

What Drives Consumers' Intentions to Own or Rent

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Financial and Housing attitudes drive most consumers' own-rent intentions more than the traditionally-studied demographics such as income and age.



Overview

From 2006 to 2011, the U.S. housing market experienced the most significant decline in house prices since the Great Depression. Average house prices in the U.S. in the fourth quarter of 2011 were about 21 percent below their 2006 peak on a national basis and much more in some regional locations.¹ The average national foreclosure rate was 4.95 percent in 2010 and 4.1 percent in 2011, compared with the historical average of 0.32 percent over the 1980-2006 period.² The percentage of homeowners nationally who were more than 90 days late on their mortgage payment was 3.5 percent in late 2011, compared with the historical average of 0.78 percent over the 1980-2006 period.³ These housing shocks have raised important questions about the demand for homeownership and have therefore prompted us to investigate what influences Americans' intentions to own or rent their home – the “own-rent intention.” Examining the drivers of Americans' homeownership preferences have important implications for both housing policy makers and industry players in better managing housing-related risks and in encouraging consumers to make sustainable housing choices to ensure a well-functioning housing marketplace.

As part of this study, we conducted predictive modeling to investigate which (subjective) attitudes, in addition to (objective) demographic conditions, best accounted for individuals' current status as homeowners or renters, as well as their intentions to own or rent if they were to move. We have included attitudinal factors since they are often believed to stimulate and act as leading indicators for actual behaviors. In addition, since we are possibly in a time of transition for housing-related behaviors, and as consumer attitudes can shift quickly and far in advance of demographic and socio-economic status, we believe including attitudinal factors in the analysis could be valuable to more quickly identify consumers' current own-rent drivers.

Our analysis found that consumers consider a mix of demographic and attitudinal drivers in their future “next move” own-rent preferences. Demographics such as income, age, marital status, and employment status are the primary drivers of current homeownership status and the own-rent intention for outright homeowners (those who don't have a mortgage). However, attitudes are the key drivers of the own-rent intention for renters and homeowners with a mortgage – two groups that account for about 80 percent of housing units in the U.S.

Surprisingly, we also found that exposure to default, perceived home value appreciation/depreciation, and self-reported underwater status

¹ U.S. Federal Housing Finance Agency (FHFA) Purchase-Only Home Price Index (HPI), (1991Q1=100, Seasonally Adjusted). The HPI change percentage reported here is the difference between 2006 Q3 and 2011 Q4.

² “National Delinquency Survey” from Mortgage Bankers Association (state-level measures adjusted by Moody's Analytics) – Percent in Foreclosure, started (% seasonally adjusted), state data weighted on loans serviced. The historical average is based on 1980 Q1 through 2006 Q3.

³ “National Delinquency Survey” from Mortgage Bankers Association (state-level, annual average of quarterly data adjusted by Moody's Analytics) – Percentage of Loans past due 90 days (% seasonally adjusted), state data weighted on loans serviced. The historical average is based on 1980 Q1 through 2006 Q3.

make minimal incremental contributions to predicting the own-rent intention in the models.

Analysis Approach

To examine the primary factors that influence Americans' own-rent intentions, we analyzed the full year 2011 data from the Fannie Mae National Housing Survey. The Fannie Mae National Housing Survey is a monthly survey that polls 1,000 adults every month across the U.S. with more than 100 questions to assess consumers' attitudes regarding the economy, household finances, and owning and renting, as well as their demographic conditions.⁴ The full-year data incorporates the responses of 12,014 individuals, collected from January to December 2011.

The specific questions we focused on were:

- What factors influence consumers' current homeownership status (i.e., whether they own or rent today)?

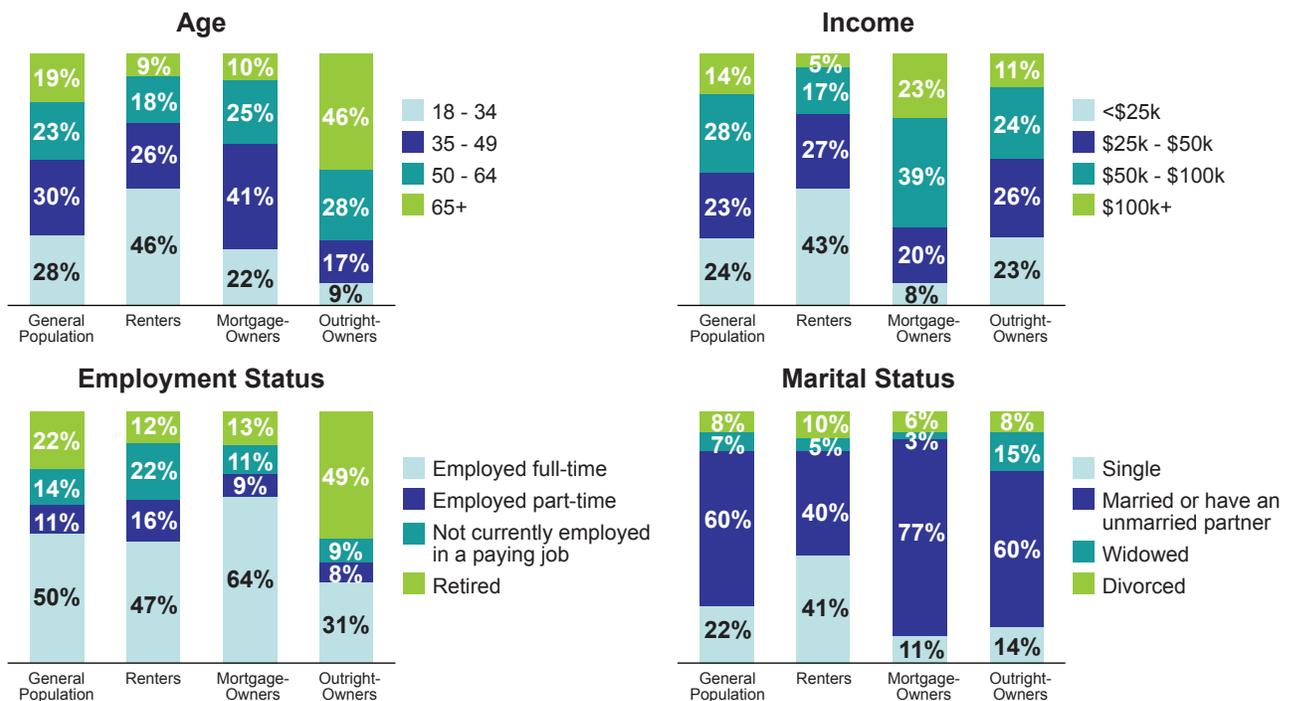
- What factors drive consumers' intentions to buy or rent in the future (i.e., whether they will own or rent if they were to move)? And, how do the factors differ among the following three population groups:

- 1) Current renters
- 2) Current homeowners with a mortgage (mortgage-owners)
- 3) Current homeowners without a mortgage (outright-owners)

We focused on these three population groups because they generally fall into three different life stages with respect to housing tenure. As the National Housing Survey data shows in **Figure 1**, renters overall tend to be younger and more likely to be single; mortgage-owners are more likely to be middle-aged, married, and employed full-time; and outright-owners tend to be older and more likely to be retired and widowed. The analyses across these three groups help illustrate similarities as well as differences in the own-rent decision-making process that exist throughout an individual's life cycle.

Figure 1: There is a clear life stage progression related to housing tenure as individuals move from renting to having a mortgage to outright owning

- **Renters:** Younger, more likely to be single and have lower income, less likely to be employed full-time
- **Mortgage-Owners:** More likely to be middle-aged, employed full-time, married, and have higher income
- **Outright-Owners:** Older, more likely to be retired, widowed, and past their peak earning years



Source: Fannie Mae 2011 National Housing Survey, January – December

⁴ Additional details about Fannie Mae's National Housing Survey including methodology, the questionnaire, published results, and a comparison to other consumer surveys can be found on www.fanniemae.com. For the details of the methodology, see <http://www.fanniemae.com/resources/file/research/housingsurvey/pdf/nhstechnicalnotes.pdf>. The questionnaire can be found at <http://www.fanniemae.com/resources/file/research/housingsurvey/pdf/nhsquestionnaire.pdf>. For the monthly trending analysis, see <http://www.fanniemae.com/portal/research-and-analysis/housing-monthly.html>; for in-depth quarterly topic analysis, see <http://www.fanniemae.com/portal/research-and-analysis/housing-quarterly.html>.

Model Specifications

We focused on two variables of primary interest for this study:

- (1) Current Homeownership Status, “Do you own your primary residence?” with response categories of “Yes,” “No,” or “Don’t know.”
- (2) Prospective Homeownership Intent, “If you were going to move, would you be more likely to buy or rent (with the option of “Don’t know”).”⁵

With more than 100 questions covered in the Fannie Mae National Housing Survey, this study attempted to identify the top variables that best account for current homeownership and prospective homeownership. The research approach taken by this study was therefore exploratory in nature, as opposed to being driven by specific hypotheses to test. We attempted to let the data speak for itself to determine, from among more than 100 variables in the survey, the most significant variables in predicting respondents’ own-rent response.

A series of steps was taken for the analysis. First, to help identify the variables to be used in later predictive modeling, correlation analyses were conducted between each of the own-rent questions and all the variables covered in the survey, including demographics, household finances, financial attitudes, beliefs regarding owning vs. renting, perceived financial and non-financial homeownership benefits and barriers, exposure to mortgage default, etc. Based on the correlation results, the top 25-30 variables with the highest simple correlations were then identified and entered into step-wise logistic regressions to predict the likelihood of owning a home at the current state and the intention to buy a home or rent at the next move. Based on the step-wise logistic regressions, the final predictive models with the top 10-15 variables were then established.⁶

Multicollinearity, a statistical phenomenon in which explanatory variables are highly inter-correlated (i.e., income, age, financial attitudes, etc.), was observed among some of the variables. The top 10-15 variables in the final models are the most powerful in explaining the own-rent choice data. Because of multicollinearity, some variables might have statistically significant correlations with the own-rent choice, but they do not show up in the final models because their effects on the own-rent choice were better explained by other

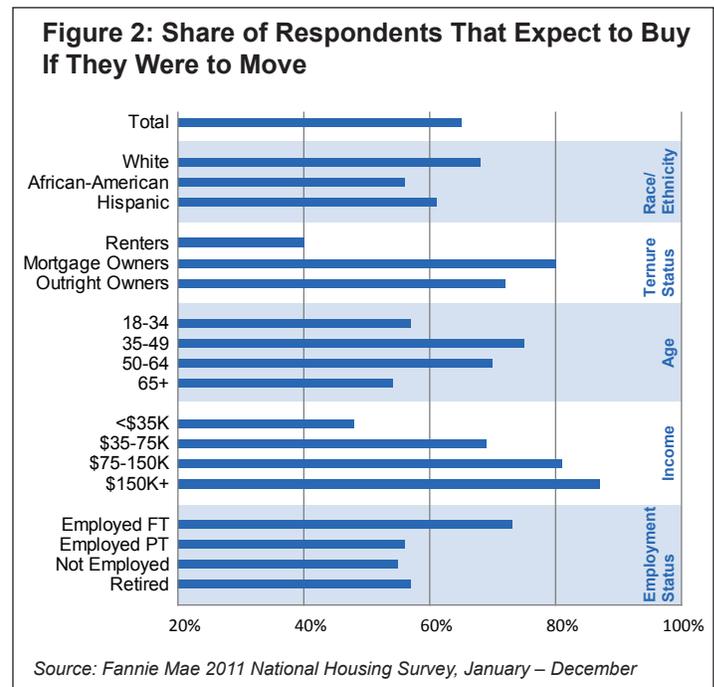
variables already present in the model. The results discussed here focus on these top variables.

It is worth noting that while the approach used in this study was exploratory in nature, we did place some minor constraints in the models by excluding self-reported debt and assets variables from the modeling process. Self-reported debt and assets were found to be the top variables in predicting current homeownership status. We decided to drop these two variables, considering that debt and assets might be the “outcome” of homeownership, as people have more debt and assets once they purchase a home. Removing these two variables from the current homeownership model resulted in higher weights of other demographic variables such as income, marital status, and employment status in predicting current homeownership.

Key Insights

The 2011 National Housing Survey results show that homeownership still appeals to the majority of Americans, with 85 percent saying owning makes more sense than renting financially over the long term and 64 percent of respondents saying that, if they were going to move, they would buy a home.

Figure 2 shows how different respondents in the survey answered the “next-move” own-rent question.

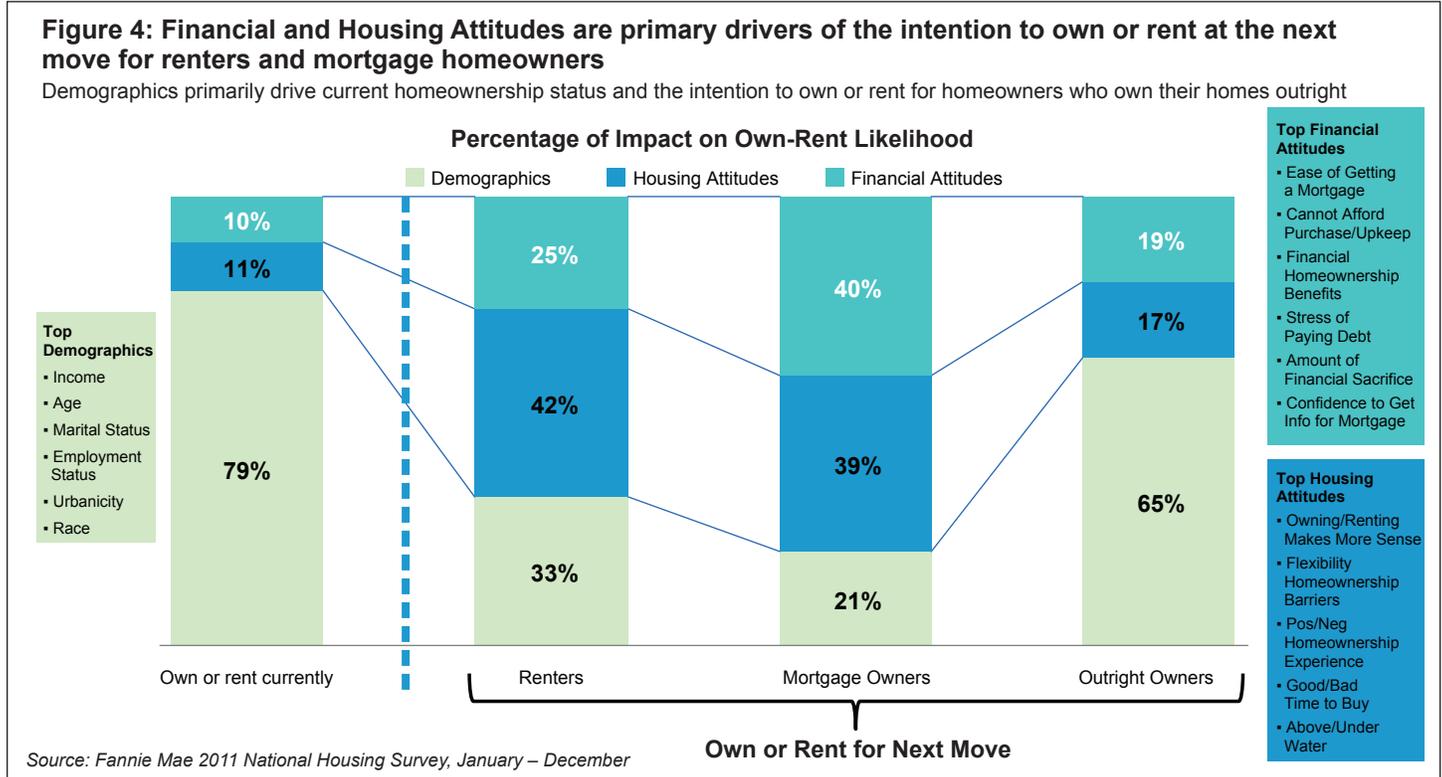
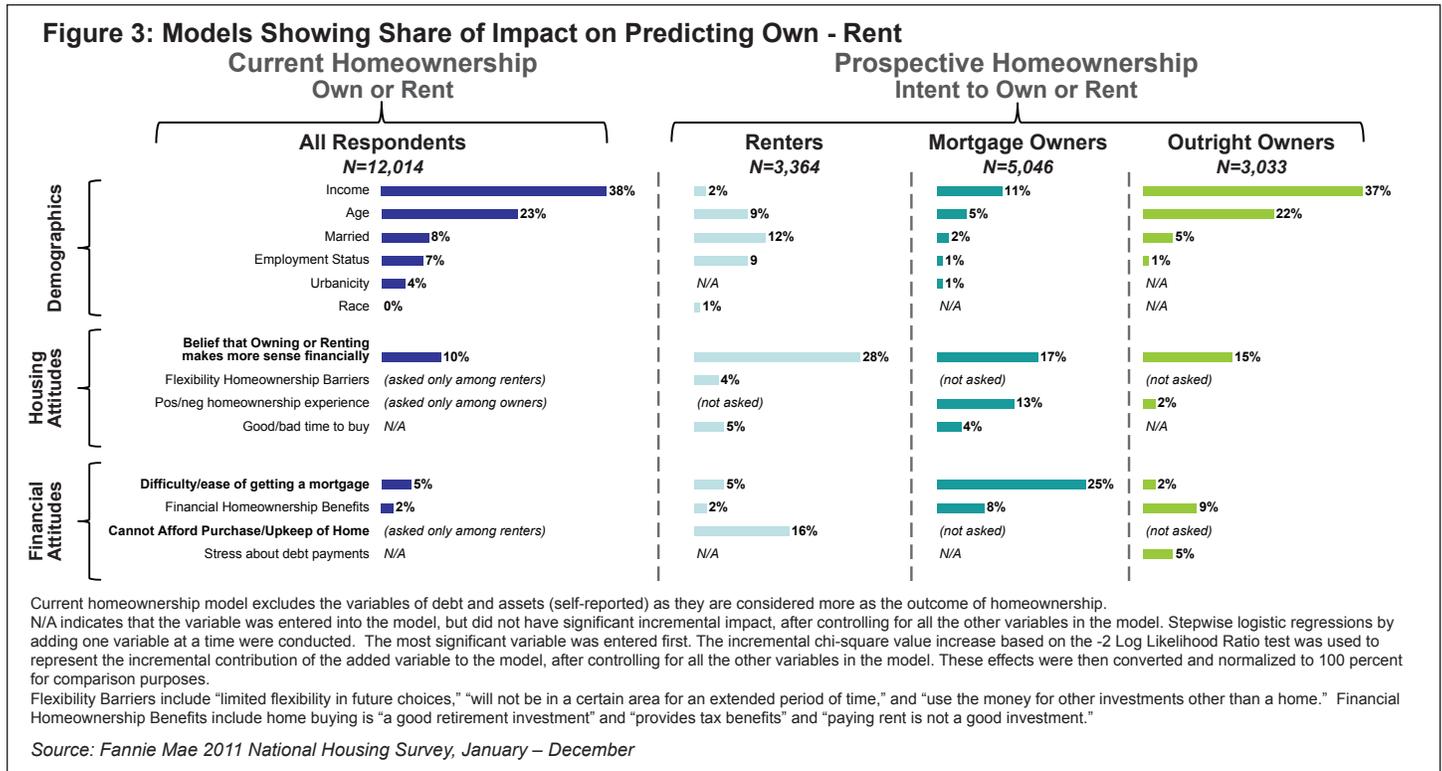


⁵ This question assesses general consumers’ “stated” preferences for owning versus renting for their next move. The extent to which this question truly reflects respondents’ “actual” behavior at their next move cannot be determined.

⁶ Forward-selection stepwise regressions were conducted, which started with no variables in the model, then introduced the variables one by one and included them in the model if they were statistically significant. The most significant variable was entered first. Other variables were selected at each subsequent step if they made additional contribution to the model given the variables already selected in the model. This is an automatic procedure for statistical model selection where there is a large number of potential explanatory variables, and no underlying theory on which to base the model selection. Please note that the order in which variables are entered affects the variable’s contribution to the model. Nagelkerk Pseudo R-Squared is .48 for the current homeownership model and is .27, .27, and .22 for the prospective homeownership models, respectively among renters, mortgage owners, and outright owners.

Figure 3 below presents the relative importance of each primary factor in predicting the own-rent response across the four models, after controlling for

all the other factors within the model. These effects are normalized to 100 percent for comparison purposes.⁷



⁷ The incremental chi-square value increase based on the -2 Log Likelihood Ratio test was used here to represent the incremental contribution of each additional variable added to the model. These values were then converted and normalized to 100 percent. Other methods to estimate the relative importance of independent variables in predicting the dependent variable such as standardized betas yielded similar results.

Figure 4 provides a more strategic summary view by grouping the variables into three categories: Demographics, Housing Attitudes, and Financial Attitudes. Figures 3 and 4 considered together suggest:

- Demographics (such as income, age, marital status, and employment status) are the primary drivers of current homeownership status and the intention to own or rent for outright-owners, by a wide margin over financial and housing attitudes.
- However, in relation to one's "next-move" housing preference, housing and financial attitudes are the key drivers of the intention to own or rent for renters and mortgage-owners. These two groups account for about 80 percent of housing units in the US.⁸

The analysis yields differences in the factors driving the own-rent intention in each of the models across the three population groups:

- The belief of whether "owning or renting makes more sense financially over the long term" fundamentally drives all three populations to behave accordingly as the top housing attitude, and especially among renters where it is the top overall driver.
- Perceived Ease/Difficulty of getting a mortgage is the primary driver of the own-rent intention for mortgage-owners, but is a much less important factor for renters.
- Existing Homeownership Experience (i.e., "Has homeownership been very positive for you and your family, somewhat positive, somewhat negative, or very negative for you and your family") is a primary driver of the own-rent intention among mortgage-owners, but not among outright-owners. The results here suggest that, once consumers buy a home, obtain a mortgage, and have a positive owning experience, they want to continue owning. We also built a predictive model based on the entire sample (including renters, mortgage-owners, and outright-owners). Current tenure choice was found to be a dominant factor with a 51 percent weight in predicting the next-move own-rent intention, suggesting that once people own a home, they would want to continue owning.⁹
- Concern with the affordability of home purchase and the upkeep of a house is a major factor discouraging renters from buying.

- Demographics including income and age are the top drivers for outright-owners to continue owning.

Interestingly, exposure to default, perceived home value appreciation/depreciation, and non-financial benefits of homeownership (e.g., having a good place to raise and educate children, safety, more space, and control), although they have statistically significant correlations with the own-rent intention under the bi-variate analysis, are shown to make no major incremental contributions to predicting the own-rent intention in the models. In addition, self-reported underwater status has a very minimal incremental impact.¹⁰

Figure 4 suggests that there are distinct lifecycle differences in the future own-rent decision-making process when combined with the demographics details underlying each model. Attitudes are the lead drivers for younger renters and middle-aged mortgage-owners, but demographics are the lead drivers for older outright-owners. For renters and mortgage-owners, aspirations for and belief in homeownership play a major role in decision-making, possibly forming a "homeownership optimism" in determining whether they expect to own or rent in the future. For outright-owners, their housing choice preference is driven more by their demographics, specifically income and employment status, possibly due to it having a limiting effect on attitudes since upside financial possibilities are less likely at the later stage of life where income is past its peak and one is more likely to be retired.

Discussion/Implications

The above key findings suggest that:

- Traditionally, research has focused almost exclusively on the demographic drivers such as income and age for the own-rent housing decision. Possibly, this is because demographics are the more tangible drivers of the own-rent decision and are historically used in mortgage underwriting. We found that the three population segments modeled here are affected by a mix of demographic and attitudinal drivers in their future or "next move" own-rent preferences. **Renters and mortgage-owners are most affected by attitudinal drivers.** Since a mix of demographic and attitudinal drivers can influence Americans' own-rent decision, resources to help consumers to more deliberately understand and balance these drivers may allow them

⁸ According to the 2010 Decennial Census, the distribution of occupied housing units in the U.S. is 19.7 percent own free and clear, 45.4 percent own with a mortgage, and 34.9 percent renter-occupied. In Fannie Mae's full year 2011 National Housing Survey, 25.2 percent of respondents own homes outright; 42.0 percent own with a mortgage; 28.0 percent rent; and 4.8 percent live with someone without paying for housing.

⁹ A separate step-wise logistic regression model was conducted based on the entire sample, excluding the current tenure choice variable (as it is a dominant factor, if included in the model, with a 51 percent weight in predicting the next-move own-rent choice). Top variables include income (34.2%), the belief of owning or renting makes sense (23.8%), marital status (10.5%), and perceived ease/difficulty to get a mortgage (8%), altogether accounting for 77 percent of importance in predicting the next-move own-rent response.

¹⁰ The percentage of importance of the self-reported above/underwater status in predicting the next-move own-rent response is 1.7 percent, too minimal to be shown on Figure 3.

to make better, more sustainable housing choices. It is possible that many of these drivers, especially the attitudinal ones, act as automatic or unconscious biases that lead consumers to less fulfilling and less successful housing choices – e.g., needs that drive a consumer to over-consume in their home purchase and ultimately default, fears that prevent a well-qualified renter from purchasing a home that will better suit their needs, or expectations that drive a happy renter to become a less happy homeowner. Further research is necessary to explore the factors that impact the formation and deliberate understanding of demographic and attitudinal drivers for the own-rent decision.

- Our study shows that the negative housing events of the past few years have not discouraged people from wanting to own a home. Exposure to mortgage default, perceived home value appreciation/depreciation, and self-reported underwater status are not significant factors in the models in predicting individuals' intentions to own a home for their next move. These results suggest that Americans' aspirations to own a home are strong even

when facing the dramatic challenges in the housing market over the past few years. This finding could possibly be related to our prior conclusion about the automatic biases that drive the own-rent decision and may attest to their relative strength.

- If further research bears these initial conclusions out, then it might be worthwhile to:
 - provide further education to potential home owners to understand and balance their financial commitment with the less tangible but powerful attitudes that drive their own-rent behavior,
 - reflect the impact of attitudinal drivers on how consumers value the housing asset in underwriting, pricing, and risk models to potentially improve mortgage underwriting, pricing, and loss mitigation, especially since they may influence behaviors in distress scenarios, and
 - consider the impact of this emphasis on attitudinal drivers on prudential and regulatory standards.

Own-Rent Analysis

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