FannieMae

OWN-RENT ANALYSIS

Fannie Mae Own-Rent Analysis

Theme 1: Persistence of the Homeownership Aspiration

Release Date: December 9, 2010

Overview of Fannie Mae Own-Rent Analysis

Objective

- Fannie Mae conducted a research project to better understand the factors influencing consumers' decisions to buy or to rent their homes and to compare current actions and financial considerations with historic behaviors and economic factors/conditions

Methodology

- As part of the work, Penn Schoen Berland, in partnership with Oliver Wyman, conducted telephone interviews with 2,041 general respondents plus 1,566 additional respondents from geographic areas of interest
  - To inform the survey design, focus groups were held in Washington, DC and Phoenix, AZ during July and August 2010
  - Telephone interviews were carried out during August and September 2010
- In addition to the survey, research was conducted in order to evaluate the survey findings comparatively with historical market experience

Results

- The research results are being disclosed in a series of summary themed reports
- This is the first themed report: *Persistence of the Homeownership Aspiration*

Driven by lifestyle considerations, homeownership remains a strongly held aspiration for most people in spite of recent turmoil in the housing market

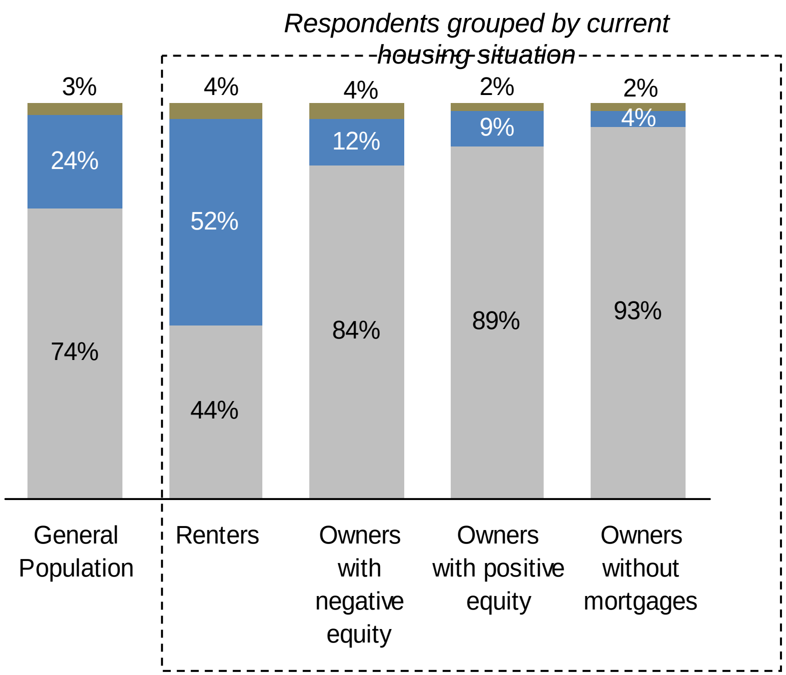
- Desire to own a home remains strong: the substantial majority of owners as well as half of renters believe they would be better off owning their homes, both in terms of finances and lifestyles
  - Positive attitudes toward homeownership are common across owners and renters
  - Owners consistently report most satisfaction with their housing situation
  - Even borrowers with underwater mortgages have positive associations with ownership
  - However, some renters may be increasingly likely to continue renting at least for the short term due to concerns about financial constraints and the economy

- Decision to buy is largely driven by lifestyle and life cycle considerations, whereas decision to rent is driven primarily by financial constraints
  - Ownership rates increase with income and age
  - Renters are under substantially more financial constraints than owners in terms of income, savings, wealth, and access to credit

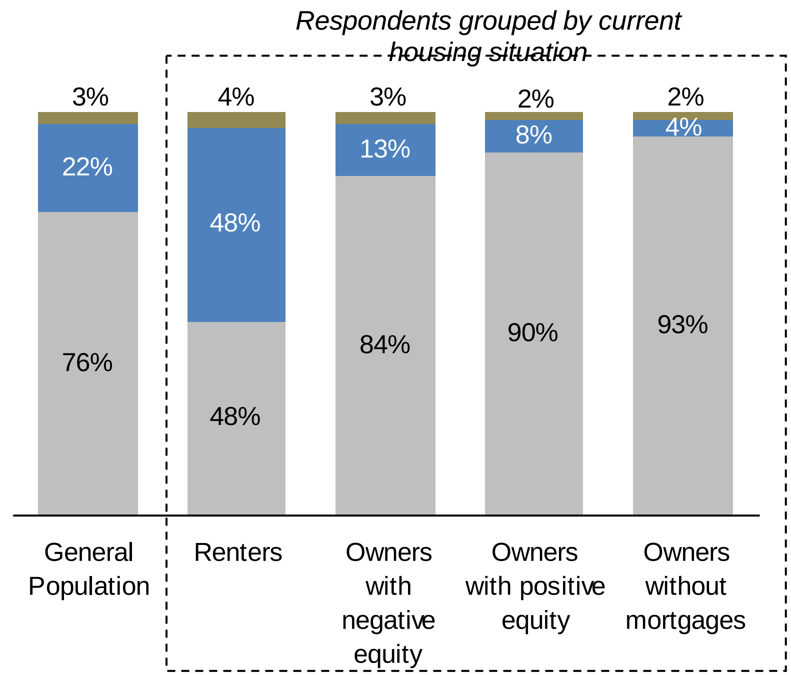
- Homeownership rates have fallen to 66.9% in Q3 2010 from their peak of 69.2% during Q4 2004, but the ultimate impact of the crisis on homeownership rates remains unknown
  - Attitudes toward homeownership remain positive
  - Although personal finances and access to credit have weakened for many people, home prices and interest rates have decreased, which improves affordability

The vast majority of owners believe they are better off with their current housing choice, but renters are divided between owning and renting

Given your current <u>household finances</u>, do you think you would be better off renting your home or would you be better off owning your home?



Given your current <u>lifestyle and family situation</u>, do you think you would be better off renting your home or would you be better off owning your home?



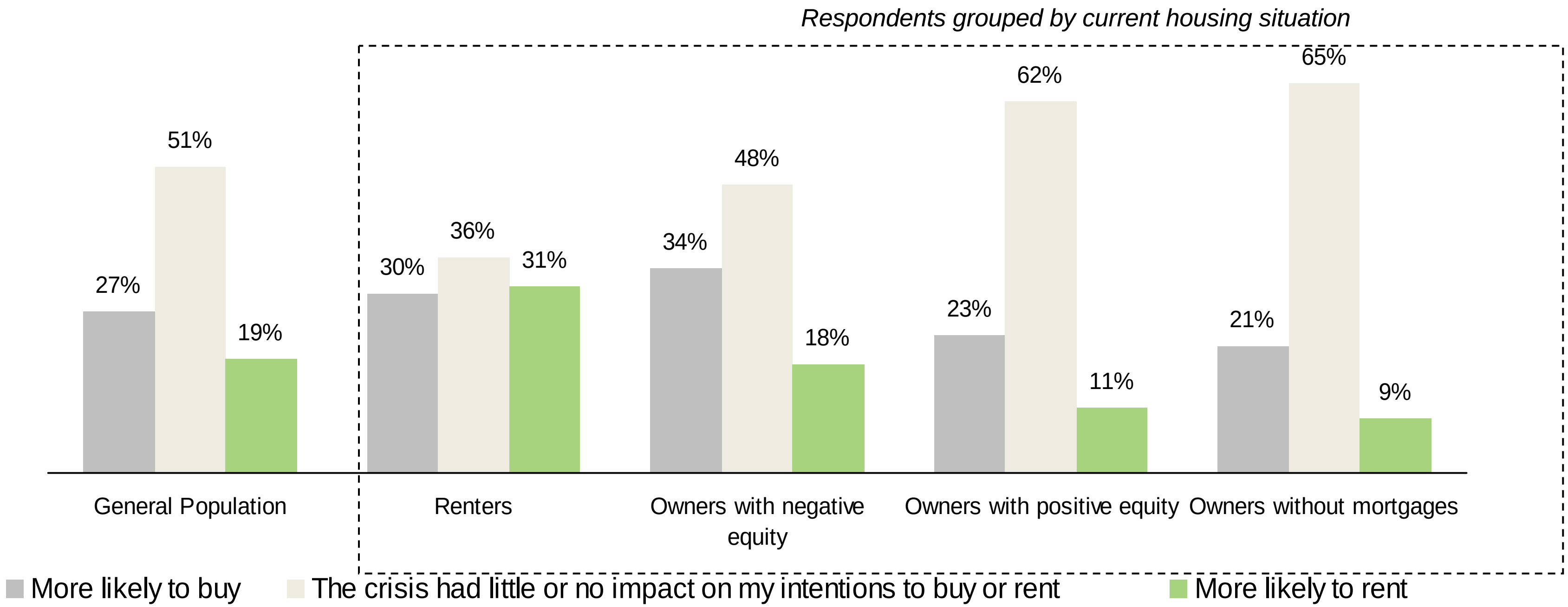
Better off owning ***Better off renting*** ***Don't know***

- Responses across the two questions overlap significantly; among people who believe they would be better off owning based on their finances, 81% believe that they also would be better off owning considering their lifestyle and family situation

Source: Fannie Mae 2010 Own-Rent Survey
Note: Owners with mortgages about equal to the value of their home are not included in the breakout.

The housing crisis does not appear to have deteriorated overall willingness to buy among current owners or renters

*Has the housing crisis made you…?**

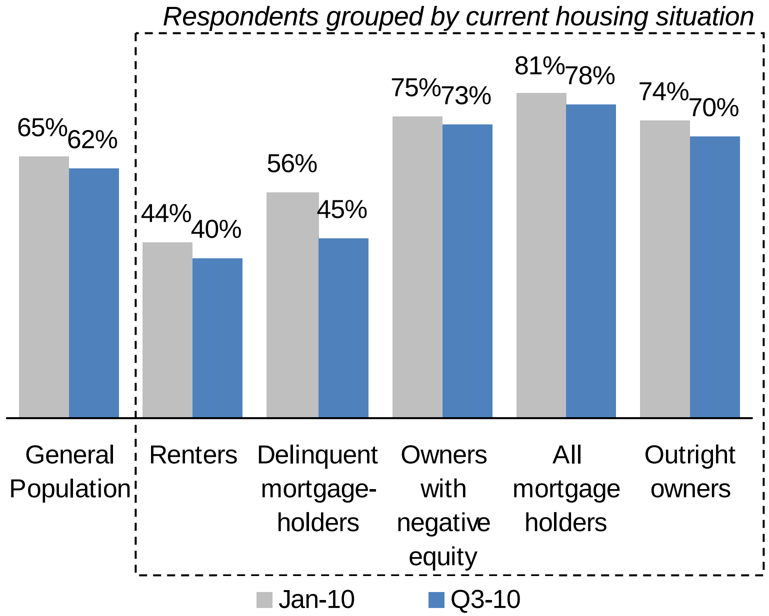


- Recent experiences in the real estate market do not appear to have reduced the appetite for home ownership
- Underwater borrowers are more likely to report that the crisis has increased their intentions to buy likely due to improved affordability from lower house prices

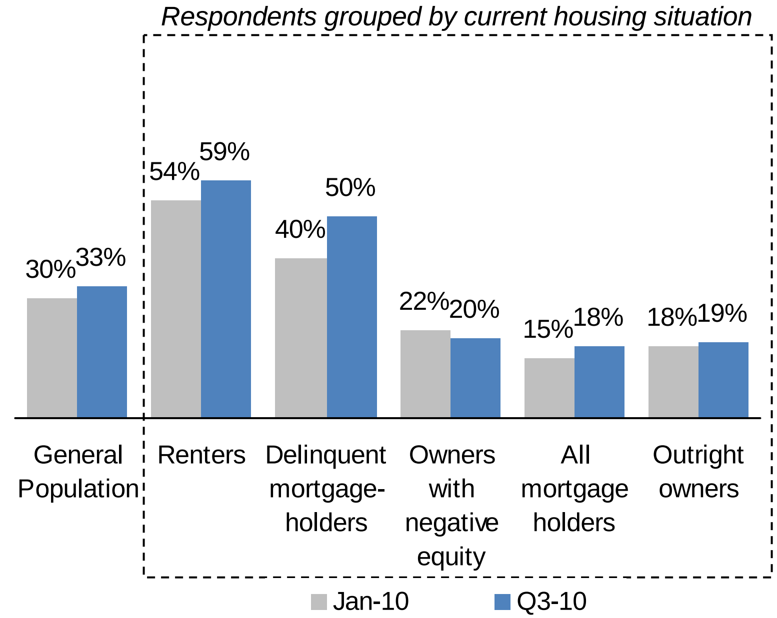
Source: Fannie Mae 2010 Own-Rent Survey
*Note that on each question, respondents had the option to answer "don't know" (volunteered), which is why, in some cases, the total % may not equal 100. Owners with mortgages about equal to the value of their home are not included in the breakout.

Although ownership aspirations remain high over the long-term, renters may be delaying their plans to transition into ownership

If you were going to move, would you be more likely to buy?



If you were going to move, would you be more likely to rent?



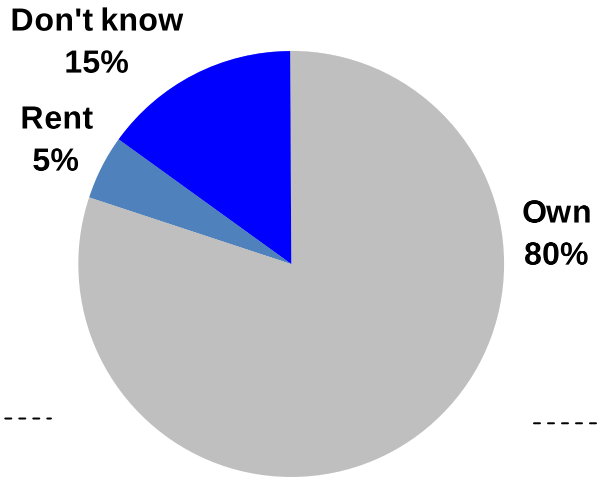
- From January 2010 to the third quarter, the percentage of renters who say they will probably continue to rent in their next move increased from 54% to 59%
- 36% of renters think it is a bad time to buy relative to 21% of mortgage holders and 28% of outright owners
- The most common barriers that renters identify as major reasons preventing them from transitioning to ownership include
  - Not having good enough credit for a mortgage (major reason for 52% of renters)
  - Not being able to afford the purchase or upkeep of a home (major reason for 46% of renters)
  - Thinking it's not a good time economically to buy (major reason for 43% of renters)

Source: National Housing Survey, November 23, 2010

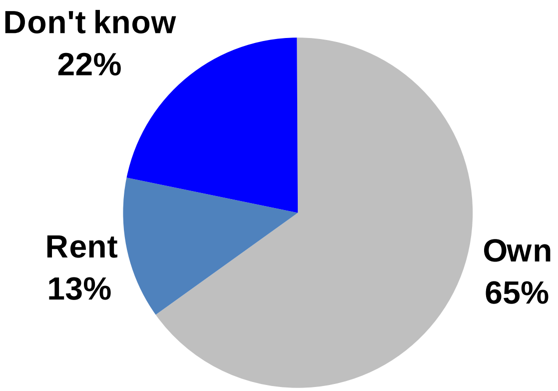
Most respondents have positive perceptions of the externalities of homeownership with 80% of respondents preferring to live among owners

Would you prefer to live in a neighborhood where most people…?

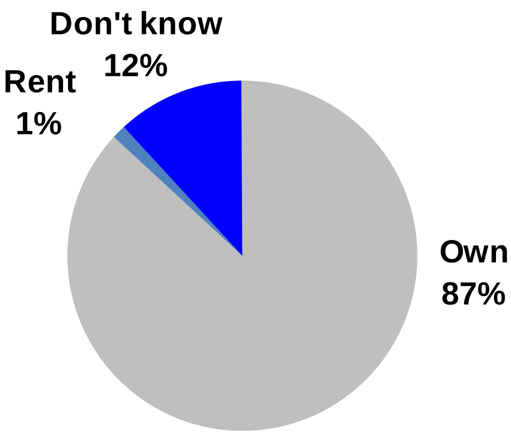
General population



Renters



Owners

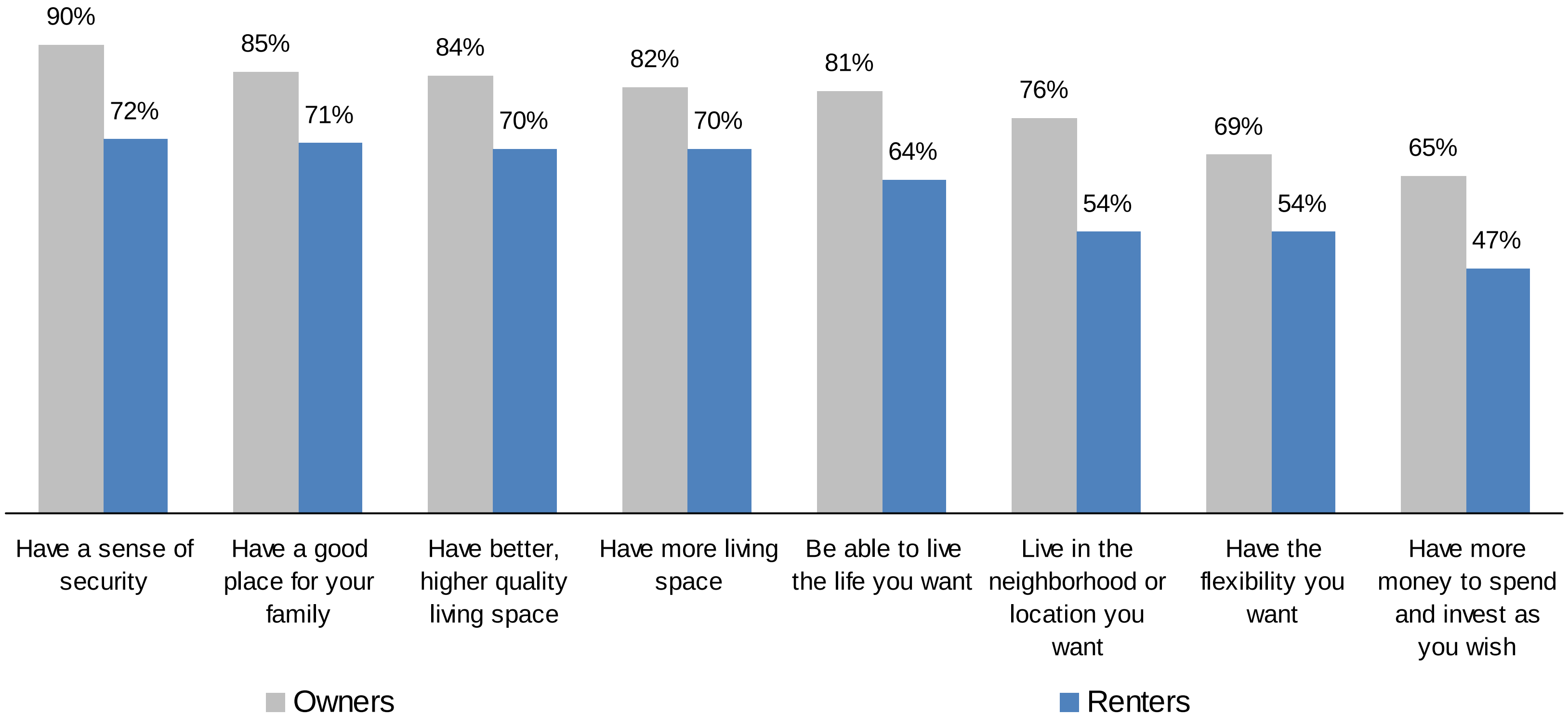


Source: Fannie Mae 2010 Own-Rent Survey

Assuming financial impact was the same, ownership is perceived as the superior housing option across the board

Assuming the financial impact of renting or owning a particular home were about the same, are you better off renting or owning to…?

Respondents selecting “Better off owning” shown in graph. Other responses included “Better off renting” and “No real difference” (selected by over 10% of respondents on each question)



Source: Fannie Mae 2010 Own-Rent Survey

Respondents are increasingly able to realize homeownership aspirations as they age and as their incomes increase

Homeownership rates by age and income from Fannie Mae Own-Rent Survey

Standard errors in red

Family income in 2009

Age	<25K	25K - 49K	50K - 99K	100K+
18 - 29	10% 2.9%	38% 4.6%	42% 5.3%	54% 8.4%
30 - 39	24% 4.8%	43% 5.2%	66% 4.7%	85% 4.0%
40 - 49	38% 6.0%	53% 5.1%	83% 3.4%	90% 3.8%
50 - 59	45% 5.7%	71% 6.0%	86% 3.4%	98% 1.8%
60+	67% 4.0%	87% 2.9%	89% 3.2%	87% 5.5%

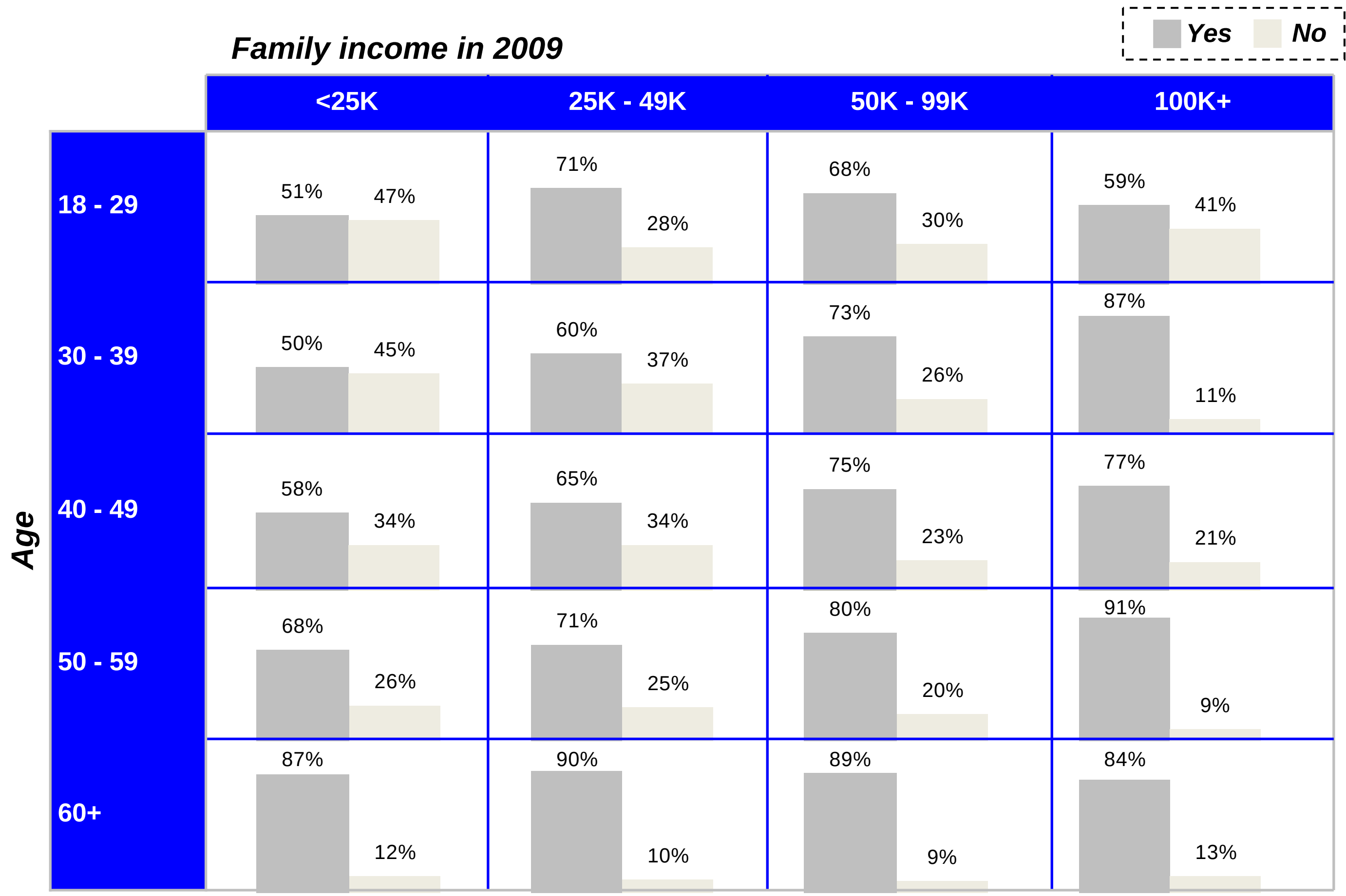
- Although public data sources have greater number of responses on age and income, survey results are more recent and allow the study of attitudes and beliefs simultaneously with demographic factors
- The findings on the table are consistent with logistic regression analysis of the dataset which shows that the likelihood of homeownership increases with age, income, and wealth[1]
  - For example, someone earning $100,000-$150,000 per year is over 18 times more likely to own a home than someone earning less than $15,000 per year, for a given age and level of wealth
  - Someone 55-65 years old is almost four times more likely to own than someone 25-35 years old, for a given income and level of wealth

Source: Fannie Mae 2010 Own-Rent Survey

1. Regression analysis will be detailed in a separate release. The approach involved accurately estimating the impact of age, income, and wealth on the probability of homeownership through a logistic regression, where the properly specified coefficients could be interpreted as the marginal impact on the odds of homeownership.

As homeownership rates increase with age and income, so does the satisfaction respondents report with their housing situations

*Are you doing what you want with regard to your housing situation?**



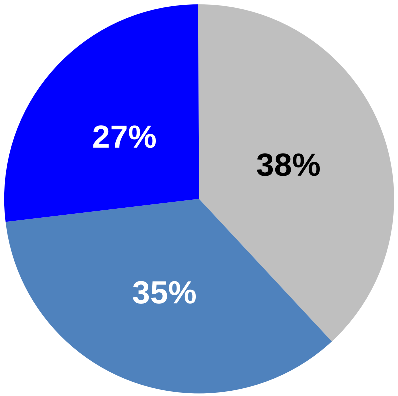
Source: Fannie Mae 2010 Own-Rent Survey

* Question wording has been simplified for clarity. Note that on each question, respondents had the option to answer "don't know" (volunteered), which is why, in some cases, the total % may not equal 100.

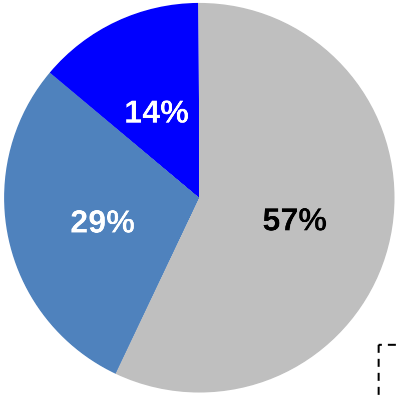
Respondents believe that the best reasons to rent are financial but that the best reasons to own are lifestyle-driven

What is the best reason to rent a home?

Current Owners

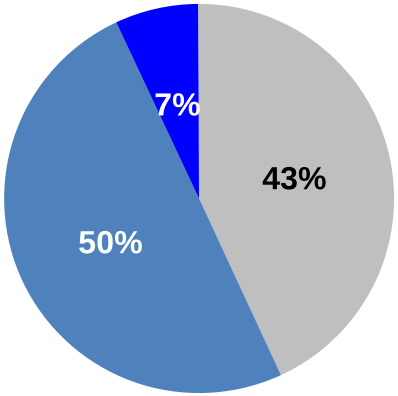


Current Renters

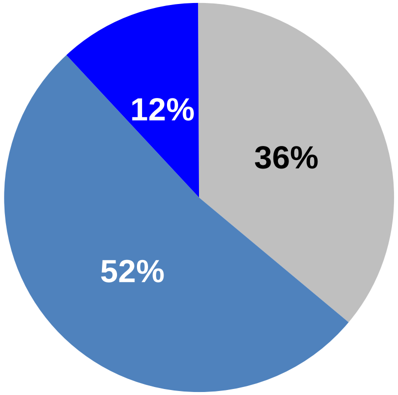


What is the best reason to buy a home?

Current Owners



Current Renters



Financial benefits
Lifestyle benefits
Don't know

Source: Fannie Mae 2010 Own-Rent Survey

Theme 1: Persistence of the Homeownership Aspiration

There are limited meaningful attitude differences between owners and renters, although owners expressed slightly more caution on some financial factors

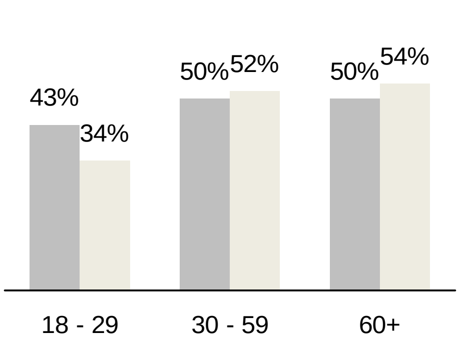
How well does this describe you?

% of "very well" responses are plotted

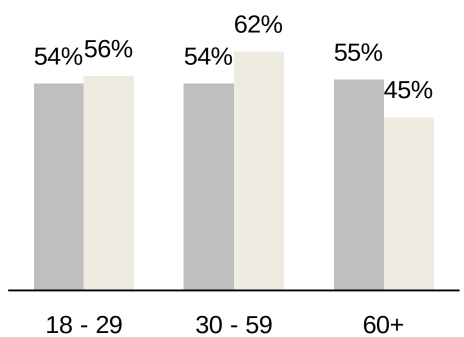
Owners ***Renters***

Select lifestyle attitudes

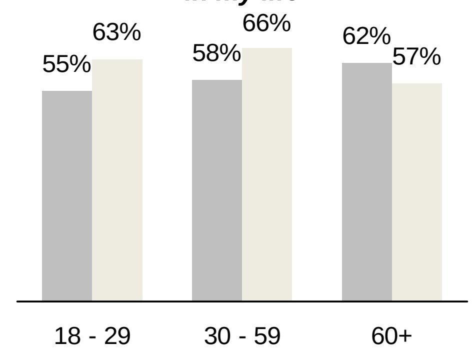
I would rather spend time at home than go out



I believe that tomorrow will be better than today

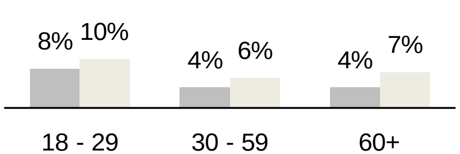


It's very important to have flexibility in my life

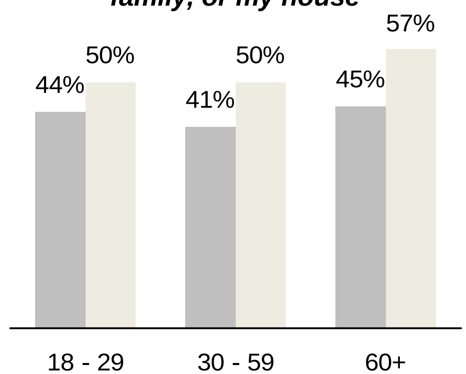


Select financial attitudes

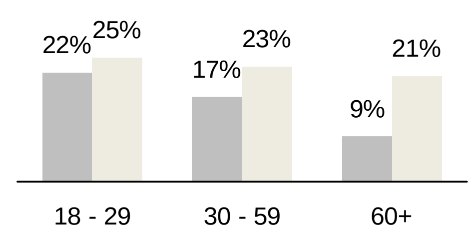
I sometimes use credit to buy things I cannot really afford



It makes me feel good to splurge on something nice for myself, my family, or my house



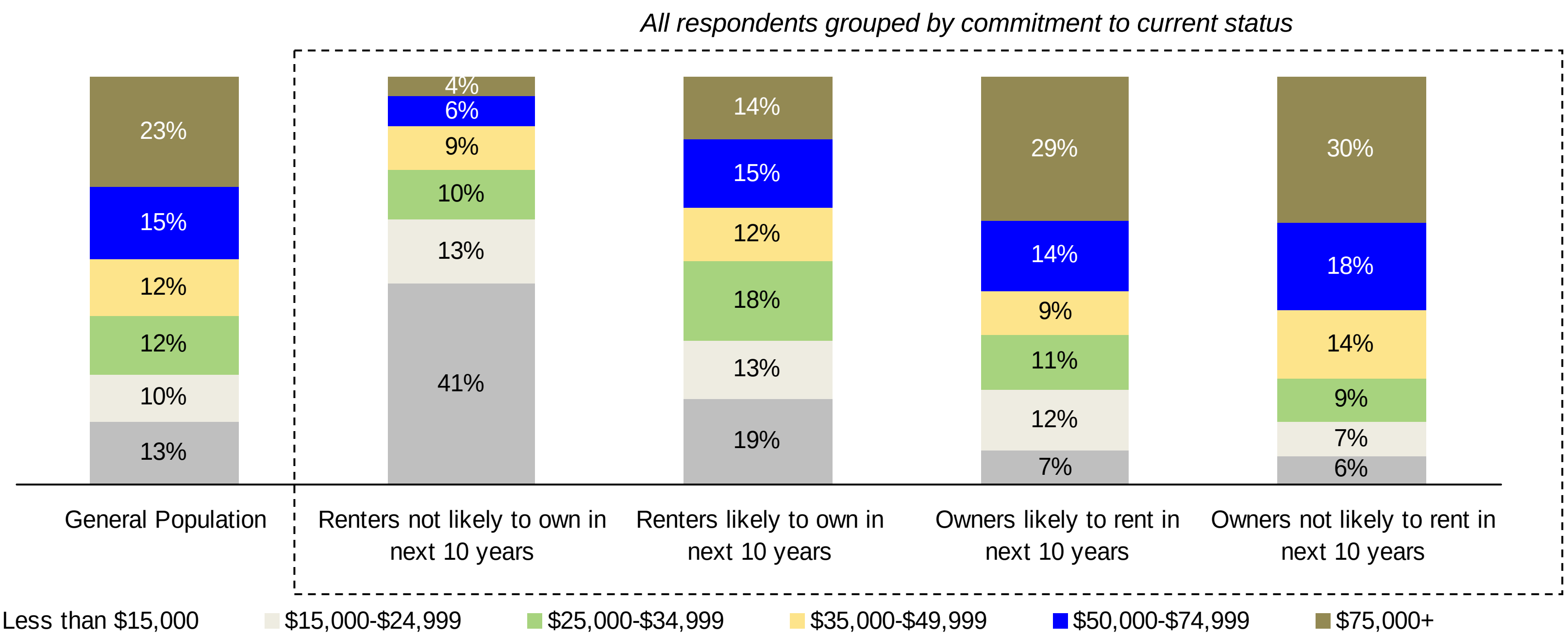
I am always looking for new investment opportunities



Source: Fannie Mae 2010 Own-Rent Survey

Renters tend to face more financial constraints than owners: More than 50% of renters may lack the income to qualify for a mortgage on a typical home

Which of the following categories best represents your total family income for 2009?*



- 64% of renters who do not plan to own and 50% of renters who plan to own probably do not have sufficient income to qualify for the mortgage on a median-priced home[1]
- According to regression analysis, earning less than $15,000 reduces the likelihood of homeownership by approximately two-thirds relative to all other income brackets[2]

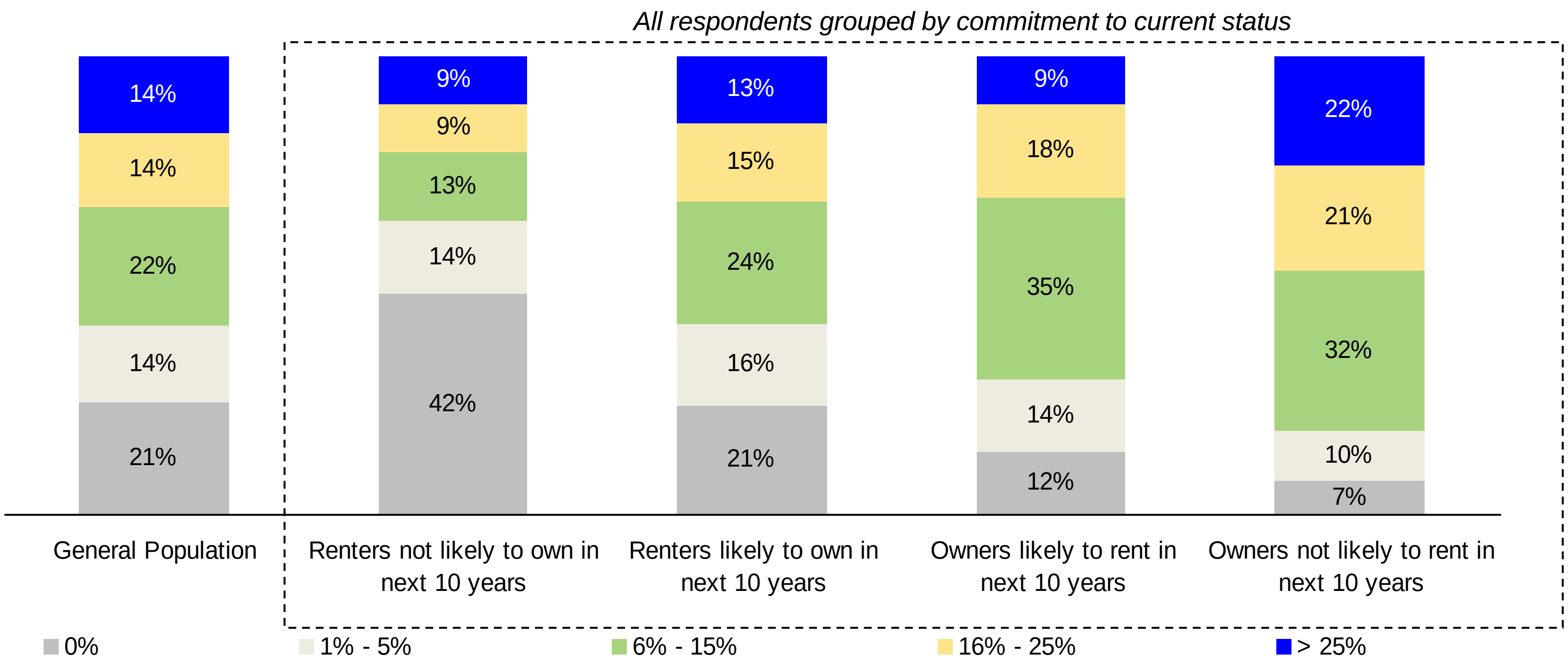
Source: Fannie Mae 2010 Own-Rent Survey

* Note that on each question, respondents had the option to answer "don't know" (volunteered), which is why, in some cases, the total % may not equal 100.

1. Calculation based on August 2010 data. Median home price of $204K (US Census), 30-yr fixed-rate mortgage with effective interest rate of 4.74% (FHFA) and 20% down payment, plus rule of thumb that mortgage payment should not exceed 28% of gross income.
2. Regression analysis will be detailed in a separate release. The approach involved accurately estimating the impact of age, income, and wealth on the probability of homeownership through a logistic regression, where the properly specified coefficients could be interpreted as the marginal impact on the odds of homeownership.

Renters tend to face more financial constraints than owners: More than 20% of renters do not save any of their income

What percent of your income currently goes into savings?*

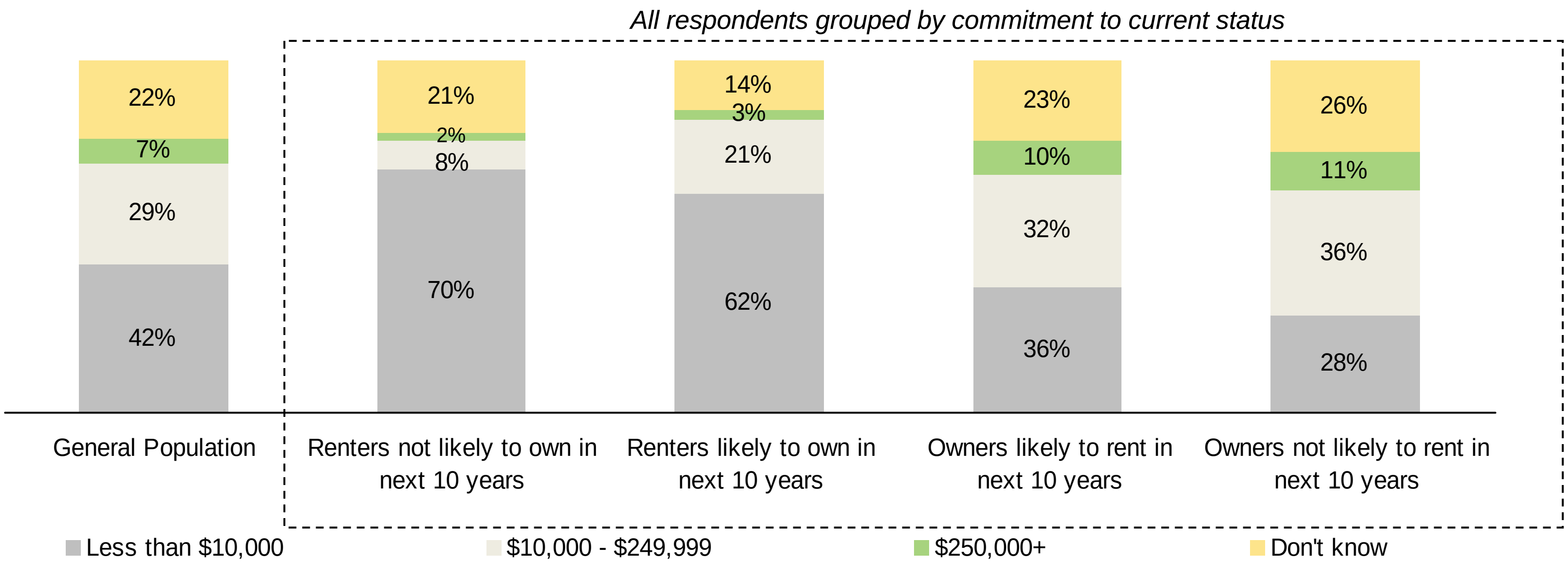


- Renter savings habits differ based on whether they plan to transition to ownership
  - Renters who don’t plan to own are more likely to be retired or low income and thus less likely to be saving
  - Renters who plan to own are likely to be saving for a down payment
- Committed owners have higher savings rates than owners who may transition to renting, probably because owners who may rent have lower incomes

Source: Fannie Mae 2010 Own-Rent Survey
* Note that on each question, respondents had the option to answer "don't know" (volunteered), which is why, in some cases, the total % may not equal 100.

Renters tend to face more financial constraints than owners: More than 60% of renters have less than $10,000 in investable assets

Which of the following categories best represents how much in assets you have currently, either invested or available for investing, in terms of checking or savings accounts, investment accounts, and brokerage accounts, but not including the value of any real estate or employer-sponsored retirement plan such as a 401k?*

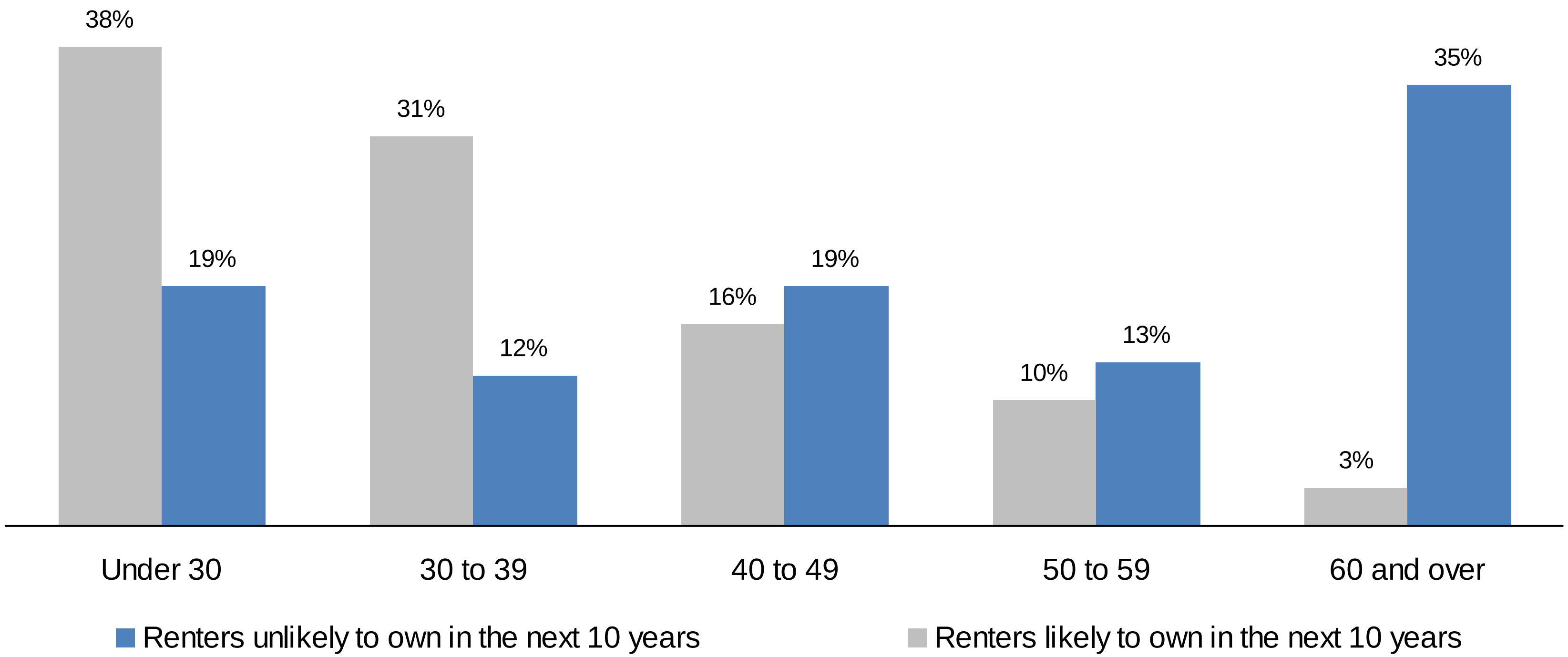


- With under $10,000 in investable assets, many renters would struggle to make a down payment and cover closing costs associated with transition into homeownership
- Having savings of under $10,000 decreases the likelihood of owning by about 50% relative to savings over $10,000 according to regression analysis[1]

Source: Fannie Mae 2010 Own-Rent Survey
*Note that on each question, respondents had the option to answer "don't know" (volunteered), which is why, in some cases, the total % may not equal 100.
1. Regression analysis will be detailed in a separate release. The approach involved accurately estimating the impact of age, income, and wealth on the probability of homeownership through a logistic regression, where the properly specified coefficients could be interpreted as the marginal impact on the odds of homeownership.

Renters who plan to transition to ownership tend to be younger than renters who do not plan to transition

What is your age?*



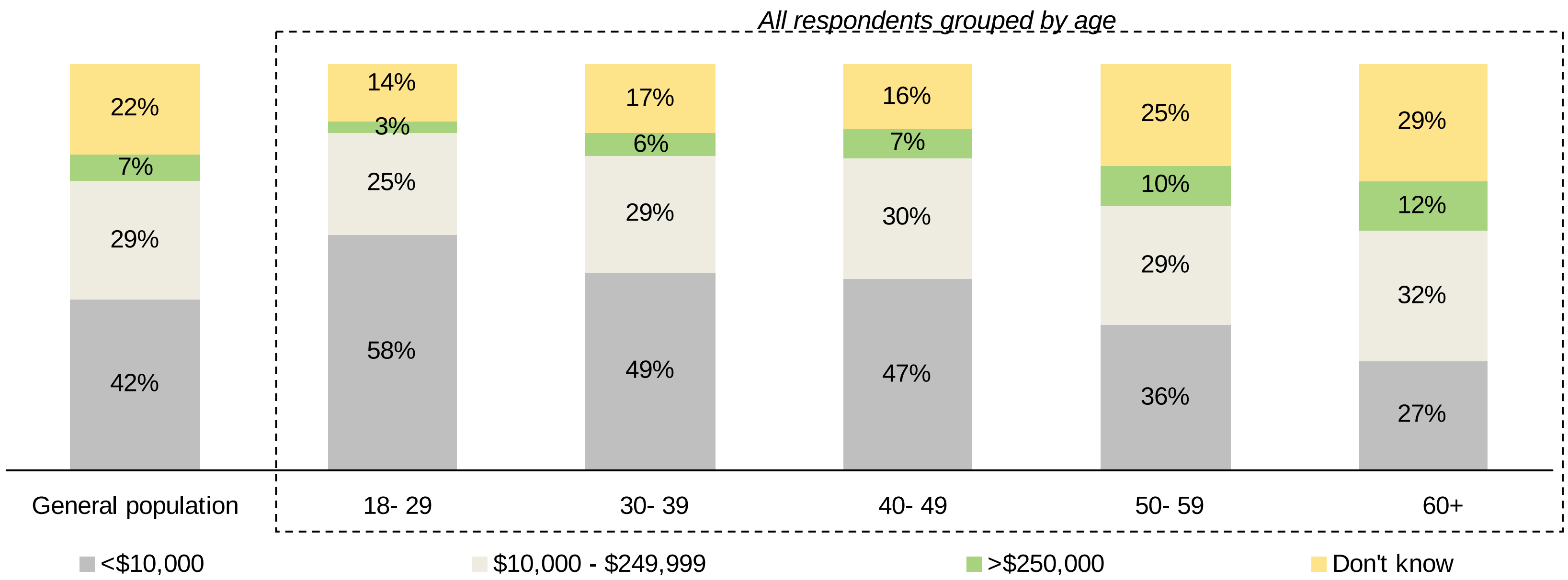
- Renters can be divided into two segments to consider likelihood of transitioning to homeownership
  - Younger renters with the potential to improve their financial situations and enter homeownership
  - Older renters who are less likely to achieve the financial means to enter homeownership

Source: Fannie Mae 2010 Own-Rent Survey

* Note that on each question, respondents had the option to answer "don't know" (volunteered), which is why, in some cases, the total % may not equal 100%. Renters self-identified their likelihood of transitioning to ownership.

Since people tend to accumulate wealth with age, many younger renters may achieve financial situations conducive to ownership over time

Which of the following categories best represents how much in assets you have currently, either invested or available for investing, in terms of checking or savings accounts, investment accounts, and brokerage accounts, but not including the value of any real estate or employer-sponsored retirement plan such as a 401k?*



- As age increases, the percentage of respondents with less than $10,000 of investable assets shrinks and the percentage of respondents with more than $250,000 grows

Source: Fannie Mae 2010 Own-Rent Survey

* Note that on each question, respondents had the option to answer "don't know" (volunteered), which is why, in some cases, the total % may not equal 100

Attitudes toward homeownership remain positive, but the crisis has raised awareness of risks and the ultimate impact remains to be seen

- **In focus groups, commitment to owning remained strong for a variety of reasons…**
  - *"There's not a word for it, but [owning] combines privacy, space, security, and sort of your way of life at your little spot on Earth that you can do and shape to your individuality and have refuge from the world in."*
    – Male, DC, age 66+
  - *"Owning gives a sense of pride. Just like I accomplished something. First you rent, then you hopefully buy a house or a condo."*
    – Male, DC, age 30-50
  - *"Owning a home is the single best investment because you can enjoy the benefits while you live in it."*
    – Male, DC, age 30-50
  - *"Owning is the American dream."*
    – Male, Phoenix, age 66+
- **…However the housing crisis has raised awareness of the risks of homeownership and highlighted the benefits of renting to some respondents**
  - *I think pre-[crisis] definitely it was a priority to own and post – I'm just real scared at this point."*
    – Female, DC, age 30-50
  - *"There's definitely I think a stigma attached [to renting] but I think it was more-so before [the crisis]. Now after the fact, people are looking back and they're like, 'Wow. We might've thought you were a bum for not buying in the past.' But in hindsight, you were actually smart because you decided it wasn't within your ability to pay for a house and people who went outside their means and bought a house are the ones who are suffering now."*
    – Male, DC, age 18-29
  - *"You know, the risk has always been there. We just – now we have a better understanding of how to calculate it differently, you know, because you never know what's going to happen."*
    – Female, DC, age 30-50

Source: Survey design focus groups in Washington, DC and Phoenix, AZ in July and August 2010

The implications of the crisis and the growth in single-family rental properties on rental behaviors is not yet fully known

- Single-family rentals have been growing as a portion of rentals stock, from 31% of rentals in 2005 to 33% in 2009
  - Availability of single-family rentals is likely to continue rising as a consequence of the growing number of foreclosed properties
  - It is possible that some of the traits people value in ownership (e.g., having a good space for a family) can be delivered through single-family rentals
- However, single family renters are generally unsatisfied with their living situations presently, and they are more likely to be considering a transition into ownership than other renters
  - 39% of single-family renters are doing what they want with their housing situation, compared with 58% of renters in multifamily properties and 88% of owners
  - 45% of single-family renters say they would buy if they were to move versus 35% of renters in multifamily properties

Focus group findings

- Some participants are recognizing the ability to rent the types of larger single-family properties that are generally associated with owning
  - *"Many people are talking about an apartment being too small, whether you own a condo or you rent; and a house being larger – but I can rent a house versus [own] a house."*

    – Male, DC, age 66+
  - *"I think a lot of people are renting big homes. People are trying to get out of their houses more than they are trying to get in."*

    – Female, Phoenix, age 30-55
- However, other focus group participants felt like renting a big home is equivalent to throwing money away
  - *"You rarely rent an apartment bigger than a home."*

    – Male, Phoenix, age 66+
  - *"For me I'm not going to rent anything bigger than what I have. I'm not renting a 3 bedroom. I'm going to own something if it's that much bigger. I just really feel like at that point that's when I start to agree that I'm going to be throwing the money away."* – Female, DC, age 30-55

Sources: US Census American Housing Survey 2005 and 2009. Fannie Mae 2010 Own-Rent Survey and survey design focus groups in Washington, DC and Phoenix, AZ in July and August 2010

Appendix
Findings from Regression Analysis

Research Methodology

- Penn Schoen Berland, in partnership with Oliver Wyman, conducted 3,607 telephone interviews among the following audiences:

Sample 1 (General Population)	Sample size
General Population (including)	2,041
Renters who do not plan to own	187
Renters who may own in the future	430
Owners who do not plan to rent	1,117
Owners who may rent in the future	171

Sample 2 (Oversample)	Sample size
Cleveland	519
Phoenix	511
Seattle	536

- In-parallel, fact-based research was conducted to compare the survey findings with owning versus renting with historical trends

Overview of HomeOwnership Regression Analysis

- **Objective:** The regression analysis we completed involved identifying a specified estimation of the impact of various factors on the probability of homeownership.
- **Methods:** The statistical method used to estimate these relationships was a multivariate logistic regression, where the properly specified coefficients could be interpreted as the marginal impact on the odds of homeownership.
- **Data Source:** For the purposes of the regression analysis, data was used from the U.S. General Population sample detailed on the previous slide.

Steps Completed and Overview of Findings

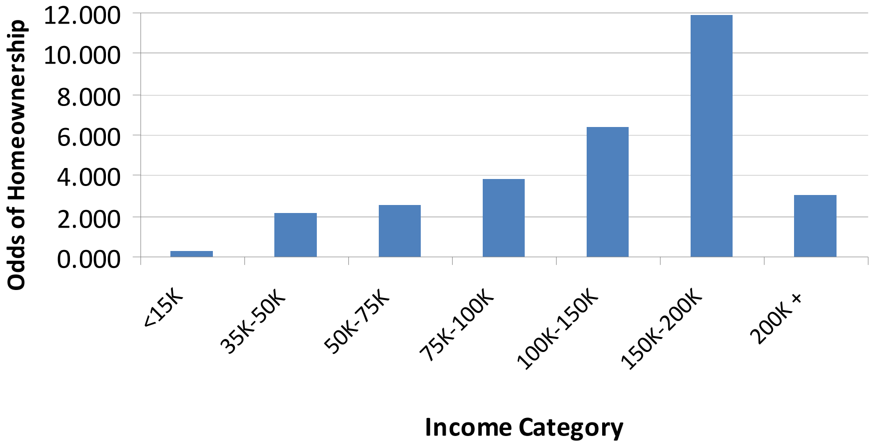
- **To properly specify this model, we used two basic steps:**
  - **Baseline Model:** Obtaining an estimation of the impact of wealth, income, and age on the odds of homeownership.
    - Using these three variables we identified two different models using differing combinations of categorical income, wealth, and age variables. The findings indicate that the odds of homeownership are exponential in income, roughly linear in age, and binary in wealth, with some minimum wealth threshold identifying an increase in odds.
  - **Additional Modeling:** Adding additional variables to the model, taking care to ensure that the age, income, and wealth estimations from the baseline were robust against the inclusion of the extra variables.
    - We found that marriage increased probability of homeownership, along with college education and rural identification, while urban specification decreased the probability of homeownership (the rural versus urban specification is most likely a proxy for the impact of affordability).

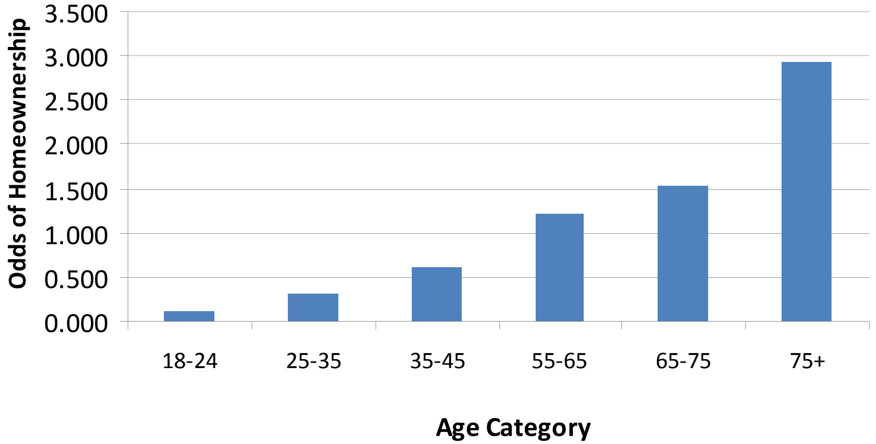
Impact of Income, Age, and Wealth on the Odds Of Homeownership

- Using income, age, and wealth we identified two different models using differing combinations of categorical income, wealth, and age variables. The findings indicate that the odds of homeownership are exponential in income, roughly linear in age, and binary in wealth, with some minimum wealth threshold identifying an increase in odds.

		B	*S.E.*	*Sig.*	*Odds*
Income ($)	*<15K*	-1.071	0.188	0.000	0.343
	35K-50K	0.761	0.197	0.000	2.140
	50K-75K	0.947	0.189	0.000	2.579
	75K-100K	1.344	0.230	0.000	3.833
	100K-150K	1.861	0.296	0.000	6.432
	150K-200K	2.480	0.626	0.000	11.941
	200K +	1.114	0.368	0.003	3.046
Wealth	*<10K*	-0.657	0.146	0.000	0.519
Age	*18-24*	-2.088	0.261	0.000	0.124
	25-35	-1.128	0.177	0.000	0.324
	35-45	-0.487	0.182	0.008	0.615
	55-65	0.203	0.205	0.320	1.226
	65-75	0.423	0.227	0.062	1.527
	75+	1.074	0.299	0.000	2.927
Flag For No Info:	*AgeDK*	-0.132	0.368	0.720	0.877
	IncomeDK	0.325	0.238	0.172	1.384
	WealthDK	0.038	0.212	0.859	1.038
	Constant	1.095	0.204	0.000	2.988

NOTES: 1) Excluded buckets are used as reference categories
2) DK = don't know





Adding Additional Variables Such as Marital Status, Education, and Urban/Rural

- When examining additional factors beyond the baseline model, we found that:
  - Marriage increased probability of homeownership
  - College education increased probability of homeownership
  - Rural identification increased probability of homeownership
  - Urban specification decreased the probability of homeownership (the rural versus urban specification is most likely a proxy for the impact of price)

Baseline + Urban/Rural +Married + College Education

		B	S.E.	Sig.	Odds
Income ($)	*<15K*	-0.843	0.199	0.000	0.430
	35K-50K	0.602	0.207	0.004	1.826
	50K-75K	0.725	0.202	0.000	2.064
	75K-100K	1.024	0.246	0.000	2.784
	100K-150K	1.486	0.310	0.000	4.418
	150K+	2.203	0.657	0.001	9.052
	200K +	0.994	0.390	0.011	2.701
Wealth	*<10K*	-0.616	0.152	0.000	0.540
Age	*18-24*	-1.690	0.273	0.000	0.185
	25-35	-1.104	0.186	0.000	0.331
	35-45	-0.432	0.190	0.023	0.649
	55-65	0.389	0.217	0.073	1.476
	65-75	0.591	0.238	0.013	1.805
	75+	1.358	0.309	0.000	3.886
Other Variables	Married	0.928	0.128	0.000	2.530
	College	0.259	0.137	0.059	1.295
	Urban	-0.596	0.140	0.000	0.551
	Rural	0.703	0.172	0.000	2.021
Flags	*MarriedDK*	-1.152	0.659	0.080	0.316
	CollegeDK	-0.625	0.587	0.287	0.535
	UrbanicityDK	0.013	0.462	0.978	1.013
	AgeDK	1.522	0.679	0.025	4.580
	IncomeDK	0.483	0.253	0.056	1.621
	WealthDK	-0.010	0.219	0.963	0.990
	Constant	0.545	0.244	0.025	1.725

NOTES: 1) Excluded buckets are used as reference categories
2) DK = don't know

Interpreting the Results

- Below is an example of two coefficients from an estimated model:

	B	*Sig.*	*Odds*
<15K	-1.071	35K-50K	0.343
50K-75K	0.947	50K-75K	2.579

- This is interpreted as "being in the <$15K income range makes the person less likely to be a homeowner (by the odds of .343, or ~1/3)."

- The second coefficients can be interpreted as "being in the $50K-$75K income range makes the person more likely to be a homeowner (by about 2.579 - 1, or ~158%)."

- The odds ratio compares being in that category to not being in that category. For example, if $50K-$75K income has an odds ratio of 2.6, this is interpreted as "someone in this category is 2.6 times as likely to be a homeowner as someone who is not in this category."

- If the odds ratio is above 1, subtract 1 from the ratio to obtain the percentage increase in likelihood. If the odds ratio is below 1, take the inverse of the odds ratio to obtain the percentage decrease in likelihood.