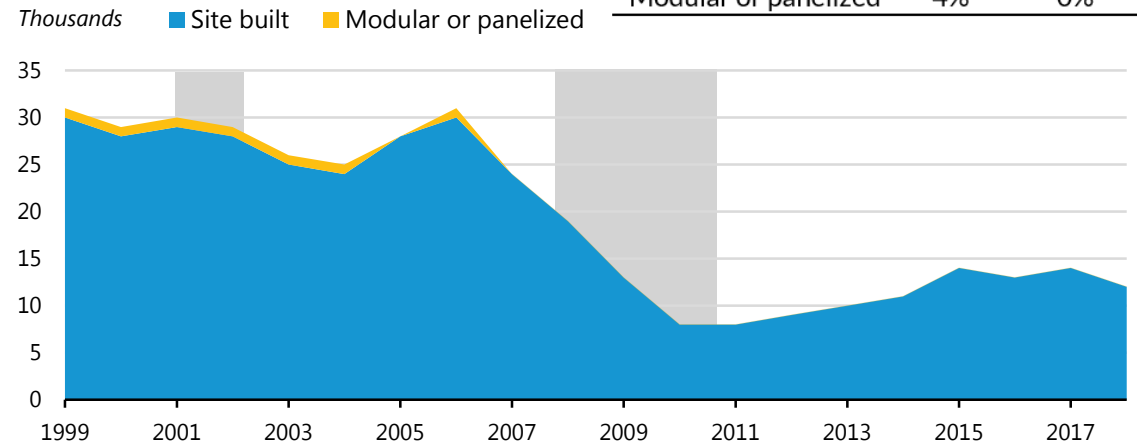


Multifamily Unit Starts, by Median and Average Area



Multifamily Buildings Completed, by Construction Method

	2006	2011	2018
Site built	96%	100%	100%
Modular or panelized	4%	0%	0%



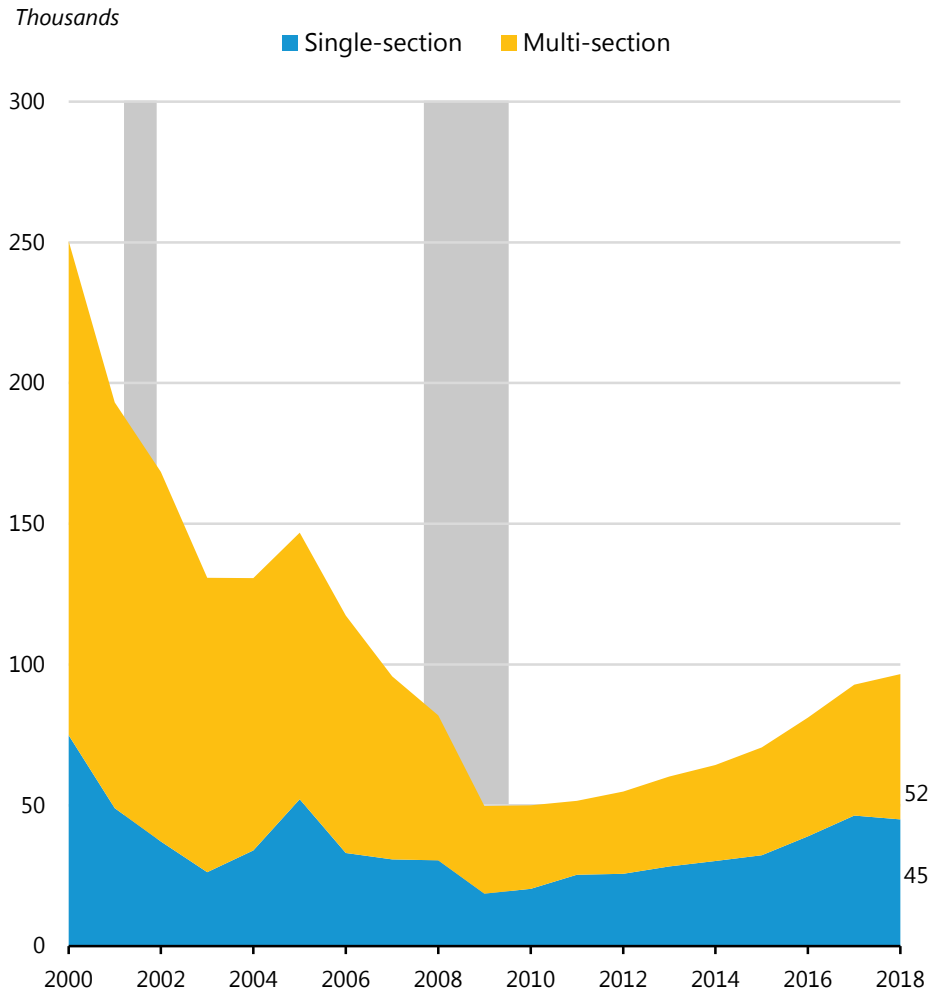
Sources: US Census Bureau, the US Department of Housing and Urban Development, and the National Bureau of Economic Research.

Note: Gray shading indicates a recession.

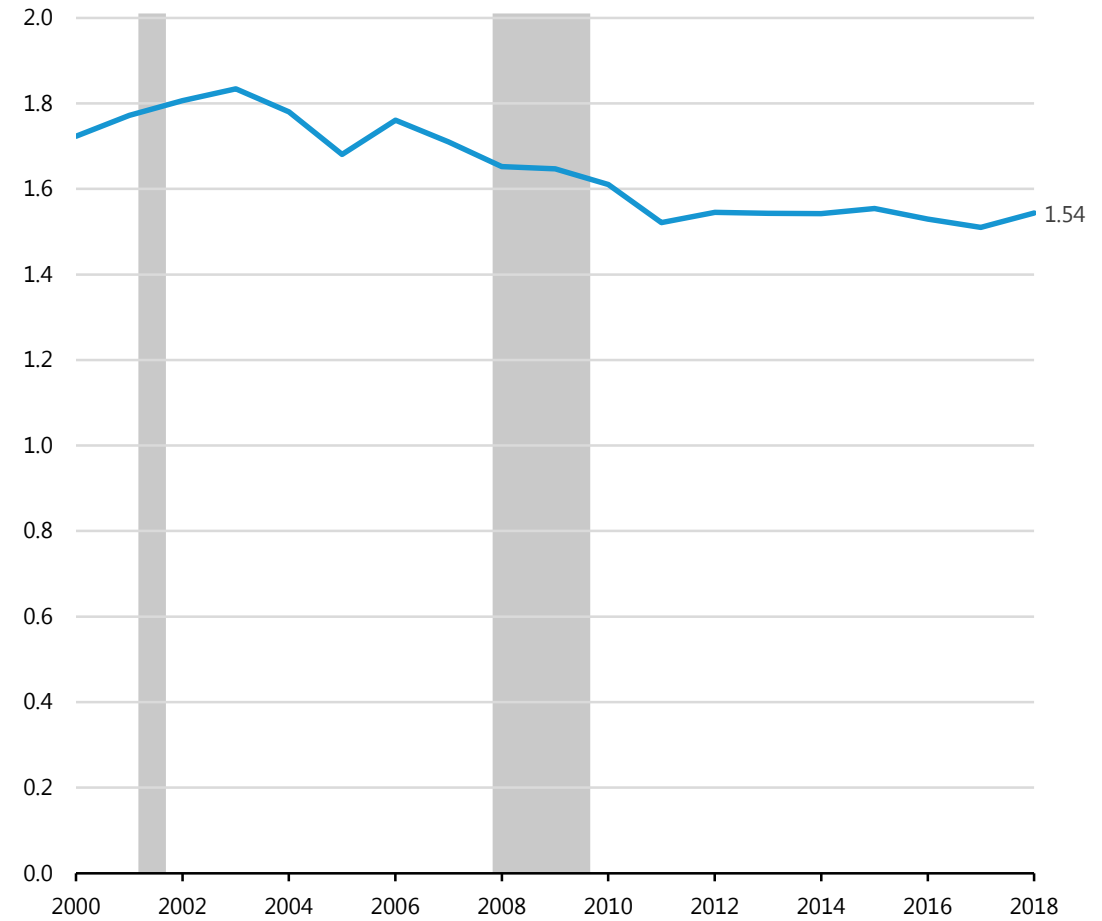
Manufactured Housing Shipments

The number of manufactured housing shipments has risen modestly since falling to a recession-related low in 2009. The decline in manufactured housing shipments between 2000 and 2009 largely reflects a steep drop in multisection shipments. Consistent with the larger decrease in multisection shipments, the average number of floors per manufactured home shipped is below levels that prevailed before the Great Recession.

Manufactured Housing Shipments, by Size



Average Number of Floors per Manufactured House Shipped



Sources: US Census Bureau and the National Bureau of Economic Research.

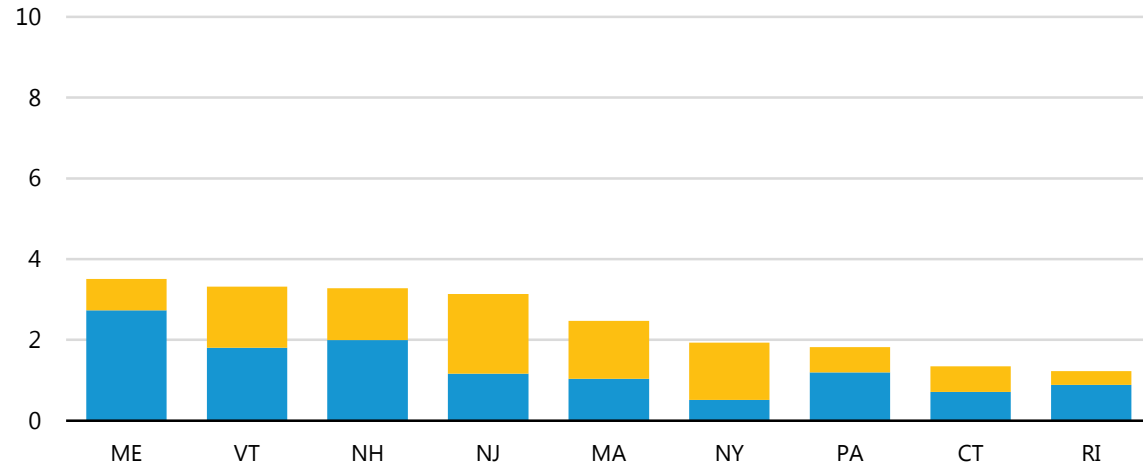
Note: Gray shading indicates a recession.

Single- and Multifamily Housing Permits by Region: 2018

Housing permits as a share of the population varies by state. All 9 northeastern states and 8 of the 12 midwestern states had fewer than four permits per 1,000 people in 2018. Five of the 9 states with more than six permits per 1,000 people were in the South, and the other 4 were in the West. Idaho had the most single-family and total permits (single-family plus multifamily) with 9 per 1,000 people. Of the 6 states where multifamily production per 1,000 people accounts for at least 50 percent of total population-adjusted production, 3 are in the Northeast, and there is 1 each in the Midwest, the South, and the West. In Washington, DC, multifamily permits accounted for 98 percent of total housing permits in 2018.

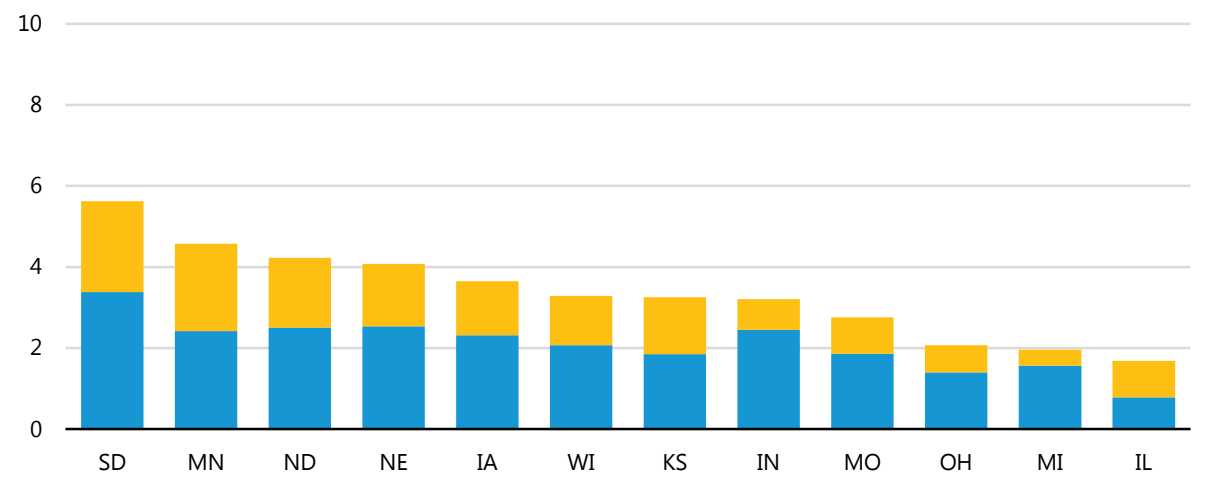
Northeast

Per 1,000 people ■ Single-family ■ Multifamily



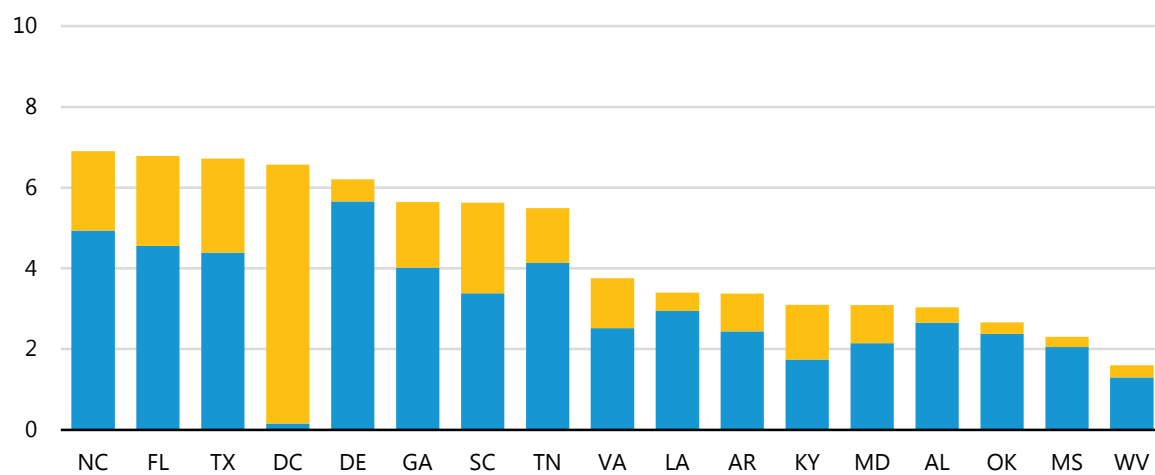
Midwest

Per 1,000 people ■ Single-family ■ Multifamily



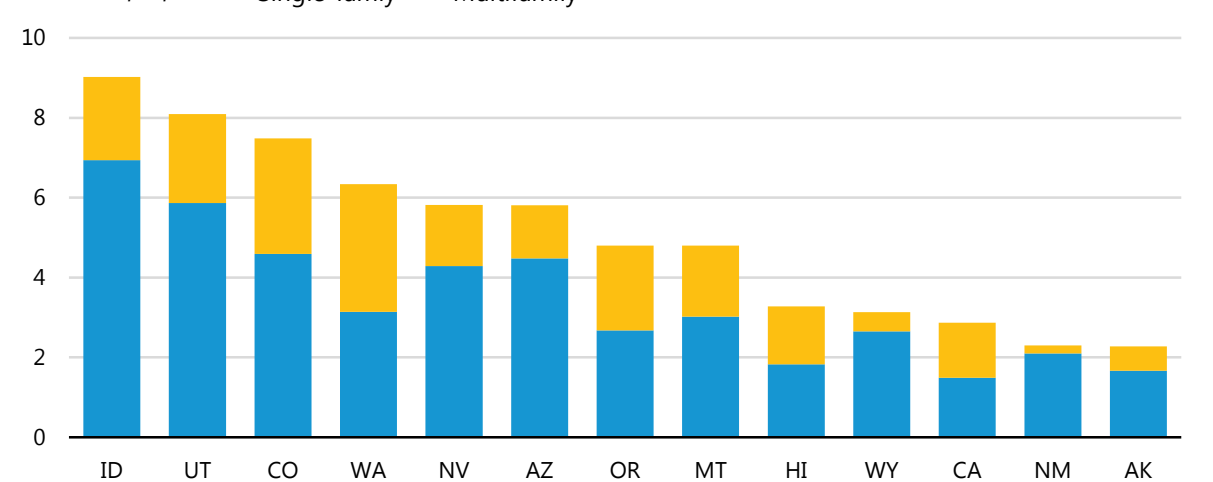
South

Per 1,000 people ■ Single-family ■ Multifamily



West

Per 1,000 people ■ Single-family ■ Multifamily



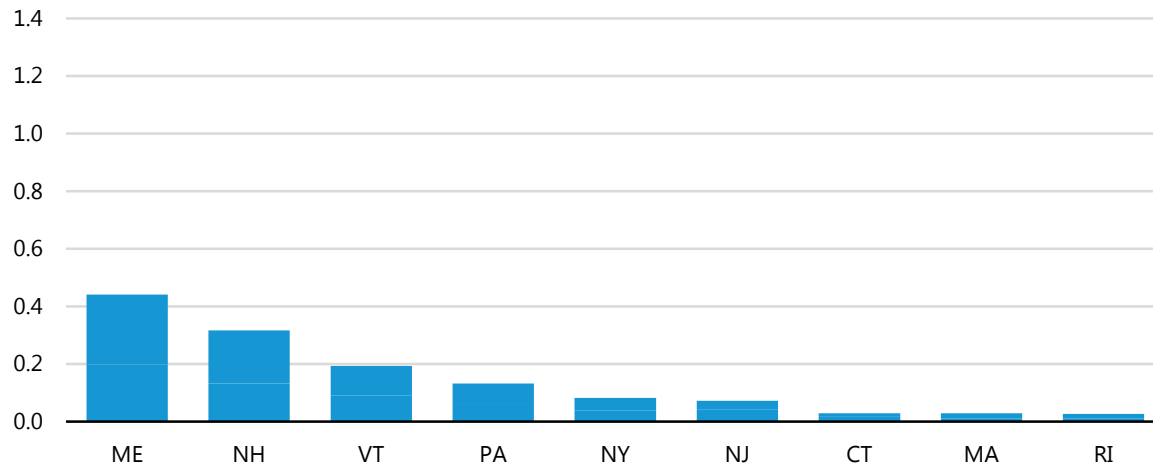
Source: US Census Bureau.

Manufactured Housing Shipments by Region: 2018

Examining the shipments of manufactured homes by population is one way to compare the flow of manufactured homes across different areas. Many states with fewer shipments relative to the population also had a small stock of manufactured homes. The four states with the fewest shipments in the Northeast—Connecticut, Massachusetts, New Jersey, and Rhode Island—also had the fewest manufactured homes relative to their populations. The same is true for the four states with the fewest shipments in the Midwest and the three in the South. In the West, the four states with the fewest manufactured homes relative to the population were among the five states with the fewest shipments per capita. The similarity across both the stock and shipments of manufactured homes suggests major state-specific differences in manufactured housing.

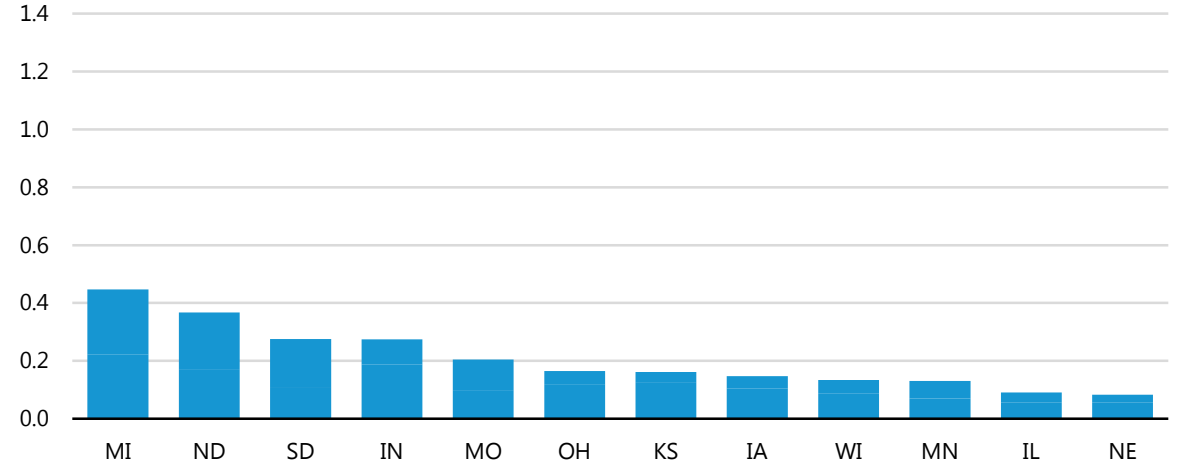
Northeast

Per 1,000 people



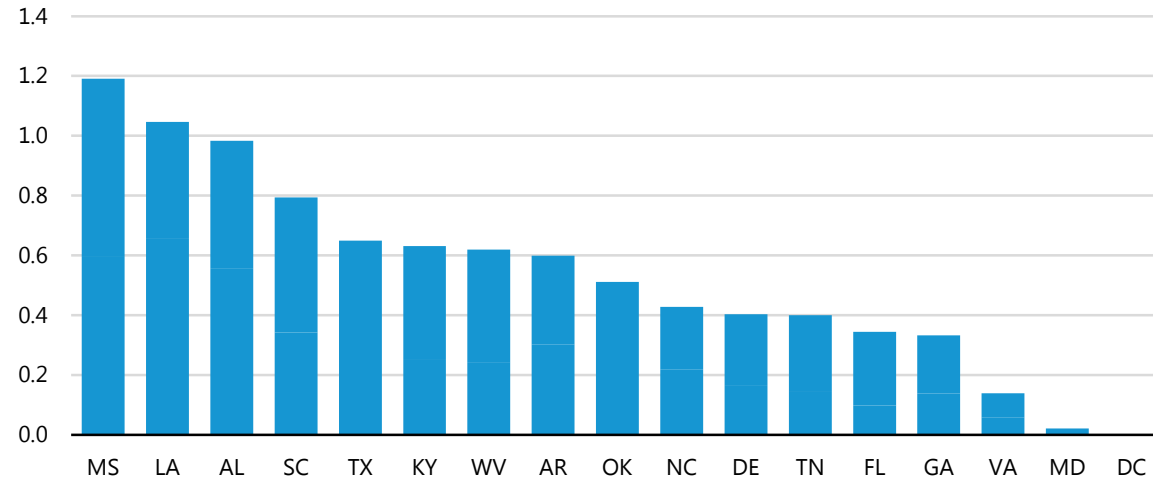
Midwest

Per 1,000 people



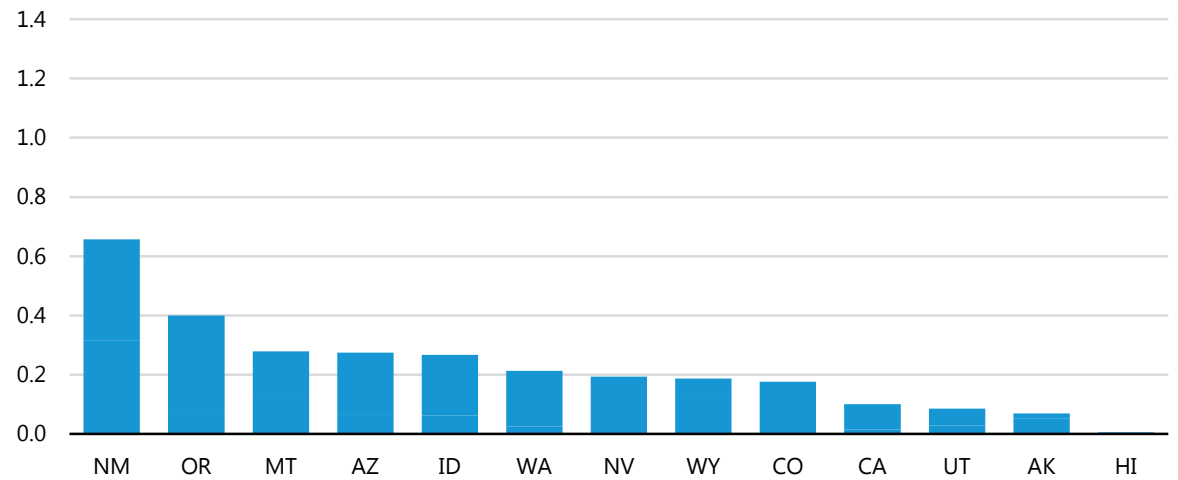
South

Per 1,000 people



West

Per 1,000 people



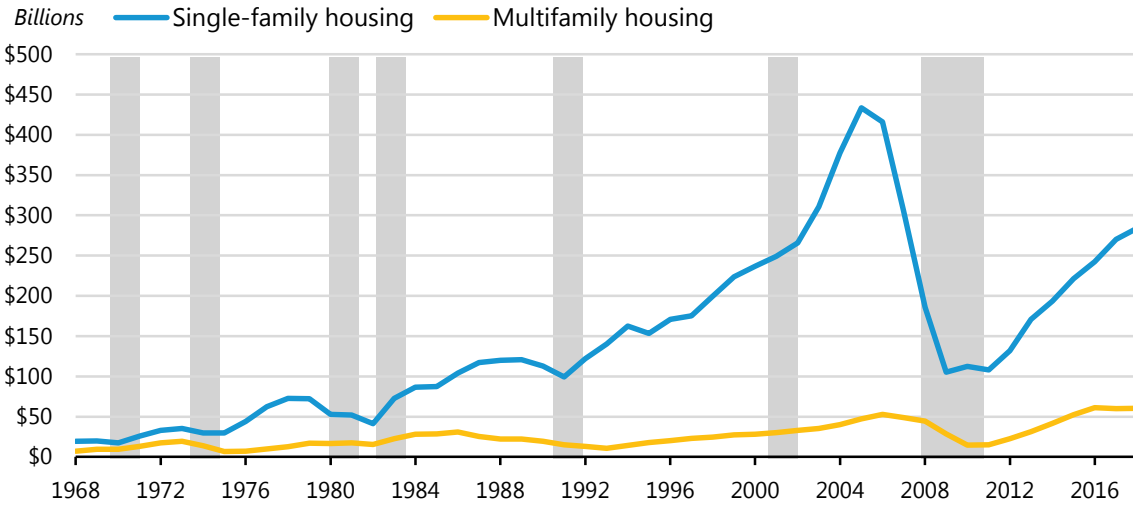
Source: US Census Bureau.

Housing and the Economy

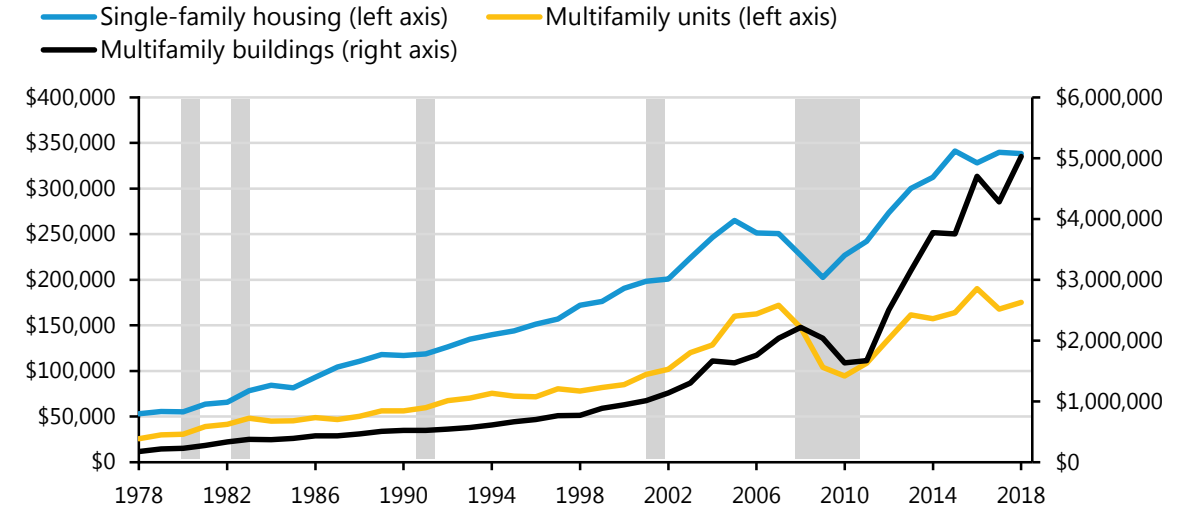
Residential Construction Costs

Despite recent increases, total spending on private residential single-family construction remains below the 2005 peak. Meanwhile, total spending on private multifamily construction flattened in 2018 but remains at a level modestly above its pre–Great Recession high. Private residential single-family construction spending is low because fewer units are being completed. Total single-family construction spending per unit has held steady at an elevated level in recent years. In contrast, total multifamily spending per unit is on par with its pre–Great Recession peak, while total multifamily spending per building has soared as multifamily construction has shifted to larger buildings. The Bureau of Labor of Statistics’ Producer Price Index indicates that the inputs to construction costs—which exclude service costs and, notably, labor costs—reached a new high in 2018. Prices of key materials, such as concrete, gypsum, lumber, and steel, sit at their highest levels since 1987.

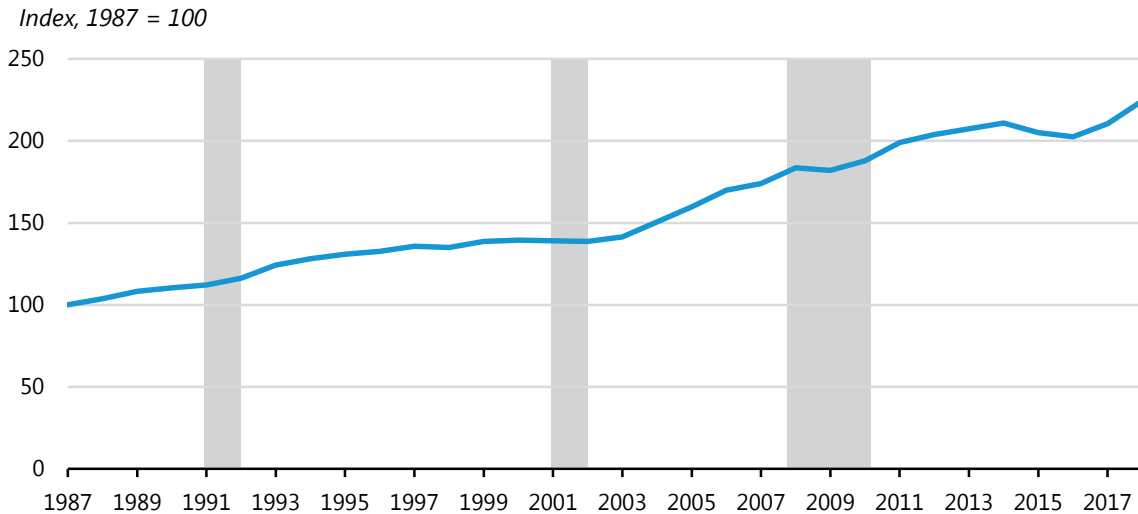
Value of Private Construction Put in Place



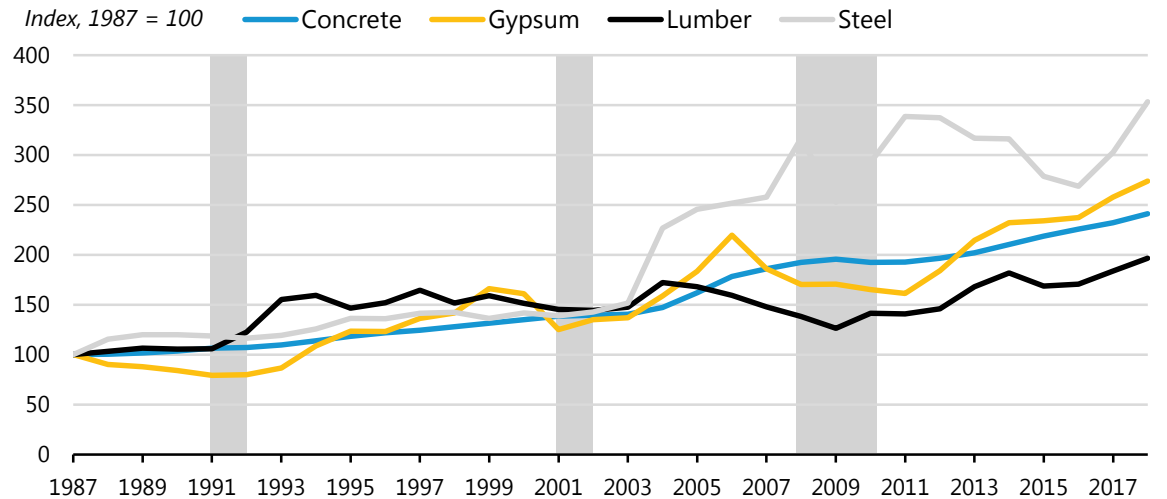
Construction Spending per Unit



Price-Level Residential Construction Inputs, Goods



Select Building Material Price Indexes



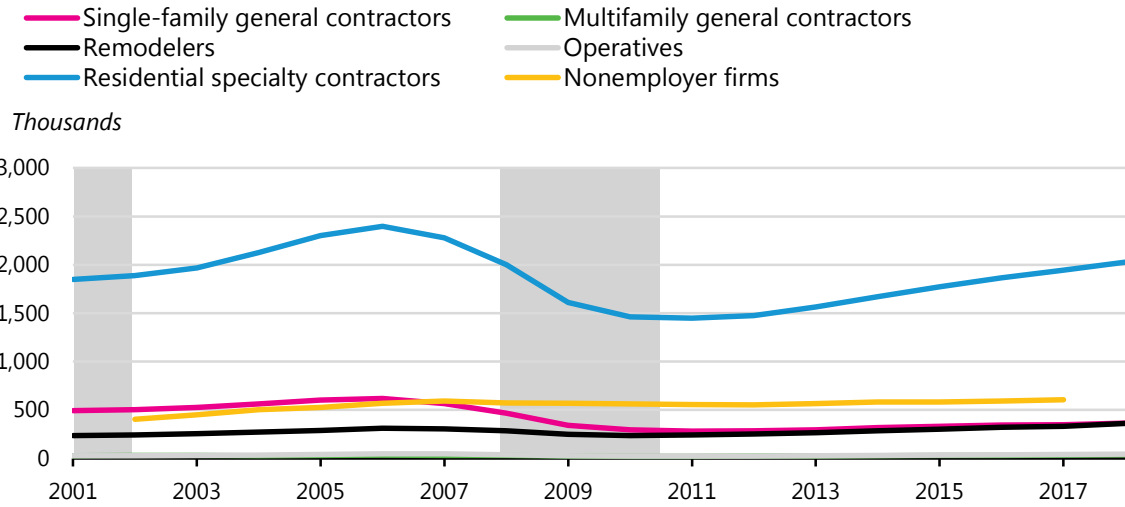
Sources: US Census Bureau, US Department of Housing and Urban Development, the Bureau of Labor Statistics, and the National Bureau of Economic Research.

Note: Gray shading indicates a recession.

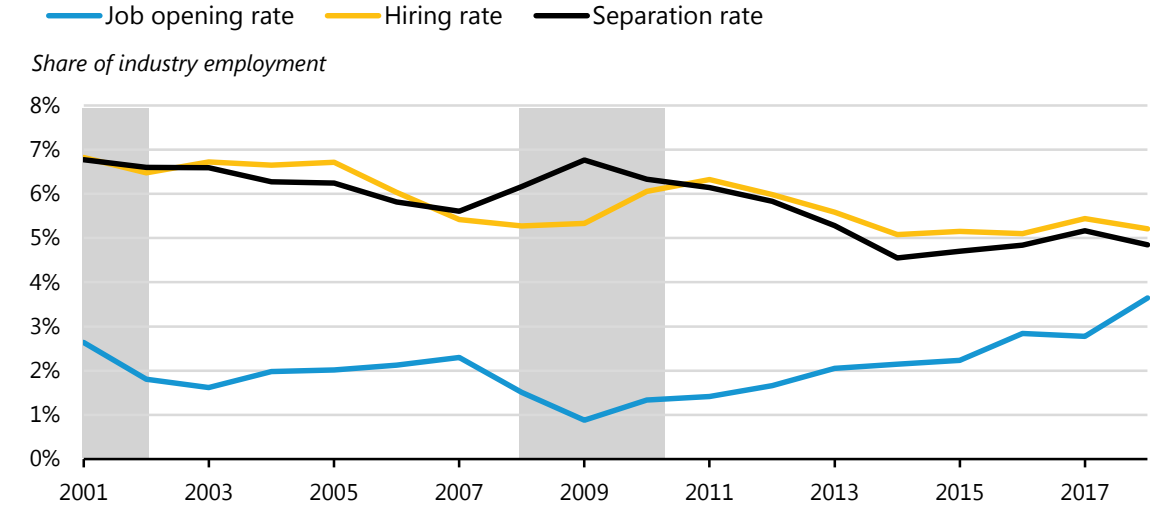
Labor Market Conditions

The number of firms in the residential construction industry with no paid employees now exceeds its prerecession peak, while the number of payroll jobs within the residential construction industry remains below its prerecession peak. This is largely because of a weaker recovery among residential specialty trade contractors and single-family general contractors. The number of residential remodeler payroll employees now exceeds its previous peak and is on par with the number of single-family general contractors. Total multifamily general contractors and housing operatives have also recovered, but there is significantly less payroll employment in these sectors. Housing operatives are payroll employees at establishments primarily engaged in constructing single-family houses and other buildings for sale on their own account rather than as contractors. Lower payroll employment comes during a time of record-high job openings across the construction industry. Although the hiring rate modestly exceeds the separations rate, the two track each other closely. Despite improvement immediately following the Great Recession, labor productivity in the single-family sector has held steady in recent years, near the levels that prevailed between 1994 and 2002. As job openings increase and productivity decreases, average hourly earnings among payroll employees continue to rise across much of the industry.

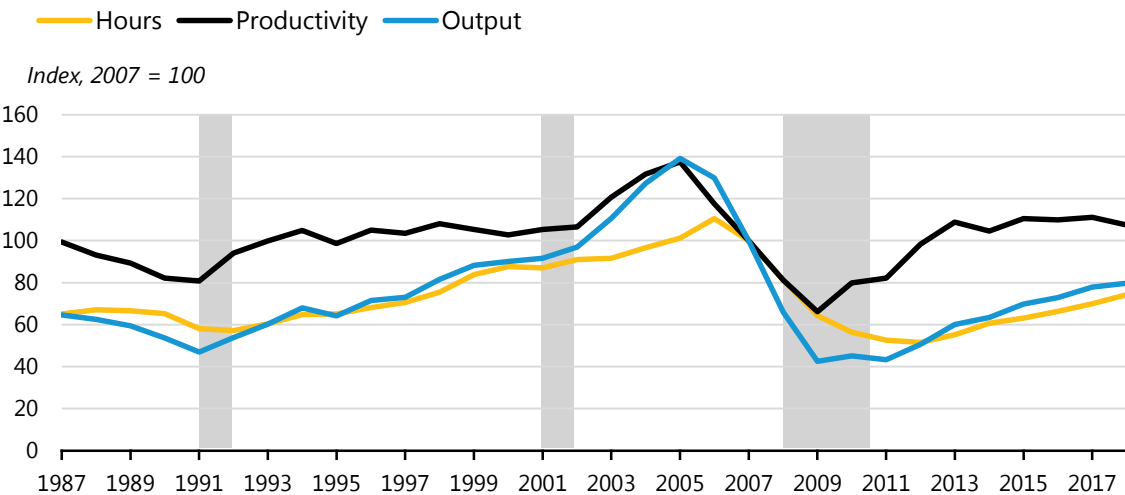
Residential Construction



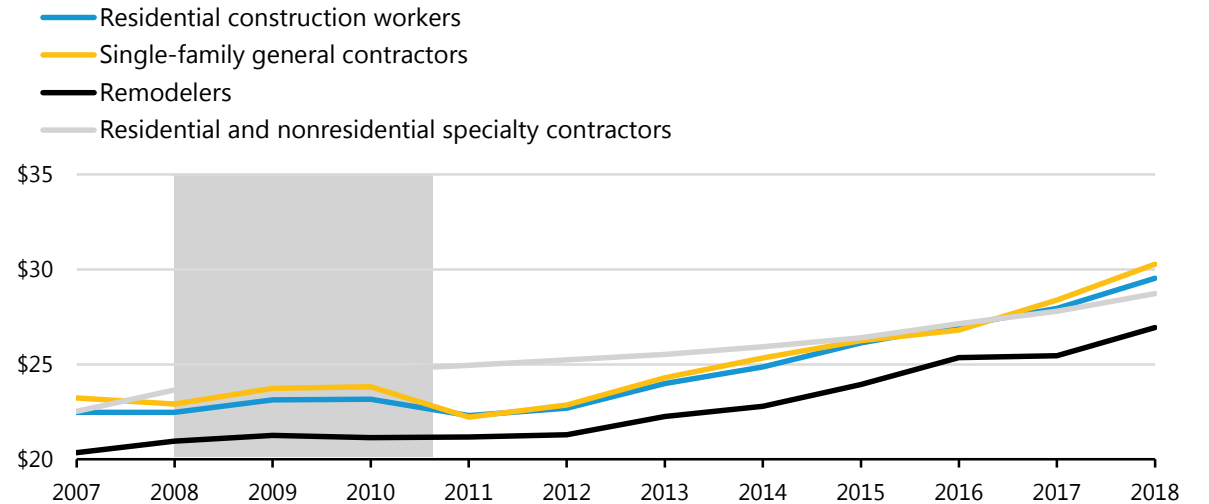
Worker Flows in the Construction Industry



Single-Family Residential Construction Labor Productivity



Average Hourly Earnings



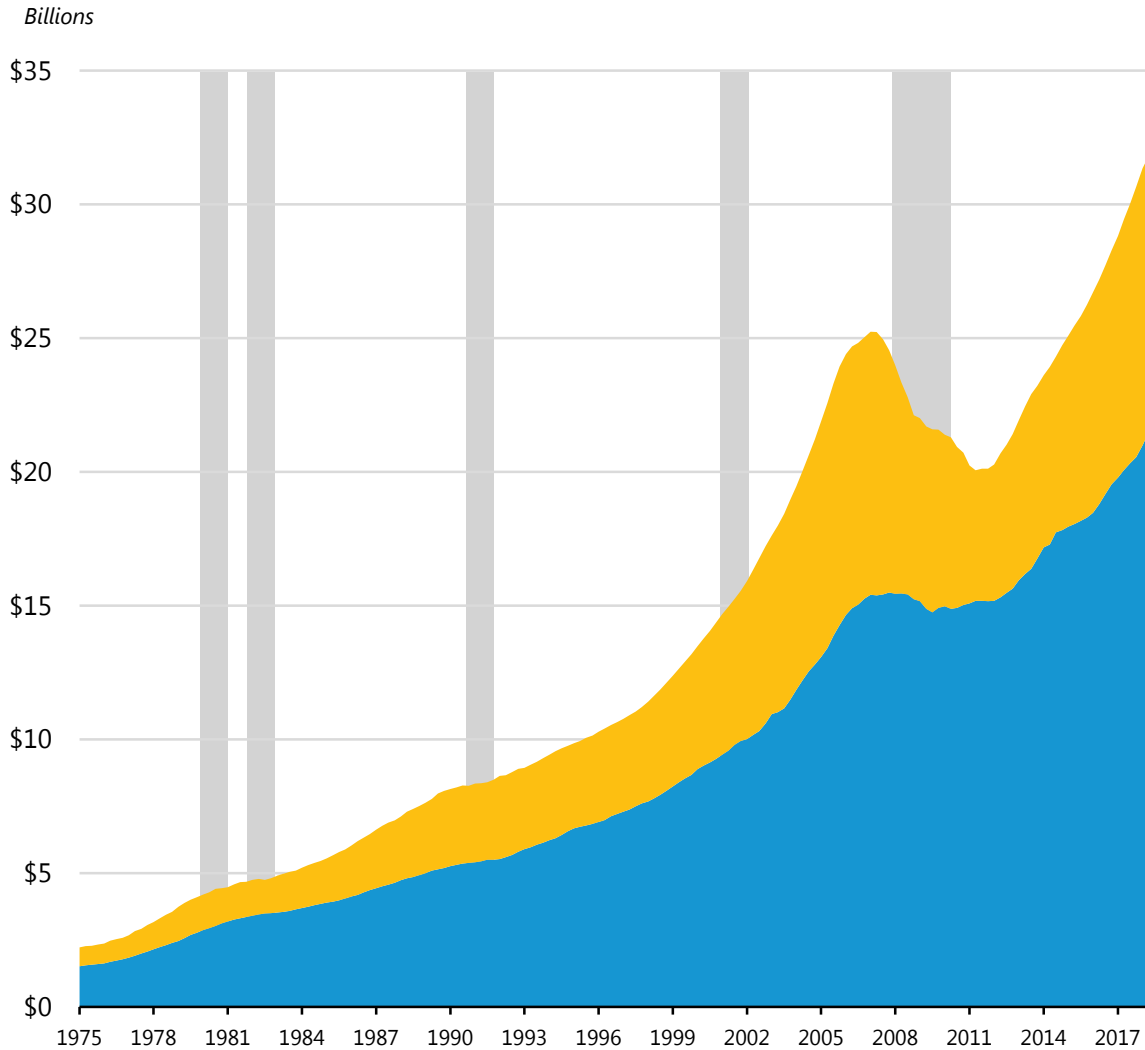
Sources: Bureau of Labor Statistics, the US Census Bureau, and the National Bureau of Economic Research.
Note: Gray shading indicates a recession.

Land Values and Structure Costs

A home's value reflects the value of the structure and that of any land associated with the home. Over the past cycle, aggregate land values, which account for a smaller portion of total market value, have been more volatile than the total value of structures. Home values fell in response to the Great Recession, with total market value declining 21 percent between 2007 and 2011, from \$25.2 trillion to \$20.1 trillion. The decline reflected a 15 percent decline in the aggregate value of structures but a 50 percent decline in the aggregate associated land values. Since 2011, the total market value has increased 59 percent, reflecting a 42 percent increase in the total value of housing structures and a 111 percent increase in the total value of the associated land. The distribution across the top 45 metropolitan areas by total market value is wide, but it largely reflects differences in land values. Areas with higher total market values typically have a higher share attributable to land values.

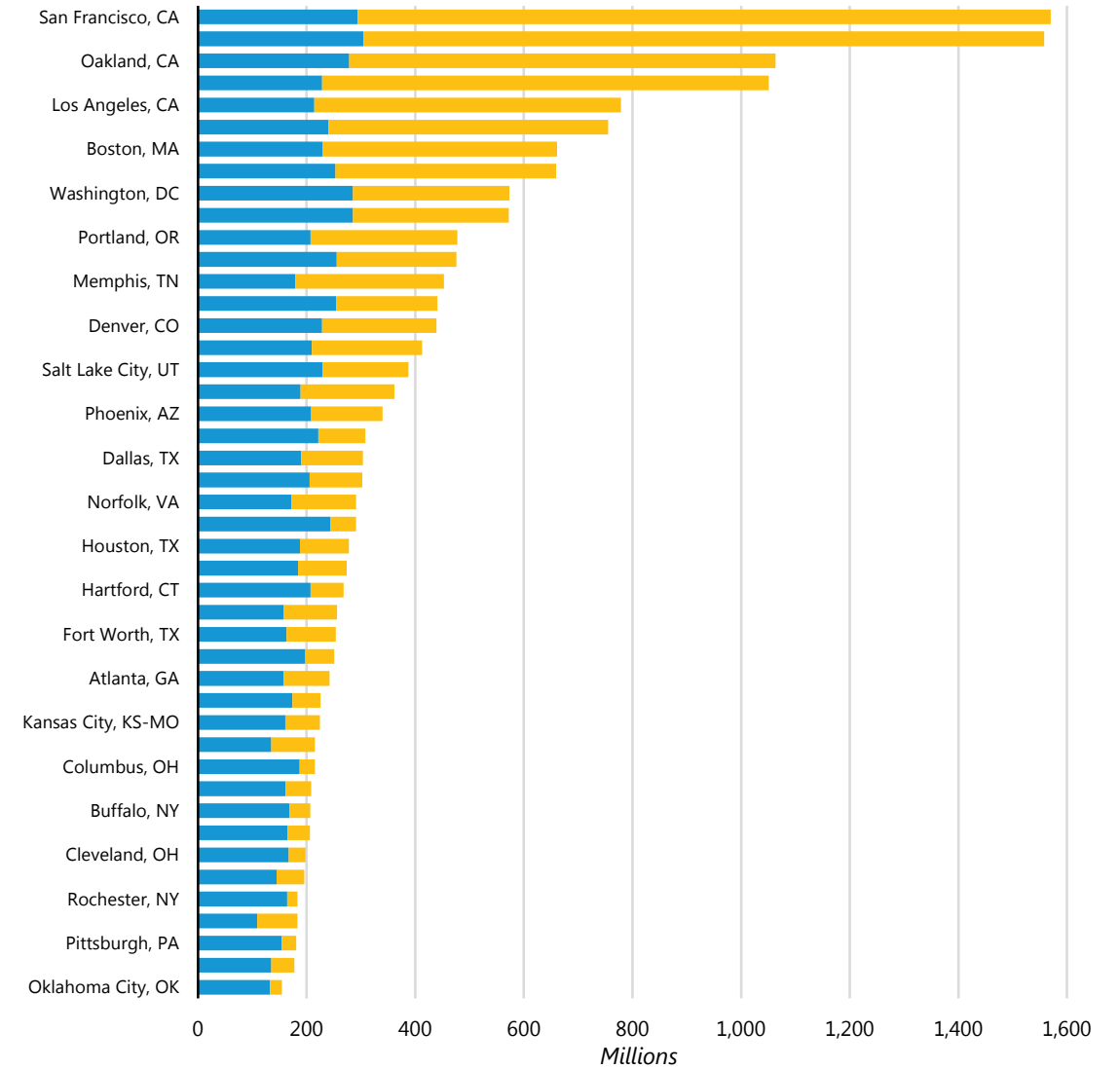
Home Values by Land and Structure

■ Structure cost ■ Land value



Land Values and Structure Costs by MSA, Second Quarter

■ Structure cost ■ Land value 2018



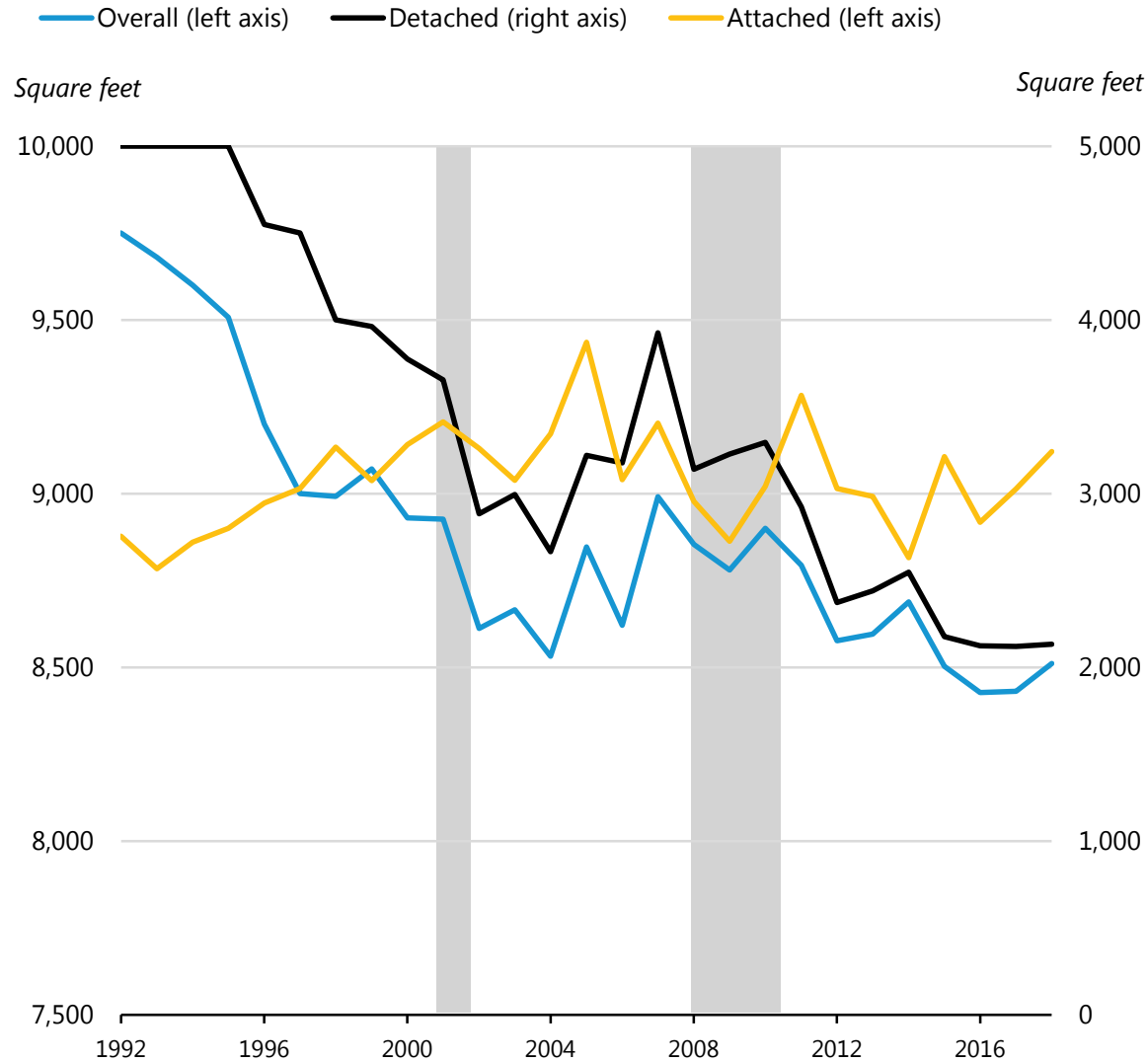
Sources: American Enterprise Institute and the National Bureau of Economic Research.

Note: Gray shading indicates a recession.

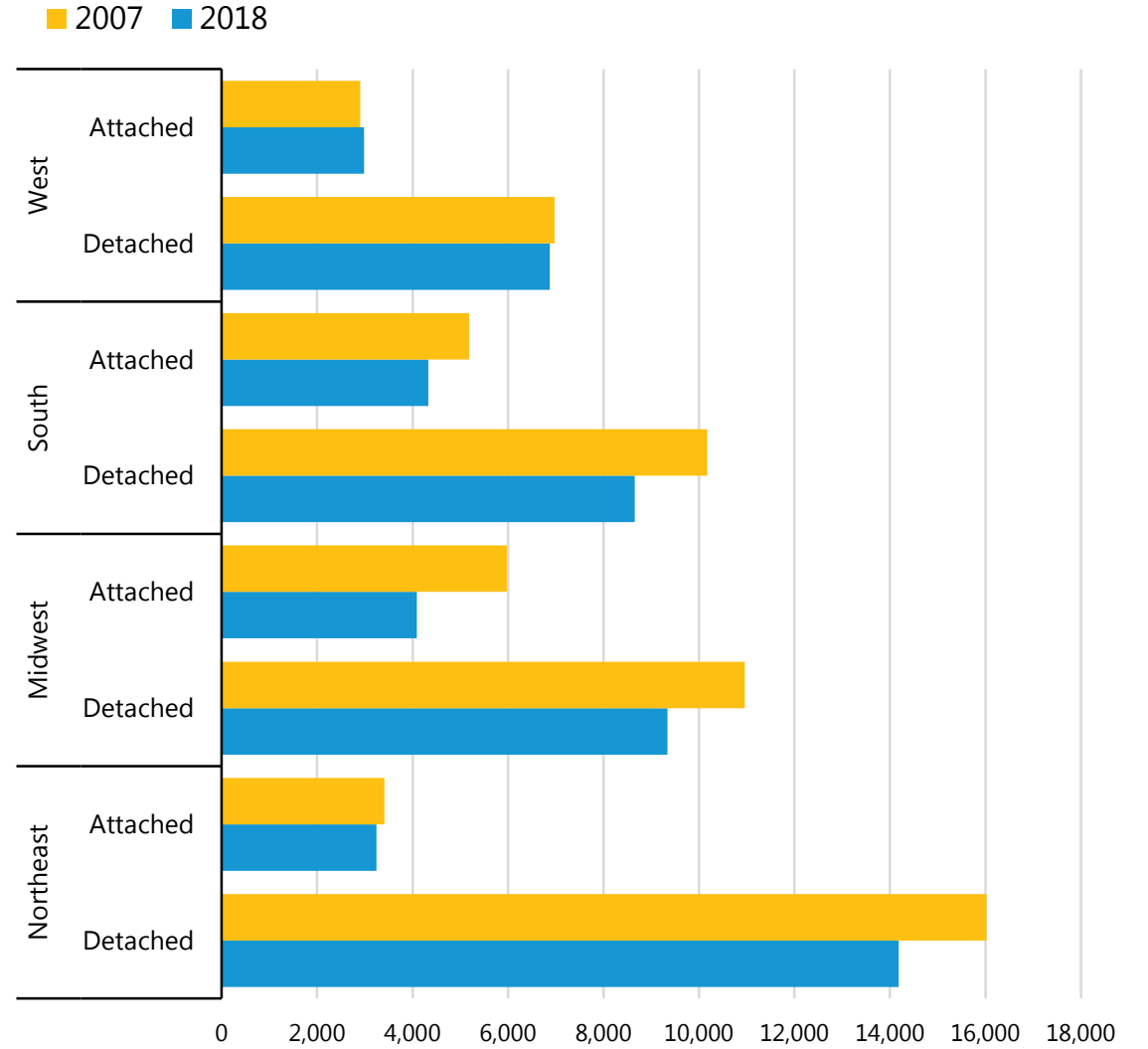
Lot Sizes

The median lot size for single-family homes sold has declined since the early 1990s and is the smallest on record, currently 8,567 square feet. The decrease is largely because of smaller lots for detached single-family homes, a trend that was pronounced both before 2005 and after 2008. Between 2004 and 2007, average lot size increased, but that trend quickly reversed. Meanwhile, lot sizes for single-family attached homes increased leading up to the crisis and has since stabilized around 3,000 square feet. Regionally, the median lot size of single-family homes sold fell between 2007 and 2018, except for attached homes sold in the West.

Median Lot Size for New Single-Family Homes Sold



Median Lot Size by Region and Design



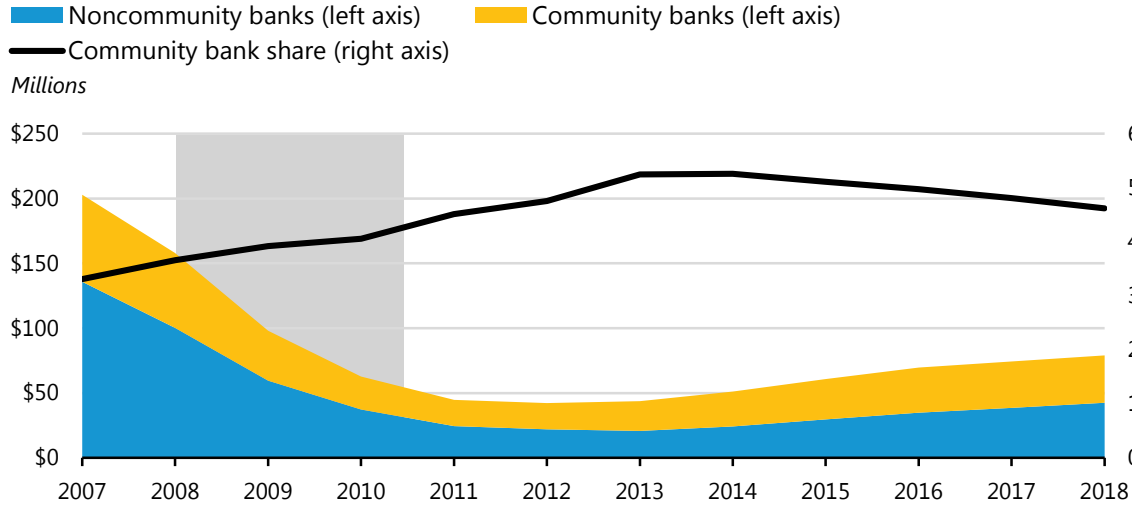
Sources: US Census Bureau, the US Department of Housing and Urban Development, and the National Bureau of Economic Research.

Note: Gray shading indicates a recession.

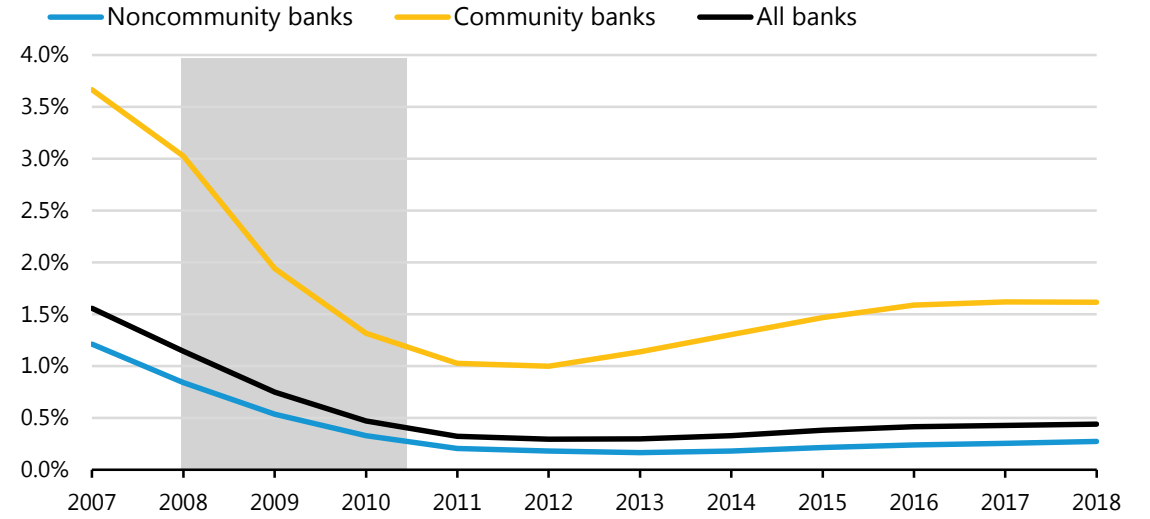
One-to-Four-Unit Residential Construction Lending

Commercial banks remain the key source of residential construction loans, with community banks holding more loans relative to their assets. After the recession, the total volume of outstanding residential construction loans fell dramatically, from \$202 million in 2007 to \$42 million in 2012. This was largely because of a decline in outstanding loans held by larger noncommunity banks. Soaring net charge-off rates, particularly at noncommunity banks, and tightening standards have decreased the number of outstanding loans. There appear to be mixed signals on the rate of change in lending standards. Results from the Federal Reserve Board's Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS) indicates that standards are tightening slowly, while the Acquisition, Development, and Construction Financing Survey from the National Association of Home Builders (NAHB) suggests that standards are easing slowly. The SLOOS surveys loan officers at large banks and focuses on residential and commercial construction as well as land and land development loans, while the NAHB survey captures smaller builders looking for acquisition, development, or construction loans.

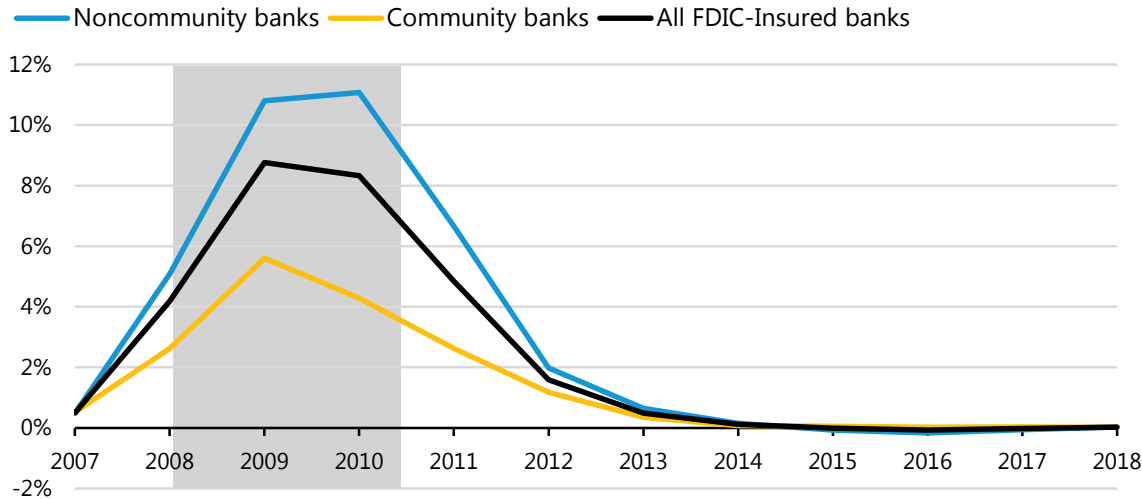
Loan Volume at FDIC-Insured Banks



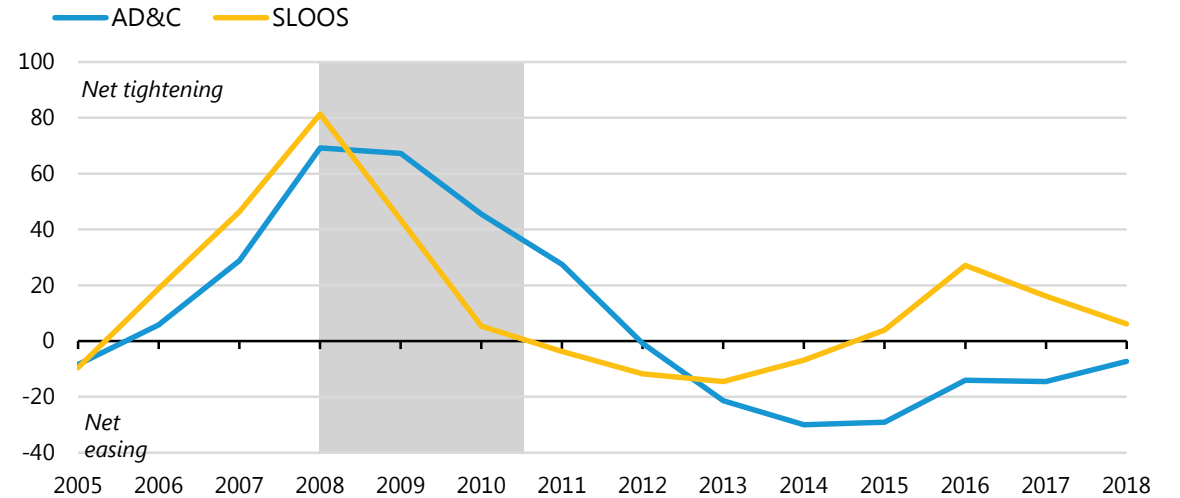
Loan Volume as a Share of Assets



Net Charge-Off Rates at FDIC-Insured Banks



Lending Standards on Construction Loans



Sources: Federal Deposit Insurance Corporation, the Federal Reserve Board, the National Association of Home Builders, and the National Bureau of Economic Research.

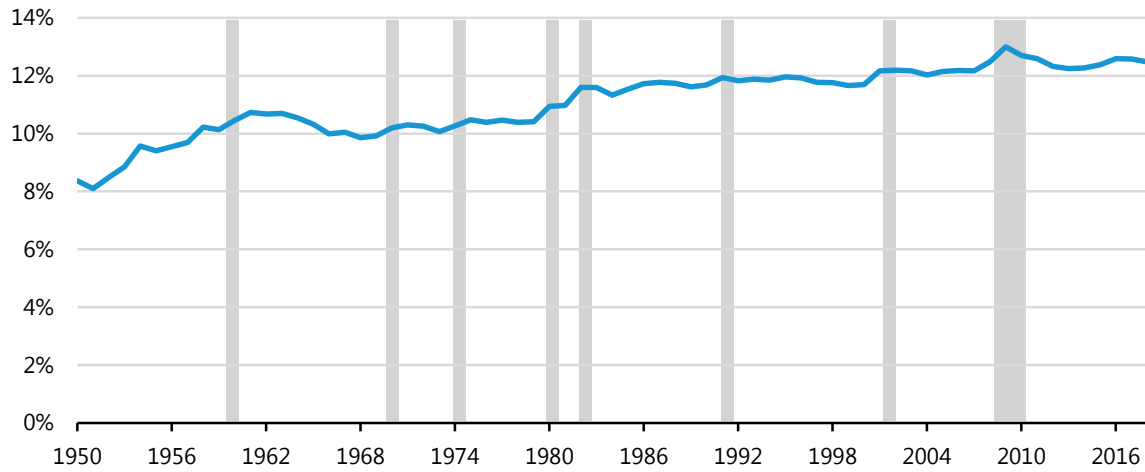
Notes: AD&C = Acquisition, Development, and Construction Financing Survey; FDIC = Federal Deposit Insurance Corporation; SLOOS = Senior Loan Officer Opinion Survey on Bank Lending Practices.

Gray shading indicates a recession.

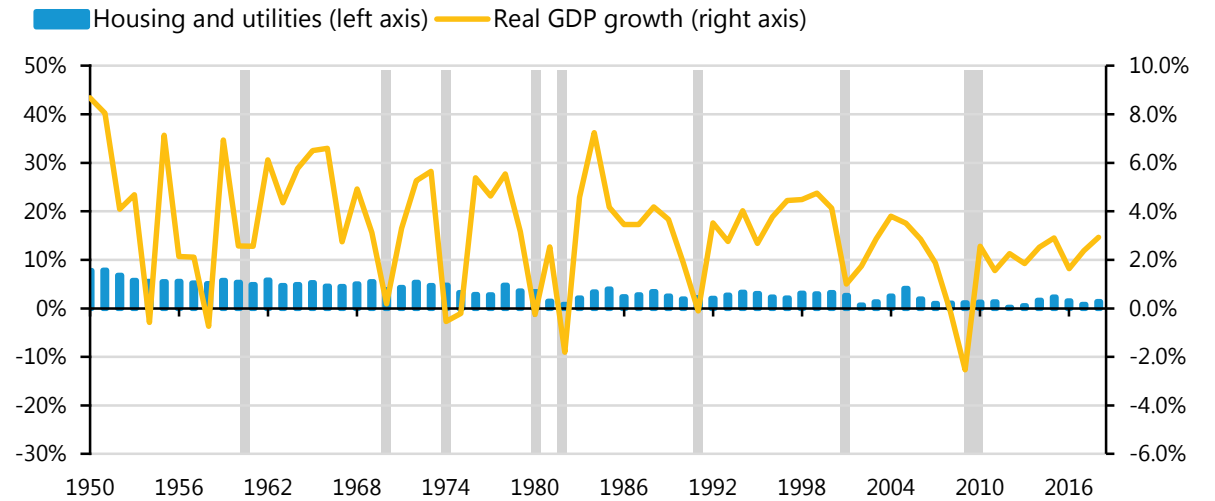
The Contribution of Housing and Utilities to GDP

The cost of households using the housing stock is captured by an estimated total cost of housing and utilities. The housing piece includes the amounts paid by people renting homes and farms and an imputed rental value of owner-occupied dwellings. The utilities piece includes the costs of water, sanitation, electricity, and gas. The housing and utilities share of nominal GDP is higher today than in the 1950s but has remained steady since 1982 at about 12 percent. Nominal measures of economic activity reflect changes in real activity and changes in price (i.e., inflation). The share of housing and utilities relative to nominal GDP masks trends in these two areas. Real housing and utilities growth, which has been low and positive, accounts for a smaller proportion of GDP growth, on average, since the early 1980s. In contrast, housing and utilities price growth (i.e., inflation), which typically lagged inflation across the broader economy between 1950 and 1981, now typically exceeds economy-wide inflation.

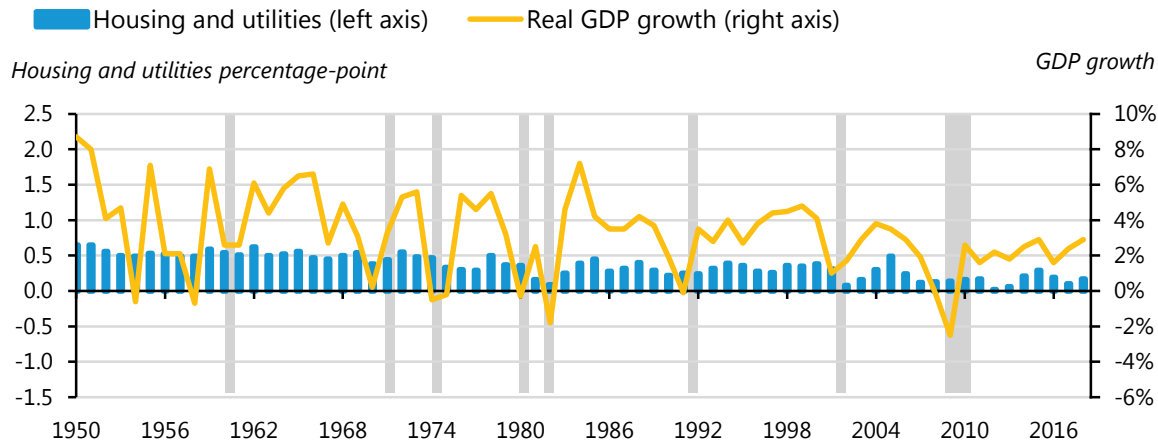
Housing and Utilities' Share of Nominal GDP



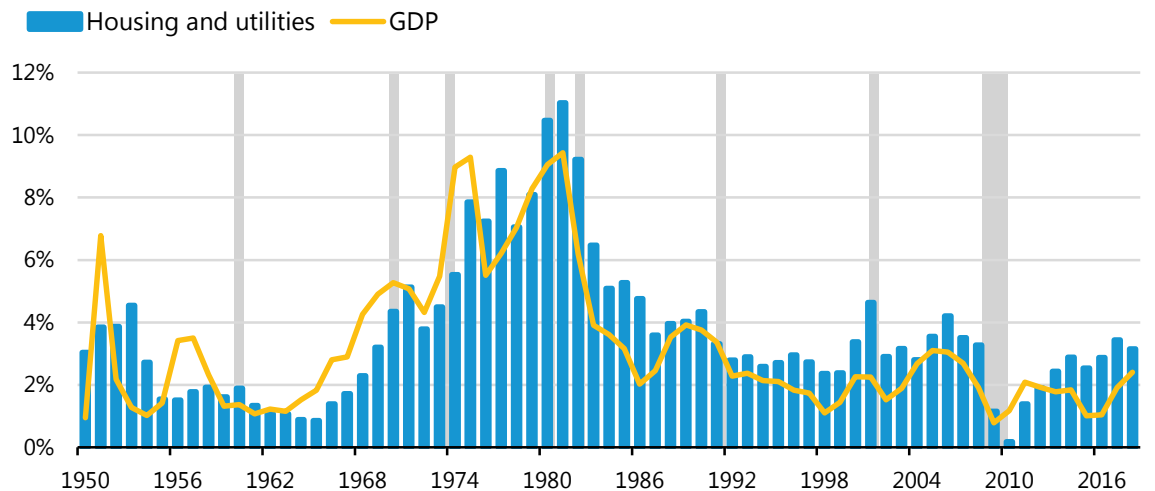
Growth in Real Housing and Utilities and Real GDP



Real Housing and Utilities' Contribution to Real GDP Growth



Housing and Utilities and GDP Inflation



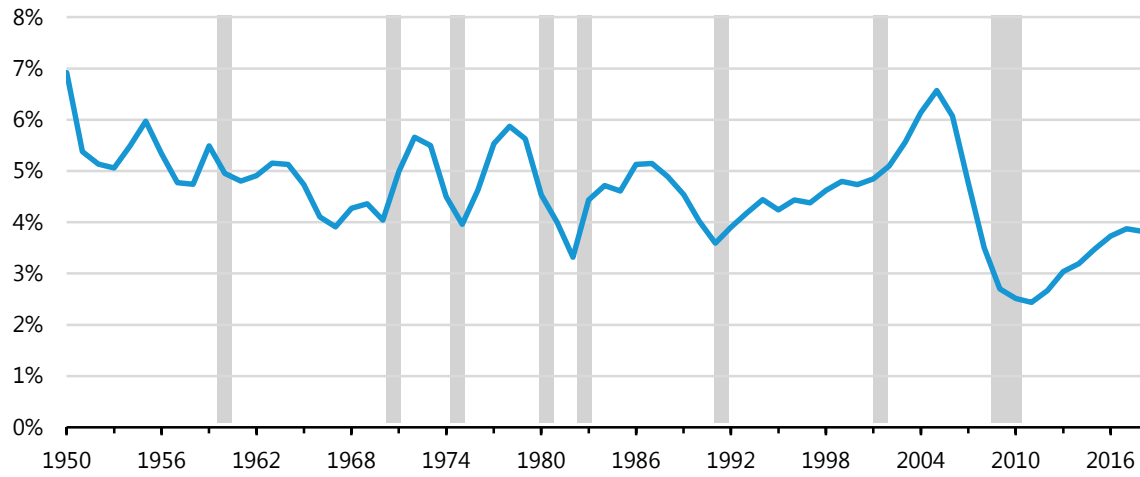
Sources: Bureau of Economic Analysis and the National Bureau of Economic Research.

Notes: GDP = gross domestic product. Gray shading indicates a recession.

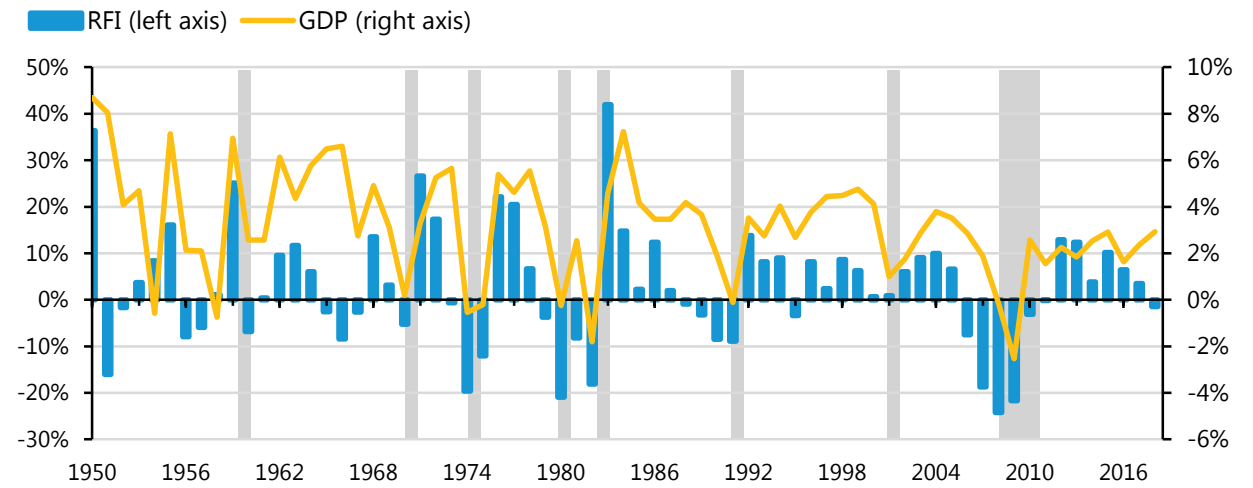
The Contribution of Residential Fixed Investment to GDP

The residential fixed investment component of GDP includes single-family, multifamily, and manufactured housing residential construction spending as well as brokers' commissions from home sales. The RFI share of nominal GDP is typically lower and more cyclical than the housing and utilities share. Although growth in RFI inflation typically exceeds inflation across the broader economy, the impact of this trend on the RFI share of nominal GDP is obscured by the large variation in real RFI growth. In contrast to real housing and utilities growth, real RFI growth is more variable and has even fallen in some years. Except for 2001, declines in real RFI occur in the years leading up to a recession. Historically, the strongest growth occurs near the end of or just after a recession. Because of greater cyclicity, RFI's contribution to real GDP varies widely but tracks broader fluctuations in real GDP growth more closely than do housing and utilities.

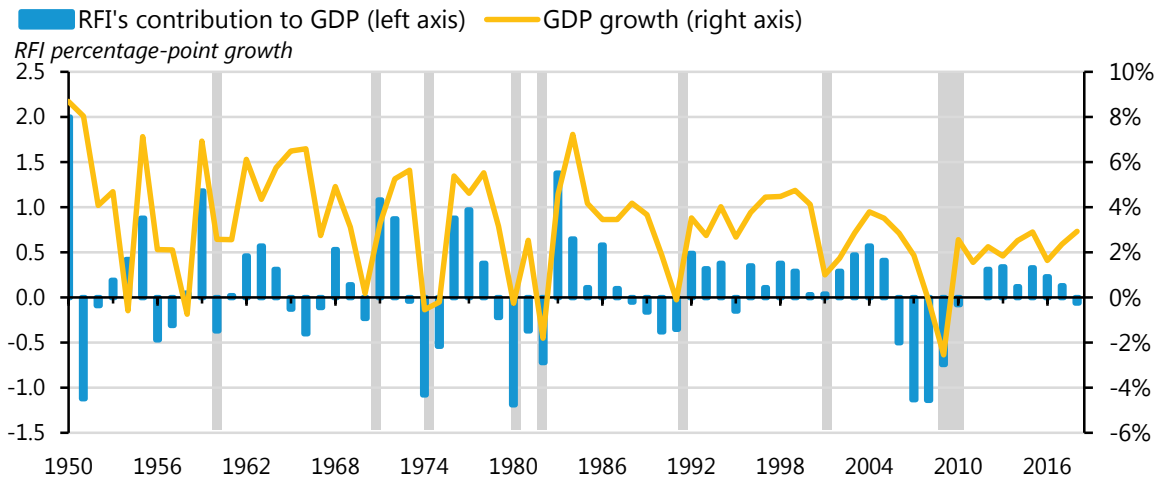
Nominal Residential Fixed Investment Share of Nominal GDP



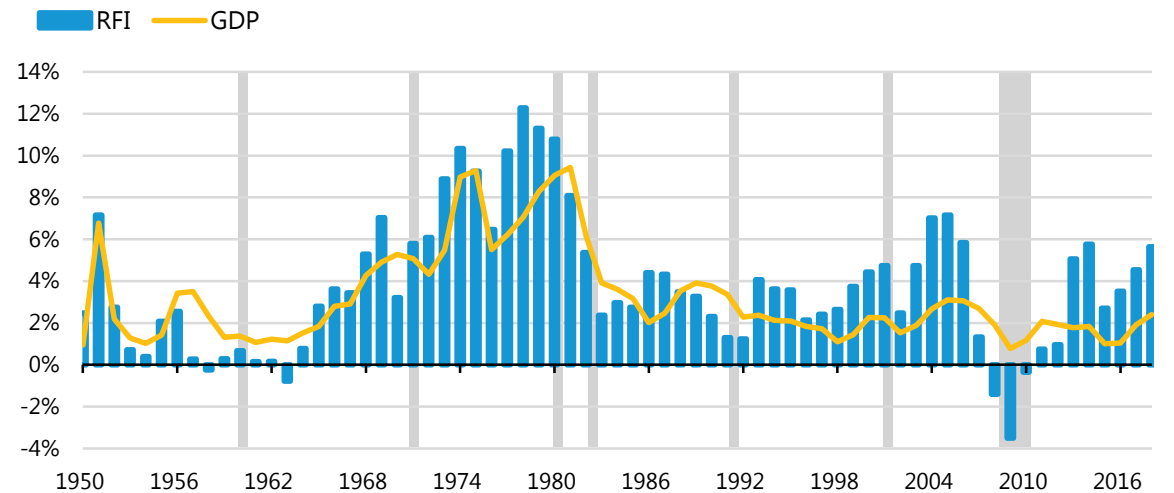
Real Residential Fixed Investment and Real GDP



Real Residential Fixed Investment's Contribution to Real GDP Growth



Residential Fixed Investment and GDP Inflation



Sources: Bureau of Economic Analysis and the National Bureau of Economic Research.

Notes: GDP = gross domestic product; RFI = residential fixed investment. Gray shading indicates a recession.

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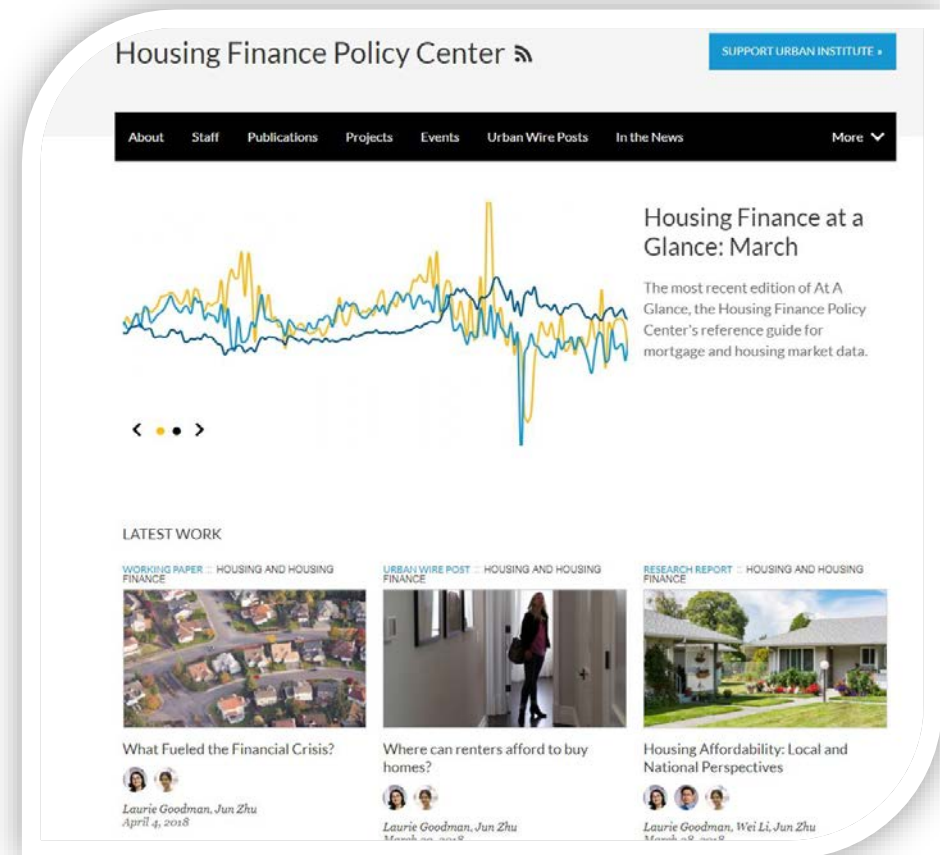
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Caitlin Young is a research assistant in the Housing Finance Policy Center.

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