



RESEARCH REPORT

How Much House Do Americans Really Own?

Measuring America's Accessible Housing Wealth by Geography and Age

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Executive Summary

This research report, the third in a series, measures the net and accessible housing wealth of Americans with owner-occupied homes. To do this, we use the latest consumer credit data supplemented with public property record data and the American Community Survey's (ACS) Public Use Microdata Sample (PUMS) data.

To date, our knowledge of housing wealth has failed to clearly identify patterns associated with geography and age or to accurately measure net wealth and actual liquidity. By combining our three data sources, we have identified these patterns. Accordingly, the analysis in this paper is unique and useful for four reasons:

- **Reveals geographic differences:** We know there are large geographic differences in house values and household wealth (see the Standard & Poor's/Case-Shiller 20-city home price index),¹ but specific details about these differences below the metropolitan statistical area level have not been available in surveys that policymakers mainly rely on. The Survey of Consumer Finance, which has been the main source of net housing wealth calculations to date, only surveys 4,000–6,500 American households and is too small to explore different geographic locations. The Federal Reserve's Survey of Household Economics and Decisionmaking has a similar survey size. The Survey of Income and Program Participation and the Health and Retirement Study have a larger sample size but are not large enough to provide robust data at the local level. In this study, we measure housing wealth down to the Census Bureau's Public Use Microdata Area (PUMA) level, revealing sharp geographic differences in housing wealth among smaller geographic areas.
- **Reveals age patterns:** Homeowners accumulate housing wealth as they age, so age must be considered when comparing housing wealth. Our combined data sources allow us to estimate net housing wealth for discrete age groups.
- **Measures net housing wealth:** We subtract all outstanding home debt secured by the house from the current house value, providing robust information about how much unencumbered housing wealth—the wealth potentially available to support retirement, education, and so on—Americans have. A similar study by the Demand Institute (Keely and Bostjancic 2014) only examined housing wealth in terms of aggregated housing market values.

- **Measures accessible housing wealth:** To convert unencumbered housing wealth into purchasing power, homeowners must borrow against the home through a cash-out refinance, a home equity loan, or a home equity line of credit. Lenders typically limit the total amount consumers can borrow through all mortgages, home equity loans, and home equity lines of credit to no more than 75–85 percent of the current home value. This limit sets the amount of net housing wealth consumers can convert into spending in real terms.

Our findings reveal several significant patterns in US housing wealth in 2015:

- Of the 73.3 million owner-occupied housing units, 46.4 million (about two-thirds) had home debt such as mortgages and equity loans. In contrast, 26.9 million homes (about one-third) were owned free and clear without any home debt.
- On average, each owner-occupied housing unit had a net housing wealth of \$150,506 after subtracting all outstanding debt secured by the housing unit from the 2015 home value. For homes owned free and clear, average net housing wealth was \$229,296; for those with debt, average net housing wealth is \$104,932.
- The total net housing wealth for all owner-occupied units was \$11.03 trillion. Of that, \$4.9 trillion was from units with home debt and \$6.2 trillion from units without home debt.
- If lenders allow homeowners to borrow up to 75 percent of their current home value, 52.4 million owner-occupied units would have accessible housing wealth, including all 26.9 million units owned free and clear and 25.6 million encumbered by some home debt.
- Of the \$11 trillion in net housing wealth from all owner-occupied housing units, about \$7 trillion (64 percent) was accessible. On average, \$171,972 could be extracted from a home without home debt and \$98,763 from a home with debt for a combined average of \$133,810.

We find that the nation's net and accessible housing wealth are concentrated by age:

- Owners 65 or older had 44 percent (\$3.1 trillion) of the nation's accessible housing wealth (\$7 trillion) despite owning only 30 percent of all owner-occupied housing units. Meanwhile, owners under 40 only had 6 percent of accessible housing wealth despite making up 17 percent of all homeowners.
- Accessible housing wealth is even more concentrated in units owned by homeowners 65 or older without a mortgage. The 19 percent of units they own made up 35 percent of accessible

housing wealth. Units owned by those under 40 with a mortgage made up 14 percent of all housing units but accounted for only 2.5 percent of accessible housing wealth.

- Almost 9 percent of homeowners ages 50 to 59 and 7.5 percent of those ages 60 to 64 owed in excess of 5 percent more than their houses were worth. This age group may have difficulty recovering this important source of wealth before they reach retirement age, negatively affecting their standard of living if they are unable to continue working or have no other assets.

We also find that the nation's net and accessible housing wealth is concentrated geographically:

- Net and accessible housing wealth is concentrated in a few states, led by California, New York, Florida, and Texas. California had only 9.3 percent of all owner-occupied housing units but 20.4 percent of all net housing wealth (\$2.25 trillion of \$11.03 trillion) and 20 percent of accessible housing wealth (\$1.42 trillion of \$7.02 trillion).
- There is huge variation in average net housing wealth per housing unit across states. Although the national average is \$150,506, Arkansas and West Virginia averaged only \$79,795 and \$80,312, respectively. In contrast, Hawaii and Washington, DC, averaged \$411,564 and \$381,272, respectively.
- Within states, housing wealth remains concentrated in a few local areas. Of all 2,350 PUMAs, the top 25 ranked by total net housing wealth accounted for almost 7 percent of all net housing wealth (\$743 billion of \$11.03 trillion) but only 1.2 percent of all housing units. The top 558 PUMAs accounted for 26 percent of all housing units and made up 50 percent of net housing wealth.
- The local-area variation in average housing wealth per housing unit is as dramatic as the variation in total housing wealth. Each PUMA in the top 25 had an average net housing wealth per unit between \$736,000 and \$1.5 million, while each PUMA in the bottom 25 only had an average net housing wealth per unit between \$27,000 and \$45,000.

At the household level, there is even greater concentration of net and accessible housing wealth:

- Ten percent of owner-occupied housing units held 46 percent of net housing wealth and 51 percent of accessible housing wealth.
- Housing wealth is highly concentrated but significantly less so than overall wealth, which reflects the concentration of the net worth of less wealthy households in their homes and the importance of homeownership in wealth building.

- However, because housing wealth makes up a far higher proportion of the net worth of lower-income Americans than of those higher in the income and wealth distribution, they are especially vulnerable to major house price contractions.
- The concentration of housing wealth among wealthier families is consistent with findings that tax preferences for housing disproportionately benefit those at the top of the income distribution (Toder et al. 2010).

Data and Methodology

In this paper, we measure the net housing wealth of homeowners' primary residences at the household level. For an owner-occupied housing unit, the household's net housing wealth generally equals the current house value minus all outstanding home debt secured by the housing unit. Home debt includes all first and second mortgages, home equity lines of credit (HELOC), and home equity loans that are secured by the housing unit.

We divide all owner-occupied housing units into two groups: households with no home debt and households with outstanding home debt secured by their primary residence.

Homes Owned Free and Clear

For households with no home debt, net housing wealth simply equals the current house value, which is measured using the 2014 American Community Survey (ACS) one-year Public Use Microdata Sample (PUMS).

The tenure field of the ACS PUMS asks for the household's housing tenure status and gives four possible answers:

- Owned with mortgage or loan (including home equity loans)
- Owned free and clear
- Rented
- Occupied without payment of rent

Each household also self-reports the property value of their primary residence at the time of the survey, which tells us the net housing wealth for households with no home debt.²

Homes Owned with Home Debt

To measure net housing wealth for households with home debt, we must calculate, in addition to the property value of the primary residence, the total amount of all outstanding home debt secured by the primary residence. ACS PUMS data alone is not enough to make this calculation. The dataset has

information on the household's total monthly payment on all outstanding first, second, and junior mortgages and home equity loans secured by the primary residence, but it does not include the remaining balance of these debts. We must use credit bureau data to measure the net housing wealth for these households.

The credit bureau data consist of a random, longitudinal 2 percent sample of depersonalized credit records from a major credit bureau from 2010 to 2015. For details about the random sample, see Li and Goodman (2016). The data include the consumer's ZIP code, age, and balance and payment information for several trade types: auto loan, student loan, credit card, HELOC, first mortgage, second mortgage, and other installment and revolving debts.

To identify the housing tenure status (owner or renter) of a consumer in the sample, the credit bureau matched each consumer's name and address to a national public property record database maintained by CoreLogic. They first matched the consumer's address in the credit bureau data to a mailing or property address in the property record data. If the consumer's first and last names matched those of one of the property owners, the consumer was identified as an owner of the property. If the consumer's first and last names did not match, the consumer was identified as a renter of the property. In other words, we define an owner as an adult whose name is on the property's deed in the matched dataset. We define a renter as an adult whose name is not on the property's deed. To protect consumer privacy, all personal information such as name and address were removed, leaving only information on match success. For details on the matched dataset, see Li and Goodman (2016).

In the matched sample, 835,806 consumers (15.7 percent of all 5.316 million consumers in the sample) are identified as homeowners with a first mortgage, a second mortgage, a HELOC loan, or any combination of these three types of home debt. These consumers are sorted by the unique, encrypted ID of the consumer's property address. Of these 835,806 consumers, only 2,509 (0.3 percent) share the same property address with one or more consumers. This leaves 833,297 unique properties occupied by owners with outstanding home debt secured by the property.

The current value of the property is obtained from CoreLogic's public property record database. The database provides two property values: (a) the total value (from land plus improvements) closest to current (2014 or 2015) market value used by county or local taxing authorities and (b) the current automated valuation model value of the property from CoreLogic's automated valuation model appraisal algorithms. We use the higher of the two values as the final property value.

The total amount of all outstanding home debt secured by each property is the sum of three values obtained from the credit bureau data:

- Total balance on open first-mortgage trades reported in the six months before August 2015.
- Total balance on open second-mortgage trades reported in the six months before August 2015.
- Total balance on open HELOC trades reported in the six months before August 2015.

Where a property has more than one owner in the sample, the home debt of all owners was combined.³

Weighting the Credit Bureau Sample with American Community Survey Microdata

We weighted the 833,297 unique properties described above with ACS PUMS data to make them follow the same joint distribution as their counterparts in PUMS data on two attributes: consumer/head householder's age and geographic location. For details, see Li and Goodman (2016).

Defining How Much Equity Is Accessible to Homeowners

To convert housing wealth into purchasing power, a consumer must borrow against the home through a cash-out refinance, a home equity loan, or a HELOC. Lenders limit how much a consumer can borrow. The Federal Housing Administration permits cash-out refinances up to 85 percent of the home value (85 percent loan-to-value ratio). That is, if the mark-to-market value of a home is \$200,000, a borrower could draw out \$170,000 in equity. Fannie Mae and Freddie Mac permit cash-out refinances up to 80 percent.

Borrowers with lower credit scores face additional charges when attempting to access more than 75 percent of their home's value. A borrower with a FICO credit score of 680–699 doing a cash-out refinance on a single-family home with a loan-to-value ratio (LTV) of 60.01–75 would pay an up-front surcharge of 1.125 percent. The surcharge increases to 1.75 percent if the LTV is 75.01–80. For borrowers with a 640–659 FICO score, the up-front loan level pricing adjustment is 1.635 for LTVs of 60.01–75 and 3.125 percent for LTVs of 75.01–80. At least partially as a result of these charges, there are relatively few cash-out refinances over 75 percent LTV securitized by Fannie Mae and Freddie Mac. Consequently, we use two cutoff points in determining accessible or accessible equity, one at 85 percent LTV and one at 75 percent LTV. Note that we measure the amount of equity that is theoretically accessible, not the amount that homeowners will opt to extract.

Findings

Net Housing Wealth at the National Level

There were 73.3 million owner-occupied housing units in the United States in 2015. Of these, 46.4 million (about two-thirds) had home debt such as mortgages and equity loans, and 26.9 million (about one-third) were owned free and clear (figure 1.A).

In 2015, the average owner-occupied housing unit had a net housing wealth of \$150,506 after subtracting all outstanding debt secured by the housing unit from the house value. Units owned free and clear tend to have higher net housing wealth than those with home debt. On average, free and clear units had a net housing wealth of \$229,296 compared to \$104,932 for units with home debt (figure 1.B).

The total net housing wealth for all owner-occupied units was \$11.03 trillion. Of that, \$4.9 trillion was from units with home debt and \$6.2 trillion from units without, though those without debt accounted for only a third of all owner-occupied units (figure 1.C). The Federal Reserve's flow of funds, which includes wealth from investment properties, places total housing wealth (home equity) at \$13.2 trillion.

How Much Housing Wealth Is Accessible to Homeowners?

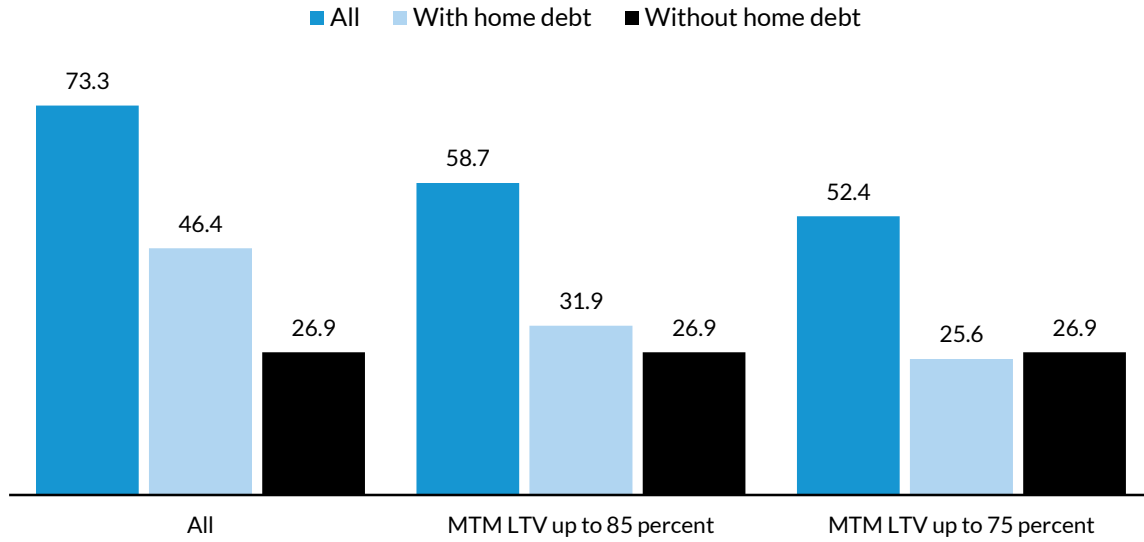
To convert housing wealth into spending, homeowners must borrow against the home through a cash-out refinance, a home equity loan, a HELOC, or a reverse mortgage. Lenders limit how much an owner can borrow. Typically, the total amount of home debt secured by the property can not exceed 75–85 percent of the current home value (mark-to-market loan-to-value-ratio, or MTM LTV). This limit determines how much housing wealth is accessible.

In 2015, there were 58.7 million owner-occupied housing units with an MTM LTV under 85, meaning they have accessible housing wealth if lenders allow their owners to borrow up to 85 percent of the current home value. These owners include all 26.9 million who own their homes free and clear and 31.9 million with home debt. As shown in figure 1.A, 69 percent (31.9 million of 46.4 million) of all owner-occupied units with home debt had accessible housing wealth.

FIGURE 1.A

Number of Owner-Occupied Housing Units, 2015

In millions



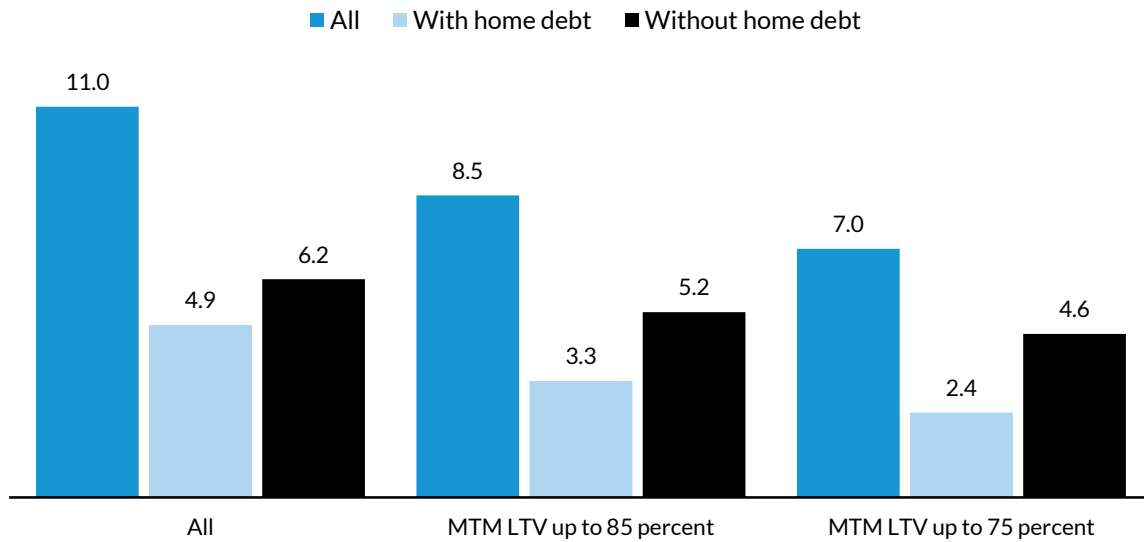
Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: MTM LTV = mark-to-market loan-to-value ratio.

FIGURE 1.B

Total Net Housing Wealth, 2015

Trillions of 2015 dollars



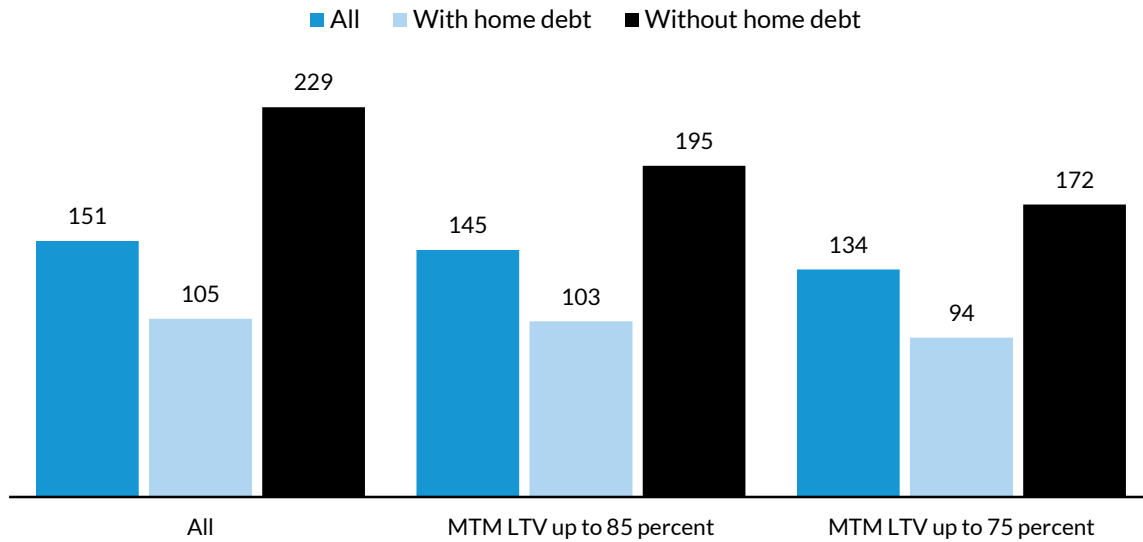
Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: MTM LTV = mark-to-market loan-to-value ratio.

FIGURE 1.C

Average Net Housing Wealth per Owner-Occupied Housing Unit, 2015

Thousands of 2015 dollars



Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: MTM LTV = mark-to-market loan-to-value ratio.

If lenders only allow owners to borrow up to 75 percent of their current home value instead of 85 percent, the number of owners with accessible housing wealth would shrink from 58.7 million to 52.4 million. All of the 6.3 million excluded owners have home debt and only own 15–25 percent of their home's current value free and clear (figure 1.A).

If owners with accessible housing wealth extracted all equity up to 85 percent of current home value, they could extract an average of \$145,242 per home for a total of \$8.5 trillion. If lenders limit extraction to 75 percent of current home value, homeowners could extract an average of \$133,810 per home for a total of \$7 trillion (figures 1.B and 1.C). Therefore, of the \$11 trillion in net housing wealth from all owner-occupied housing units, about \$7 trillion (64 percent) is accessible under today's lending standards.

Net Housing Wealth by Age Group

Housing wealth generally increases with age as homeowners pay off mortgages and house values appreciate. Accordingly, we divided all owner-occupied housing units into seven groups according to the age of the head homeowner (figures 2.A, 2.B, and 2.C).

Homeowners under 50 had less equity than their older counterparts, constituting 35 percent of all owners but holding only 23 percent of all equity. Those over 60 constituted 41 percent of all owners and held 52 percent of all equity (figures 2.A and 2.B).

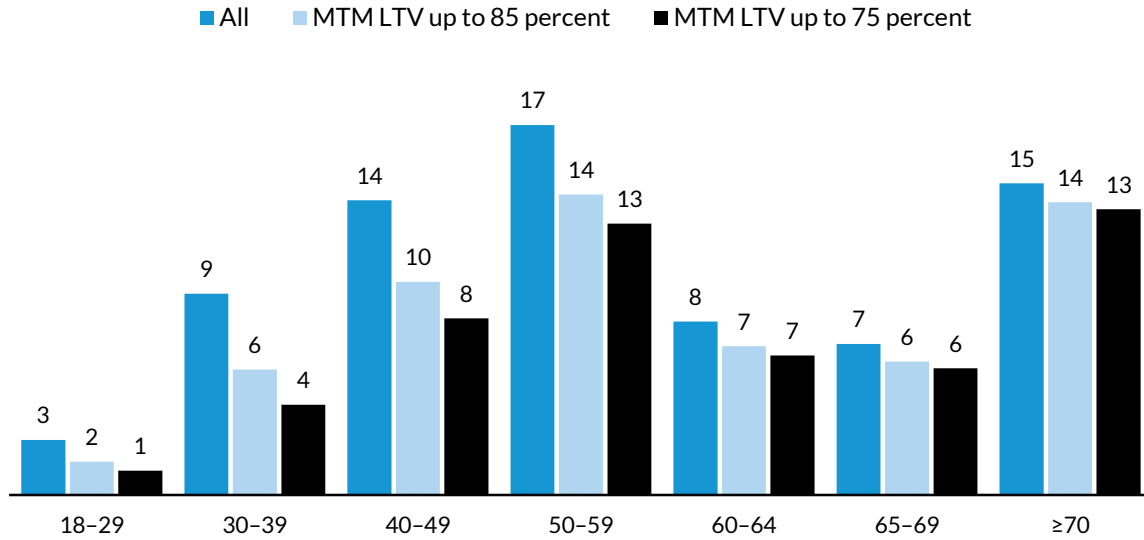
The distribution is even more skewed when we look at accessible housing wealth. Using a limit of 75 percent of current home value, only 45 percent of homeowners under 40 had accessible housing wealth compared with 92 percent of those 70 or older. Using the 85 percent threshold, 62 percent of homeowners under 40 had accessible housing wealth versus 94 percent of those 70 or older (figures 2.A and 2.B).

Figure 2.C shows average net housing wealth per owner-occupied housing unit and average accessible net housing wealth per unit. There were huge differences between the age groups, with middle-aged and younger homeowners most constrained from tapping into their housing wealth despite their generally higher financial burdens from raising children, paying back mortgages, and so on. Using the 85 percent limit, 62 percent of homeowners ages 30 to 39 had accessible housing wealth versus 72 percent of those ages 40 to 49, 81 percent of those ages 50 to 59, 86 percent of those ages 60 to 64, 88 percent of those ages 65 to 69, and 94 percent of those 70 or older. As shown in figure 2.C, the average accessible equity also increases with age.

FIGURE 2.A

Number of Owner-Occupied Housing Units, by Age Group, 2015

In millions



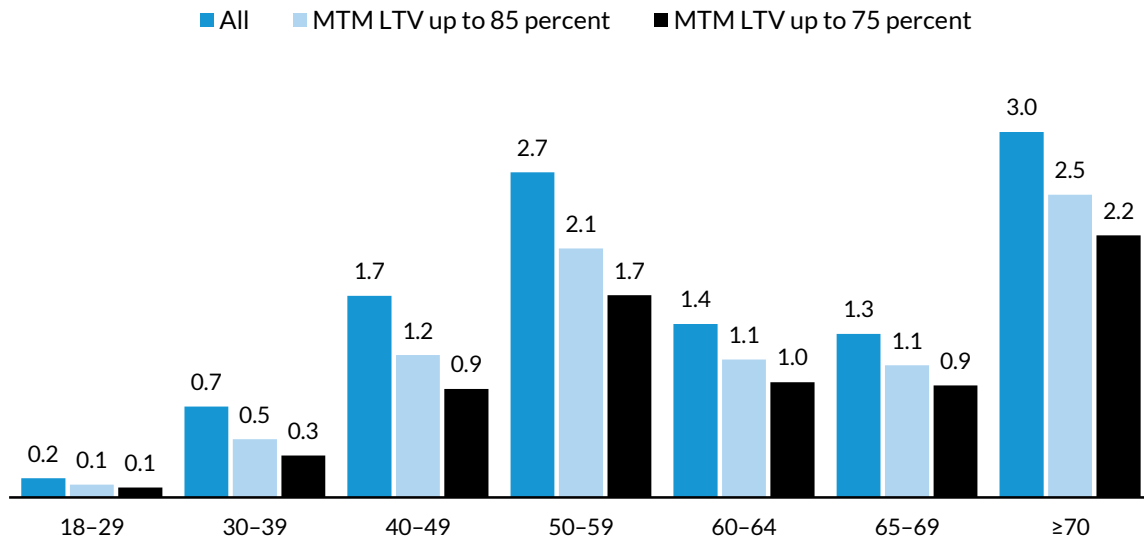
Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: MTM LTV = mark-to-market loan-to-value ratio.

FIGURE 2.B

Total Net Housing Wealth, by Age Group, 2015

Trillions of 2015 dollars



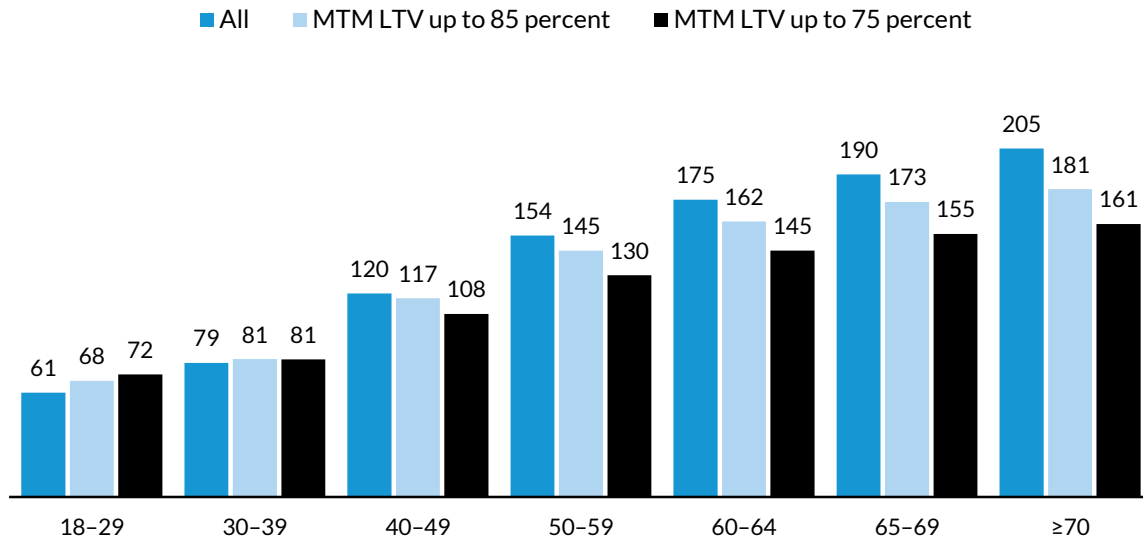
Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: MTM LTV = mark-to-market loan-to-value ratio.

FIGURE 2.C

Average Net Housing Wealth per Owner-Occupied Housing Unit, by Age Group, 2015

Thousands of 2015 dollars



Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: MTM LTV = mark-to-market loan-to-value ratio.

HOMES WITH AND WITHOUT HOME DEBT

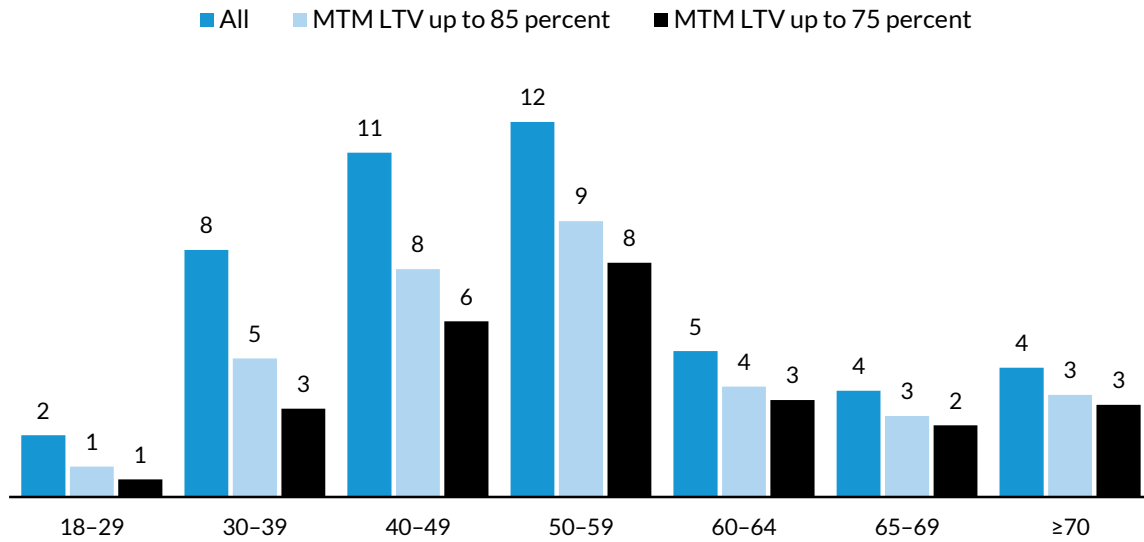
How does the age pattern break down between those with and without home debt?

Figures 3.A, 3.B, and 3.C replicate the figures above for owner-occupants with home debt, and figures 4.A, 4.B, and 4.C do the same for owner-occupants without home debt. Together, they provide the values for figures 2.A, 2.B, and 2.C.

FIGURE 3.A

Number of Owner-Occupied Housing Units with Home Debt, by Age Group, 2015

In millions



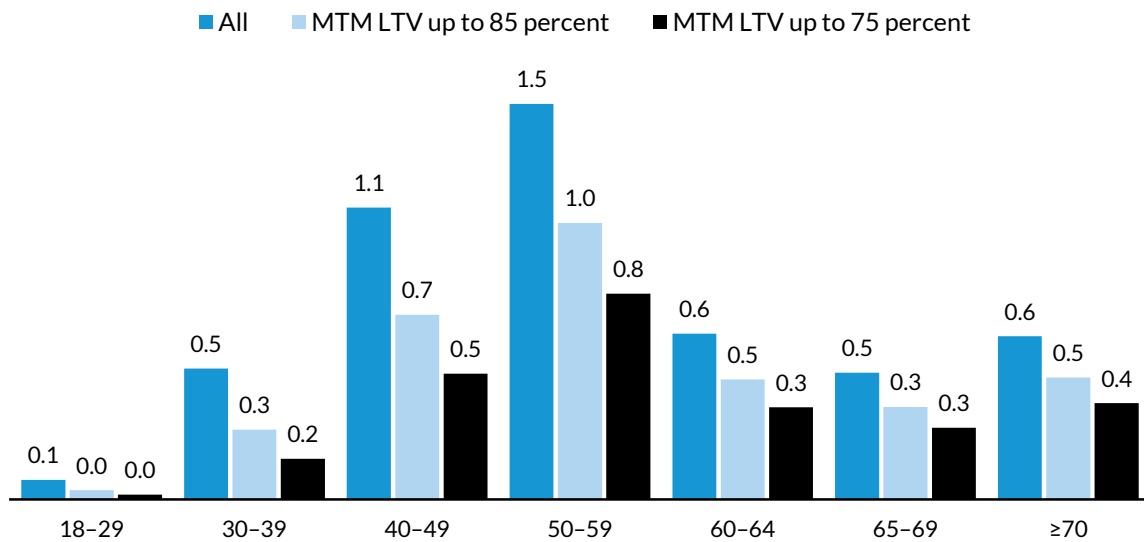
Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: MTM LTV = mark-to-market loan-to-value ratio.

FIGURE 3.B

Total Net Housing Wealth for Owner-Occupied Housing Units with Home Debt, by Age Group, 2015

Trillions of 2015 dollars



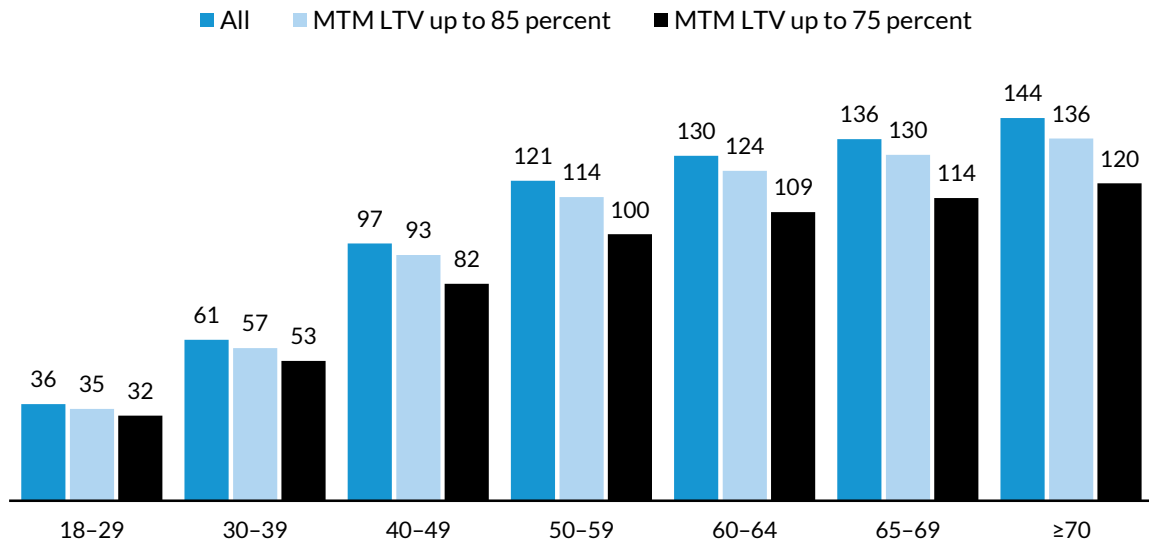
Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: MTM LTV = mark-to-market loan-to-value ratio.

FIGURE 3.C

Average Net Housing Wealth per Owner-Occupied Housing Unit with Home Debt, by Age Group, 2015

Thousands of 2015 dollars



Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: MTM LTV = mark-to-market loan-to-value ratio.

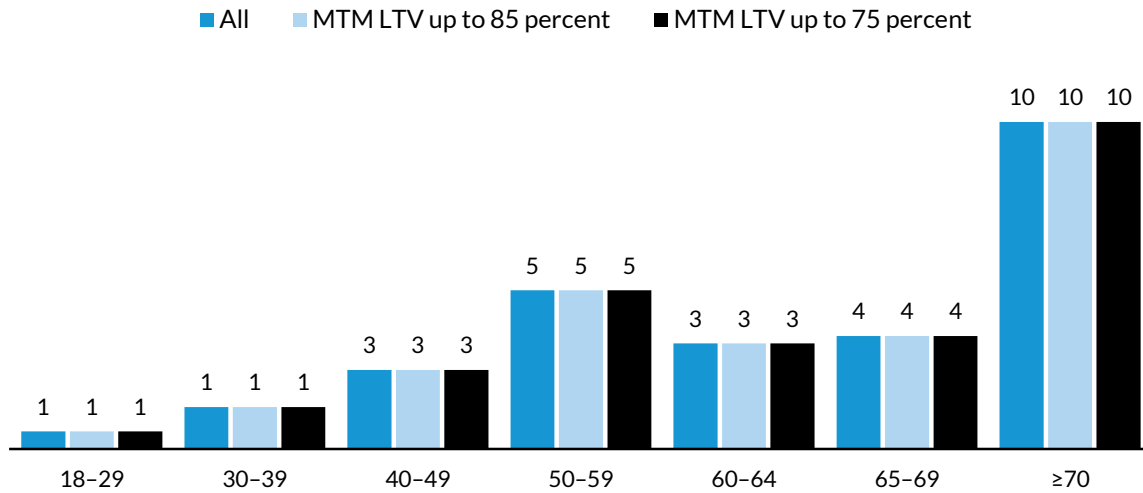
First, as we would expect, accessible housing wealth is disproportionately concentrated among homeowners with no home debt. These owners occupied just 37 percent of housing units but held 56 percent of total housing wealth, 61 percent of total accessible equity at 85 percent of current home value, and 66 percent of total accessible equity at 75 percent of current home value. An average of \$171,972 could be extracted from a home without home debt, and \$98,763 from a home with debt, for a combined average of \$133,810 (see tables A.1, A.2, and A.3 in appendix A).

Second, older owners are more likely to be free of home debt. Only 16 percent of homeowners under 40 were free of home debt; for those 70 or older, this number was over 70 percent. Moreover, although owners age 65 or older without a mortgage made up only 19 percent of all homeowners, they own 30 percent of total housing wealth and 33 or 35 percent of all accessible housing wealth at limits of 85 and 75 percent of current home value, respectively.

FIGURE 4.A

Number of Owner-Occupied Housing Units without Home Debt, by Age Group, 2015

In millions



Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

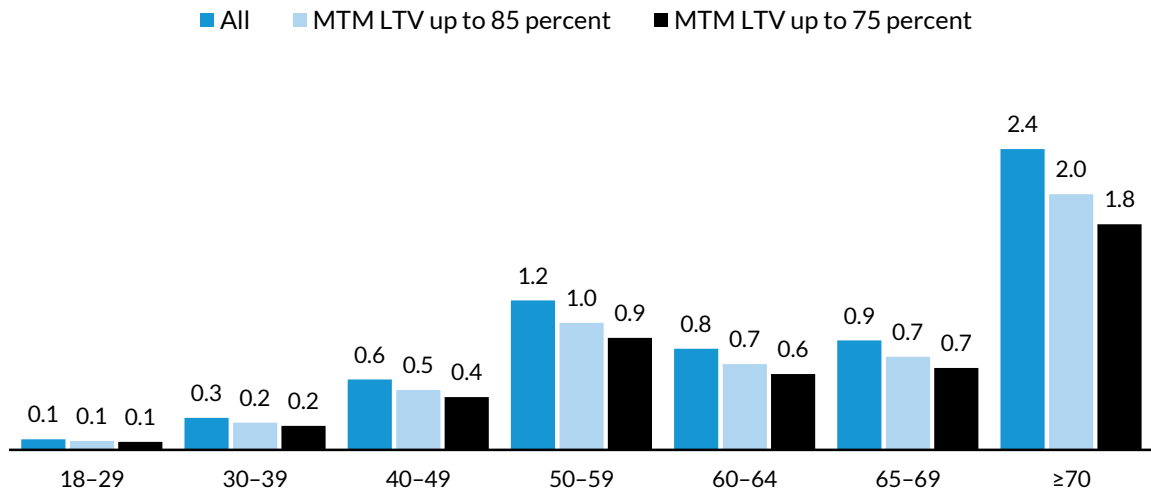
Note: MTM LTV = mark-to-market loan-to-value ratio.

For homeowners without home debt, differences in average net housing wealth were small across age groups, apparent mostly under age 30 and disappearing entirely above age 40 (figure 4.C). These differences were more pronounced for those with a mortgage. Note that figure 3.C shows the average net housing wealth for homeowners with a mortgage was \$61,000 for those ages 30 to 39 and \$136,000 for those ages 65 to 69.

FIGURE 4.B

Total Net Housing Wealth for Owner-Occupied Housing Units without Home Debt, by Age Group, 2015

Trillions of 2015 dollars



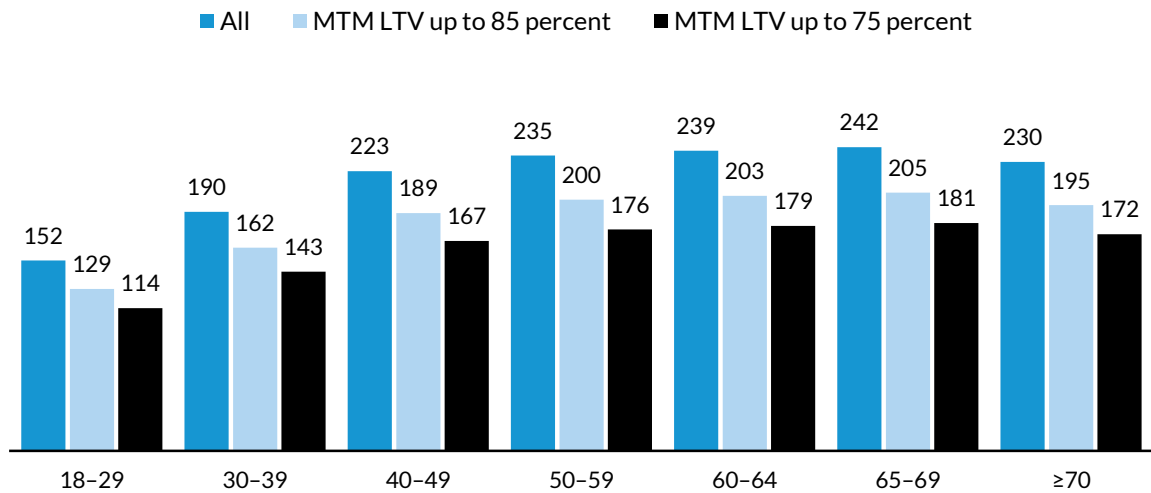
Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: MTM LTV = mark-to-market loan-to-value ratio.

FIGURE 4.C

Average Net Housing Wealth per Owner-Occupied Housing Unit without Home Debt, by Age Group, 2015

Thousands of 2015 dollars



Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: MTM LTV = mark-to-market loan-to-value ratio.

PERCENT OF HOME VALUE THAT IS NET WEALTH BY HOMEOWNER AGE

There was great variation in how much of a home's value was net wealth (table 1). For all owner-occupied housing units, 37 percent were owned free of any home debt, 8 percent had more home debt than the value of the home, and another 4 percent only had net housing wealth at the margin (less than 5 percent of the home value was net wealth). The remaining owners had outstanding home debt, but at least 5 percent of their home value was net wealth. For 12 percent of owners, 5–20 percent of their current home value was net wealth. The remaining distribution was 16 percent of owners at 20–40 percent of current home value, 11 percent of owners at 40–60 percent of current home value, and 12 percent of owners at 60 percent or more of current home value.

TABLE 1.

Distribution of Owner-Occupied Housing Units, by Percentage of Home Value that is Net Wealth and by Age Group, 2015

	100	[80,100)	[60,80)	[40,60)	[20,40)	[5,20)	[-5,5)	<-5	Total
18-29	562,574	9,880	44,763	152,945	582,564	758,665	291,972	190,425	2,593,788
	0.77	0.01	0.06	0.21	0.79	1.04	0.40	0.26	
	21.69	0.38	1.73	5.90	22.46	29.25	11.26	7.34	
	2.09	0.31	0.84	1.84	4.84	8.91	9.07	3.26	
30-39	1,339,097	79,055	254,418	861,279	2,548,063	2,467,101	868,847	1,060,028	9,477,887
	1.83	0.11	0.35	1.18	3.48	3.37	1.19	1.45	
	14.13	0.83	2.68	9.09	26.88	26.03	9.17	11.18	
	4.99	2.50	4.75	10.37	21.19	28.98	26.98	18.12	
40-49	2,522,051	379,766	929,918	2,032,652	3,350,497	2,270,971	866,884	1,510,306	13,863,045
	3.44	0.52	1.27	2.77	4.57	3.10	1.18	2.06	
	18.19	2.74	6.71	14.66	24.17	16.38	6.25	10.89	
	9.39	12.00	17.37	24.48	27.86	26.67	26.92	25.82	
50-59	5,054,932	1,057,798	1,820,234	2,591,115	2,978,148	1,697,948	655,779	1,547,801	17,403,755
	6.90	1.44	2.48	3.54	4.06	2.32	0.89	2.11	
	29.05	6.08	10.46	14.89	17.11	9.76	3.77	8.89	
	18.82	33.44	33.99	31.20	24.77	19.94	20.37	26.46	
60-64	3,366,625	578,197	817,434	1,005,409	1,028,845	547,644	222,604	603,108	8,169,867
	4.59	0.79	1.12	1.37	1.40	0.75	0.30	0.82	
	41.21	7.08	10.01	12.31	12.59	6.70	2.72	7.38	
	12.54	18.28	15.27	12.11	8.56	6.43	6.91	10.31	
65-69	3,601,588	427,283	613,405	758,017	731,449	383,648	149,916	440,354	7,105,658
	4.91	0.58	0.84	1.03	1.00	0.52	0.20	0.60	
	50.69	6.01	8.63	10.67	10.29	5.40	2.11	6.20	
	13.41	13.51	11.46	9.13	6.08	4.51	4.66	7.53	
≥70	10,409,608	631,483	874,258	902,805	805,563	388,138	163,884	496,974	14,672,714
	14.20	0.86	1.19	1.23	1.10	0.53	0.22	0.68	
	70.95	4.30	5.96	6.15	5.49	2.65	1.12	3.39	
	38.76	19.96	16.33	10.87	6.70	4.56	5.09	8.50	
Total	26,856,475	3,163,462	5,354,430	8,304,222	12,025,127	8,514,116	3,219,886	5,848,996	73,286,714
	36.65	4.32	7.31	11.33	16.41	11.62	4.39	7.98	

Source: Authors' calculations using ACS PUMS data and matched credit-bureau and property-record data.

Note: In each cell, the four numbers are number of housing units, percentage of total, percentage of each age group, and percentage of each net wealth group. For example, there were 562,574 owner-occupied housing units owned free and clear by owners ages 18 to 29, accounting for 0.77 percent of all owner-occupied housing units, 21.69 percent of all owners between 18 and 29, and 2.09 percent of all owner-occupied housing units owned free and clear.

How much of home value that is net wealth follows a clear age pattern? In general, net wealth constitutes a greater portion of current home value for older owners than for younger owners. For example, 71 percent of owners age 70 or older had no home debt compared with only 14 percent of owners ages 30 to 39.

Figure 5 shows the distribution of owner-occupied housing units by percentage of home value that is net wealth and by age group. The area of each rectangle is proportional to the frequency of a combination of an age group and a level of net housing wealth. The vertical length of the rectangle is

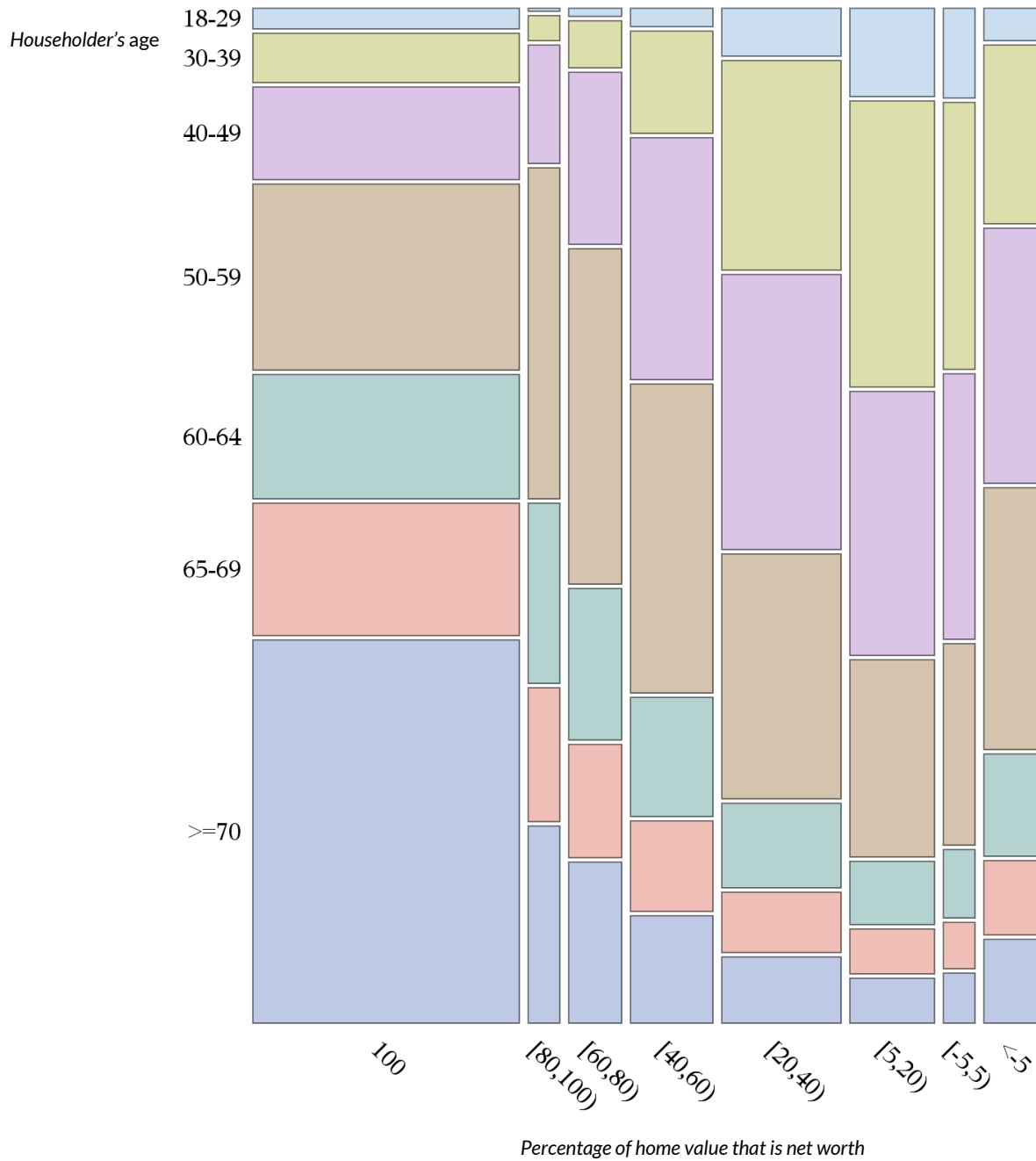
proportional to the frequency of the age group, and its horizontal length is proportional to the frequency of the level of net housing wealth. The largest rectangle, in the bottom-left corner, represents owners 70 or older without home debt, who accounted for 14 percent of all owners. The second-largest rectangle represents owners ages 50 to 59 without any home debt, who accounted for 7 percent of all owners. Together, the two rectangles for homeowners ages 60 to 64 and ages 65 to 69 without any home debt accounted for almost 10 percent of all owners. The other populous groups were owners ages 40 to 49 with net wealth of 20–40 percent of their home value (5 percent of all owners) and owners ages 50 to 59 with net wealth of 20–40 percent of their home value (4 percent of all owners).

Almost 9 percent of homeowners ages 50 to 59 and 7.5 percent of those ages 60 to 64 owed in excess of 5 percent more than their houses were worth. This age group may have difficulty recovering this important source of wealth before they reach retirement age, negatively affecting their standard of living if they are unable to continue working or have no other assets. In our recent report (Li and Goodman 2016), we found that a disproportionate share of these struggling former homeowners are middle-aged. Nearly 31 percent (1.3 million) of former homeowners ages 36 to 45 and 26 percent (1.2 million) of those ages 46 to 55 experienced a foreclosure, accounting for almost one-third of all foreclosures between 2003 and 2015.

Younger borrowers most likely obtained their mortgages after the financial crisis, when home prices were appreciating rather than depreciating. But those between ages 36 and 55 in 2015, particularly those under age 46, most likely obtained their mortgages at or near the peak of the housing cycle in 2005, when they would have been in their midtwenties to midthirties. Many were hit particularly hard by the housing bust. Older consumers are more likely to have paid off all or part of their mortgages before the financial crisis, giving them more equity in their homes and making the housing burden more manageable. But as we have shown in this paper, older homeowners avoided foreclosure, but their housing wealth has not recovered to precrisis levels.

FIGURE 5

Distribution of Owner-Occupied Housing Units, by Percentage of Home Value that Is Net Wealth and by Age Group, 2015



Source: Authors' calculations using ACS PUMS data and matched credit-bureau and property-record data.

Note: The area size of each rectangle is proportional to the frequency of a combination of an age group and a level of net housing wealth. The vertical length of the rectangle is proportional to the frequency of the age group, and its horizontal length is proportional to the frequency of the level of net housing wealth.

How Concentrated Is Housing Wealth Geographically and by Household?

State-Level Results

Figures 6.A, 6.B, and 6.C, figures 7.A, 7.B, and 7.C, and table A.4 show net housing wealth at the state level. Housing wealth is concentrated in a few states, led by California, which had 9.3 percent of all owner-occupied housing units but 20.4 percent of total net housing wealth (\$2.25 trillion of \$11.03 trillion) and 20 percent of accessible housing wealth (\$1.42 trillion of \$7.02 trillion), assuming equity is accessible up to 75 percent of current home value. This reflects that California had the largest number of owner-occupied housing units (6.8 million) and the third-highest average net wealth per housing unit (\$330,000).

There were only four states with over \$500 billion in net housing wealth: California, New York, Florida, and Texas (figure 6.B). New York was a distant second to California in housing net wealth at \$838 billion (table A.4). Texas and Florida had more housing units than New York but less wealth per housing unit. These four states made up 28 percent of the nation's housing units (21 million of 73 million) but 40 percent of total net housing wealth (\$4.42 trillion of \$11.03 trillion) and a very similar share of total accessible housing wealth.

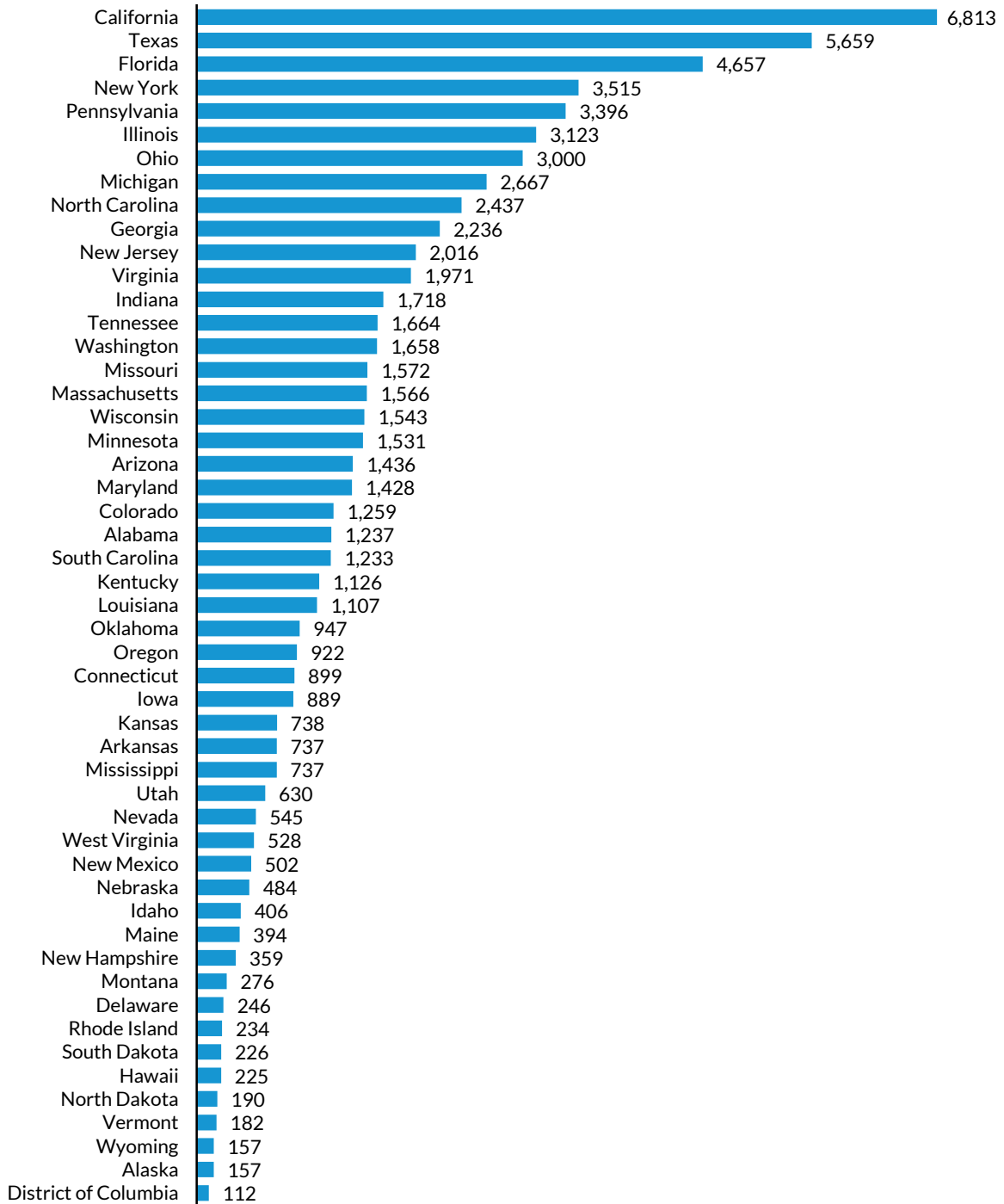
Although the national average net worth per housing unit was \$150,506, there was huge variation in the amount of net housing wealth per housing unit, from a low of \$79,795 in Arkansas and \$80,312 in West Virginia to a high of \$411,564 in Hawaii and \$381,272 in Washington, DC.

It is interesting to note that 80 percent of all homeowners had equity at or above 15 percent of the current value of their home and 72 percent were at the 25 percent level. These results varied only modestly from state to state. At the high end—in Hawaii; Washington, DC; Vermont; and California—88 percent of homeowners had equity at or above 15 percent of their home value. At the low end—in Rhode Island and Nevada—this number ranged from 70 to 72 percent, probably a result of robust home price depreciation during the crisis and a slower recovery of housing markets than in other states. Results were very similar at the 25 percent equity level. West Virginia and Mississippi had the greatest percentage of homes owned free and clear, followed by several other rural states.

FIGURE 6.A

Number of Owner-Occupied Units, by State, 2015

In thousands

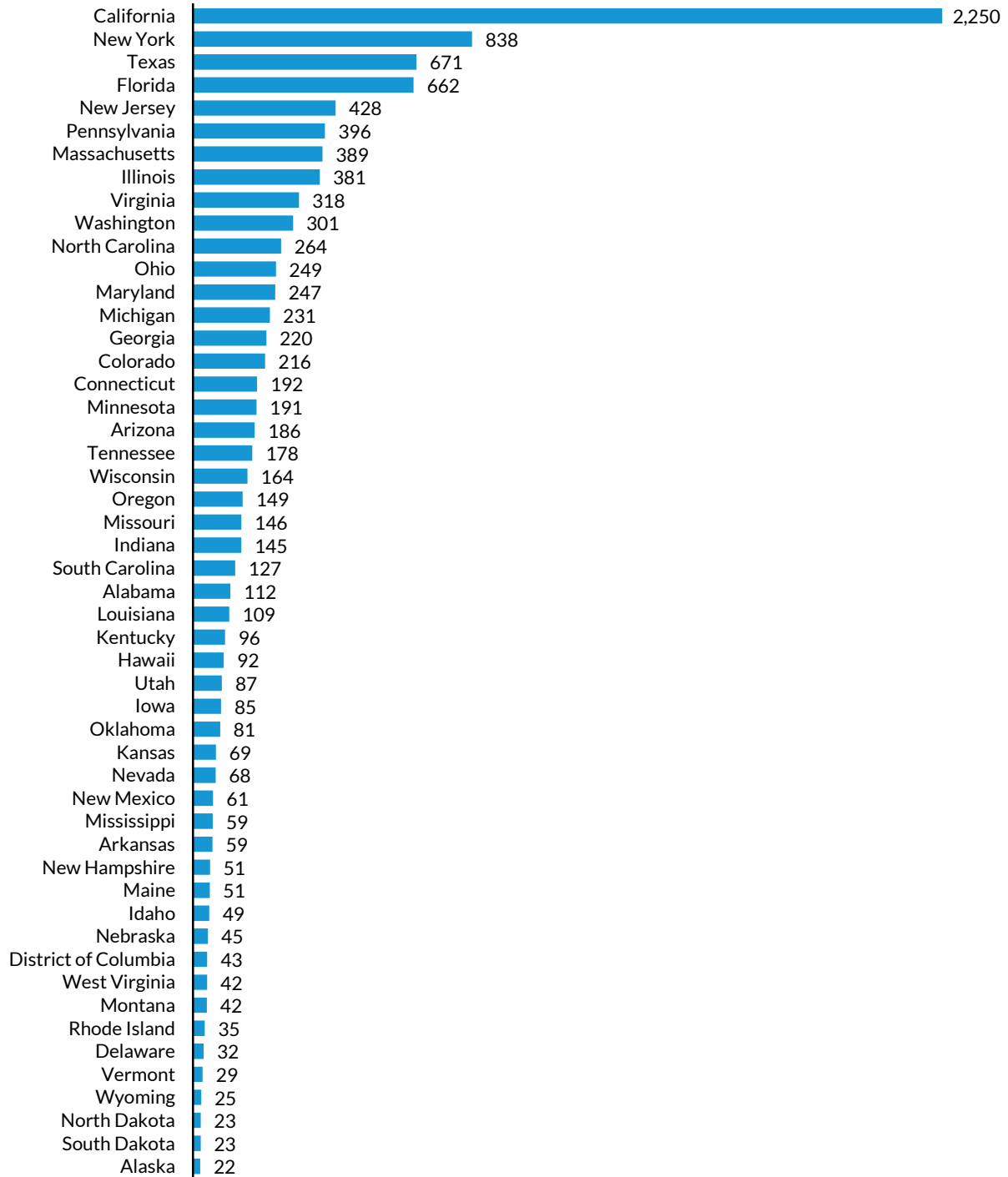


Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

FIGURE 6.B

Total Net Housing Wealth, by State, 2015

Billions of 2015 dollars

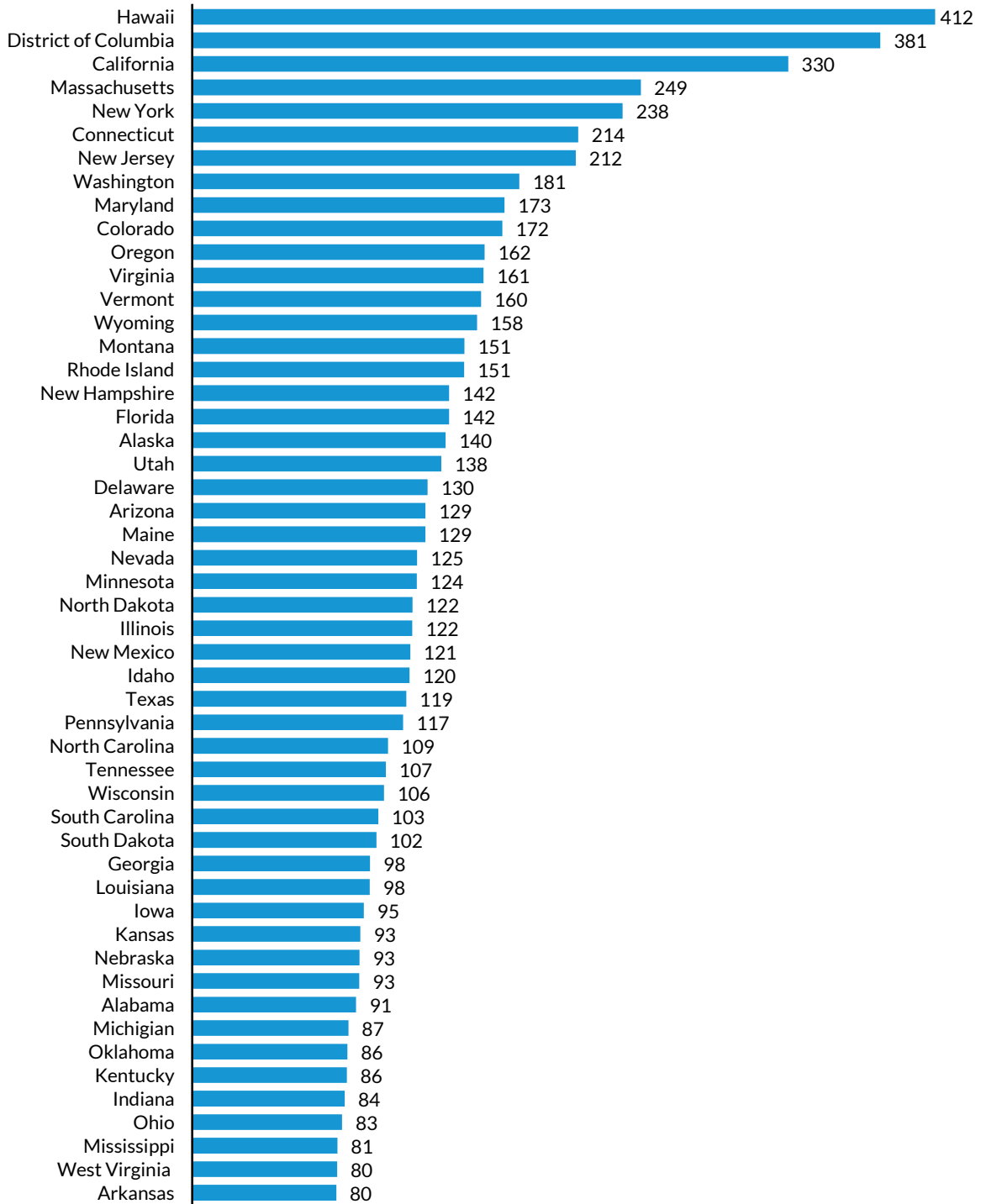


Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

FIGURE 6.C

Average Net Housing Wealth per Owner-Occupied Housing Unit, by State, 2015

Thousands of 2015 dollars

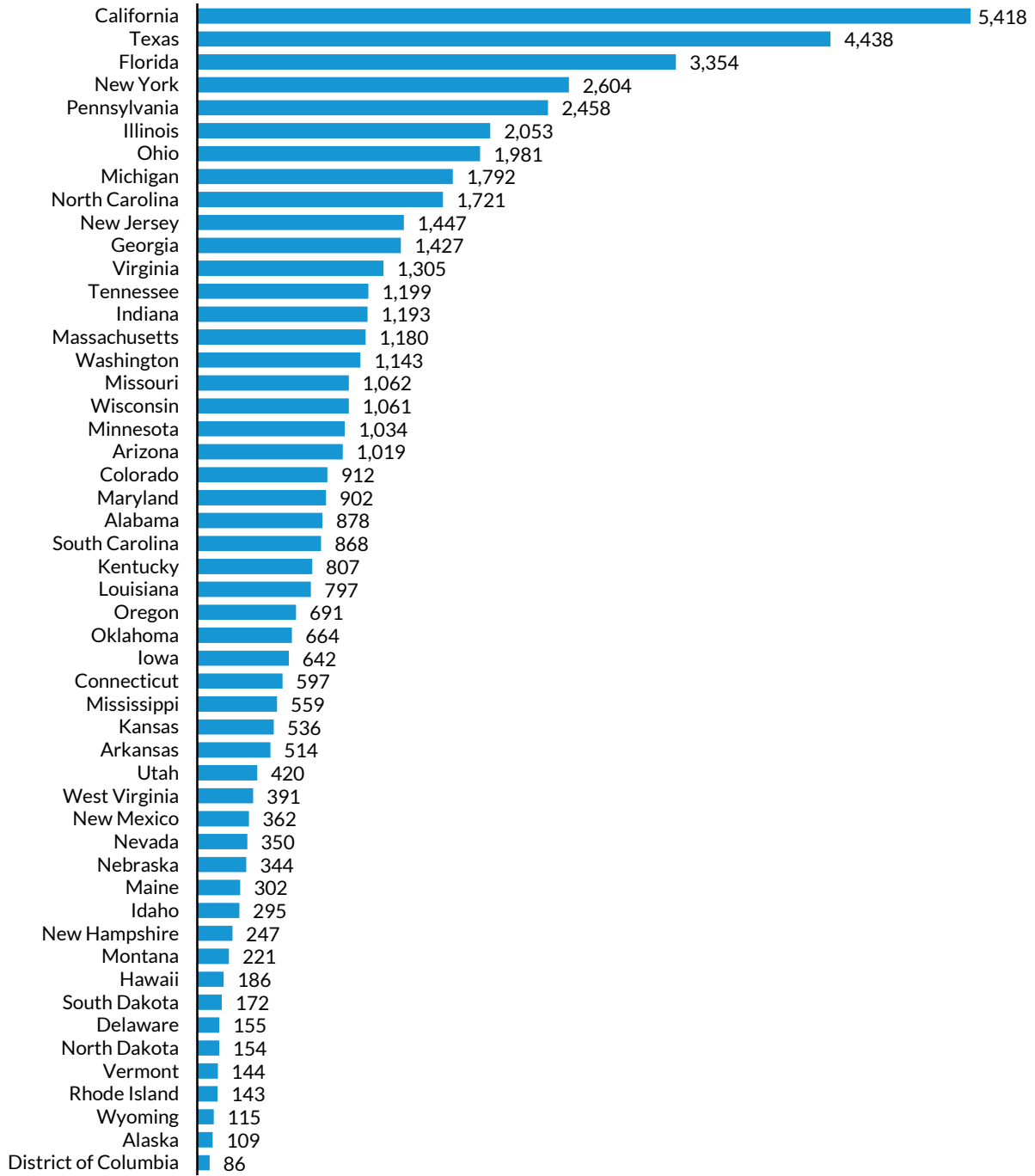


Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

FIGURE 7.A

Number of Owner-Occupied Housing Units with Accessible Housing Wealth at 75 Percent of Current Home Value, by State, 2015

In thousands

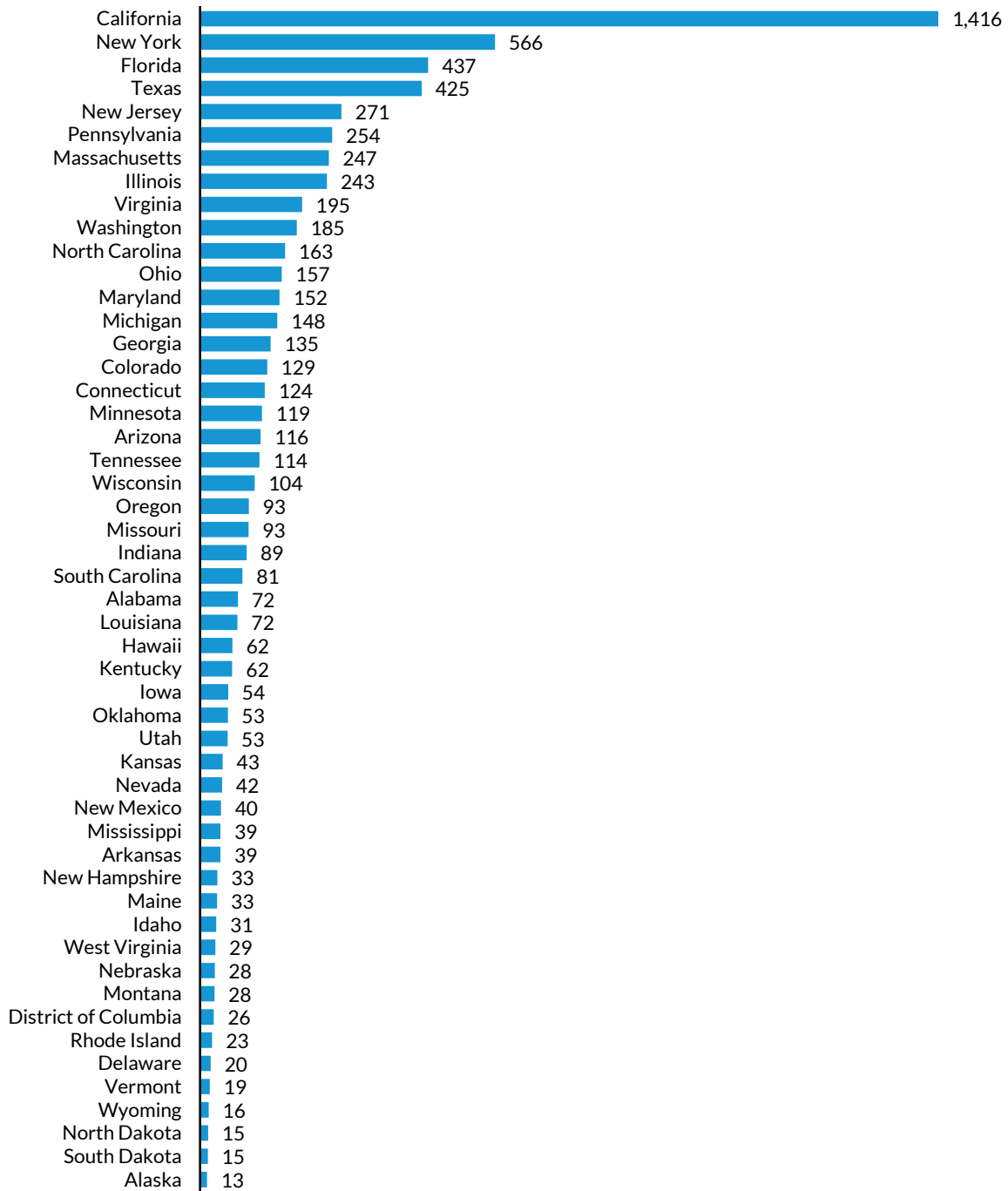


Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

FIGURE 7.B

Total Net Housing Wealth of Owner-Occupied Housing Units with Accessible Housing Wealth at 75 Percent of Current Home Value, by State, 2015

Billions of 2015 dollars

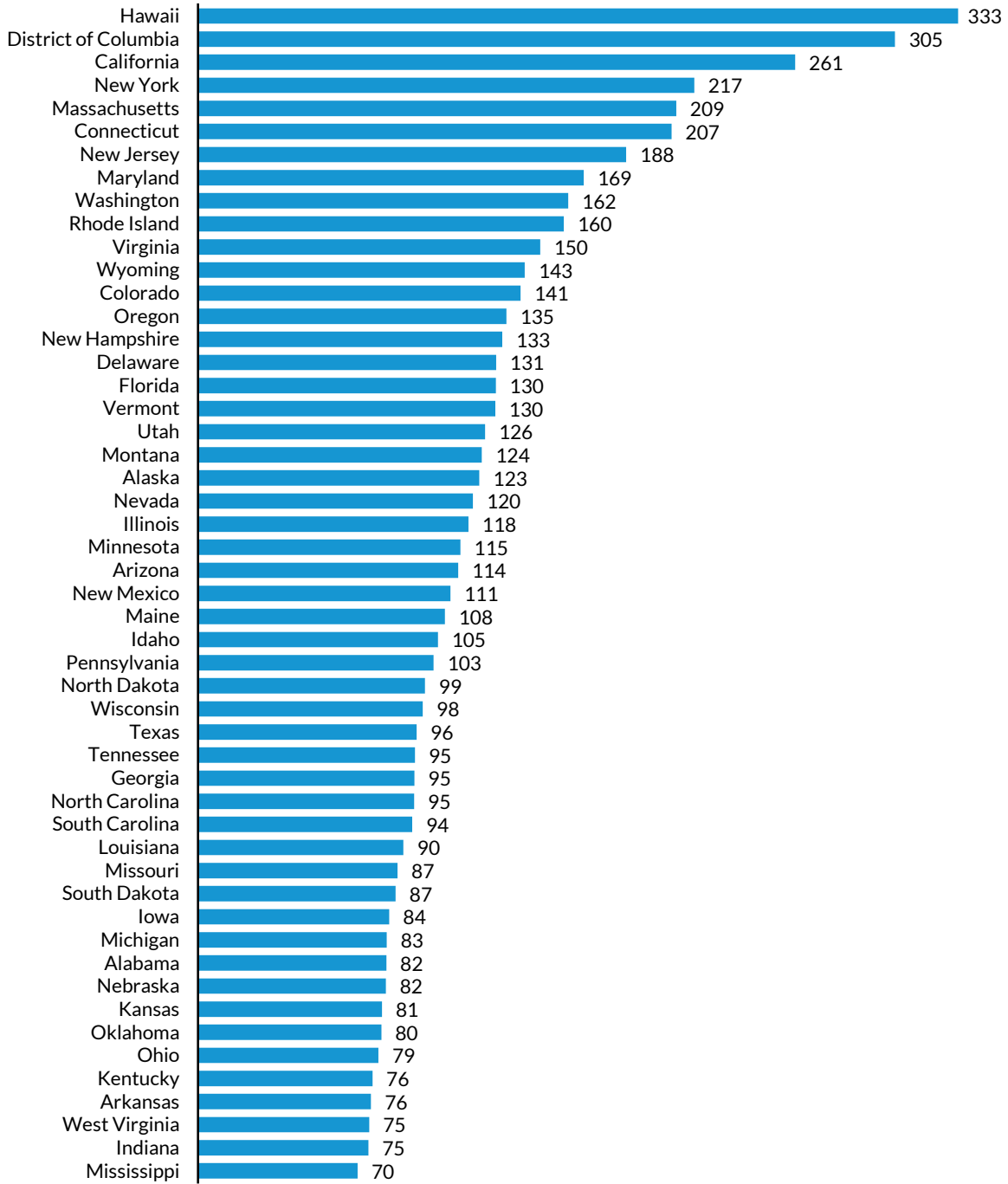


Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

FIGURE 7.C

Average Net Housing Wealth per Owner-Occupied Housing Unit with Accessible Housing Wealth at 75 Percent of Current Home Value, by State, 2015

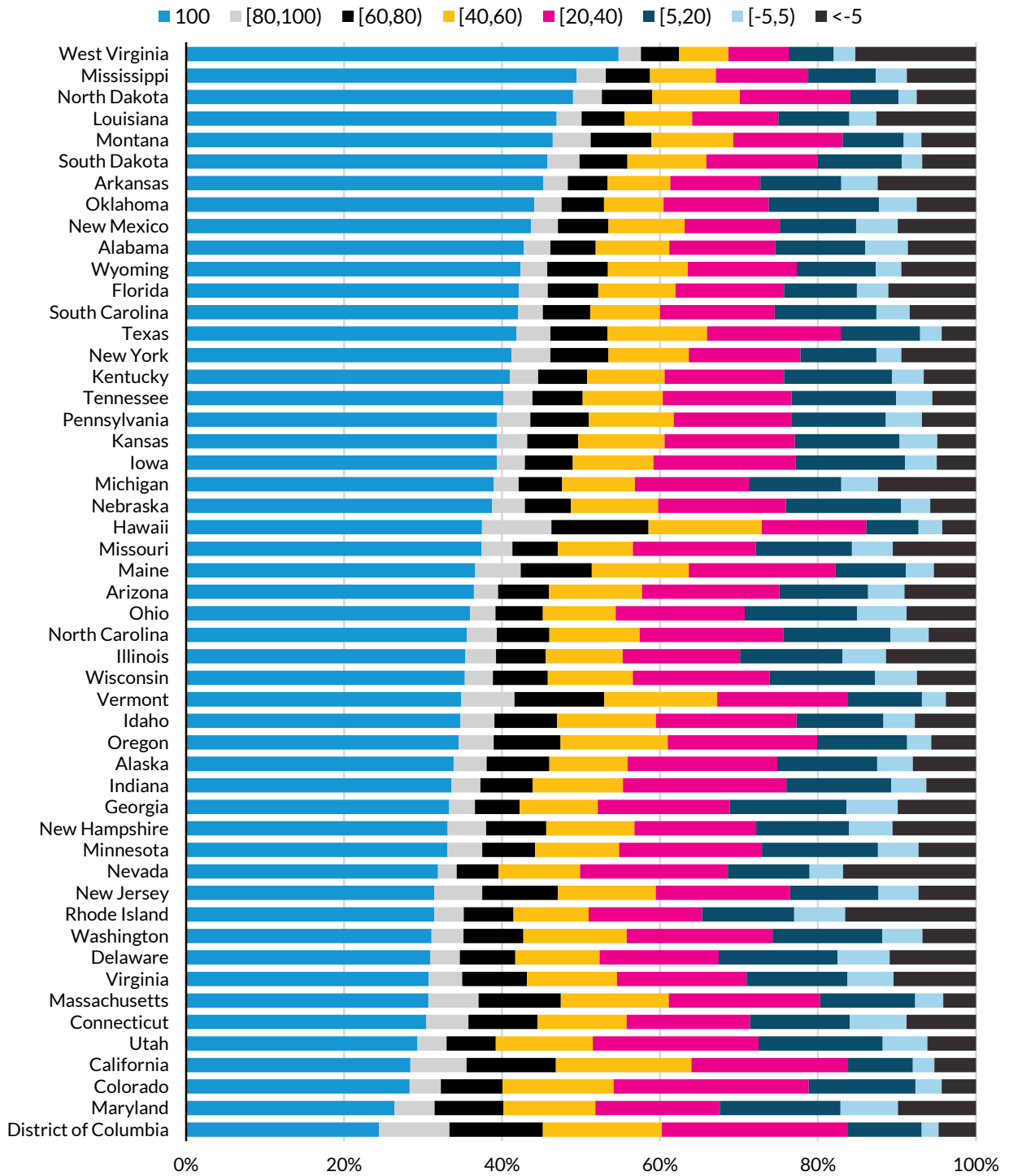
Thousands of 2015 dollars



Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

FIGURE 8

Distribution of Owner-Occupied Housing Units, by Percentage of Home Value that Is Net Wealth and by State, 2015



Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Local Area-Level Results

Within states, housing wealth remains concentrated in a few local areas. ACS's Public Microdata has information at the level of Public Use Microdata Areas (PUMAs), local areas within states that contain at least 100,000 people. Table 2 shows the top 25 and bottom 25 PUMAs with respect to total net housing wealth. Table A.6 shows the same rankings for total accessible housing wealth, and Table A.7 shows average net housing wealth per housing unit. The data show a few interesting patterns.

First, out of all 2,350 PUMAs, the top 25 ranked by total net housing wealth accounted for almost 7 percent of all net housing wealth (\$743 billion of \$11,030 billion) but only 1.2 percent of all housing units. Sixteen of these PUMAs were in California, 5 are in New York, 2 are in Massachusetts, and there is 1 each in Connecticut and Maryland. By contrast, the bottom 25 PUMAs together made up less net wealth than any of the top 25 PUMAs individually. And they were much less concentrated, with six in New York, three in Texas and Michigan, and two each in Wisconsin, Arizona, California, Ohio, and Georgia. Florida, Nevada, and Pennsylvania had one each. The top 558 PUMAs accounted for 26 percent of all housing units and 50 percent of all net housing wealth. The top 1185 PUMAs, which made up 57 percent of all housing units, had 75 percent of all net housing wealth.

The ranking of PUMAs by total accessible housing wealth, assuming a limit of 75 percent of current value, is very close to the ranking by total net housing wealth. Most of the top 25 is identical, and there is a fair amount of overlap in the bottom 25, with 23 lower-ranked PUMAs appearing in both lists.

The local-area variation of average housing wealth per housing unit is as dramatic as the variation in total housing wealth. Table A.7 shows that each PUMA in the top 25 had an average net housing wealth per unit between \$736,000 and \$1.5 million, while each PUMA in the bottom 25 only had an average net housing wealth per unit between \$27,000 and \$45,000.

TABLE 2

PUMA Rank by Total Net Housing Wealth of All Owner-Occupied Housing Units, 2015

Billions of 2015 dollars

Rank	Top 25 PUMAs		Bottom 25 PUMAs	
	PUMA	Value	PUMA	Value
1	CA Santa Clara County (Northwest) Mountain View, Palo Alto & Los Altos Cities	63	NY NYC-Bronx Community District 5 Morris Heights, Fordham South & Mount Hope	0.04
2	NY NYC-Manhattan Community District 8 Upper East Side	47	NY NYC-Bronx Community District 1 & 2 Hunts Point, Longwood & Melrose	0.21
3	CA Orange County (West Central) Newport Beach, Aliso Viejo & Laguna Hills Cities	42	NY NYC-Bronx Community District 4 Concourse, Highbridge & Mount Eden	0.22
4	CA Santa Clara County (Southwest) Cupertino, Saratoga Cities & Los Gatos Town	41	NY NYC-Bronx Community District 7 Bedford Park, Fordham North & Norwood	0.37
5	CA Los Angeles County (Central) LA City (Central/Pacific Palisades)	35	WI Milwaukee City (Central)	0.43
6	CA Marin County (Southeast) San Rafael (South), Mill Valley & Sausalito Cities San Mateo County (Southeast)	34	AZ Phoenix City Maryvale (East)	0.48
7	CA Menlo Park, East Palo Alto Cities & Atherton Town	33	NY NYC-Bronx Community District 3 & 6 Belmont, Crotona Park East & East Tremont	0.52
8	CT Stamford & Greenwich Towns	32	NY Monroe County (Central) Rochester City (West)	0.54
9	MD Montgomery County (South) Bethesda, Potomac & North Bethesda	30	MI Detroit City (Southwest)	0.56
10	NY NYC-Manhattan Community District 7 Upper West Side & West Side	29	CA Los Angeles County (Central) LA City (Central/Koreatown)	0.58
11	CA Orange County (Southwest) San Clemente, Laguna Niguel & San Juan Capistrano Cities	27	MI Detroit City (Northeast)	0.58
12	CA Santa Barbara County South Coast Region Contra Costa County	27	MI Genesee County (Central) Flint City Area	0.62
13	CA Walnut Creek (West), Lafayette, Orinda Cities & Moraga Town	27	AZ Phoenix City Maryvale (West)	0.66
14	CA Los Angeles County (Central) West Hollywood & Beverly Hills Cities	25	WI Milwaukee City (South Central)	0.69
15	CA San Mateo County (Central) San Mateo (North), Burlingame & Millbrae Cities	25	TX Houston City (West) Westpark Tollway, Between Loop I-610 & Beltway TX-8	0.70
16	CA San Diego County (West) San Diego City (Southwest/Central Coastal)	24	GA Atlanta Regional Commission (South Central) Clayton County (North) Forest Park City	0.72
17	CA Los Angeles County (East Central) Arcadia, San Gabriel & Temple City Cities	24	TX Harris County (North) Houston City (North) I-45, Between Beltway TX-8 & FM-1960	0.72
18	CA Alameda County (East) Livermore, Pleasanton & Dublin Cities Middlesex (Southeast) & Norfolk (Northeast)	24	FL Miami-Dade County (Northeast Central) Miami City (Downtown)	0.73
19	MA Counties Newton City & Brookline Town	23	OH Cleveland City (Central)	0.74
20	CA San Diego County (West)	23	NV Las Vegas City (Southeast)	0.74

Top 25 PUMAs			Bottom 25 PUMAs		
Rank	PUMA	Value		PUMA	Value
	San Diego (Northwest/San Dieguito) & Encinitas Cities				
21	CA San Mateo County (East Central) Redwood City, San Carlos & Belmont Cities	22	NY	NYC–Brooklyn Community District 4 Bushwick	0.77
22	NY NYC–Manhattan Community District 1 & 2 Battery Park City, Greenwich Village & Soho	22	OH	Columbus City (West)	0.78
23	CA Los Angeles County--Redondo Beach, Manhattan Beach & Hermosa Beach Cities	21	OH	Toledo City (East)	0.79
24	MA Norfolk (Northeast) & Middlesex (Southeast) Counties (West of Boston City)	21	TX	Houston (Southeast) & South Houston Cities Inside Beltway TX-8	0.79
25	NY Westchester County (Northeast)	21	CT	Hartford Town	0.81
	Total	743		Total	15

Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: PUMA = Public Use Microdata Area.

To further reveal how concentrated housing wealth is, we looked at the percentage of housing wealth contained in the top 10, 20, and 50 percent of PUMAs ranked by the total net housing wealth of each PUMA (figure 9.A and 9.B).

Figure 9.A looks at net housing wealth. It shows that the top 10 percent of PUMAs had 28 percent of all housing wealth, the top 20 percent had 45 percent of housing wealth, and the top 50 percent had 75 percent of housing wealth.

Figure 9.B looks at accessible housing wealth and assumes equity extraction at the 75 percent level. The results are marginally more concentrated than those in figure 9.A. The top 10 percent of PUMAs had 29 percent of all accessible housing wealth, the top 20 percent had 46 percent of accessible housing wealth, and the top 50 percent have 74 percent of accessible housing wealth.

To check if the concentration was caused by the larger size of some PUMAs, we replicated figures 9.A and 9.B but weighted PUMAs by number of owner-occupied housing units. The results remained very close. For example, the top 10 percent of PUMAs, weighted by number of owner-occupied units, had 27 percent and 29 percent of all net housing wealth and accessible housing wealth, respectively, versus 28 and 29 percent in figures 9.A and 9.B.

Household-Level Results

We have shown how net housing wealth and accessible housing wealth are concentrated at the local level. One could argue that there are huge household-level variations in housing wealth in each local

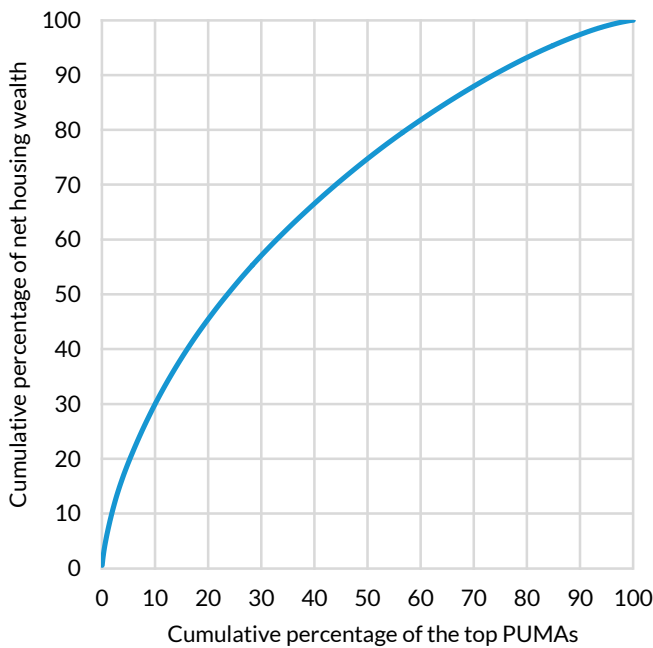
area that are not revealed by the above results. So we looked further at the percentage of housing wealth contained in the top 10, 20, and 50 percent of households (or more accurately, the top owner-occupied housing units) ranked by the total net and accessible housing wealth of each housing unit (figure 9.C and 9.D).

We do see an increased concentration of net and accessible housing wealth at the household level. Figure 9.C shows that the top 10 percent of owner-occupied housing units possessed 46 percent of all net housing wealth, the top 20 percent had 63 percent of net housing wealth, and the top 50 percent had 90 percent of net housing wealth.

Figure 9.D looks at accessible housing wealth and assumes equity extraction at the 75 percent level. Accessible housing wealth is even more concentrated than net housing wealth at the household level. The top 10 percent of households had 51 percent of all accessible housing wealth, the top 20 percent had 70 percent of accessible housing wealth, and the top 50 percent had 96 percent of accessible housing wealth.

FIGURE 9.A

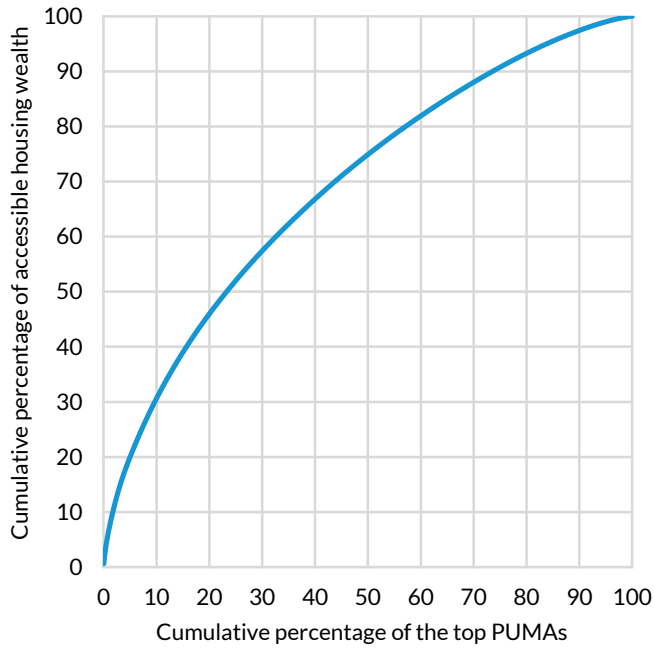
Concentration of Net Housing Wealth by Top PUMAs



Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

FIGURE 9.B

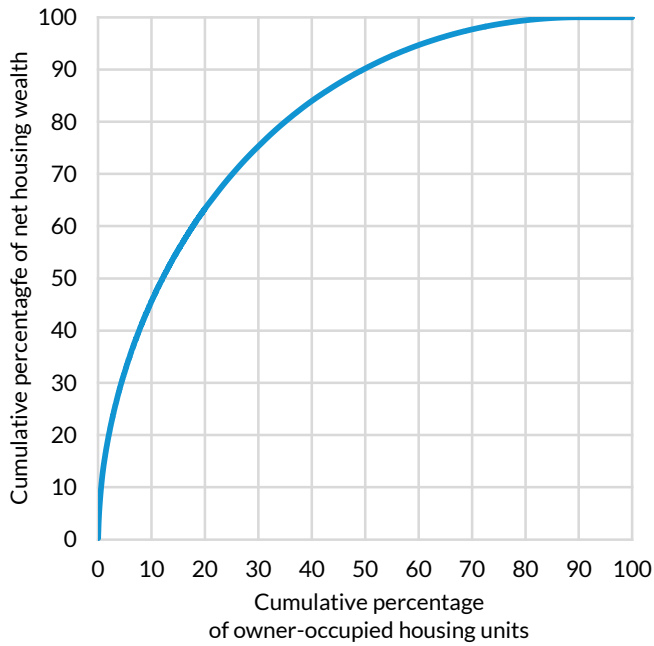
Concentration of Accessible Housing Wealth by Top PUMAs



Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

FIGURE 9.C

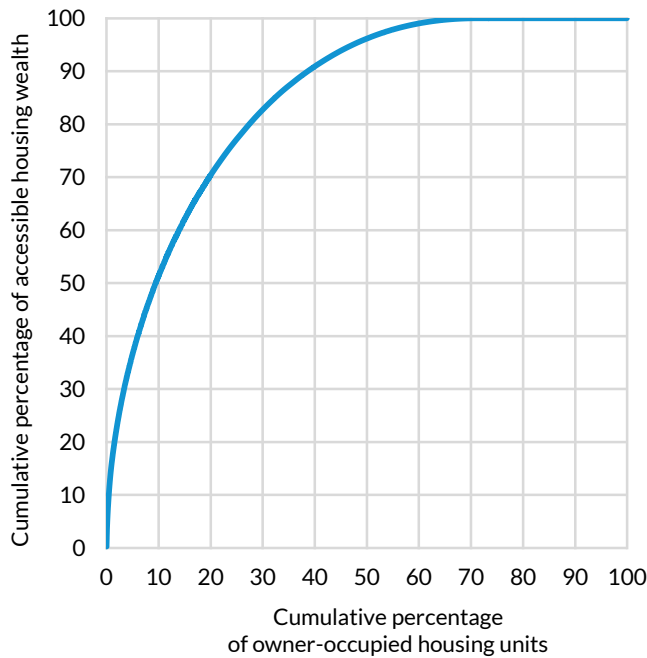
Concentration of Net Housing Wealth by Top Owner-Occupied Housing Units



Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

FIGURE 9.D

Concentration of Accessible Housing Wealth by Top Owner-Occupied Housing Units



Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note that housing wealth is much less concentrated than other types of wealth. The Federal Reserve's Survey of Consumer Finances (Bricker et al. 2014) showed that the top 3 percent of US households held 54.4 percent of the nation's overall wealth, and the next 7 percent held 20.9 percent of total wealth. Thus, the top 10 percent of US families held 75.3 percent of the nation's total wealth, leaving all other families with just 24.7 percent.

In contrast, our study shows that the top 3 percent of owner-occupied housing units accounted for 25 percent of the nation's net housing wealth. In total, the top 10 percent of these units accounted for 46 percent of net housing wealth, leaving the bottom 90 percent with more than half of US housing wealth.

Moreover, 63.5 percent of Americans own a home,⁴ a higher ownership percentage than any other financial asset: 49.2 percent have retirement accounts, 13.8 percent have stocks, 13.2 percent have life insurance accounts, and 10 percent have savings bonds (Bricker et al. 2014).

Conclusion

This report measures accessible housing wealth—the amount of housing wealth available for spending—in the United States. We find that if lenders allow homeowners to borrow up to 75 percent of their current home value, 52.4 million homeowners would have accessible housing wealth, including 26.9 million owners free of home debt and 25.6 million owners with some home debt. Of the \$11 trillion in net housing wealth from all owner-occupied housing units, about \$7 trillion (64 percent) was accessible. An average of \$171,972 could be extracted from a home without home debt and \$98,763 from a home with debt, for a combined average of \$133,810.

We also find that housing wealth is concentrated in the hands of older Americans, many of whom have no outstanding home debt. Owners 65 or older had 44 percent (\$3.1 trillion) of all accessible housing wealth despite owning only 30 percent of all owner-occupied housing units. Meanwhile, owners under 40 owned 17 percent of all owner-occupied housing units but had only 6 percent of accessible housing wealth. Accessible housing wealth is even more concentrated in those 65 or older without a mortgage, who possessed 35 percent of accessible housing wealth while owning just 19 percent of all owner-occupied housing units. Although homeowners under 40 with a mortgage owned 14 percent of all housing units, they had only 2.5 percent of all accessible housing wealth.

Finally, we find that net and accessible housing wealth are extremely concentrated at the state and local level. California had only 9.3 percent of all owner-occupied housing units but accounted for 20.4 percent and 20 percent of total net and accessible housing wealth, respectively. Within states, housing wealth remains concentrated in a few local areas. The top 25 PUMAs ranked by total net housing wealth accounted for almost 7 percent of all net housing wealth but only 1.2 percent of all owner-occupied housing units. Each of the top 25 PUMAs had more total net housing wealth and accessible housing wealth individually than the bottom 25 PUMAs put together. The top 10 percent of PUMAs by net housing wealth contained 28 percent of all net housing wealth and 29 percent of accessible housing wealth. Finally, housing wealth is also concentrated at the household level. The top 10 percent of owner-occupied housing units by net housing wealth accounted for 46 percent of all net housing wealth and 51 percent of all accessible housing wealth.

Policy Implications

Our study shows that the combination of government support for homeownership and the drive of individuals to achieve the American dream of homeownership has generated significant accessible housing wealth.

However, our study also shows the inequality in net and accessible housing wealth across neighborhoods and households. This raises at least three important policy questions:

- Does homeownership in and of itself contribute to inequality, recognizing that housing wealth is far more equitably distributed than other wealth, such as financial assets or business ownership?
- Do current government policies to support homeownership, which tend to favor upper-income homeowners, exacerbate housing-based inequality?
- How can the wealth of lower-income homeowners be better protected against a major downturn in house prices? We find that almost 9 percent of homeowners ages 50 to 59 and 7.5 percent of those ages 60 to 64 owed in excess of 5 percent more than their houses were worth. This age group may have difficulty recovering this important source of wealth before they reach retirement age, negatively affecting their standard of living if they are unable to continue working or have no other assets.

Notwithstanding these concerns, homeownership remains an important part of wealth building among the vast majority of the population. Government at all levels, the government-sponsored enterprises, lenders, housing providers, and advocates must work together to improve access to mortgage credit that allows owners to sustain homeownership and enhance the economic well-being of their families.

Appendix A. Additional Results

TABLE A.1

Net Housing Wealth for All Owner-Occupied Housing Units, by Age Group, 2015

	Housing units	Total net housing wealth (billions)	Average net housing wealth per housing unit	Units with net housing wealth accessible up to 85 CLTV	Total net housing wealth accessible up to 85 CLTV (billions)	Average net housing wealth accessible up to 85 CLTV	Units with net housing wealth accessible up to 75 CLTV	Total net housing wealth accessible up to 75 CLTV (billions)	Average net housing wealth accessible up to 75 CLTV
18-29	2,593,788	\$159.2	\$61,396	1,566,268	\$107.2	\$68,417	1,145,027	\$82.6	\$72,161
30-39	9,477,887	\$747.9	\$78,910	5,909,133	\$479.0	\$81,067	4,253,343	\$344.6	\$81,025
40-49	13,863,045	\$1,660.4	\$119,769	10,031,195	\$1,172.3	\$116,865	8,308,589	\$894.3	\$107,638
50-59	17,403,755	\$2,677.8	\$153,861	14,145,581	\$2,050.6	\$144,966	12,775,687	\$1,666.3	\$130,425
60-64	8,169,867	\$1,428.4	\$174,842	7,005,120	\$1,135.4	\$162,087	6,559,898	\$950.3	\$144,862
65-69	7,105,658	\$1,348.1	\$189,722	6,274,613	\$1,088.5	\$173,480	5,965,109	\$922.6	\$154,659
≥70	14,672,714	\$3,008.3	\$205,027	13,776,590	\$2,493.9	\$181,023	13,441,880	\$2,157.6	\$160,512
Total	73,286,714	\$11,030.1	\$150,506	58,708,498	\$8,527.0	\$145,242	52,449,533	\$7,018.3	\$133,810

Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: CLTV = current loan-to-value ratio.

TABLE A.2

Net Housing Wealth for Owner-Occupied Housing Units with Home Debt, 2015

	Housing units	Total net housing wealth (billions)	Average net housing wealth per housing unit	Units with net housing wealth accessible up to 85 CLTV	Total net housing wealth accessible up to 85 CLTV (billions)	Average net housing wealth accessible up to 85 CLTV	Units with net housing wealth accessible up to 75 CLTV	Total net housing wealth accessible up to 75 CLTV (billions)	Average net housing wealth accessible up to 75 CLTV
18-29	2,031,214	\$74.0	\$36,419	1,003,694	\$34.7	\$34,548	582,453	\$18.7	\$32,056
30-39	8,138,790	\$493.2	\$60,595	4,570,036	\$262.5	\$57,443	2,914,246	\$153.6	\$52,700
40-49	11,340,994	\$1,098.8	\$96,886	7,509,144	\$695.0	\$92,548	5,786,538	\$473.1	\$81,765
50-59	12,348,823	\$1,489.3	\$120,603	9,090,649	\$1,040.4	\$114,452	7,720,755	\$774.9	\$100,369
60-64	4,803,242	\$624.5	\$130,012	3,638,495	\$452.1	\$124,248	3,193,273	\$347.3	\$108,764
65-69	3,504,070	\$477.4	\$136,246	2,673,025	\$348.4	\$130,353	2,363,521	\$269.5	\$114,042
≥70	4,263,106	\$614.9	\$144,235	3,366,982	\$459.5	\$136,464	3,032,272	\$362.5	\$119,554
Total	46,430,239	\$4,872.0	\$104,932	31,852,023	\$3,292.6	\$103,371	25,593,058	\$2,399.7	\$93,763

Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: CLTV = current loan-to-value ratio.

TABLE A.3

Net Housing Wealth for Owner-Occupied Housing Units without Home Debt, 2015

	Housing units	Total net housing wealth (billions)	Average net housing wealth per housing unit	Units with net housing wealth accessible up to 85 CLTV	Total net housing wealth accessible up to 85 CLTV (billions)	Average net housing wealth accessible up to 85 CLTV	Units with net housing wealth accessible up to 75 CLTV	Total net housing wealth accessible up to 75 CLTV (billions)	Average net housing wealth accessible up to 75 CLTV
18-29	562,574	\$85.3	\$151,579	562,574	\$72.5	\$128,842	562,574	\$64.0	\$113,684
30-39	1,339,097	\$254.7	\$190,224	1,339,097	\$216.5	\$161,691	1,339,097	\$191.0	\$142,668
40-49	2,522,051	\$561.6	\$222,666	2,522,051	\$477.3	\$189,266	2,522,051	\$421.2	\$166,999
50-59	5,054,932	\$1,188.5	\$235,108	5,054,932	\$1,010.2	\$199,842	5,054,932	\$891.3	\$176,331
60-64	3,366,625	\$804.0	\$238,802	3,366,625	\$683.4	\$202,982	3,366,625	\$603.0	\$179,102
65-69	3,601,588	\$870.7	\$241,751	3,601,588	\$740.1	\$205,488	3,601,588	\$653.0	\$181,313
≥70	10,409,608	\$2,393.4	\$229,924	10,409,608	\$2,034.4	\$195,435	10,409,608	\$1,795.1	\$172,443
Total	26,856,475	\$6,158.1	\$229,296	26,856,475	\$5,234.4	\$194,902	26,856,475	\$4,618.6	\$171,972

Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: CLTV = current loan-to-value ratio.

TABLE A.4

Net Housing Wealth for All Owner-Occupied Housing Units, by State, 2015

	Housing units (thousands)	Total net housing wealth (billions)	Average net housing wealth per housing unit (thousands)	Units with net housing wealth accessible up to 85 CLTV	Total net housing wealth accessible up to 85 CLTV (billions)	Average net housing wealth accessible up to 85 CLTV (thousands)	Units with net housing wealth accessible up to 75 CLTV	Total net housing wealth accessible up to 75 CLTV (billions)	Average net housing wealth accessible up to 75 CLTV (thousands)
AK	157	\$22	\$140	124	\$17	\$133	109	\$13	\$123
AL	1,237	\$112	\$91	969	\$87	\$90	878	\$72	\$82
AR	737	\$59	\$80	561	\$46	\$83	514	\$39	\$76
AZ	1,436	\$186	\$129	1,134	\$142	\$125	1,019	\$116	\$114
CA	6,813	\$2,250	\$330	5,931	\$1,738	\$293	5,418	\$1,416	\$261
CO	1,259	\$216	\$172	1,061	\$161	\$152	912	\$129	\$141
CT	899	\$192	\$214	681	\$150	\$220	597	\$124	\$207
DC	112	\$43	\$381	99	\$33	\$331	86	\$26	\$305
DE	246	\$32	\$130	177	\$25	\$139	155	\$20	\$131
FL	4,657	\$662	\$142	3,677	\$523	\$142	3,354	\$437	\$130
GA	2,236	\$220	\$98	1,650	\$166	\$101	1,427	\$135	\$95
HI	225	\$92	\$412	200	\$74	\$369	186	\$62	\$333
IA	889	\$85	\$95	730	\$65	\$89	642	\$54	\$84
ID	406	\$49	\$120	330	\$38	\$114	295	\$31	\$105
IL	3,123	\$381	\$122	2,323	\$294	\$127	2,053	\$243	\$118
IN	1,718	\$145	\$84	1,398	\$110	\$78	1,193	\$89	\$75
KS	738	\$69	\$93	601	\$53	\$88	536	\$43	\$81
KY	1,126	\$96	\$86	900	\$74	\$83	807	\$62	\$76
LA	1,107	\$109	\$98	866	\$86	\$99	797	\$72	\$90
MA	1,566	\$389	\$249	1,325	\$301	\$227	1,180	\$247	\$209
MD	1,428	\$247	\$173	1,033	\$187	\$181	902	\$152	\$169
ME	394	\$51	\$129	338	\$40	\$117	302	\$33	\$108
MI	2,667	\$231	\$87	2,014	\$179	\$89	1,792	\$148	\$83
MN	1,531	\$191	\$124	1,193	\$145	\$122	1,034	\$119	\$115
MO	1,572	\$146	\$93	1,201	\$112	\$93	1,062	\$93	\$87
MS	737	\$59	\$81	600	\$47	\$78	559	\$39	\$70
MT	276	\$42	\$151	238	\$33	\$138	221	\$28	\$124
NC	2,437	\$264	\$109	1,957	\$200	\$102	1,721	\$163	\$95
ND	190	\$23	\$122	164	\$18	\$112	154	\$15	\$99
NE	484	\$45	\$93	393	\$34	\$87	344	\$28	\$82
NH	359	\$51	\$142	272	\$40	\$146	247	\$33	\$133
NJ	2,016	\$428	\$212	1,621	\$330	\$204	1,447	\$271	\$188
NM	502	\$61	\$121	392	\$48	\$122	362	\$40	\$111
NV	545	\$68	\$125	391	\$52	\$132	350	\$42	\$120
NY	3,515	\$838	\$238	2,854	\$670	\$235	2,604	\$566	\$217
OH	3,000	\$249	\$83	2,260	\$190	\$84	1,981	\$157	\$79

	Housing units (thousands)	Total net housing wealth (billions)	Average net housing wealth per housing unit (thousands)	Units with net housing wealth accessible up to 85 CLTV	Total net housing wealth accessible up to 85 CLTV (billions)	Average net housing wealth accessible up to 85 CLTV (thousands)	Units with net housing wealth accessible up to 75 CLTV	Total net housing wealth accessible up to 75 CLTV (billions)	Average net housing wealth accessible up to 75 CLTV (thousands)
OK	947	\$81	\$86	737	\$64	\$86	664	\$53	\$80
OR	922	\$149	\$162	778	\$114	\$147	691	\$93	\$135
PA	3,396	\$396	\$117	2,730	\$307	\$112	2,458	\$254	\$103
RI	234	\$35	\$151	163	\$28	\$169	143	\$23	\$160
SC	1,233	\$127	\$103	968	\$98	\$101	868	\$81	\$94
SD	226	\$23	\$102	190	\$18	\$94	172	\$15	\$87
TN	1,664	\$178	\$107	1,351	\$138	\$102	1,199	\$114	\$95
TX	5,659	\$671	\$119	4,926	\$518	\$105	4,438	\$425	\$96
UT	630	\$87	\$138	496	\$65	\$132	420	\$53	\$126
VA	1,971	\$318	\$161	1,485	\$241	\$162	1,305	\$195	\$150
VT	182	\$29	\$160	159	\$23	\$142	144	\$19	\$130
WA	1,658	\$301	\$181	1,318	\$228	\$173	1,143	\$185	\$162
WI	1,543	\$164	\$106	1,210	\$126	\$104	1,061	\$104	\$98
WV	528	\$42	\$80	413	\$34	\$83	391	\$29	\$75
WY	157	\$25	\$158	127	\$20	\$154	115	\$16	\$143
US	73,287	\$11,030	\$151	58,708	\$8,527	\$145	52,450	\$7,018	\$134

Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: CLTV = current loan-to-value ratio.

TABLE A.5

Percentage of Home Value that Is Net Wealth, by State, 2015

	100	[80,100)	[60,80)	[40,60)	[20,40)	[5,20)	[-5,5)	<-5	Total
AK	34%	4%	8%	10%	19%	13%	5%	8%	156,593
AL	43%	3%	6%	9%	13%	11%	5%	9%	1,237,419
AR	45%	3%	5%	8%	11%	10%	5%	12%	737,143
AZ	36%	3%	6%	12%	17%	11%	5%	9%	1,436,241
CA	28%	7%	11%	17%	20%	8%	3%	5%	6,813,454
CO	28%	4%	8%	14%	25%	13%	3%	4%	1,258,978
CT	30%	5%	9%	11%	16%	13%	7%	9%	899,295
DC	24%	9%	12%	15%	24%	9%	2%	5%	111,841
DE	31%	4%	7%	11%	15%	15%	7%	11%	245,967
FL	42%	4%	6%	10%	14%	9%	4%	11%	4,657,093
GA	33%	3%	6%	10%	17%	15%	6%	10%	2,236,228
HI	37%	9%	12%	14%	13%	7%	3%	4%	224,613
IA	39%	4%	6%	10%	18%	14%	4%	5%	889,490
ID	35%	4%	8%	13%	18%	11%	4%	8%	405,801
IL	35%	4%	6%	10%	15%	13%	5%	11%	3,122,625
IN	34%	4%	7%	11%	21%	13%	4%	6%	1,717,740
KS	39%	4%	6%	11%	16%	13%	5%	5%	738,389
KY	41%	4%	6%	10%	15%	14%	4%	7%	1,126,187
LA	47%	3%	5%	9%	11%	9%	3%	13%	1,106,836
MA	31%	6%	10%	14%	19%	12%	4%	4%	1,565,517
MD	26%	5%	9%	12%	16%	15%	7%	10%	1,427,997
ME	37%	6%	9%	12%	19%	9%	4%	5%	393,595
MI	39%	3%	6%	9%	14%	12%	5%	12%	2,666,517
MN	33%	4%	7%	11%	18%	15%	5%	7%	1,530,739
MO	37%	4%	6%	9%	16%	12%	5%	11%	1,571,596
MS	49%	4%	6%	8%	12%	9%	4%	9%	736,603
MT	46%	5%	8%	10%	14%	8%	2%	7%	276,377
NC	36%	4%	7%	11%	18%	14%	5%	6%	2,436,591
ND	49%	4%	6%	11%	14%	6%	2%	7%	190,355
NE	39%	4%	6%	11%	16%	15%	4%	6%	484,453
NH	33%	5%	8%	11%	15%	12%	6%	11%	359,287
NJ	31%	6%	10%	12%	17%	11%	5%	7%	2,015,917
NM	44%	3%	6%	10%	12%	10%	5%	10%	501,667
NV	32%	2%	5%	10%	19%	10%	4%	17%	544,513
NY	41%	5%	7%	10%	14%	10%	3%	9%	3,514,587

OH	36%	3%	6%	9%	16%	14%	6%	9%	3,000,091
OK	44%	3%	5%	8%	13%	14%	5%	7%	947,333
OR	34%	4%	8%	14%	19%	11%	3%	6%	922,485
PA	39%	4%	7%	11%	15%	12%	5%	7%	3,395,553
RI	31%	4%	6%	10%	14%	12%	6%	17%	233,595
SC	42%	3%	6%	9%	15%	13%	4%	8%	1,233,057
SD	46%	4%	6%	10%	14%	11%	3%	7%	225,777
TN	40%	4%	6%	10%	16%	13%	5%	6%	1,663,554
TX	42%	4%	7%	13%	17%	10%	3%	4%	5,658,763
UT	29%	4%	6%	12%	21%	16%	6%	6%	629,698
VA	31%	4%	8%	11%	16%	13%	6%	10%	1,970,941
VT	35%	7%	11%	14%	17%	9%	3%	4%	182,059
WA	31%	4%	8%	13%	18%	14%	5%	7%	1,657,954
WI	35%	4%	7%	11%	17%	13%	5%	7%	1,543,102
WV	55%	3%	5%	6%	8%	6%	3%	15%	527,674
WY	42%	3%	8%	10%	14%	10%	3%	9%	156,834
US	37%	4%	7%	11%	16%	12%	4%	8%	73,286,714

Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

TABLE A.6

Total Net Housing Wealth for Owner-Occupied Housing Units with Net Housing Wealth Accessible up to 75 Percent of CLTV, Top 25 and Bottom 25 PUMAs, 2015

Billions of 2015 dollars

Rank	Top 25 PUMAs		Bottom 25 PUMAs	
	PUMA	Value	PUMA	Value
1	CA Santa Clara County (Northwest) Mountain View, Palo Alto & Los Altos Cities	43	NY NYC-Bronx Community District 5 Morris Heights, Fordham South & Mount Hope	0.03
2	NY NYC-Manhattan Community District 8 Upper East Side	34	NY NYC-Bronx Community District 1 & 2 Hunts Point, Longwood & Melrose	0.15
3	CA Orange County (West Central) Newport Beach, Aliso Viejo & Laguna Hills Cities	28	NY NYC-Bronx Community District 4 Concourse, Highbridge & Mount Eden	0.17
4	CA Santa Clara County (Southwest) Cupertino, Saratoga Cities & Los Gatos Town	28	WI Milwaukee City (Central)	0.27
5	CA Los Angeles County (Central) LA City (Central/Pacific Palisades)	23	NY NYC-Bronx Community District 7 Bedford Park, Fordham North & Norwood	0.28
6	CA San Mateo County (Southeast) Menlo Park, East Palo Alto Cities & Atherton Town	23	AZ Phoenix City Maryvale (East)	0.31
7	CA Marin County (Southeast) San Rafael (South), Mill Valley & Sausalito Cities	22	CA Los Angeles County (Central) LA City (Central/Koreatown)	0.32
8	CT Stamford & Greenwich Towns	21	NY Monroe County (Central) Rochester City (West)	0.35
9	NY NYC-Manhattan Community District 7 Upper West Side & West Side	20	NY NYC-Bronx Community District 3 & 6 Belmont, Crotona Park East & East Tremont	0.35
10	MD Montgomery County (South) Bethesda, Potomac & North Bethesda	20	TX Harris County (North) Houston City (North) I-45, Between Beltway TX-8 & FM-1960	0.38
11	CA Santa Barbara County South Coast Region	18	AZ Phoenix City Maryvale (West)	0.38
12	CA Orange County (Southwest) San Clemente, Laguna Niguel & San Juan Capistrano Cities	17	MI Detroit City (Southwest)	0.41
13	CA Contra Costa County Walnut Creek (West), Lafayette, Orinda Cities & Moraga Town	17	GA Atlanta Regional Commission (Central) Fulton County (South) Union & Fairburn Cities	0.41
14	CA Los Angeles County (Central) West Hollywood & Beverly Hills Cities	17	MI Detroit City (Northeast)	0.41
15	CA San Diego County (West) San Diego City (Southwest/Central Coastal)	17	GA Atlanta Regional Commission (South Central) Clayton County (North) Forest Park City	0.43
16	CA San Mateo County (Central) San Mateo (North), Burlingame & Millbrae Cities	17	MI Genesee County (Central) Flint City Area	0.44
17	CA Los Angeles County (East Central) Arcadia, San Gabriel & Temple City Cities	16	OH Cleveland City (Central)	0.45
18	MA Middlesex (Southeast) & Norfolk (Northeast) Counties Newton City & Brookline Town	15	TX Houston City (West) Westpark Tollway, Between Loop I-610 & Beltway TX-8	0.45
19	NY NYC-Manhattan Community District 1 & 2 Battery Park City, Greenwich Village & Soho	15	OH Columbus City (West)	0.45

20	NY	Suffolk County (East)	15	WI	Milwaukee City (South Central)	0.47
21	CA	San Mateo County (East Central) Redwood City, San Carlos & Belmont Cities	14	AZ	Maricopa County Glendale City (South)	0.47
22	CA	San Diego County (West) San Diego (Northwest/San Dieguito) & Encinitas Cities	14	TX	Houston (Southeast) & South Houston Cities Inside Beltway TX-8	0.47
23	CA	Alameda County (East) Livermore, Pleasanton & Dublin Cities	14	FL	Miami-Dade County (Northeast Central) Miami City (Downtown)	0.48
24	NY	Nassau County (Northwest) North Hempstead Town (North)	14	CT	Hartford Town	0.48
25	MA	Norfolk (Northeast) & Middlesex (Southeast) Counties (West of Boston City)	14	CO	El Paso County (Central) Colorado Springs City (South) & Security- Widefield	0.49
Total			498	Total		9.3

Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: CLTV = current loan-to-value ratio, PUMA = Public Use Microdata Area.

TABLE A.7

Average Net Housing Wealth on All Owner-Occupied Housing Units, Top 25 and Bottom 25 PUMAs, 2015

Thousands of 2015 dollars

Rank	Top 25 PUMAs		Bottom 25 PUMAs	
	PUMA	Value	PUMA	Value
1	CA San Mateo County (Southeast) Menlo Park, East Palo Alto Cities & Atherton Town	1,487	MI Detroit City (Northeast)	27
2	CA Santa Clara County (Northwest) Mountain View, Palo Alto & Los Altos Cities	1,453	MI Detroit City (Northwest)	29
3	CA Los Angeles County (Central) West Hollywood & Beverly Hills Cities	1,355	GA Atlanta Regional Commission (South Central) Clayton County (North) Forest Park City	29
4	CA Los Angeles County (Southwest) Santa Monica City	1,326	OH Toledo City (East)	30
5	NY NYC–Manhattan Community District 8 Upper East Side	1,298	MI Genesee County (Central) Flint City Area	32
6	CA San Francisco County (North & East) North Beach & Chinatown	1,242	MI Detroit City (Southwest)	32
7	CA Santa Clara County (Southwest) Cupertino, Saratoga Cities & Los Gatos Town	1,230	GA Atlanta Regional Commission (Central) Fulton County (South) Union & Fairburn Cities	34
8	CA San Mateo County (Central) San Mateo (North), Burlingame & Millbrae Cities	1,090	MI Detroit City (North Central)	36
9	NY NYC–Manhattan Community District 9 Hamilton Heights, Manhattanville & West Harlem	1,088	MI Ingham County (Northwest)	36
10	NY NYC–Manhattan Community District 1 & 2 Battery Park City, Greenwich Village & Soho	998	OH Montgomery County (East Central) Dayton & Riverside Cities	37
11	CA San Francisco County (North & West) Richmond District	973	GA Atlanta Regional Commission (Central) DeKalb County (South)	39
12	CA Los Angeles County (Central) LA City (Central/Pacific Palisades)	964	MI Wayne County (Southeast) Downriver Area (North)	39
13	CA Marin County (Southeast) San Rafael (South), Mill Valley & Sausalito Cities	938	KS Sedgwick County (Central) Wichita City (Central)	41
14	NY NYC–Manhattan Community District 4 & 5 Chelsea, Clinton & Midtown Business District	921	MI Wayne County (Central) Westland, Garden City, Inkster & Wayne Cities	41
15	NY NYC–Brooklyn Community District 6 Park Slope, Carroll Gardens & Red Hook	836	TN Memphis City (Southwest)	41
16	CA San Diego County (West) San Diego City (Southwest/Central Coastal)	835	OH Cleveland City (Central)	41
17	NY NYC–Manhattan Community District 7 Upper West Side & West Side	812	OH Summit County (Central) Akron City (East)	41
18	CA San Mateo County (East Central) Redwood City, San Carlos & Belmont Cities	808	IN Marion County Wayne & Decatur (Northwest) Townships Indianapolis City (West)	42
19	CA San Francisco County (Central) Inner Mission & Castro	793	MI Genesee County (Central, Outside Flint City)	42
20	CA Santa Barbara County South Coast Region	787	OH Columbus City (West)	43
21	CA Orange County (West Central)	772	MO St. Louis County (Northeast)	44

Newport Beach, Aliso Viejo & Laguna Hills Cities						
Los Angeles County (West Central)						
22	CA	LA City (West Central/Westwood & West Los Angeles)	758	TN	Memphis (North) & Bartlett (Southwest) Cities	44
23	CT	Stamford & Greenwich Towns	747	TX	Dallas County (Southeast) Dallas City (Southeast)	45
24	DC	District of Columbia (West)	740	MO	St. Louis County (Northwest)	45
25	CA	Los Angeles County (West Central) LA City (Central/Hancock Park & Mid-Wilshire)	736	WI	Milwaukee City (Central)	45

Source: Authors' calculations using ACS PUMS data and matched credit bureau and property record data.

Note: PUMA = public use microdata area.

Notes

1. "S&P/Case-Shiller Home Price Indices," S&P Dow Jones Indices, accessed July 12, 2016, <http://us.spindices.com/index-family/real-estate/sp-case-shiller>.
2. Research shows that homeowners, especially in a rising market, overvalue their homes. Kiel and Zabel (1999) examine the metropolitan version of the American Housing Survey for three cities from 1978 to 1991 to compare owners' valuations of their homes with sale prices of houses sold in the 12 months prior to an interview. They find that owners overvalue their houses by an average of 5.1 percent.
3. The risk of double counting loans with two or more coborrowers who are both on the deed is very low because very few consumers in our 2 percent credit bureau sample share the same address.
4. US Census Bureau, "Residential Vacancies and Homeownership in the First Quarter 2016," news release, Thursday, April 28, 2016.

References

- Bricker, Jesse, Lisa J. Dettling, Alice Henriques, Joanne W. Hsu, Kevin B. Moore, John Sabelhaus, Jeffrey Thompson, and Richard A. Windle. 2014. "Changes in US Family Finances from 2010 to 2013: Evidence from the Survey of Consumer Finances." *Federal Reserve Bulletin* 100 (4).
- Keely, Louise, and Kathy Bostjancic. 2014. *A Tale of 2000 Cities: How the Sharp Contrast between Successful and Struggling Communities Is Reshaping America*. New York: Demand Institute. <http://demandinstitute.org/2000cities/report/>.
- Kiel, Katherine A., and Jeffrey E. Zabel. 1999. "The Accuracy of Owner-Provided House Values: The 1978–1991 American Housing Survey." *Real Estate Economics* 27 (2): 263–98.
- Li, Wei, and Laurie Goodman. 2015. *Americans' Debt Styles by Age and Over Time*. Washington, DC: Urban Institute. <http://urbn.is/29EOqUD>.
- . 2016. *Comparing Credit Profiles of American Renters and Owners*. Washington, DC: Urban Institute. <http://urbn.is/29FqJOx>.
- Toder, Eric, Margery Austin Turner, Katherine Lim, and Liza Getsinger. 2010. "Reforming the Mortgage Interest Deduction." Washington, DC: Urban Institute. <http://urbn.is/29K6wHF>.
- National Institute on Aging. 2011. *Growing Older in America: The Health and Retirement Study*. Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Institute on Aging. https://www.nia.nih.gov/sites/default/files/health_and_retirement_study_0.pdf.

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