RESEARCH REPORT

Comparing Credit Profiles of American Renters and Owners

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Acknowledgments

Introduction

This research report, the second in a series, reviews 2015 consumer credit data from a major credit bureau and 2015 public property record data, supplemented with 2014 American Community Survey's (ACS) Public Use Microdata Sample (PUMS) data, to better understand the credit profiles of American consumers by their tenure status. This study focuses on the personal financial picture of individual consumers rather than that of the household or family.

We divide all US adult consumers into two groups—owners and renters—and then divide each group into three subgroups: with mortgage now, with mortgage in the past 16 years but not now, and without mortgage in the past 16 years. We then compare the credit profiles of these six groups of consumers by age, credit score, and type and amount of debt to get a sense of how age and credit profile relate to whether consumers own or rent homes (often called tenure status). By using a random sampling of all adult consumers with credit records and weighting with ACS PUMS data, we can size each group (by age, tenure, and geographic locations) and define its relative share of the population.

The literature on consumers' tenure choices focuses on two questions:

1. What factors lead to different tenure choices?
2. How do different tenure choices affect consumers' financial well-being?

Rosen (1979); Henderson and Ioannides (1983); Jones (1989); Megbolugbe, Marks, and Schwartz (1991); Green (2001); Hubert (2006); Reid (2013); and Drew (2014) provide good reviews on the factors consumers use to make tenure choices. Consumers may view homeownership as a stable alternative to the risk of rent increases or eviction, as well as a path to a better life through wealth accumulation and access to better neighborhoods and outcomes for their children. Likewise, consumers may prefer a more flexible way to manage and control their housing, or they may look at home-ownership as the only way to live in the home with their desired characteristics (design, size, layout) in the neighborhood of their choice. Green (2001), Muellbauer (2008), and Coulson and Fisher (2009) provide good literature reviews on the impact of tenure choices on consumers' financial well-being.

Tenure choice is not just about where a person lives; it is also a major financial decision. Housing, whether rented or owned, is one of the largest expenditures for most consumers. Many homeowners have mortgages, although a surprising number have already paid off their mortgages and own their homes free and clear. In either case, the down payment necessary to obtain a mortgage is a big chunk of most households' savings.

At the same time, consumers have many other financial needs: education, auto, and medical expenses, as well as saving for retirement. And, consumers' tenure status inevitably shapes how they meet their other financial needs, in particular financing with debt. This complete picture of the relationship between consumer debt and tenure status over a lifetime is surprisingly missing in the current literature, a gap this report will try to close.

In our earlier report (Li and Goodman 2015), we found that consumers' debt patterns reflect their lifestyle changes as they get older. Auto and student loan debt are more common among younger borrowers, while mortgages are more common among borrowers in their thirties, forties, and fifties. Home equity and "credit card–only" debt is more prevalent among older adults. Vantage credit scores generally rise with age.

Similarly, consumers' tenure choices are very much a function of their ages and credit profiles. This report addresses several questions regarding the intersection of tenure choice and credit profile:

- A third of owner-occupied homes do not have mortgages. Who are these homeowners, and what are their credit profiles?

- Renters are generally less affluent than homeowners. What differences are reflected in their credit profiles?

- What are the credit profiles of those who had a mortgage but are now renting? How many of them lost their homes to foreclosure, and how many of them simply chose to downsize?

- How common are households that rent their primary residence and own a property somewhere else—a vacation home, an investment property, a previous residence following relocation, or a home in a worse school district? What are the credit characteristics of these individuals?

Data and Methodology

Credit Bureau Data

Our data consist of a random 2 percent sample of six years (2010–15) of depersonalized consumer data from a major credit bureau. Consumers were chosen based on the last two digits of the personal identification number assigned to them by the credit bureau. This process generated 5.317 million consumers for the August 2015 draw. The same information for each consumer was collected for each August from 2010 through 2015, creating panel data with six snapshots. If a consumer dropped out of the data (for example, because he or she passed away), a new consumer was added in a manner that retained randomness in the sample. All records were stripped of personally identifiable information, and no data on race/ethnicity, gender, or income were included. The data included zip code, age, Vantage credit score, information on debt in collections, public records, and balance and payment information for each of the following trade types: auto loan, credit card, student loan, home equity line of credit (HELOC), first mortgage, second mortgage, and other installment and revolving debts.

Consumer Age

Consumers' ages are reported by the credit bureau as of August 2015. Thirteen percent of consumers have no age information. Of those consumers, 98 percent have either no debt (90 percent) or only credit card spending (8 percent).

Credit Scores

Lenders rely extensively on two scoring models in making credit decisions: Vantage and FICO. Vantage score is derived from consumer credit information. It is jointly owned by the big three credit bureaus— Equifax, Experian, and TransUnion—who all contribute their data. Vantage 3.0, used in our analysis, was introduced in March 2013 and scores an additional 30–35 million previously "unscoreable" consumers. Consumers receive a score within the range of 300–850, the same scale used by FICO.

Consumer Debt by Type

Consumers with zero balance on all open trades, or no open trades reported in the last six months of a sampling period, are considered consumers without any debt for that period. We used the same metric to define whether a consumer has debt for a specific type of trade, such as credit card debt, an auto loan, a student loan, a HELOC, or a mortgage. For mortgage debt, we used the combined balance on both first and second mortgages. Appendix A discusses our definitions and describes calculations for the various trade lines.

Identifying Owners and Renters

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 one of the property owner's first and last names, the consumer was identified as an owner of the property. If the consumer's first and last names did not match any of the property owner's first and last names, 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 in the matched dataset. To protect consumers' privacy, all personal identification information such as name and address were removed, leaving only information on match success.

Appendix table C.1 (page 29) shows the matching results. Sixty-nine percent of the 5.3 million consumers in our random sample were matched to a property record. Among those adult consumers who match a property record, 45 percent are homeowners and 55 percent are renters. This seems inconsistent with the often quoted 63–65 percent homeownership rate. However, the 45 percent owner rate is by individual, whereas the 65 percent homeownership rate is by household. These are very different concepts: an adult child living with his or her parents in the home they own would be considered a homeowner at the household level but not at the individual level. As we describe below, the ACS microdata allow for calculations at the individual and household levels. Analysis using the ACS data indicates that 48 percent of adults are homeowners and 52 percent are renters, reasonably close to our 45/55 split. We use these calculations of ACS data at the individual level to correct the biases in our sample, discussed below, and scale our credit bureau results to ACS calculations.

Weighting the Credit Bureau Data with American Community Survey Microdata

We have three major biases in our results. First, the major credit bureaus only have data on consumers with either credit of the previously detailed trade types (auto, credit card, student loan, mortgage, or HELOC) or collections activity, such as medical bills, utility bills, or government debt. As a result, our numbers likely understate the percentage of those who have no debt and thus no credit history, items in collections, or records at any of the three major credit bureaus. This bias is apt to understate the number of renters.

Second, and offsetting the downward bias in renters, we are not adequately capturing situations where the consumer is a homeowner but the title to the property is in his or her spouse's name only. We are also missing situations where the home is in the name of a trust or corporation.

Third, the credit bureau data is a random sample of all US consumers who have a credit record with the bureau, and the national public property record database covers the market very well. Still, 31 percent of consumers did not have a match between the two databases. This may create biases on estimates of what consumers are owners or renters and their credit profiles.

To address these biases, we weighted the matched data with ACS PUMS to make the matched credit bureau and property record data follow the same joint distribution as the PUMS data on three attributes: consumer age, tenure status, and geographic location. The methodology of the weighting is described in appendix B.

Findings

Six Tenure-Mortgage Groups

We first divide individual consumers into two groups—owners (O) and renters (R)—and sort by age, as shown in figures 1 and 2. The patterns are as expected: homeownership numbers increase with age, peaking among adults ages 66–75, then declining thereafter. As a result, 28 percent of homeowners are 45 and younger compared with 68 percent of renters.

FIGURE 1

Age Distribution by Tenure Group

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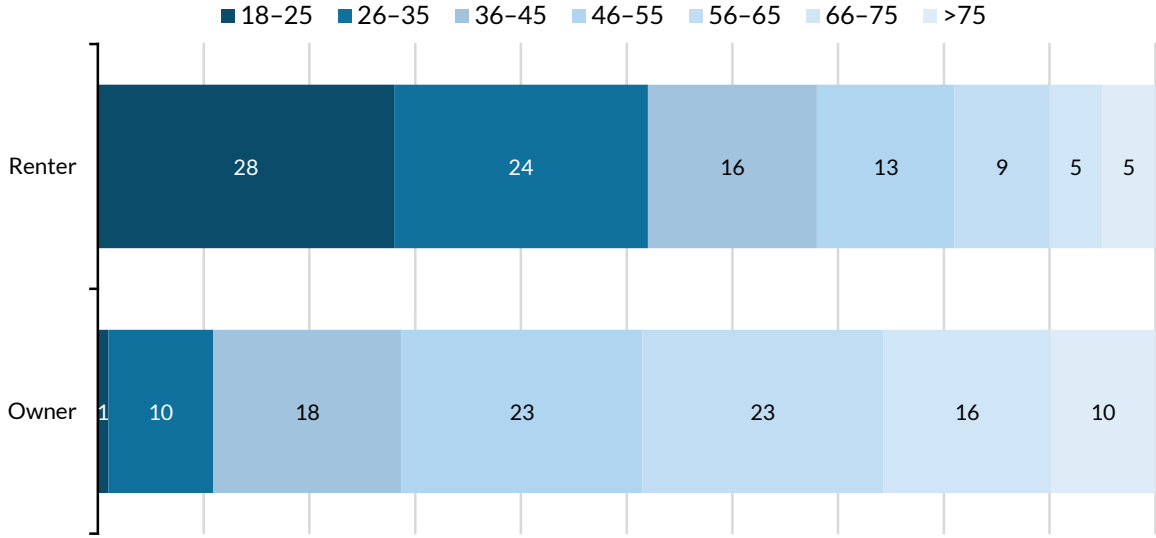
Source: Authors' calculations using ACS PUMS data and matched credit-bureau and property-record data.

FIGURE 2

Tenure Distribution by Age Group

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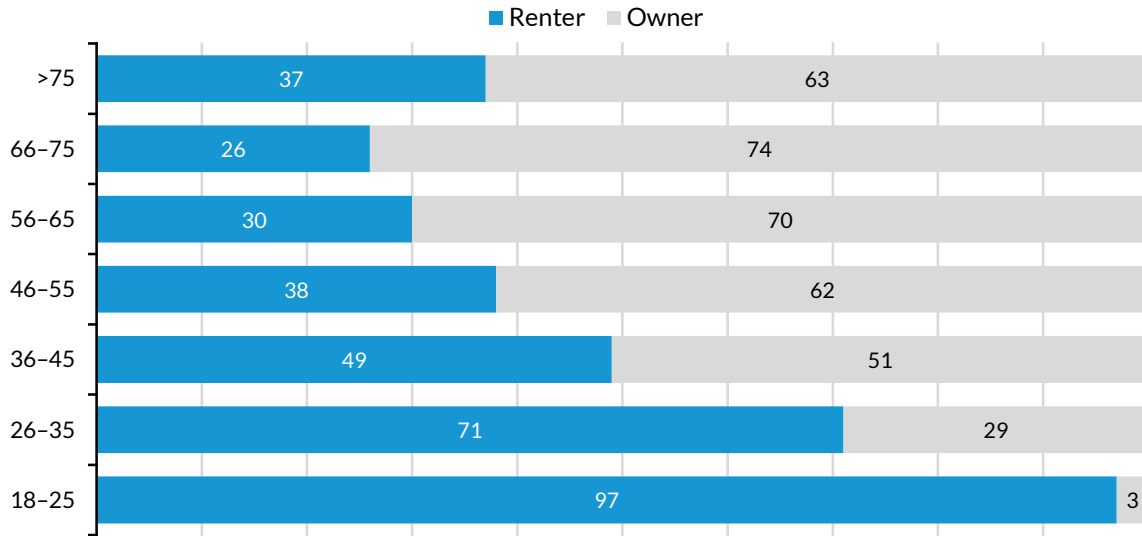
Source: Authors' calculations using ACS PUMS data and matched credit-bureau and property-record data.

We then divide each tenure group into three mortgage groups: have mortgage now (CM or current mortgage), had mortgage in the past 16 years but not now (EM or ever mortgage), and had no mortgage in the past 16 years (NM or never mortgage).1 This creates six tenure-mortgage groups:

1. Owner with mortgage now (OCM)
2. Owner with mortgage in the past 16 years but not now (OEM)
3. Owner without mortgage in the past 16 years (ONM)[2]
4. Renter with mortgage now (RCM)
5. Renter with mortgage in the past 16 years but not now (REM)
6. Renter without mortgage in the past 16 years (RNM)

Tenure is determined by the most recent data (2015); the earliest data available (2010) are used to determine whether the consumer ever had a mortgage. Table 1 shows that 118 million adults, or 48 percent of the US adult population, own their homes. Sixty-seven million (27 percent) are owners with a mortgage now on their credit bureau account, 28 million are owners who have had a mortgage in the past 16 years but do not have one now, and 23 million are owners who have not had a mortgage in the past 16 years. The 51 million individual owners with no current mortgage constitute 43 percent of all

adult consumers identified as owners. This number may be overstated and may reflect situations where the title is joint but the mortgage is in the spouse's name.

TABLE 1

The Distribution of Tenure Status by Mortgage Status and Age Group

Percentage of tenure-mortgage group (percentage of age group)

Age	ONM	OEM	OCM	RNM	REM	RCM	Total
18–25	2.8 (1.8)	0.2 (0.1)	0.8 (1.5)	35.4 (93.6)	2.6 (1.4)	5.0 (1.6)	36M (14.7%)
26–35	9.3 (5.0)	4.1 (2.7)	13.3 (20.9)	26.7 (59.4)	13.0 (5.8)	22.4 (6.3)	43M (17.5%)
36–45	9.8 (5.5)	11.8 (8.2)	22.7 (37.3)	13.6 (31.7)	22.3 (10.5)	22.7 (6.7)	41M (16.7%)
46–55	12.6 (6.6)	21.1 (13.8)	27.1 (41.8)	9.7 (21.3)	23.9 (10.6)	21.7 (6.0)	43M (17.7%)
56–65	18.1 (10.6)	29.3 (21.3)	22.2 (38.1)	6.3 (15.5)	19.2 (9.4)	16.7 (5.1)	39M (15.9%)
66–75	20.8 (19.2)	22.7 (26.0)	10.7 (29.1)	3.4 (13.2)	11.0 (8.5)	8.2 (4.0)	25M (10.1%)
>75	26.6 (33.9)	10.8 (17.1)	3.2 (11.9)	4.9 (26.2)	8.1 (8.7)	3.3 (2.2)	18M (7.3%)
Total	23M (9.3%)	28M (11.6%)	67M (27.4%)	96M (39.0%)	19M (7.9%)	12M (4.9%)	245M (100%)

Source: Authors' calculations using ACS PUMS data and matched credit-bureau and property-record data.
Notes: Figures outside parentheses are column percentages. Figures inside parentheses are row percentages. Figures outside parentheses in the Total row or column are population size numbers; M stands for millions. Figures inside parentheses in the Total row are percentages for one of the six tenure-mortgage groups. Figures inside parentheses in the Total column are percentages for one of the seven age groups.
ONM = owner without mortgage in the past 16 years, OEM= owner with mortgage in the past 16 years but not now, OCM = owner with mortgage now, RNM = renter without mortgage in the past 16 years, REM = renter with mortgage in the past 16 years but not now, RCM = renter with mortgage now.

One hundred twenty-seven million adults, the remaining 52 percent of the US adult population, are renters. Ninety-six million renters (39 percent) have not had a mortgage in the past 16 years, 19 million (7.9 percent) have had a mortgage in the past 16 years but do not have one now, and 12 million (4.9 percent) have a mortgage now on a property other than the one they rent.

Renters who have had a mortgage in the past but no longer do (REM) may have lost their home to foreclosure or bankruptcy, sold their home and chosen to rent as a means of downsizing, sold a home they could no longer afford, or moved for work and are renting temporarily.

Renters who have a current mortgage on a separate property (RCM) may have a mortgage on a vacation home and rent their primary residence, have a mortgage on a separate investment property, or have recently relocated and still own a home with a mortgage in their former location.

Age Patterns of the Tenure-Mortgage Groups

Our results confirm that tenure choice is very much a function of age, with homeowners generally older than renters. When we examine mortgage groups within the two tenure groups, more interesting patterns emerge.

Figures 3 and 4 and table 1 show that owners without a mortgage in the past 16 years (ONM) tend to skew much older. Nearly half the 23 million ONM consumers are 66 or older, an age group making up less than 18 percent of the adult population.

Owners without a current mortgage but with one in the past 16 years (OEM) have likely paid off their mortgage in the period covered by the credit bureau data. The OEM group also tends to be older, although not as old as the ONM group. Among OEM consumers, 34 percent are 66 or older, while another 29 percent are between 56 and 65, compared with 16 percent of the adult population.

FIGURE 3

Age Groups by Tenure-Mortgage Group
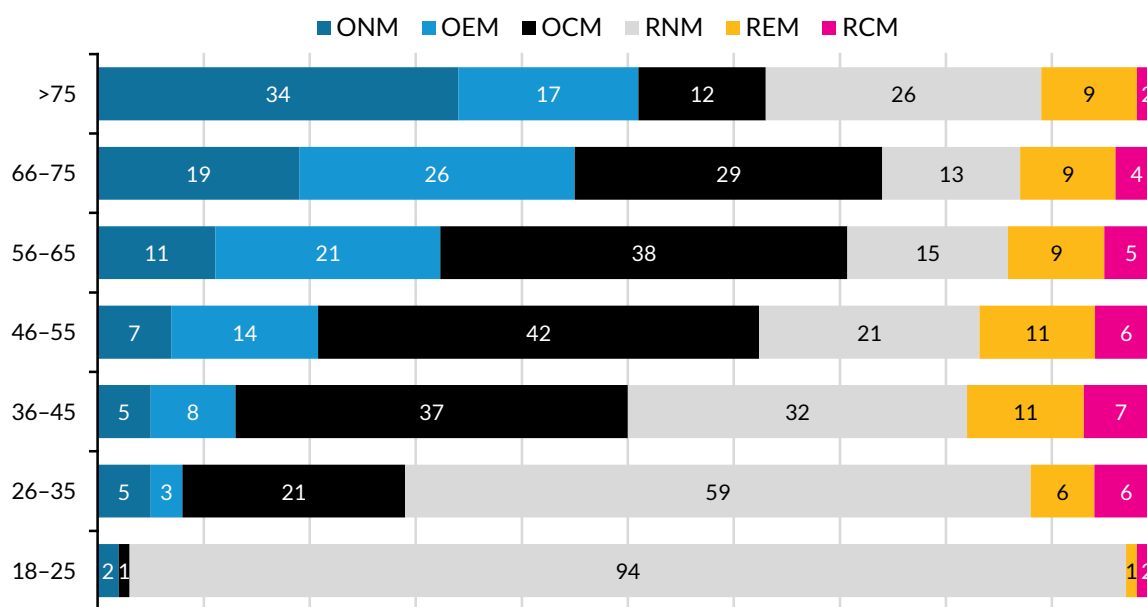
Percentage of total group

Source: Authors' calculations using ACS PUMS data and matched credit-bureau and property-record data.
Note: ONM = owner without mortgage in the past 16 years, OEM= owner with mortgage in the past 16 years but not now, OCM = owner with mortgage now, RNM = renter without mortgage in the past 16 years, REM = renter with mortgage in the past 16 years but not now, RCM = renter with mortgage now.

FIGURE 4

Tenure-Mortgage Groups by Age

Percentage of total group
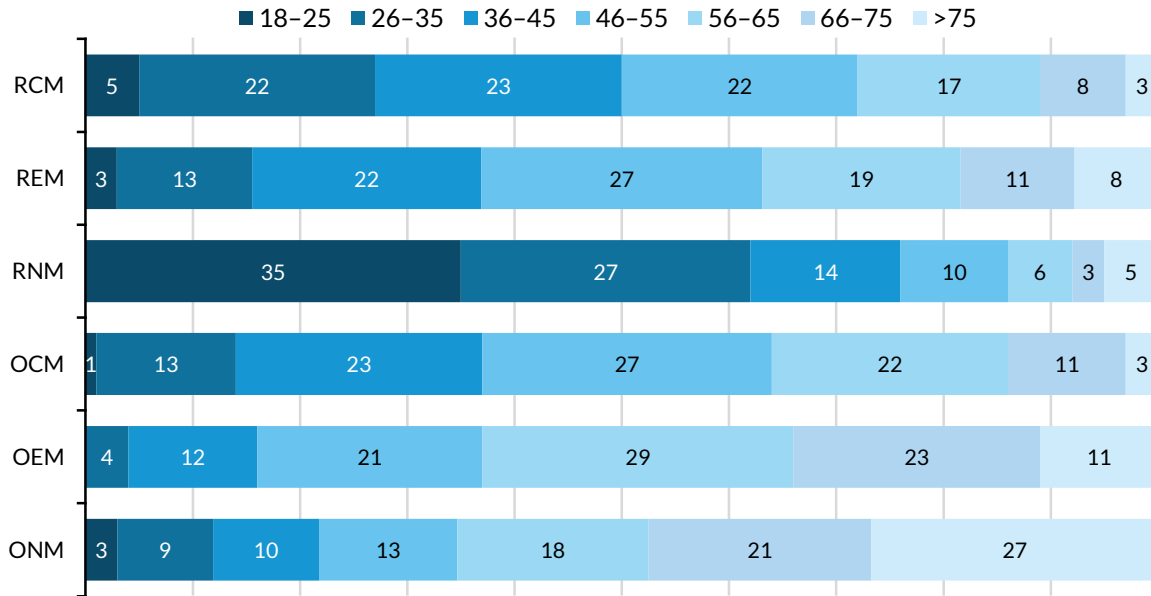
	18–25	26–35	36–45	46–55	56–65	66–75	>75
RCM	5	22	23	22	17	8	3
REM	3	13	22	27	19	11	8
RNM	35		27	14	10	6	3	5
OCM	1	13	23	27	22	11	3
OEM	4	12	21	29	23	11	
ONM	3	9	10	13	18	21	27

Source: Authors' calculations using ACS PUMS data and matched credit-bureau and property-record data.
Note: RCM = renter with mortgage now, REM = renter with mortgage in the past 16 years but not now, RNM = renter without mortgage in the past 16 years, OCM = owner with mortgage now, OEM= owner with mortgage in the past 16 years but not now, ONM = owner without mortgage in the past 16 years.

Homeowners ages 36–65 account for 72 percent of owners with a current mortgage (OCM) despite only 50 percent of the adult population falling in this age range.

Renters without a mortgage in the past 16 years (RNM) are likely to be younger: 62 percent are under 35, compared with only 32 percent of the adult population.

By contrast, the other two renter groups—renters with a current mortgage (RCM) and renters without a current mortgage but with a mortgage in the past 16 years (REM)—have an age distribution more similar to OCM consumers. REM consumers are even more concentrated in the 66 or older group than OCM consumers, suggesting that some REM consumers are seniors who have given up their family home and moved into rental housing or are living with relatives. RCM consumers are skewed slightly younger than OCM consumers: the 26–35 group is overrepresented among RCM and underrepresented among OCM compared to the age group's share of the adult population. This may reflect mobility differences among different age groups: younger consumers are more mobile than their

elder counterparts, hence they are more likely to become renters for a period before they sell their previous home and purchase another home.

Tenure, Mortgage, and Credit Scores

Renters tend to have much lower credit scores than owners. Sixty-eight percent of owners have Vantage scores above 700, compared with just 33 percent of renters (figure 5), while renters account for 84 percent of all adult consumers with Vantage scores below 550 (figure 6). This phenomenon is both a cause and an outcome since only creditworthy consumers can get a mortgage and become owners, and owners paying back their mortgages further enhance their good credit. More interesting is the distribution of these credit scores by mortgage status.

Tenure Groups by Vantage Score
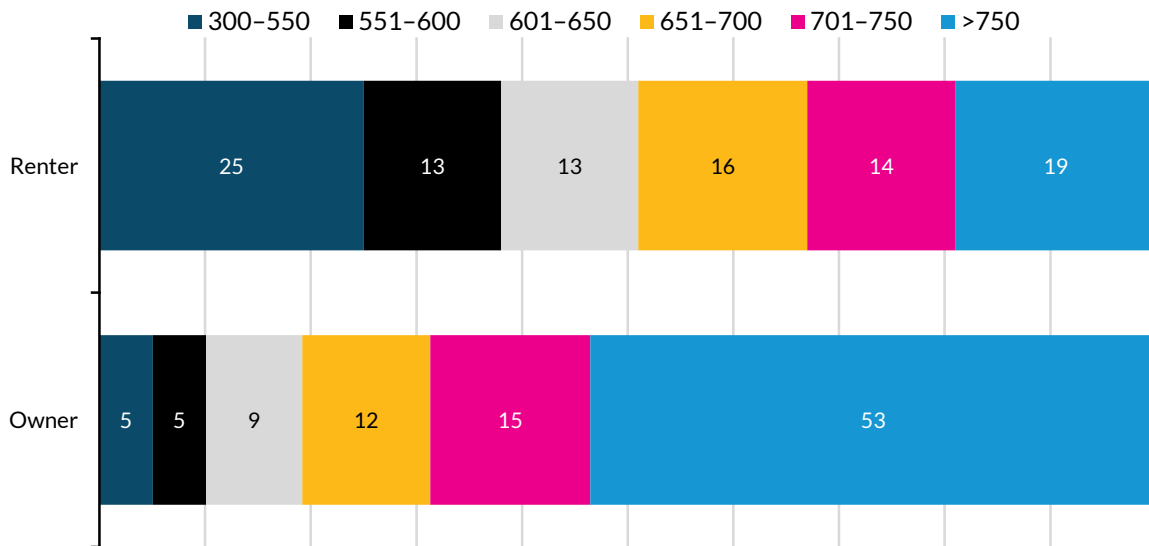
Percentage of total group

Legend: ■ 300–550 ■ 551–600 ■ 601–650 ■ 651–700 ■ 701–750 ■ >750

Renter: 25 | 13 | 13 | 16 | 14 | 19

Owner: 5 | 5 | 9 | 12 | 15 | 53

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

FIGURE 6

Vantage Scores by Tenure Group

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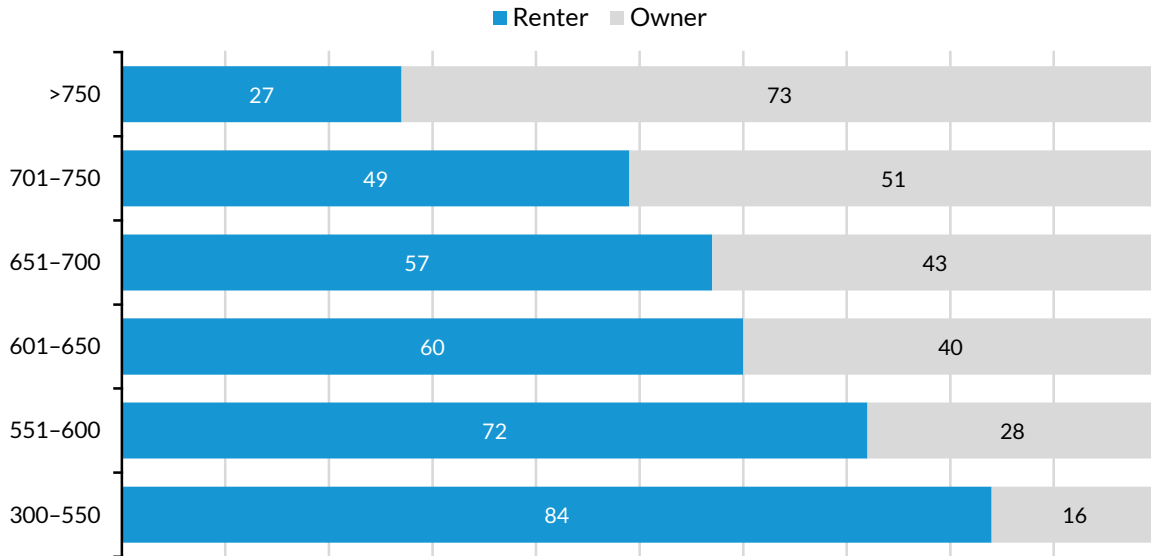
Source: Authors' calculations using ACS PUMS data and matched credit-bureau and property-record data.

Table 2 and figures 7 and 8 show that the three owner groups have more homogenous credit scores than the three renter groups. Sixty-four percent of ONM consumers have Vantage scores above 700. This number increases to 70 percent and 69 percent for OEM and OCM consumers, respectively, compared with 27 percent and 39 percent for RNM and REM consumers, respectively. RCM consumers, at 66 percent, look much more like owners than renters on credit scores.

TABLE 2

The Distribution of Tenure Status by Mortgage Status and Vantage Score

Percentage of tenure-mortgage group (percentage of score group)

Score	ONM	OEM	OCM	RNM	REM	RCM	Total
300–550	8.9 (5.4)	5.3 (4.0)	3.9 (6.9)	29.9 (73.9)	16.6 (8.5)	3.9 (1.3)	38M (15.5%)
551–600	**6.8 (6.7)**	6.2 (7.6)	4.8 (13.8)	14.6 (58.4)	13.3 (11.1)	5.0 (2.6)	23M (9.6%)
601–650	8.7 (7.5)	8.6 (9.2)	9.1 (23.0)	12.8 (44.9)	14.9 (10.8)	10.3 (4.6)	27M (11.0%)
651–700	11.2 (7.6)	10.4 (8.8)	13.3 (26.5)	15.5 (42.7)	16.0 (9.1)	14.9 (5.3)	34M (13.9%)
701–750	10.9 (7.1)	10.6 (8.6)	18.6 (35.7)	13.1 (34.8)	11.9 (6.5)	21.2 (7.3)	35M (14.4%)
>750	53.4 (14.1)	58.9 (19.3)	50.4 (39.2)	14.0 (15.1)	27.3 (6.1)	44.7 (6.2)	86M (35.6%)
Total	23M (9.4%)	28M (11.7%)	67M (27.7%)	93M (38.3%)	19M (7.9%)	12M (5.0%)	242M (100%)

Source: Authors' calculations using ACS PUMS data and matched credit-bureau and property-record data.
Notes: Figures outside parentheses are column percentages. Figures inside parentheses are row percentages. Figures outside parentheses in the Total row or column are population size numbers for a specific group; M stands for millions. Figures inside parentheses in the Total row are percentages for one of the six tenure-mortgage groups. Figures inside parentheses in the Total column are percentages for one of the six Vantage score groups.
ONM = owner without mortgage in the past 16 years, OEM= owner with mortgage in the past 16 years but not now, OCM = owner with mortgage now, RNM = renter without mortgage in the past 16 years, REM = renter with mortgage in the past 16 years but not now, RCM = renter with mortgage now.

FIGURE 7

Vantage Scores by Tenure-Mortgage Group
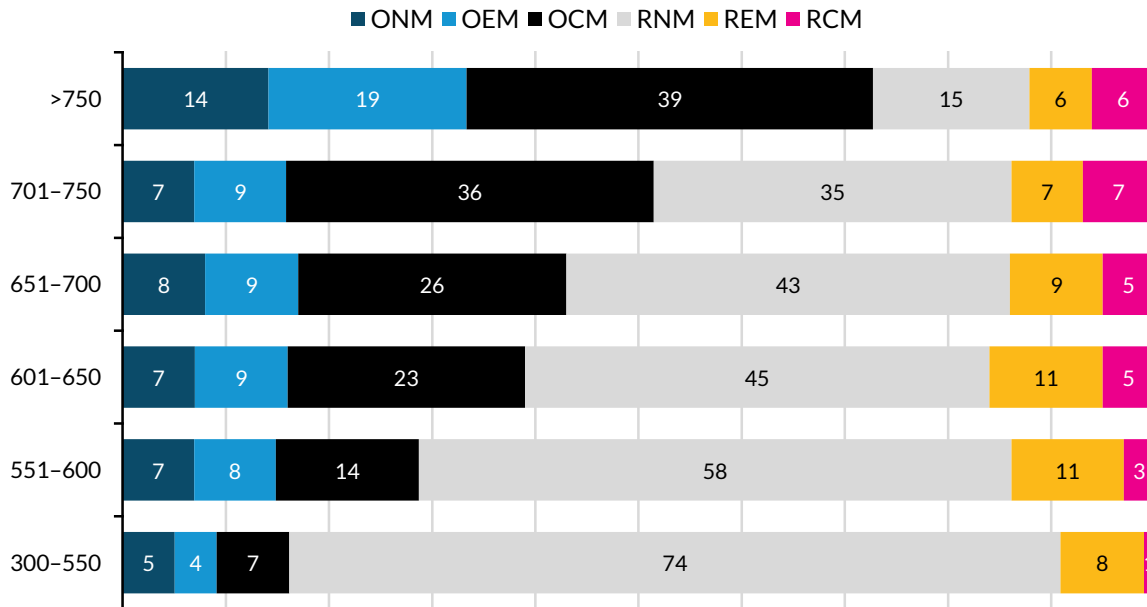
Percentage of total group

Source: Authors' calculations using ACS PUMS data and matched credit-bureau and property-record data.
Note: ONM = owner without mortgage in the past 16 years, OEM= owner with mortgage in the past 16 years but not now, OCM = owner with mortgage now, RNM = renter without mortgage in the past 16 years, REM = renter with mortgage in the past 16 years but not now, RCM = renter with mortgage now.

FIGURE 8

Tenure-Mortgage Groups by Vantage Score
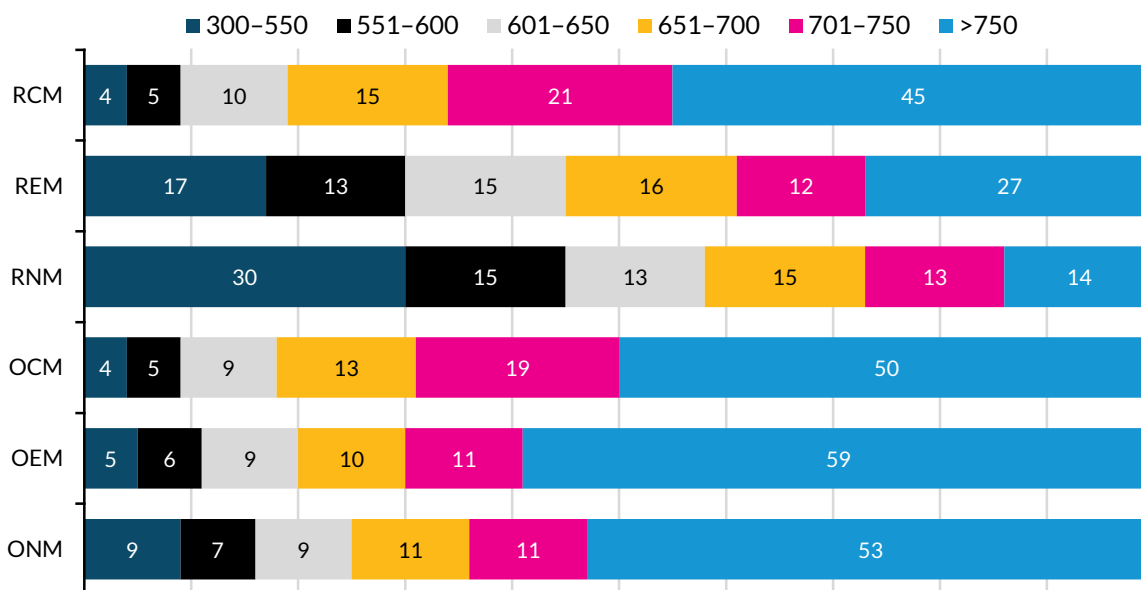
Percentage of total group

Source: Authors' calculations using ACS PUMS data and matched credit-bureau and property-record data.
Note: RCM = renter with mortgage now, REM = renter with mortgage in the past 16 years but not now, RNM = renter without mortgage in the past 16 years, OCM = owner with mortgage now, OEM= owner with mortgage in the past 16 years but not now, ONM = owner without mortgage in the past 16 years.

Sixteen percent of ONM consumers have Vantage scores at or below 600. This number becomes 12 percent and 9 percent for OEM and OCM consumers respectively. For renter groups, however, 45 percent (RNM), 30 percent (REM), and 9 percent (RCM) have scores below 600. Again, RCM consumers look much more like owners than other renters.

This analysis sheds light on an important policy question: how many renters would qualify for a mortgage? To get a mortgage, consumers need a relatively high credit score in addition to a down payment and stable income. Here, we are only evaluating renters' credit scores, but this is sufficient to calculate an upper bound. And is it an upper bound, as we are not considering the consumer's debt-to-income ratio or ability to fund a down payment.

Generally, consumers need a minimum credit score of 650 to qualify for a mortgage. Using this number, 60.2 million current renters—48 percent of all adult renters—could qualify for a mortgage based on their credit score alone. This includes 40 million RNM consumers (43 percent of all RNMs), 10.5 million REM consumers (55 percent), and 9.7 million RCM consumers (81 percent).[3] The other 63.8

million—52 percent of renters—do not have a high enough credit score to qualify for a mortgage. This number would be lower once debt-to-income and ability to fund a down payment are considered.

Tenure and Mortgage Foreclosures

Nine million (7.1 percent) of all adult consumers with a current or past mortgage experienced a foreclosure on a first mortgage between 2003 and 2015 (table 3). Of these consumers, 4.7 million are currently renters (including more than 500,000 with a current mortgage) and 4.3 million are owners (2.5 million with a current mortgage).

Foreclosure rates for the four tenure groups that have ever had a mortgage, from highest to lowest, are as follows:

1. Renters with a past mortgage (21.9 percent)
2. Owners with a past mortgage (6.3 percent)
3. Renters with a current mortgage (4.3 percent)
4. Owners with a current mortgage (3.7 percent)

TABLE 3

Mortgage Foreclosures by Tenure Status by Age Groups

Number of foreclosed first mortgages (foreclosure rate in %)

Age	OEM	OCM	REM	RCM	Total
18–25	5,797 (12.7)	2,205 (0.4)	15,788 (3.2)	903 (0.2)	24,693 (1.5)
26–35	158,364 (13.5)	195,088 (2.2)	600,754 (24.1)	61,034 (2.3)	1,015,240 (6.6)
36–45	456,918 (13.6)	663,161 (4.4)	1,336,087 (31.1)	153,338 (5.6)	2,609,505 (10.2)
46–55	542,938 (9.1)	803,051 (4.4)	1,208,861 (26.3)	147,928 (5.7)	2,702,777 (8.6)
56–65	396,811 (4.8)	561,179 (3.8)	700,898 (19.0)	100,882 (5.0)	1,759,770 (6.1)
66–75	175,039 (2.7)	199,175 (2.8)	248,438 (11.8)	38,033 (3.9)	660,685 (4.0)
>75	62,467 (2.0)	49,375 (2.3)	105,814 (6.8)	13,908 (3.5)	231,564 (3.2)
Total	1,798,332 (6.3)	2,473,236 (3.7)	4,216,641 (21.9)	516,026 (4.3)	9,004,235 (7.1)

Source: Authors' calculations using ACS PUMS data and matched credit-bureau and property-record data.
Notes: Figures outside parentheses are the number of foreclosed first mortgages for a specific tenure and age group combination. Figures inside parentheses are the foreclosure rate for the specific tenure and age group combination. Figures outside parentheses in the Total row or column are the total number of foreclosures for a specific tenure or age group. Figures inside parentheses in the Total row are foreclosure rates for one of the four tenure-mortgage groups. Figures inside parentheses in the Total column are foreclosure rates for one of the seven age groups.
OEM= owner with mortgage in the past 16 years but not now, OCM = owner with mortgage now, REM = renter with mortgage in the past 16 years but not now, RCM = renter with mortgage now.

REM consumers have a much higher foreclosure rate than any other tenure group, accounting for almost half the 9 million foreclosures since the housing boom and bust. If we add the RCM group, slightly more than half (57 percent) of the individuals that experienced a foreclosure between 2003 and 2014 are now renters. This may understate the actual number, as some who are current owners experienced a foreclosure on a rental property and not on their primary residence. Even so, these numbers show that some who experienced a foreclosure are able to once again access homeownership.

There is a distinct age pattern on foreclosure rates. Middle-aged consumers (ages 36–55) with a current or past mortgage have the highest foreclosure rate (10.2 percent for the 36–45 age group and 8.6 percent for the 46–55 age group), much higher than their younger and older peers. Why? Younger consumers most likely obtained their mortgages after the financial crisis, a more stable environment where home prices were appreciating rather than depreciating. Older consumers are most likely to have paid off either all or part of their mortgages before the financial crisis, giving them more equity in their homes and making the housing burden more manageable. Those between the ages of 36 and 55 in 2015, particularly those under 46, most likely obtained their mortgages at or near the peak of the housing cycle in 2005, when they would have been in their mid-twenties to mid-thirties, turning many of them into victims of the housing bust.

Combining the tenure grouping with the age grouping, middle-aged REM consumers were hit the hardest by the financial crisis: 1.3 million (31 percent) of all REM consumers ages 36–45 and 1.2 million (26 percent) of those ages 46–55 experienced a mortgage foreclosure, accounting for almost a third of all foreclosures between 2003 and 2015.

Credit Profiles of the Six Tenure-Mortgage Groups

To better understand the financial picture of the six tenure-mortgage groups, we examine their other types of debt: auto loans, credit cards, student loans, HELOC, debt in collections, and negative public records on their credit reports. Consumers' debt patterns are closely tied to their tenure choices, as both reflect the lifestyle changes that accompany aging.

Owners without Mortgage in the Past 16 Years (ONM)

ONM consumers are older on average than the other tenure-mortgage groups. Table 4 shows a median age of 64, older than any other group. Table 4 also shows a median Vantage score of 764 for the ONM

group, higher than owners with a current mortgage (751) but lower than owners with a paid-off mortgage (785).

Interestingly, appendix table C.2 shows that the ONM group has a large spread in Vantage scores between the younger and older group members. Younger ONM consumers actually have fairly low credit scores—654 for those ages 26–35, 645 for those ages 36–45, and 678 for those ages 46–55— considerably lower than the other two owner groups with similar ages. By contrast, older ONM consumers have very high Vantage scores: 765 for those ages 56–65 and over 800 for those 65 and older, almost no difference from the other two owner groups with similar ages.

TABLE 4

Credit Profiles of Six Tenure-Mortgage Groups

Consumers with debt (median balance | percentage of tenure group)

Measure	ONM	OEM	OCM	RNM	REM	RCM	Total
Any trade	18M (4,047 | 77.8)	25M (9,032 | 86.9)	67M (167,936 | 100)	59M (8,177 | 61.7)	14M (11,010 | 72.8)	12M (185,343 | 100)	195M (29,918 | 79.4)
Auto loan	5M (13,703 | 21.9)	9M (14,614 | 31.1)	33M (16,013 | 49.0)	22M (12,977 | 23.6)	6M (14,844 | 31.9)	5M (15,787 | 45.8)	81M (14,614 | 33.0)
Credit card	16M (1,489 | 68.9)	23M (2,536 | 79.5)	59M (4,587 | 87.5)	45M (1,480 | 46.7)	12M (2,584 | 61.5)	10M (4,208 | 86.4)	164M (2,725 | 66.8)
Debt collection	5M (996 | 20.4)	4M (815 | 15.4)	9M (706 | 13.9)	40M (1,389 | 42.2)	7M (1,364 | 36.9)	2M (731 | 13.8)	67M (1,195 | 27.5)
HELOC	1M (30,067 | 4.8)	3M (37,391 | 11.4)	9M (34,104 | 13.1)	300K (33,003 | 0.3)	519K (40,087 | 2.7)	1M (38,923 | 9.4)	15M (34,908 | 6.2)
Student loan	1M (13,893 | 5.2)	2M (14,597 | 6.0)	9M (15,752 | 12.7)	14M (13,981 | 15.1)	2M (16,481 | 10.6)	2M (15,799 | 15.7)	30M (14,804 | 12.1)
Neg. pub. record	2M (8.5)	5M (16.0)	5M (7.4)	15M (15.3)	5M (28.4)	961K (8.0)	33M (13.3)
Age	23M (64)	28M (60)	67M (51)	96M (30)	19M (51)	12M (45)	245M (46)
Vantage score	23M (764)	28M (785)	67M (751)	96M (619)	19M (666)	12M (740)	245M (698)

Source: Authors' calculations using ACS PUMS data and matched credit-bureau and property-record data.
Note: Figures outside parentheses are population size numbers for consumers with a specific debt. For example, 33 million owners with mortgages have auto loans; M stands for millions. Figures inside parentheses before the division are median debt balances, in dollars, of consumers in that tenure-mortgage group who have that specific debt. Figures inside parentheses and after the division are percentages of consumers in that tenure-mortgage group with that specific debt. For age and Vantage score, figures outside parentheses are total population sizes of tenure-mortgage groups; figures inside parentheses are the median ages or median Vantage scores of tenure-mortgage groups.
ONM = owner without mortgage in the past 16 years, OEM= owner with mortgage in the past 16 years but not now, OCM = owner with mortgage now, RNM = renter without mortgage in the past 16 years, REM = renter with mortgage in the past 16 years but not now, RCM = renter with mortgage now.

The age discrepancy in credit scores stems from various factors. Some younger consumers identified as ONM may be joint owners with their spouses. If so, and if their credit score was lower than their spouse's and their income was not needed to secure the mortgage, they would not be included on the mortgage and would lose the chance to improve their credit score. Others may have had the home purchased for them, with their credit scores irrelevant to the lending decision. Still others may have built on private land, with no mortgage or a chattel loan on manufactured housing. For older consumers identified as ONM, the 16 years of credit bureau data may not register a mortgage paid off more than 16 years ago. Some older ONMs may have had the combination of credit score and financial capacity to

obtain a mortgage and pay it off more than 16 years ago. However, the number of older borrowers is so large that we presume that most paid cash for their homes at a time when housing prices were lower relative to incomes.

ONM consumers are less likely than the other two owner groups to have other types of open debt. Eighteen million (77.8 percent) of ONM consumers have at least one open debt, compared with 86.9 percent and 100 percent of the OEM and OCM groups, respectively (see table 4). The most common open debt is credit card debt or spending (16 million or 68.9 percent of all ONM consumers), with the median credit card balance at $1,489—much lower than that of the other two owner groups. Only RNM consumers have a comparatively low median balance. For ONM consumers with open debts, the median balance of $4,047 on those debts is lower than that of any other tenure-mortgage group, even renters. Moreover, this group is much less likely to have auto debt than any other group; less than 22 percent have auto debt. This is partially age driven. As shown in our earlier report (Li and Goodman 2015), older consumers are less likely to have open auto debt than younger consumers, and ONM consumers are more likely to be 66 or older.

Table 4 shows that ONM consumers are not only more likely to have debt in collections than the other two owner groups, but more likely to have higher median balance of that debt ($979 versus $803 for OEM and $711 for OCM). Appendix table C.2 confirms that ONM borrowers with debt in collections are disproportionately younger borrowers with lower Vantage scores.

Finally, ONM consumers are more likely to live in a low-cost area (appendix table C.3). West Virginia has the highest share (20.4 percent) of owners without a mortgage in the past 16 years, followed by Mississippi (17.9 percent), Arkansas (16.0 percent), Alabama (14.5 percent), Kentucky (14.3 percent), and Iowa (13.9 percent); the nationwide average is 9 percent. The high concentration of ONM consumers in rural areas may indicate that some of them have either built homes themselves on private land or have chattel mortgages on mobile homes.

Owners with Mortgage in the Past 16 Years but Not Now (OEM)

OEM consumers also skew older. Table 4 shows their median age is 60, versus 51 for OCM consumers. The median Vantage score of this group, 785, is the highest among all adult consumers.

This group is less likely to have open debts, such as credit card debt or spending, auto loans, or student loans, than the OCM group and all renter groups. Where these debts do exist, the median

balance is lower, except for HELOC debt. While OEM consumers are marginally less likely to have HELOC debt than those with a current mortgage, the median balance is $36,000 versus $33,000.

OEM consumers are less likely to live in high-cost areas such as California, Hawaii, New York, and Washington, DC (appendix table C.3). This pattern suggests that many of these consumers are retirees who have sold one home and purchased a new home with cash in a more affordable area.

Interestingly, a relatively higher proportion (16 percent) of OEM consumers has at least one negative public record on their credit history, versus only 8.5 percent of ONM consumers and 7.4 percent of OCM consumers. This difference deserves further investigation.

Owners with a Current Mortgage (OCM)

OCM consumers have a median age of 51 (see table 4), lower than the other two owner groups but much older than RNM or RCM consumers, and about the same as REM consumers.

The median Vantage score for this group, 751, is higher than that of all renter groups but lower than other owner groups. However, OCMs under 55 and RCMs have the highest credit scores of any tenure-mortgage group; after age 55, renters with no mortgage or a paid-off mortgage have stronger Vantage scores. The age distribution of OCMs is most similar to that of RCMs.

OCM consumers are more likely to have other types of open debt than other owner groups. More OCMs have open auto loan, student loan, credit card, and HELOC debt, but OCMs look very similar to RCM consumers on patterns of open debts (table 4). For owners who have these open debts, those with a current mortgage tend to have a higher balance. This makes sense, since most OCM consumers are ages 36–65, and middle-aged consumers bear the highest debt burden because they tend to be raising growing families (Li and Goodman 2015).

Many are interested in the relationship between student loan debt and homeownership (Gicheva and Thompson 2015).[4] Table 4 shows that a lower proportion of owners tend to have student loan debts. ONM (5.2 percent) and OEM (6 percent) consumers have the lowest student debt (compared with 12.7 percent of OCMs, 15 percent of RNMs, 10.6 percent of REMs, and 15.7 percent of RCMs). However, once one corrects for age, as in appendix table C.2, these differences largely disappear.

Owners with a current mortgage (as well as renters with a current mortgage) are less likely to have external debt collections and negative public records than other owner or renter groups (table 4). Again,

mortgage, credit score, and negative credit records form a circular relationship; a strong credit score is required to receive a mortgage, and performing well on a mortgage helps build a strong credit score.

Renters without Mortgage in the Past 16 Years (RNM)

At 96 million adult consumers, RNMs are the largest group of the total adult population. They also form the largest pool of potential homeowners. As shown in table 4, RNM consumers tend to be much younger (median age of 30) than other groups and have the lowest credit scores (median Vantage score of 619), which may suggest that their credit profile is age driven. However, in every age group, RNM consumers have much lower Vantage scores than any other tenure-mortgage group (appendix table C.2), which makes it harder for them to become homeowners. RNM consumers are most common in expensive regions (California, Hawaii, and Washington, DC) and are disproportionately single.

RNM consumers have relatively fewer types of open debt (table 4). Only 47 percent have credit cards, compared with 67 percent of the total adult population, and only 24 percent have auto loans, compared with 33 percent of the adult population. But they do have more student loan debt: 15 percent compared with 12 percent of the adult population. When they have open debt, RNM consumers tend to owe a smaller amount. RNM consumers also have the highest percentage of debt in collections: 43 percent compared with 27.5 percent for the population. Of the 12 million RNM consumers ages 36–55, 57 percent have debt in collections and 26 percent have negative public records on their credit report.

Renters with Mortgage in the Past 16 Years but Not Now (REM)

The median age of REM consumers is identical to that of OCMs. The age distribution is also similar, although there are more consumers over 75 in the REM group. REM consumers have a lower median Vantage score (665) than any other group, with the exception of RNMs.

REM median credit scores cluster into two age groups: those younger than 65 (640–680) and those older than 65 (approximately 750). Clearly, these groups present different stories. Younger REM consumers are likely being forced out of homeownership, but older REM consumers are likely seniors downsizing in retirement or moving to a new location to be near other family members.

A surprisingly high share of REM consumers (5 million of 19 million) has negative public records, a far higher share (28.4 percent) than any other tenure-mortgage group. Most of the REMs (4 million) with negative public records are middle-aged REM consumers (ages 36–55), as shown in table 4.

Negative public records include bankruptcies, judgments, and tax liens collected from public record sources; many of these items are consistent with foreclosure proceedings. They may also include outstanding federal or governmental agency debts, such as defaulted student loans, federal tax liens, unpaid child/family support, or other miscellaneous debts.[5]

REM consumers are most concentrated in the four sand states (Arizona, California, Florida, and Nevada), which were hit hardest by foreclosures, and Colorado, again suggesting that many REM consumers lost their homes to foreclosures.

REM consumers are very similar to OEMs on other types of debt. Roughly the same percentage has auto loans, although fewer REM consumers have credit cards. REM consumers with student loan debt tend to have a higher loan balance than any other group.

Renters with a Current Mortgage (RCM)

RCM consumers are very similar to OCM consumers in most respects, though slightly younger (median age of 46 versus 51) and with lower Vantage scores (median 740 versus 751) and less time in their mortgage (34 versus 44 months).

Conclusion

This study assesses the credit profiles of consumers with six different mortgage-tenure combinations, comparing their credit scores and type and amount of debt. We found that consumers' credit profiles are closely tied to their tenure choices, and that both at least partially reflect a consumer's lifestyle changes as he or she ages. Our research revealed a number of surprising findings:

- Sixty-four million or 52 percent of all renters have credit scores below 650, generally not high enough to qualify for a mortgage.

- At least 57 percent of individuals who experienced a foreclosure between 2003 and 2015 are not homeowners in 2015. Even so, a significant minority have reestablished homeownership.

- Many of the 15 million middle-aged renters with a past mortgage, particularly those in the four sand states (Arizona, California, Florida, and Nevada) and Colorado, appear to have been forced out of homeownership by financial troubles.

- Of the 96 million renters who have never had a mortgage, 42 percent have debt in collections.

- Twelve million or 5 percent of adult consumers are renters with a mortgage on another property. These consumers look almost identical to consumers who own their own property and have a current mortgage.

Owners with no mortgage or a paid-off mortgage are on average older and have higher Vantage scores than consumers with a current mortgage. However, younger consumers with no mortgage have lower Vantage scores than consumers with a current mortgage.

The interaction between consumers' tenure choices and their credit profiles has many important policy implications that warrant further examination. This report is a first step.

Appendix A. Definitions

Balance is the total amount of debt owed on an account. If the amount past due is higher than the balance amount, the amount past due is used as balance.

Open trades are accounts available to provide credit; this excludes derogatory items and installment trades with $0 outstanding balance. Derogatory items include debt in collections, charge-offs, repossessions, foreclosures, trades in bankruptcy, and so on. Charge-offs are accounts with a balance that the lender no longer expects to be repaid and has written off as bad debt. Repossession refers to a financial institution taking back an object that was used as collateral, rented, or leased in a transaction. Derogatory information is retained on a consumer's credit file for up to seven years. Closed trades are retained on the credit file for 10 years from date closed. Trades disputed or challenged by a consumer who believes an item of information on the trade is inaccurate or incomplete are excluded from analysis under the Fair Credit Billing Act.

Mortgage

The field of "number of months since the oldest first mortgage trade was opened" is used to identify whether a consumer had a mortgage between 2000 and 2015. Since closed trades are retained on the credit file for 10 years from date closed, information on a mortgage paid off in the 10 years before August 2010 (the earliest data draw) will still appear on this field.

Consumers with zero balance on open first or second mortgage trades or no open first or second mortgage trades reported in the last six months from August 2015 are considered consumers without any mortgage debt for the 2015 sampling period.

Auto Loans

Auto loans include both auto loans and auto leases with installment terms. An auto lease is a contract that allows the consumer the right to use a car over a period of time while making regular payments, but after which the consumer does not own the car.

Credit Cards

Credit cards are consumer accounts with a credit card issued, including retailer-issued cards, bank-issued debit cards, and so on.

For credit card debt, we are not able to differentiate between those who use credit cards as a transaction vehicle, paying off their bills each month, and those who use credit cards as a credit vehicle to finance their purchases over time. Therefore, we use the term "credit card spending" in place of "credit card debt."

There is no consensus on the percentage of borrowers who pay their balances in full. An American Bankers Association (2014) report covering Q2 2014 found that 29 percent of borrowers pay in full each month, 29.8 percent are dormant accounts that showed no activity over the quarter, and 41.2 percent are revolvers, in which some percentage of the monthly balance is rolled over to the next month at least once during the quarter. A Gallup poll survey in April 2014 found that 48 percent of borrowers said they always paid the full amount of their credit card balances each month, and 16 percent said they usually did (Swift 2014). Twenty percent said they usually left balances, 12 percent usually paid the minimum, and 1 percent paid less than the minimum. A Bankrate survey in August 2014 found that 40 percent of borrowers under 30 said they paid off their cards each month, versus 53 percent of those 30 and older.[6]

Debt in Collections

External collections are trades reported by third-party collection agencies, including medical collections or loans that originated from another credit grantor, such as a bank. External collections are typically retained on credit files for seven years from original date of delinquency. External collections are treated as closed (i.e., not open for credit use) and derogatory.

Home Equity Line of Credit (HELOC)

HELOC is a form of revolving credit in which the home serves as collateral.

Student Loan

Student loans in deferred status are excluded. No payments need to be made on a student loan as long as deferment is in effect.

Negative Public Records

Negative public records include bankruptcies, judgments, and tax liens collected from public record sources. They may also include outstanding federal or governmental agency debts, such as student loans in default, federal tax liens, unpaid child/family support, or other miscellaneous debts. Private external collections are excluded.

Appendix B. Reweighting Credit Bureau Results to Match ACS

This appendix demonstrates how we weight the credit bureau data with ACS PUMS data to make the former follow the same joint distribution as the latter on three attributes: a consumer's geographic location, age, and tenure status

The ACS PUMS data are a set of untabulated records about individuals and their housing units that allow researchers to create custom tables not available through pretabulated ACS data products. We use the 2014 PUMS, which contains data on approximately 1 percent of the United States population.

Matching Geography

The most detailed unit of geography contained in the PUMS files is the Public Use Microdata Area (PUMA). PUMAs are special nonoverlapping areas that partition each state into contiguous geographic units containing no fewer than 100,000 people each. Altogether, PUMAs cover the entirety of the United States. The 2014 ACS PUMS files rely on PUMA boundaries drawn by state governments after the 2010 Census. PUMAs are built on census tracts and counties.

The credit bureau data does not contain consumers' PUMA locations, but does contain consumers' state, county, and census tract information. To crosswalk between the PUMS files and the credit bureau's files, we downloaded the 2010 Census tract to 2010 PUMA relationship file, which allows us to identify credit bureau consumers' PUMA locations based on their state, county, and census tract information.[7]

To maximize the identification of a consumer's PUMA, we adopted a "waterfall" algorithm. For consumers in a county that relates to only one PUMA, a consumer's county information is used to identify the consumer's PUMA. Otherwise, for consumers in a census tract for which the first four-digit census tract code relates to only one PUMA, a consumer's first four-digit census tract code is used to identify the consumer's PUMA. In all other cases, a consumer's six-digit census tract code is used to identify the consumer's PUMA.

Redefining Tenure Status in ACS to Put It on the Consumer Level

Since ACS is sampled based on households, tenure status is defined at the household level—that is, if a household is identified as living in an owner-occupied housing unit, then every household member is regarded as a homeowner. This is not consistent with our definition used in the matched credit bureau and property record data. For the latter, we define owners as adult consumers whose names are on the property's deed. Thus, an adult child living with parents in an owner-occupied housing unit would be identified as a renter since the child's name isn't on the property's deed. Similarly, a student renting a room from a homeowner would be counted a renter under the matched credit bureau and property record data; even if the housing unit is owner-occupied and the student is counted as member of the household under ACS. Thus, the renter population in the matched credit bureau data tends to be larger than in the ACS data.

To make the definition of an owner in ACS consistent with the one used for the matched credit bureau data, we created a new homeowner definition for each ACS person.

First, an owner must be an adult living in an owner-occupied housing unit and must meet one of two requirements:

1. Must be the head of the household who "is the person living or staying here in whose name this house or apartment is owned, being bought, or rented," according to the ACS questionnaire.
2. Must be the husband or wife of the head of the household.

By using this definition, we were able to calculate the person-level homeowner rate. Using 2014 ACS PUMS data, we found that 48 percent of adults are owners and 52 percent are renters. These numbers are reasonably close to the numbers calculated using the matched credit bureau and property record data, which show that 45 percent of adult consumers are owners.

The matched credit bureau data likely have two sources of undercounting of owners. First, if a spouse's name is not on the property, the spouse is counted as a renter rather than an owner. The ACS PUMS data will count the spouse as an owner, according to our definition. Second, in some instances, the property may be in the name of a trust or noncorporate business rather than the individual, which will not match to any consumer's name at all. In either case, we weighted the credit bureau data with ACS PUMS data to make the former follow the same distribution as the latter on consumers' tenure status.

Calculating Weights for Each Consumer in the Matched Credit Bureau and Property Record Data

Once we know each person's PUMA, age, and tenure status, we calculate the final weights:

1. We calculate the joint distribution in the matched credit bureau and property record data on a consumer's PUMA location, age, and tenure status—owner or renter—by creating a three-way cross table on the above three variables. The consumer's age is transformed into seven categories, as shown in table 1. So there are 2,380 PUMAs, seven age groups, and two tenure groups, giving 2,380 × 7 × 2 = 33,320 possible combinations/cells in the cross table. Call the frequency of a cell in this step's cross table C_1.

2. Repeat the above step and create the cross table using the ACS PUMS data (the cross table is created using PUMS's person-level weights). Call the frequency of a cell in this step's cross table, C_2.

3. Match the two cross tables together. The final weight for each matched cell equals C_2/C_1.

4. Assign weights to each consumer in the matched credit bureau and property record data according to the consumer's geographic location, age, and tenure status.

Appendix C. Additional Results

Unweighted Distribution of Tenure Status by Mortgage Status and Age Groups from the Matched Credit Bureau and Property Record Data Alone

Showing sample size and missing values of the matched credit bureau and property record data

Age	ONM	OEM	OCM	RNM	REM	RCM	UNK	Total
18–25	9,637 (0.2%)	612 (0.0%)	6,565 (0.1%)	300,205 (5.6%)	4,489 (0.1%)	5,254 (0.1%)	154,064 (2.9%)	480,826 (9.0%)
26–35	25,462 (0.5%)	14,423 (0.3%)	102,090 (1.9%)	381,682 (7.2%)	39,346 (0.7%)	39,669 (0.7%)	236,650 (4.5%)	839,322 (15.8%)
36–45	26,638 (0.5%)	41,548 (0.8%)	182,412 (3.4%)	211,734 (4.0%)	75,116 (1.4%)	45,166 (0.8%)	220,450 (4.1%)	803,064 (15.1%)
46–55	35,354 (0.7%)	76,255 (1.4%)	228,721 (4.3%)	154,729 (2.9%)	82,458 (1.6%)	45,078 (0.8%)	230,700 (4.3%)	853,295 (16.0%)
56–65	51,421 (1.0%)	107,731 (2.0%)	193,055 (3.6%)	106,326 (2.0%)	70,413 (1.3%)	37,216 (0.7%)	204,494 (3.8%)	770,656 (14.5%)
66–70	29,709 (0.6%)	49,031 (0.9%)	60,397 (1.1%)	33,720 (0.6%)	25,052 (0.5%)	12,066 (0.2%)	74,956 (1.4%)	284,931 (5.4%)
>70	107,380 (2.0%)	74,750 (1.4%)	61,635 (1.2%)	108,072 (2.0%)	45,236 (0.9%)	13,855 (0.3%)	163,943 (3.1%)	574,871 (10.8%)
UNK	18,666 (0.4%)	1,209 (0.0%)	931 (0.0%)	291,676 (5.5%)	6,321 (0.1%)	992 (0.0%)	389,938 (7.3%)	709,733 (13.3%)
Total	**304,267 (5.7%)**	**365,559 (6.9%)**	**835,806 (15.7%)**	**1,588,144 (29.9%)**	**348,431 (6.6%)**	**199,296 (3.7%)**	**1,675,195 (31.5%)**	**5,316,698 (100.0%)**

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

Notes: Figures inside parentheses are cell percentages of total. Figures outside parentheses in the Total row or column are sample size for a specific group. Figures inside parentheses in the Total row are percentages for one of the tenure-mortgage groups. Figures inside parentheses in the Total column are percentages for one of the age groups. UNK = unknown or missing either age or tenure-mortgage information.

ONM = owner without mortgage in the past 16 years, OEM= owner with mortgage in the past 16 years but not now, OCM = owner with mortgage now, RNM = renter without mortgage in the past 16 years, REM = renter with mortgage in the past 16 years but not now, RCM = renter with mortgage now.

TABLE C.2

Credit Profiles of Six Tenure-Mortgage Groups by Seven Age Groups

Consumers with debt (median balance | percentage of tenure group)

Measure	Age	ONM	OEM	OCM	RNM	REM	RCM
Any trade	18–25	461K (8,932 | 72.9)	37K (18,506 | 80.6)	540K (128,909 | 100)	22M (6,856 | 64.9)	373K (11,459 | 75.5)	594K (149,342 | 100)
	26–35	2M (13,213 | 79.2)	1M (17,150 | 86.5)	9M (177,745 | 100)	17M (11,671 | 67.5)	2M (14,933 | 78.0)	3M (206,770 | 100)
	36–45	2M (12,245 | 76.6)	3M (15,469 | 84.6)	15M (201,635 | 100)	8M (10,646 | 59.2)	3M (14,841 | 75.3)	3M (221,132 | 100)
	46–55	2M (9,987 | 77.2)	5M (12,722 | 85.8)	18M (175,327 | 100)	5M (8,331 | 53.7)	3M (12,695 | 72.5)	3M (185,734 | 100)
	56–65	3M (5,729 | 80.6)	7M (8,864 | 88.3)	15M (146,783 | 100)	3M (5,890 | 54.6)	3M (8,808 | 72.9)	2M (155,863 | 100)
	66–75	4M (2,829 | 83.5)	6M (6,044 | 89.6)	7M (131,940 | 100)	2M (3,477 | 58.7)	2M (5,882 | 74.2)	978K (140,780 | 100)
	>75	4M (1,069 | 72.1)	3M (2,854 | 82.3)	2M (100,347 | 100)	2M (1,102 | 41.6)	876K (2,432 | 56.0)	392K (105,431 | 100)
Auto loan	18–25	196K (14,371 | 30.9)	20K (17,634 | 43.4)	314K (16,710 | 58.1)	8M (12,253 | 23.8)	169K (12,751 | 34.2)	323K (15,898 | 54.4)
	26–35	768K (15,500 | 36.1)	546K (17,208 | 46.5)	5M (16,637 | 57.7)	8M (13,228 | 29.5)	1M (15,270 | 40.6)	1M (15,800 | 52.5)
	36–45	731K (15,733 | 32.6)	1M (16,788 | 39.7)	8M (17,122 | 54.1)	3M (14,231 | 24.9)	2M (16,038 | 39.0)	1M (16,756 | 49.4)
	46–55	860K (15,296 | 29.8)	2M (15,864 | 35.2)	9M (16,263 | 50.4)	2M (13,910 | 21.0)	2M (15,377 | 34.4)	1M (16,107 | 45.6)
	56–65	1M (13,523 | 24.5)	3M (14,199 | 30.6)	7M (15,090 | 44.6)	1M (13,083 | 17.7)	1M (14,000 | 27.9)	810K (14,997 | 40.4)
	66–75	916K (11,954 | 19.2)	2M (12,918 | 27.0)	3M (14,128 | 38.9)	483K (11,893 | 14.8)	496K (12,734 | 23.5)	332K (13,997 | 34.0)
	>75	521K (9,769 | 8.6)	521K (10,386 | 17.0)	560K (11,642 | 26.2)	222K (9,501 | 4.7)	170K (10,068 | 10.8)	85K (11,429 | 21.6)
Credit card	18–25	334K (1,224 | 52.8)	31K (1,551 | 66.7)	439K (2,304 | 81.2)	16M (1,004 | 47.6)	282K (1,708 | 57.0)	483K (2,031 | 81.3)
	26–35	1M (2,398 | 63.3)	869K (3,131 | 74.0)	8M (3,707 | 86.7)	13M (1,945 | 51.1)	2M (2,659 | 62.8)	2M (3,570 | 88.1)
	36–45	1M (2,849 | 61.2)	2M (3,686 | 73.6)	13M (5,233 | 87.9)	6M (2,096 | 42.9)	3M (2,986 | 61.0)	2M (4,949 | 87.8)
	46–55	2M (2,494 | 64.1)	5M (3,346 | 76.9)	16M (5,422 | 87.8)	4M (2,073 | 40.0)	3M (2,988 | 60.3)	2M (5,159 | 86.6)
	56–65	3M (1,932 | 71.6)	7M (2,555 | 81.6)	13M (4,490 | 87.7)	3M (1,979 | 44.2)	2M (2,622 | 63.8)	2M (4,520 | 86.2)
	66–75	4M (1,426 | 78.1)	5M (2,130 | 84.6)	6M (3,660 | 88.2)	2M (1,677 | 52.1)	1M (2,258 | 67.7)	843K (3,682 | 86.3)
	>75	4M (800 | 68.6)	2M (1,414 | 77.4)	2M (2,440 | 82.0)	2M (822 | 39.0)	812K (1,307 | 51.9)	289K (2,423 | 73.6)
Debt collection	18–25	171K (978 | 27.1)	13K (962 | 27.6)	69K (503 | 12.7)	11M (1,182 | 32.1)	195K (1,466 | 39.4)	56K (580 | 9.3)
	26–35	810K (1,224 | 38.1)	277K (929 | 23.6)	1M (667 | 13.0)	12M (1,584 | 48.9)	1M (1,611 | 42.2)	304K (621 | 11.3)
	36–45	958K (1,218 | 42.7)	893K (930 | 26.6)	2M (737 | 15.5)	7M (1,609 | 56.8)	2M (1,507 | 46.4)	426K (755 | 15.6)
	46–55	1M (1,078 | 35.7)	1M (904 | 21.2)	3M (720 | 15.2)	5M (1,453 | 56.4)	2M (1,399 | 43.2)	434K (786 | 16.7)
	56–65	881K (932 | 21.3)	1M (751 | 13.3)	2M (729 | 13.2)	3M (1,224 | 46.7)	1M (1,194 | 32.2)	277K (850 | 13.8)
	66–75	478K (667 | 10.0)	548K (679 | 8.5)	740K (625 | 10.3)	990K (859 | 30.4)	437K (964 | 20.7)	107K (727 | 10.9)
	>75	338K (436 | 5.6)	256K (543 | 8.4)	231K (606 | 10.8)	627K (564 | 13.4)	245K (683 | 15.7)	49K (611 | 12.5)
HELOC	18–25	2K (29,539 | 0.3)	2K (23,910 | 3.4)	7K (16,996 | 1.2)	37K (27,227 | 0.1)	1K (15,942 | 0.3)	5K (15,729 | 0.8)
	26–35	32K (40,535 | 1.5)	31K (40,520 | 2.7)	360K (24,880 | 4.0)	32K (43,317 | 0.1)	13K (36,895 | 0.5)	86K (32,377 | 3.2)
	36–45	57K (44,474 | 2.5)	202K (47,083 | 6.0)	2M (32,483 | 10.9)	29K (40,020 | 0.2)	47K (44,119 | 1.1)	244K (39,490 | 8.9)
	46–55	136K (36,089 | 4.7)	645K (41,609 | 10.8)	3M (35,502 | 16.1)	41K (39,687 | 0.4)	112K (48,000 | 2.4)	339K (39,856 | 13.0)
	56–65	279K (32,967 | 6.8)	1M (37,601 | 13.9)	2M (35,000 | 16.7)	57K (36,486 | 0.9)	168K (37,653 | 4.5)	283K (41,688 | 14.1)
	66–75	337K (27,732 | 7.1)	882K (34,137 | 13.7)	1M (34,860 | 15.3)	52K (29,255 | 1.6)	120K (38,963 | 5.7)	131K (36,051 | 13.4)
	>75	250K (24,009 | 4.1)	311K (31,411 | 10.2)	273K (33,020 | 12.8)	51K (26,496 | 1.1)	58K (35,000 | 3.7)	40K (34,342 | 10.2)
Student loan	18–25	116K (10,514 | 18.4)	10K (12,095 | 21.7)	124K (11,304 | 22.9)	6M (11,958 | 18.5)	128K (15,087 | 25.9)	163K (12,513 | 27.4)
	26–35	428K (15,613 | 20.1)	255K (14,394 | 21.7)	2M (14,543 | 26.7)	6M (16,226 | 22.0)	571K (15,967 | 22.9)	787K (15,501 | 29.3)
	36–45	245K (16,987 | 10.9)	405K (16,828 | 12.1)	2M (18,010 | 15.7)	2M (17,225 | 12.2)	617K (18,459 | 14.4)	457K (17,823 | 16.8)
	46–55	163K (13,412 | 5.7)	433K (15,204 | 7.2)	2M (16,120 | 10.3)	594K (14,078 | 6.4)	409K (16,175 | 8.9)	268K (16,709 | 10.3)
	56–65	128K (11,852 | 3.1)	425K (13,803 | 5.1)	1M (15,335 | 9.5)	254K (12,168 | 4.2)	229K (14,695 | 6.2)	168K (14,644 | 8.4)
	66–75	59K (9,827 | 1.2)	135K (11,722 | 2.1)	283K (13,196 | 3.9)	59K (12,867 | 1.8)	58K (11,976 | 2.8)	38K (13,514 | 3.9)
	>75	52K (10,688 | 0.9)	45K (11,371 | 1.5)	49K (13,929 | 2.3)	33K (11,133 | 0.7)	20K (14,897 | 1.2)	6K (10,977 | 1.6)

Measure	Age	ONM	OEM	OCM	RNM	REM	RCM
Negative public record	18–25	48K (7.6)	7K (16.0)	15K (2.7)	2M (5.9)	55K (11.1)	10K (1.7)
	26–35	346K (16.3)	276K (23.5)	521K (5.8)	5M (19.7)	695K (27.9)	148K (5.5)
	36–45	464K (20.7)	1M (31.7)	1M (8.7)	4M (27.3)	2M (38.2)	278K (10.2)
	46–55	466K (16.2)	1M (23.5)	2M (8.4)	2M (25.6)	2M (35.4)	272K (10.4)
	56–65	360K (8.7)	1M (13.6)	1M (7.4)	1M (19.6)	982K (26.6)	171K (8.5)
	66–75	171K (3.6)	500K (7.8)	406K (5.7)	369K (11.3)	338K (16.0)	64K (6.6)
	>75	80K (1.3)	166K (5.4)	99K (4.6)	149K (3.2)	132K (8.4)	18K (4.7)
Vantage score	18–25	633K (647)	46K (670)	540K (705)	34M (628)	494K (640)	594K (705)
	26–35	2M (654)	1M (698)	9M (736)	25M (602)	2M (641)	3M (732)
	36–45	2M (645)	3M (689)	15M (738)	13M (579)	4M (632)	3M (734)
	46–55	3M (678)	6M (736)	18M (748)	9M (585)	5M (646)	3M (740)
	56–65	4M (765)	8M (796)	15M (767)	6M (625)	4M (687)	2M (761)
	66–75	5M (800)	6M (807)	7M (785)	3M (677)	2M (746)	978K (779)
	>75	6M (803)	3M (806)	2M (791)	5M (723)	2M (752)	392K (784)

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

Notes: Figures outside parentheses are population size numbers for consumers with a specific debt. For example, 314,000 owners currently with mortgages and ages 18–25 have auto loans; K stands for thousands, and M stands for millions. Figures inside parentheses before the division are median debt balances of consumers from one of the six tenure-mortgage groups with an age group who have that specific debt. For example, the median auto loan balance for owners currently with mortgages and auto loan debt and ages 18–25 is $16,710. Figures inside parentheses after the division are percentages of consumers from one of the six tenure-mortgage groups with an age group who have a specific debt. For example, 58 percent of owners currently with mortgages and ages 18–25 have auto loans. For Vantage score, figures outside parentheses are total population sizes of a tenure-mortgage group with an age group; figures inside parentheses are the median Vantage scores for that tenure-mortgage group with that age group.

ONM = owner without mortgage in the past 16 years, OEM= owner with mortgage in the past 16 years but not now, OCM = owner with mortgage now, RNM = renter without mortgage in the past 16 years, REM = renter with mortgage in the past 16 years but not now, RCM = renter with mortgage now.

TABLE C.3

State Distributions of Six Tenure-Mortgage Groups

Percentage of states (percentage of tenure group)

State	ONM	OEM	OCM	RNM	REM	RCM	Total
AK	0.2 (7.4)	0.2 (8.2)	0.2 (30.0)	0.2 (38.7)	0.2 (7.7)	0.4 (8.0)	55TK (0.22%)
AL	2.4 (14.5)	1.7 (13.2)	1.4 (24.8)	1.4 (35.7)	1.3 (6.7)	1.5 (4.9)	374TK (1.53%)
AR	1.6 (16.0)	1.0 (12.8)	0.8 (23.9)	0.8 (35.2)	0.8 (6.9)	1.0 (5.3)	226TK (0.92%)
AZ	1.4 (6.4)	1.9 (10.9)	2.1 (28.5)	2.0 (38.6)	2.9 (11.3)	1.8 (4.3)	490TK (2.00%)
CA	5.9 (4.6)	8.4 (8.0)	10.9 (24.7)	14.9 (47.9)	15.1 (9.8)	12.4 (5.0)	2,966TK (12.10%)
CO	1.0 (5.8)	1.6 (11.1)	2.1 (34.3)	1.5 (35.0)	1.9 (9.0)	1.6 (4.8)	409TK (1.67%)
CT	1.0 (8.1)	1.2 (11.7)	1.3 (31.3)	1.1 (36.6)	1.0 (7.1)	1.2 (5.1)	282TK (1.15%)
DC	0.1 (3.3)	0.1 (5.2)	0.2 (19.9)	0.3 (58.3)	0.2 (6.9)	0.3 (6.5)	54TK (0.22%)
DE	0.3 (8.4)	0.3 (12.4)	0.3 (31.6)	0.3 (36.4)	0.3 (6.6)	0.3 (4.6)	73TK (0.30%)
FL	6.7 (9.7)	7.5 (13.5)	5.4 (22.8)	6.7 (40.5)	8.3 (10.1)	4.5 (3.4)	1,584TK (6.46%)
GA	3.0 (9.1)	3.0 (11.0)	3.0 (26.8)	3.3 (41.8)	3.1 (7.8)	2.2 (3.4)	761TK (3.10%)
HI	0.3 (5.9)	0.3 (8.4)	0.4 (22.3)	0.5 (44.2)	0.5 (8.8)	1.0 (10.4)	111TK (0.45%)
IA	1.4 (13.9)	1.1 (12.9)	1.2 (34.1)	0.7 (29.7)	0.7 (5.7)	0.7 (3.7)	238TK (0.97%)
ID	0.5 (8.5)	0.5 (12.8)	0.6 (34.1)	0.4 (28.3)	0.5 (8.2)	0.8 (8.1)	120TK (0.49%)
IL	3.7 (8.5)	4.3 (12.2)	4.4 (30.0)	3.7 (35.3)	3.9 (7.6)	5.3 (6.5)	990TK (4.04%)
IN	2.0 (9.1)	2.4 (13.7)	2.4 (32.1)	1.8 (33.7)	1.9 (7.3)	1.7 (4.0)	501TK (2.05%)
KS	1.1 (11.1)	1.0 (13.2)	1.0 (30.8)	0.8 (34.1)	0.8 (6.7)	0.7 (4.1)	218TK (0.89%)
KY	2.1 (14.3)	1.6 (13.1)	1.3 (25.8)	1.3 (35.7)	1.3 (7.1)	1.1 (4.0)	340TK (1.39%)
LA	1.9 (12.6)	1.5 (12.2)	1.3 (23.8)	1.5 (40.8)	1.2 (6.3)	1.2 (4.2)	353TK (1.44%)
MA	1.6 (6.7)	2.0 (10.7)	2.4 (29.9)	2.2 (39.9)	2.0 (7.1)	2.5 (5.7)	536TK (2.19%)
MD	1.3 (6.2)	1.7 (10.6)	2.2 (32.2)	1.9 (39.3)	1.7 (7.1)	1.8 (4.5)	463TK (1.89%)
ME	0.6 (13.4)	0.6 (14.6)	0.5 (30.4)	0.3 (30.5)	0.4 (6.7)	0.4 (4.4)	107TK (0.44%)
MI	3.7 (11.0)	3.9 (14.5)	3.4 (30.0)	2.7 (33.1)	2.9 (7.4)	2.6 (4.0)	768TK (3.13%)
MN	1.7 (9.3)	2.0 (13.3)	2.3 (36.8)	1.2 (28.1)	1.6 (7.2)	1.8 (5.2)	418TK (1.71%)
MO	2.4 (11.7)	2.0 (12.3)	2.1 (30.1)	1.6 (32.6)	1.8 (7.4)	2.3 (5.9)	467TK (1.91%)
MS	1.8 (17.9)	1.0 (12.3)	0.7 (20.3)	1.0 (40.3)	0.7 (5.9)	0.6 (3.3)	226TK (0.92%)
MT	0.4 (10.7)	0.4 (13.3)	0.4 (31.2)	0.2 (28.8)	0.3 (7.6)	0.6 (8.4)	80TK (0.33%)
NC	3.9 (11.7)	3.4 (12.5)	3.0 (26.5)	3.1 (38.8)	2.9 (7.2)	2.1 (3.3)	765TK (3.12%)
ND	0.3 (12.0)	0.3 (12.7)	0.3 (30.3)	0.2 (32.2)	0.2 (6.0)	0.3 (6.9)	57TK (0.23%)
NE	0.7 (11.6)	0.6 (12.7)	0.7 (31.9)	0.4 (29.1)	0.5 (6.7)	0.9 (8.0)	141TK (0.58%)
NH	0.4 (9.4)	0.5 (13.6)	0.5 (33.4)	0.3 (29.5)	0.4 (6.8)	0.6 (7.3)	106TK (0.43%)
NJ	2.2 (7.4)	3.0 (12.3)	2.9 (27.8)	3.0 (41.2)	2.5 (6.9)	2.5 (4.3)	693TK (2.83%)
NM	0.7 (10.6)	0.6 (11.0)	0.7 (27.6)	0.6 (37.5)	0.6 (7.0)	0.8 (6.3)	159TK (0.65%)
NV	0.4 (4.6)	0.7 (9.3)	0.8 (25.5)	0.9 (39.3)	1.6 (14.0)	1.3 (7.3)	218TK (0.89%)
NY	6.7 (9.8)	5.2 (9.4)	4.7 (20.2)	7.6 (46.6)	5.6 (7.0)	9.0 (6.9)	1,552TK (6.33%)
OH	4.2 (10.8)	4.3 (13.7)	3.9 (29.0)	3.3 (35.4)	3.4 (7.3)	2.8 (3.8)	896TK (3.66%)
OK	1.8 (14.0)	1.3 (12.5)	1.1 (25.6)	1.1 (35.6)	1.0 (6.8)	1.3 (5.5)	293TK (1.19%)
OR	0.9 (6.8)	1.2 (10.8)	1.4 (30.6)	1.1 (35.3)	1.5 (9.1)	1.9 (7.4)	311TK (1.27%)
PA	5.0 (11.3)	5.0 (14.1)	4.3 (28.4)	3.8 (36.3)	3.3 (6.4)	2.9 (3.5)	1,010TK (4.12%)
RI	0.3 (7.7)	0.3 (10.6)	0.3 (27.1)	0.4 (39.8)	0.4 (8.7)	0.4 (6.1)	84TK (0.34%)
SC	2.1 (13.1)	1.7 (12.6)	1.5 (26.2)	1.4 (36.2)	1.3 (6.8)	1.6 (5.1)	375TK (1.53%)
SD	0.4 (12.7)	0.3 (12.3)	0.3 (32.0)	0.2 (29.7)	0.2 (6.1)	0.4 (7.2)	64TK (0.26%)
TN	2.6 (11.9)	2.5 (14.1)	2.0 (26.5)	1.9 (36.6)	2.0 (7.4)	1.4 (3.4)	506TK (2.06%)
TX	9.4 (10.8)	7.4 (10.5)	7.4 (25.1)	8.8 (42.2)	7.3 (7.1)	7.0 (4.2)	1,985TK (8.10%)
UT	0.5 (5.7)	0.8 (11.8)	1.1 (35.7)	0.7 (33.0)	0.8 (7.7)	1.0 (6.0)	204TK (0.83%)

State	ONM	OEM	OCM	RNM	REM	RCM	Total
VA	2.2 (7.8)	2.4 (10.7)	3.1 (31.8)	2.3 (34.3)	2.6 (7.7)	4.2 (7.8)	646TK (2.63%)
VT	0.2 (11.1)	0.2 (13.3)	0.3 (33.3)	0.2 (31.2)	0.2 (6.3)	0.2 (4.8)	50TK (0.21%)
WA	1.5 (6.4)	2.0 (10.6)	2.6 (32.2)	2.1 (37.1)	2.3 (8.2)	2.5 (5.4)	546TK (2.23%)
WI	1.9 (9.5)	2.1 (13.2)	2.2 (33.8)	1.5 (31.9)	1.6 (7.1)	1.7 (4.6)	446TK (1.82%)
WV	1.3 (20.4)	0.7 (13.9)	0.5 (22.6)	0.5 (33.7)	0.4 (5.6)	0.5 (3.9)	147TK (0.60%)
WY	0.2 (10.3)	0.2 (13.6)	0.2 (32.7)	0.1 (30.1)	0.2 (7.4)	0.2 (5.8)	45TK (0.18%)
Total	**23M (9%)**	**28M (12%)**	**67M (27%)**	**96M (39%)**	**19M (8%)**	**12M (5%)**	**245M (100%)**

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

Note: Figures outside parentheses are column percentages. Figures inside parentheses are row percentages. Figures outside parentheses in the Total row or column are population size numbers for a specific tenure-mortgage group or a state; TK stands for ten thousands and M stands for millions. Figures inside parentheses in the Total row are percentages for one of the six tenure-mortgage groups. Figures inside parentheses in the Total column are percentages for a state.

ONM = owner without mortgage in the past 16 years, OEM= owner with mortgage in the past 16 years but not now, OCM = owner with mortgage now, RNM = renter without mortgage in the past 16 years, REM = renter with mortgage in the past 16 years but not now, RCM = renter with mortgage now.

Notes

1. Our annual credit bureau draws are from 2010 to 2015. Each draw contains information for the previous 10 years.

2. Again, we define an owner as an adult consumer whose name or whose spouse's name is on a deed of an owner-occupied property. An owner without mortgage in the past 16 years according to his or her credit bureau record is defined as "ONM." However, the consumer's household may have had a mortgage in the past 16 years, which would be unknown to us from the credit bureau data since the consumer is not a mortgagee. Other scenarios for an ONM consumer include a consumer that paid off a mortgage more than 16 years ago.

3. We thought about including all RCM borrowers, but some had undoubtedly received a mortgage in a looser credit environment; others have a mortgage on a less expensive property (a vacation home) and may not qualify for a larger mortgage.

4. Jamie Anderson, "Yes, First-Time Home Buyer Demand is Weak. But Stop Blaming Student Loan Debt," Zillow, September 16, 2015, http://www.zillow.com/research/student-debt-homeownership-10563/.

5. Public records exclude external private collections.

6. Jeanine Skowronski, "More Millennials Say 'No' to Credit Cards," Bankrate, September 8, 2014, http://www.bankrate.com/finance/credit-cards/more-millennials-say-no-to-credit-cards-1.aspx.

7. See http://www2.census.gov/geo/docs/maps-data/data/rel/2010_Census_Tract_to_2010_PUMA.txt.

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Before joining Urban in 2013, Goodman spent 30 years as an analyst and research department manager at a number of Wall Street firms. From 2008 to 2013, she was a senior managing director at Amherst Securities Group, LP, a boutique broker/dealer specializing in securitized products, where her strategy effort became known for its analysis of housing policy issues. From 1993 to 2008, Goodman was head of global fixed income research and manager of US securitized products research at UBS and predecessor firms, which were ranked first by *Institutional Investor* for 11 straight years. She has also held positions as a senior fixed income analyst, a mortgage portfolio manager, and a senior economist at the Federal Reserve Bank of New York.

Goodman was inducted into the Fixed Income Analysts Hall of Fame in 2009. She serves on the board of directors of MFA Financial, is an advisor to Amherst Capital

Management, and is a member of the Bipartisan Policy Center's Housing Commission, the Federal Reserve Bank of New York's Financial Advisory Roundtable, and the New York State Mortgage Relief Incentive Fund Advisory Committee. She has published more than 200 journal articles and has coauthored and coedited five books. Goodman has a BA in mathematics from the University of Pennsylvania and an MA and PhD in economics from Stanford University.

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