

# COMMUNITY ADVANTAGE PANEL SURVEY: DATA COLLECTION UPDATE AND ANALYSIS OF PANEL ATTRITION

Technical Report: May 2010

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# **Community Advantage Panel Survey: Data Collection Update and Analysis of Panel Attrition**

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## **Overview**

We provide an update of the Community Advantage Panel Survey (CAPS) data collection activities that occurred in 2009 and describe our data collection plans for 2010. We first summarize the CAPS sampling strategy and data collection progress and then consider upcoming survey plans, attrition concerns, and the extent to which 2009 survey completers are representative of baseline respondents and other Self-Help Community Advantage Program (CAP) borrowers.

## **Sampling Strategy and Data Collection Progress**

Table 1 provides an overview of CAPS data collection progress for our sample of 3,743 original homeowners and 1,530 original renters.<sup>1</sup> The table displays the number of completed interviews by survey year, module, and mode of administration.

The 2010 row of Table 1 indicates that data collection for this year will include a variety of questions that concern the economic challenges that the survey respondents may have faced as a result of the financial crisis. These questions, which were also asked in 2009, collect information about coping strategies that the respondents may have employed in dealing with these challenges, as well as how these strategies relate to homeownership. Consolidated wealth and asset questions have also been added to the survey for 2010.

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<sup>1</sup> Note that many respondents' tenure status of "owner" or "renter" has changed since the study began; thus, original tenure status does not necessarily reflect current tenure status. For example, about 20% of original renters became homeowners between 2004 and 2009.

**Table 1: Data Collection Overview**

<b>Year</b>	<b>Survey Year</b>	<b><u>Owners</u></b>			<b><u>Renters</u></b>		
		<b>Module</b>	<b>Mode</b>	<b>Completes</b>	<b>Module</b>	<b>Mode</b>	<b>Completes</b>
2003	0	Home purchasing info; Counseling	SRU phone	3,743	---	--	--
2004	1	Social Capital; Parenting;	SRU phone	2,614	Social Capital; Parenting;	RTI phone	1,530
2005	2	Wealth & Assets; Mortgages; Savings	SRU phone RTI in-home	2,701 1,284	Wealth & Assets; Mortgages; Savings	RTI in-home	1,157
2006	2&3	Wealth & Assets; Mortgages; Savings; Rising Energy Costs; Sense of Community	RTI phone for soft-refusals	262	Wealth & Assets; Mortgages; Savings; Rising Energy Costs; Sense of Community	RTI phone for soft-refusals	77
	3	Rising Energy Costs; Sense of Community	SRU phone	2,118 (total: 2,380)	Rising Energy Costs; Sense of Community	RTI phone	970 (total: 1,047)
2007	4	Social Capital 2; Parenting 2; Medical Costs; Credit Scores	RTI phone	2,079	Social Capital 2; Parenting 2; Medical Costs; Credit Scores	RTI phone	903
2008	5	Wealth & Assets 2; Mortgages 2; Savings 2; Housing Experiences	RTI phone RTI in-home	1,296 1,080 (total: 2,376)	Wealth & Assets 2; Mortgages 2; Savings 2; Housing Experiences	RTI phone RTI in-home	55 927 (total: 982)
		Economic Challenges	RTI phone	2,229	Economic Challenges	RTI phone	917
2010	7	Economic Challenges 2	RTI phone	~2,216	Economic Challenges 2	RTI phone	~888

- Note:**
- Universal core questions (demographics, employment, household expenses) asked every year. In addition, owners were administered a movers' module from Year 2 onward. Conversely, renters were asked about their intentions to purchase a home every year.
  - Renters were matched to urban owners by location and income. Renters' Year-1 data originally included 118 additional respondents who were later dropped due to not meeting age or income requirements. Renters' Years 2-5 data include one case that did not complete Year 1 (ZRID=30202046).
  - The soft-refusal sample comprises those cases that did not complete the SRU phone interview or the RTI in-home interview in Year 2.

Table 2 provides additional details about the final status of the data collection efforts for 2009. The 2009 completion rates for *eligible* owners and renters were 84% and 86%, respectively. However, the number of individuals who were eligible to be surveyed in 2009 exceeded the number of respondents who completed the 2008 survey. Considering only those individuals who completed the 2008 survey, 89% of owners and 90% of renters completed the 2009 survey.

Most respondents who were contacted in 2009 were willing to participate in the survey, as less than 5% of the eligible sample resulted in final refusals. About 60% of those cases that were not completed simply could not be contacted, either because of incorrect contact information or because tracing was unsuccessful.

**Table 2: Final Status of 2009 Eligibles**

<b>Final Status – 2009</b>	<b>Owners</b>	<b>Renters</b>
Completed Interview	2,229 (84%)	917 (86%)
Unable to locate or contact	225 (9%)	100 (9%)
Ineligible	24 (1%)	23 (2%)
Refused	161 (6%)	23 (2%)
<b>Total Eligible</b>	<b>2,639</b>	<b>1,063</b>

Notes: (1) Percentages shown are column percentages. (2) The completion rates presented are calculated relative to all *eligible* cases, rather than simply those that completed the 2008 survey.

### ***Panel Completion Rates by Survey Year***

#### *Owners*

Of the 2,229 owners who completed the Year 6 interview in 2009, approximately 62% (1,379) also completed the interviews for Years 0, 1, 2, 3, 4, and 5. The original baseline sample contained 3,743 home owners, and about 37% have completed all seven interviews. Another 16% (614) have completed six interviews, 12% (448) have completed five interviews, 6% (210) have completed four interviews, 5% (203) have completed three interviews, and 11% (423) have completed just two interviews. Twelve percent of the original sample completed only baseline. Table 3 presents the number and percentage of completed owner interviews by year.

### *Renters*

Of the 917 renters who completed the Year 6 interview in 2009, 718 (78%) also completed the interviews for Years 1, 2, 3, 4, and 5. The original baseline renters sample consisted of 1,530 renters, and 47% of these have completed all six interviews, while 14% have completed five survey years. In addition, approximately 7% completed four years, 3% completed three years, 10% completed two years, and 19% completed only baseline. Note that renters have had one less interview opportunity than owners because the first renters survey was administered concurrently with the second owners survey. Table 4 presents the number and percentage of completed renter interviews by year.

### *Eligibility for the 2010 Survey*

The panel members who are eligible for 2010 interviewing comprise 2,608 owners and 1,045 renters. To derive these numbers, we began with the pool of survey participants who were eligible for the 2009 survey and subtracted those cases for respondents who had refused or who were deceased and did not have a spouse in the household who could serve as a proxy respondent.

**Table 3: Owner Interviews by Year**

Years Completed	Eligible in 2010	Number of Owners	Percentage	Cumulative Percentage
All seven years	Yes	1,379	36.8%	36.8%
Only six years		614	16.4%	53.2%
<i>Years 0,1,2,3,4,5</i>	Yes	74	2.0%	
<i>Years 0,1,2,3,4,5</i>	No	13	0.4%	
<i>Years 0,1,2,3,4,6</i>	Yes	32	0.9%	
<i>Years 0,1,2,3,5,6</i>	Yes	178	4.8%	
<i>Years 0,1,2,4,5,6</i>	Yes	97	2.6%	
<i>Years 0,1,3,4,5,6</i>	Yes	19	0.5%	
<i>Years 0,2,3,4,5,6</i>	Yes	201	5.4%	
Only five years		448	12.0%	65.2%
<i>Years 0,1,2,3,6</i>	Yes	36	1.0%	
<i>Years 0,1,2,3,5</i>	Yes	52	1.4%	
<i>Years 0,1,2,3,5</i>	No	4	0.1%	
<i>Years 0,1,2,3,4</i>	Yes	39	1.0%	
<i>Years 0,1,2,3,4</i>	No	8	0.2%	
<i>Years 0,1,2,4,5</i>	Yes	17	0.5%	
<i>Years 0,1,2,4,5</i>	No	3	0.1%	
<i>Years 0,1,2,4,6</i>	Yes	16	0.4%	
<i>Years 0,1,2,5,6</i>	Yes	96	2.6%	
<i>Years 0,1,3,4,5</i>	Yes	2	0.1%	
<i>Years 0,1,3,4,6</i>	Yes	5	0.1%	
<i>Years 0,1,3,5,6</i>	Yes	8	0.2%	
<i>Years 0,1,4,5,6</i>	Yes	14	0.4%	
<i>Years 0,2,3,4,5</i>	Yes	24	0.6%	
<i>Years 0,2,3,4,5</i>	No	4	0.1%	
<i>Years 0,2,3,4,6</i>	Yes	11	0.3%	
<i>Years 0,2,3,5,6</i>	Yes	50	1.3%	
<i>Years 0,2,4,5,6</i>	Yes	31	0.8%	
<i>Years 0,3,4,5,6</i>	Yes	28	0.8%	
Only four years		210	5.6%	70.8%
<i>Years 0,1,2,5</i>	Yes	44	1.2%	
<i>Years 0,1,2,5</i>	No	4	0.1%	
<i>Years 0,1,2,3</i>	Yes	43	1.2%	
<i>Years 0,1,2,3</i>	No	27	0.7%	
<i>Years 0,1,2,4</i>	Yes	7	0.2%	
<i>Years 0,1,2,4</i>	No	4	0.1%	
<i>Years 0,1,3,4</i>	Yes	3	0.1%	
<i>Years 0,1,3,4</i>	No	1	0.0%	
<i>Years 0,1,3,5</i>	Yes	4	0.1%	
<i>Years 0,1,3,6</i>	Yes	5	0.1%	
<i>Years 0,1,4,5</i>	Yes	4	0.1%	
<i>Years 0,1,4,5</i>	No	1	0.0%	
<i>Years 0,1,4,6</i>	Yes	2	0.1%	
<i>Years 0,2,3,4</i>	Yes	8	0.2%	
<i>Years 0,2,3,4</i>	No	7	0.2%	
<i>Years 0,2,3,5</i>	Yes	17	0.5%	
<i>Years 0,2,3,6</i>	Yes	14	0.4%	
<i>Years 0,2,4,5</i>	Yes	4	0.1%	
<i>Years 0,2,4,5</i>	No	1	0.0%	

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	<i>Years 0,2,4,6</i>	Yes	4	0.1%	
	<i>Years 0,3,4,5</i>	Yes	2	0.1%	
	<i>Years 0,3,4,5</i>	No	1	0.0%	
	<i>Years 0,3,4,6</i>	Yes	3	0.1%	
Only three years			203	5.4%	76.2%
	<i>Years 0,1,2</i>	No	159	4.3%	
	<i>Years 0,1,3</i>	Yes	6	0.2%	
	<i>Years 0,1,3</i>	No	3	0.1%	
	<i>Years 0,1,4</i>	Yes	6	0.2%	
	<i>Years 0,2,3</i>	Yes	19	0.5%	
	<i>Years 0,2,3</i>	No	6	0.2%	
	<i>Years 0,2,4</i>	Yes	4	0.1%	
Only two years			423	11.3%	87.6%
	<i>Years 0,1</i>	No	199	5.3%	
	<i>Years 0,2</i>	No	180	4.8%	
	<i>Years 0,3</i>	No	44	1.2%	
Only one year (baseline)		No	466	12.4%	100%
<b>Total</b>			<b>2,608</b>	<b>3,743</b>	<b>100%</b>

Note: Numbers are based on the raw data set prior to data cleaning; Year 2 refers either to the SRU phone survey or to the RTI in-home interview; Year 3 includes soft refusals.

**Table 4: Renter Interviews by Year**

<b>Years Completed</b>	<b>Eligible in 2010</b>	<b>Number of Renters</b>	<b>Percentage</b>	<b>Cumulative Percentage</b>
All six years	Yes	718	46.9%	46.9%
Only five years		217	14.2%	61.1%
<i>Years 1,2,3,4,5</i>	Yes	38	2.5%	
<i>Years 1,2,3,4,5</i>	No	11	0.7%	
<i>Years 1,2,3,4,6</i>	Yes	14	0.9%	
<i>Years 1,2,3,5,6</i>	Yes	88	5.8%	
<i>Years 1,2,4,5,6</i>	Yes	31	2.0%	
<i>Years 1,3,4,5,6</i>	Yes	34	2.2%	
<i>Years 2,3,4,5,6</i>	Yes	1	0.1%	
Only four years		101	6.6%	67.7%
<i>Years 1,2,3,4</i>	Yes	13	0.9%	
<i>Years 1,2,3,4</i>	No	8	0.5%	
<i>Years 1,2,3,5</i>	Yes	27	1.8%	
<i>Years 1,2,3,5</i>	No	3	0.2%	
<i>Years 1,2,3,6</i>	Yes	13	0.9%	
<i>Years 1,2,4,5</i>	Yes	9	0.6%	
<i>Years 1,2,4,5</i>	No	1	0.1%	
<i>Years 1,2,4,6</i>	Yes	2	0.1%	
<i>Years 1,3,4,5</i>	Yes	7	0.5%	
<i>Years 1,3,4,5</i>	No	2	0.1%	
<i>Years 1,3,4,6</i>	Yes	5	0.3%	
<i>Years 1,3,5,6</i>	Yes	11	0.7%	
Only three years		46	3.0%	70.7%
<i>Years 1,2,3</i>	Yes	25	1.6%	
<i>Years 1,2,3</i>	No	11	0.7%	
<i>Years 1,2,4</i>	Yes	3	0.2%	
<i>Years 1,2,4</i>	No	1	0.1%	
<i>Years 1,3,4</i>	Yes	5	0.3%	
<i>Years 1,3,5</i>	Yes	1	0.1%	
Only two years		152	9.9%	80.6%
<i>Years 1,2</i>	No	140	9.1%	
<i>Years 1,3</i>	No	12	0.8%	
Only one year (baseline)	No	297	19.4%	100%
<b>Total</b>	<b>1,045</b>	<b>1,531</b>	<b>100%</b>	<b>100%</b>

Note: Numbers are based on the raw data set prior to data cleaning. Year 2 refers to the RTI in-home interview. Year 3 includes soft refusals. Total number includes one renter who did not complete the first year survey. The case was not used in the calculation of years of completion.

## **Panel Attrition Bias**

In this section, we consider in two ways whether the sample of most recent panel respondents is representative of our target research populations. First, we examine the extent to which those individuals who completed the 2009 interview represent baseline respondents. Specifically, we compare the baseline characteristics of owners and renters who did not complete Year 6 with those of the renters and owners who did so. To carry out this comparison, we use multivariate logit models to predict Year 6 survey completion.

Second, we examine whether the owners Year 6 panel is representative of the larger sample of CAP loans to which we would like to generalize the findings of our future panel research. For this purpose, we use Chi-square proportion tests to identify differences between those 2,229 owners who completed Year 6 and the set of all 28,491 owners in our target generalization sample who received CAP loans. The appendices provide descriptive statistics for all the variables in these models (Owners: Appendices A and C; Renters: Appendix B).

### ***Samples***

A total of 2,229 owners and 917 renters completed the 2009 survey. In analyzing attrition, we consider as a reference point the subsets of the baseline samples of 3,743 owners and 1,530 renters for which the demographics data are complete.

For owners, we remove 83 cases due to missing demographic information. Similarly, for renters, we omit 144 cases. Therefore, our final samples comprise 3,660 owners and 1,386 renters.

### ***Multivariate Analyses of Panel Retention***

#### ***Specifications***

Our multivariate logit specifications predicting the likelihood that owners and renters completed the 2009 interview incorporate baseline demographic characteristics. So that the findings for owners and renters can be compared, the first two specifications contain only those variables common to both the owner and renter panels. The third specification also includes loan characteristics that are available only from our Self-Help data set of CAP homeowners.

For all three specifications, income was trimmed due to insignificance and a higher rate of missing data. U.S. region was also trimmed due to insignificance and the testing of geographic effects through state rather than region. States were compared to the reference category of “other states,” which was created by combining states with less than 90 respondents.<sup>2</sup> This variable construction resulted in owners and renters having a different number of parameters for the state variable.

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<sup>2</sup> Previous versions of this analysis have grouped states with less than 100 respondents, but we have retained the same categories to facilitate comparison of point estimates across survey years.

### *Year 6 Completion: Owners vs. Renters*

In predicting completion, significant findings generally point toward attrition bias. Thus, the results shown in Tables 5 and 6 do suggest that some attrition bias is present, as the Chi-square values indicate that both owner and renter specifications partially explain Year 6 survey completion. Appendices A, B, and C respectively provide descriptive statistics for all the variables used in Specifications 1-3.

For owners, Specification 1 of Table 5 indicates that gender, race, education, employment status, and geography jointly predict completion while the insignificant effects of age, marital status, and the number of children in the household are taken into consideration. Specifically, the odds of completing Year 6 for men were .76 times those for women. In addition, Hispanic owners were .70 times as likely to complete the survey as Whites. Education levels also influenced completion: compared to high school graduates, the odds of Year 6 completion for owners with four-year college degrees but no graduate school were nearly 40% greater, while those for owners in the other educational categories were not significant. Original geographic location influenced completion for Mississippi, Ohio, Oklahoma, and North Carolina owners, with the odds of completion for Mississippi owners being .61 times those of owners in Other states. For owners originally located in Ohio, Oklahoma, and North Carolina, the odds of completion were approximately 1.5, 1.5, and 1.4 times those of owners in Other states. Finally, owners who were retired at baseline were only 70% as likely as employed owners to complete Year 6.

For renters, Specification 2 of Table 5 indicates that gender, age, race, marital status, the number of children in the household, and education jointly predict completion. Men were .75 times as likely to complete the survey as women, while Hispanics were .5 times as likely to complete the survey as Whites. Compared to renters aged 25 years or younger, renters aged 36 years and older were about 1.9 times as likely to have completed Year 6, while those between 31 and 35 were 1.5 times as likely to have completed. Respondents with some four-year college but no degree were .6 times as likely to complete as respondents who had not completed high school, but those in other educational categories were not significantly more or less likely to complete the survey. Moreover, respondents who had at some point been married or who reported being partnered were about .7 times as likely to have completed as those who had never been married, while respondents reporting two children in the household were only about .7 times as likely to have completed the survey as those who had no children.

Across both specifications for owners and renters, gender, race, and education significantly affected Year 6 completion, with Hispanics and men being significantly less likely to respond. Overall, these results are consistent with those from previous years and show that we continue to have difficulty retaining baseline respondents who are Hispanic and male.

**Table 5: Logit Regression of Year 6 Completion (Demographics)**

Variable	Specification 1 - Owners		Specification 2 - Renters	
	B	Odds ratio	B	Odds ratio
<b>Gender</b>				
(Female)				
Male	-.28	.759**	-.29	.748*
<b>Age</b>				
(25 years old or less)				
26 – 30 years old	-.05	.950	.37	1.442
31 – 35 years old	-.03	.974	.45	1.562*
36 – 40 years old	.08	1.084	.64	1.903**
41 years old or more	.08	1.087	.65	1.906**
<b>Race</b>				
(White)				
Black	-.07	.929	.08	1.084
Hispanic	-.35	.702**	-.64	.527**
Other	-.25	.778	-.46	.631
<b>Marital status</b>				
(Never married)				
Married or living with partner	.10	1.101	-.43	.652**
Widowed, divorced, separated	-.06	.945	-.35	.706*
<b>Number of Children</b>				
(No child)				
1	.11	1.112	.03	1.031
2	.05	1.049	-.42	.659*
3 or more	-.18	.837	-.32	.724
<b>Education</b>				
11th grade or less	-.16	.855	-.20	.815
(High school graduate/GED)				
Some 2 year college	.09	1.089	.09	1.099
2 year degree	-.10	.908	.14	1.148
Some 4 year college	-.18	.838	-.56	.571*
Bachelor's degree	.31	1.370**	.17	1.186
Some graduate school or more	.14	1.149	.58	1.777
<b>Employment</b>				
(Employed)				
Unemployed, looking for work	-.17	.847	-.29	.745
Unemployed, not looking for work	.03	1.034	-.02	.979
Retired	-.37	.688**	.08	1.082
<b>State</b>				
(Other states)				
Arizona	-.01	.997	.03	1.027
California	-.01	.987		
Illinois	.12	1.129		
Michigan	.38	1.457		
Mississippi	-.49	.614*		
North Carolina	.32	1.379**	.16	1.179
Ohio	.42	1.527**		
Oklahoma	.43	1.541**	.13	1.133
South Carolina	-.18	.835		
Texas	-.15	.864		
Virginia	.25	1.282		
<b>Intercepts</b>	.37		.70	
<b>Model Chi-Square (-2LogL)</b>		129.14		111.96
<b>Df</b>		33		25
<b>N</b>		3,660		1,386

Note: Reference groups are in parentheses; States with less than 90 observations were included in Other states; region and income were not significant and were removed; \* = p<.05; \*\* = p<.01

### *Further Analysis of Owner Retention: Owner-specific Loan Characteristics*

The third specification (see Table 6) predicting retention incorporates not only the respondent demographics previously considered but also borrower and loan characteristics, such as first-time homebuyer status, credit score at mortgage origination, and the origination loan-to-value ratio, that we have obtained from Self-Help. Clearly, these loan characteristics do not exist for our renters. Descriptive statistics for this specification are provided in Appendix C.

In predicting owner retention, the more comprehensive specification displayed in Table 6 indicates that gender, race, borrower credit score, and geographic location jointly predict completion when the insignificant effects of age, education, employment status, marital status, first-time homebuyer status, annual income as a percent of area median income, loan origination year, and original loan-to-value ratio are considered.

More specifically, the odds of male owners completing Year 6 are .76 times those of female owners. With regard to race, Hispanic owners were .72 times as likely to have completed the Year 6 survey. From the perspective of geography, owners originally located in Michigan, Ohio, and North Carolina had nearly 50% greater odds of completion than those located in Other states.

Of the additional loan characteristic variables that were not included in Specification 1, only borrower credit score at origination influenced Year 6 completion. Compared to owners whose origination credit scores were unavailable, owners with credit scores greater than 720 had about 1.8 times the odds of completion. Otherwise, Table 6 indicates that most of our baseline loan characteristics did not bias the sample of 2009 survey respondents. First-time homebuyer status, annual household income as a percent of area median income, loan origination year, and original loan-to-value ratio are all insignificant predictors of completion when the other relevant variables are controlled for. Overall, Specification 3 indicates that attrition bias persists in our owners' panel with regard to gender, race, geography, and origination credit score.

**Table 6: Logit Regression of Year 6 Completion (Demographics and Loans)**

Variable	Specification 3 – Owners	
	B	Odds ratio
<b>Gender</b>		
(Female)		
Male	-.28	.757**
<b>Age</b>		
(25 years old or less)		
26 – 30 years old	-.08	.924
31 – 35 years old	-.08	.923
36 – 40 years old	.02	1.017
41 years old or more	.02	1.021
<b>Race</b>		
(White)		
Black	.01	1.015
Hispanic	-.33	.718**
Other	-.19	.827
<b>Marital status</b>		
Married or living with partner	.14	1.155
Widowed, divorced, separated (Never married)	-.01	.996
<b>Education</b>		
11th grade or less (High school graduate/GED)	-.11	.897
Some 2 year college	.09	1.094
2 year degree	-.09	.913
Some 4 year college	-.18	.833
Bachelor's degree	.22	1.249
Some graduate school or more	.04	1.038
<b>Employment</b>		
(Employed)		
Unemployed, looking for work	-.14	.866
Unemployed, not looking for work	.08	1.081
Retired	-.43	.652
<b>Identified as First-time homebuyer</b>		
(Not a first-time home buyer)		
Identified as First-time homebuyer	.07	1.077
<b>Income as percentage of AMI</b>		
(0-50% AMI)		
51%-80% AMI	.04	1.038
>81% of AMI	-.18	.837
<b>Borrower credit score</b>		
(No credit score)		
Less than 580	.15	1.157
581-620	.23	1.253
621-660	.27	1.306
661-720	.29	1.333
Greater than 720	.58	1.793**
<b>Origination year</b>		
(1999)		
2000	-.02	.981
2001	.02	1.015
2002	.11	1.112
2003	.32	1.382
<b>Loan to value</b>		
(0-90%)		
91%-95%	-.17	.840
96%-97%	-.20	.821
>97%	.02	1.018

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**State**

(Other states)		
Arizona	.01	1.011
California	-.01	.998
Illinois	.23	1.261
Michigan	.45	1.571*
Mississippi	-.37	.691
North Carolina	.35	1.422**
Ohio	.35	1.414**
Oklahoma	.20	1.221
South Carolina	-.10	.906
Texas	-.16	.856
Virginia	.24	1.276

**Intercepts** .08

**Model Chi-Square (-2LogL)** 157.04

**Df** 45

**N** 3,627

Note: Reference groups are in parentheses; states with less than 90 observations were included in the 'Other states' category. Region variables were not significant and were removed;

\* =  $p < .05$ ; \*\* =  $p < .01$

## **Comparison of the 2009 CAPS Owners with Other Self-Help CAP Borrowers**

This section compares the characteristics of those owners who completed the Year 6 survey with those of a selected sample of other CAP borrowers. Table 9 presents frequencies for demographic and homebuyer variables provided by Self-Help. The CAP sample (Self-Help Generalization Sample) to which we direct our findings consists of 28,491 homeowners, while the sample of Year 6 panel survey completers comprises 2,229 cases. Due to missing data, we exclude 3,757 borrowers, including 47 Year 6 completers. Thus, the final sample sizes for this analysis are 24,734 for the Self-Help Generalization Sample and 2,182 for the Year 6 survey completers.

We used Chi-square tests to compare these two groups, and Table 9 presents our results. The middle column of Table 9 provides percentages for all 24,734 CAP borrowers, including those who responded to the Year 6 survey. The right column instead provides percentages for the subset of owners who responded in Year 6. The percentages shown are column percentages. For example, 51% of Year 6 survey respondents are male, compared with 57% of CAP borrowers.

Table 7 indicates that there are significant differences between these two groups with respect to all of the variables considered, except credit score. Compared to the larger profile of CAP borrowers, our set of Year 6 survey completers under-represents males, Hispanics, and higher-income (as a percentage of area median income) borrowers. With respect to race, Hispanics represent 19% of the portfolio but only 13% of the panel. Whites represent 56% of CAP borrowers yet 65% of the current survey panel. In addition, those with incomes greater than 80% of area median income comprise 10% of CAP borrowers but 8% of the panel. With respect to borrower and loan characteristics, our set of Year 6 survey completers over-represents first-time homebuyers and borrowers with high origination loan-to-value ratios.

These results indicate that our 2009 survey panel is mostly but not completely representative of our target generalization sample of CAP borrowers. The most worrisome difference lies in race: our panel over-represents Whites and under-represents non-Black minorities, especially Hispanics. As was done for previous survey years, sample weights for the 2009 survey have been constructed to enable data users to correct for these biases

**Table 7: CAPS Owners Compared to Self-Help Generalization Sample**

Variable	Self-Help Generalization Sample	Community Advantage Panel Survey Year 6  Completers
<b>Gender*</b>		
Male	56.8	50.9
Female	43.2	49.1
<b>Race*</b>		
White	55.6	64.7
Black	18.5	19.5
Hispanic	18.9	12.5
Other	7.0	3.3
<b>Identified as First-time Homebuyer*</b>		
Yes	42.9	53.6
No	57.1	46.4
<b>Age*</b>		
25 or less	21.1	20.0
26-30	20.3	23.4
31-35	20.4	16.9
36-40	12.5	13.1
41 or older	25.8	26.7
<b>Income as Percentage of AMI*</b>		
0-50% AMI	30.5	33.4
51%-80% AMI	59.4	58.9
>80% AMI	10.1	7.8
<b>Loan to Value*</b>		
0-90%	16.2	10.4
91-95%	9.0	6.9
96-97%	40.8	40.2
>97%	34.0	42.5
<b>Borrower credit score</b>		
No Credit Score or Missing	5.4	4.3
Less than 580	4.7	4.4
581- 620	10.6	11.4
621-660	21.5	22.9
661-720	31.4	31.5
Greater than 720	26.5	25.6
<b>Borrower credit score (mean)^</b>	680.29	678.40
<b>LTV at origination (mean)*</b>	94.6	96.3
<b>N^</b>	24,734	2,182

Note: Percentages shown are column percentages. ^For Borrower credit score(mean), N=23,402 and 2,088, respectively. \* = p<.05

## Conclusions

Our analyses of attrition and sample representation do raise some concerns that data users need to address analytically. Even with continued retention efforts, including field tracing and incentives for respondents, we do anticipate that some attrition bias will persist through subsequent years of data collection. Given current trends, we expect higher attrition among respondents who are male or Hispanic.

Such attrition biases are not unusual in panel data collection, and methods to deal with these problems include weighting and multiple imputation. We have constructed sampling and non-response weights for each year of data collection to minimize the impact of biases resulting from higher attrition across various demographic groups. These weights will be incorporated into the final panel data set.

## **Appendices A – C**

- A Owners Attrition: Baseline Demographics by Year 6 Completion Status
- B Renters Attrition: Baseline Demographics by Year 6 Completion Status
- C Owners Attrition:  
Baseline Demographics and Loan characteristics by Year 6 Completion Status

**Appendix A**  
**Owners Attrition: Baseline Demographics by Year 6 Completion Status**

Variable	All		Dropped out		Completed	
<b>Gender**</b>						
Male	1,969	53.8%	854	43.4%	1,115	56.6%
Female	1,691	46.2%	611	36.1%	1,080	63.9%
<b>Age</b>						
25 years old or less	712	19.5%	274	38.5%	438	61.5%
26 - 30years old	854	23.3%	342	40.1%	512	60.0%
31 - 35 years old	639	17.5%	266	41.6%	373	58.4%
36 - 40 years old	481	13.1%	196	40.8%	285	59.3%
41 years old or more	974	26.6%	387	39.7%	587	60.3%
<b>Race**</b>						
White	2,247	61.4%	828	36.9%	1,419	63.2%
Black	717	19.6%	287	40.0%	430	60.0%
Hispanic	573	15.7%	298	52.0%	275	48.0%
Other	123	3.4%	52	42.3%	71	57.7%
<b>Marital status</b>						
Married or living with partner	2,082	56.9%	857	41.2%	1,225	58.8%
Widowed, divorced, separated	723	19.8%	277	38.3%	446	61.7%
Never Married	855	23.4%	331	38.7%	524	61.3%
<b>Number of Children**</b>						
No child	1,733	47.4%	672	38.8%	1,061	61.2%
1	839	22.9%	311	37.1%	528	62.9%
2	675	18.4%	278	41.2%	397	58.8%
3 or more	413	11.3%	204	49.4%	209	50.6%
<b>Education**</b>						
11th grade or less	365	10.0%	185	50.7%	180	49.3%
High school graduate/GED	886	24.2%	362	40.9%	524	59.1%
Some 2 year college	649	17.7%	245	37.8%	404	62.3%
2 year degree	508	13.9%	210	41.3%	298	58.7%
Some 4 year college	385	10.5%	171	44.4%	214	55.6%
Bachelor's degree	540	14.8%	174	32.2%	366	67.8%
Some graduate school or more	327	8.9%	118	36.1%	209	63.9%
<b>Income</b>						
Less than \$10,000	32	0.9%	12	37.5%	20	62.5%
\$10,000-\$14,999	84	2.3%	42	50.0%	42	50.0%
\$15,000-\$19,999	255	7.0%	104	40.8%	151	59.2%
\$20,000-\$24,999	526	14.4%	218	41.4%	308	58.6%
\$25,000-\$34,999	1,032	28.2%	414	40.1%	618	59.9%
\$35,000-\$49,999	1,259	34.4%	493	39.2%	766	60.8%
\$50,000-\$74,999	379	10.4%	146	38.5%	233	61.5%
\$75,000 or greater	93	2.5%	36	38.7%	57	61.3%
<b>Employment</b>						
Employed	3,380	92.4%	1,341	39.7%	2,039	60.3%
Unemployed, looking for work	118	3.2%	54	45.8%	64	54.2%
Unemployed, not looking for work	101	2.8%	41	40.6%	60	59.4%
Retired	61	1.7%	29	47.5%	32	52.5%

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**Borrower origination credit score\*\***

Credit score=0 or missing score	203	5.6%	107	52.7%	96	47.3%
less than 580	179	4.9%	83	46.4%	96	53.6%
580 - 619	435	11.9%	186	42.8%	249	57.2%
620 - 659	861	23.5%	361	41.9%	500	58.1%
660 - 719	1,155	31.6%	464	40.2%	691	59.8%
720 or greater	827	22.6%	264	31.9%	563	68.1%
<b>Age (mean)</b>	35.1		35.1		35.0	
<b>Borrower credit score (mean)^</b>	674.4		668.1		678.4	
<b>N^</b>	3,660		1,465		2,195	

Note: Percentage shown in columns 2 and 3 are row percentages. ^For borrower credit score(mean), N=3,458; 1,358; and 2,100 respectively. \* = p<.05; \*\* = p<.01

**Appendix B**  
**Renters Attrition: Baseline Demographics by Year 6 Completion Status**

Variable	All		Dropped out		Completed	
<b>Gender**</b>						
Male	391	28.2%	160	40.9%	231	59.1%
Female	995	71.8%	332	33.4%	663	66.6%
<b>Age**</b>						
25 years old or less	260	18.8%	119	45.8%	141	54.2%
26 - 30years old	195	14.1%	74	38.0%	121	62.1%
31 - 35 years old	162	11.7%	64	39.5%	98	60.5%
36 - 40 years old	147	10.6%	49	33.3%	98	66.7%
41 years old or more	622	44.9%	186	29.9%	436	70.1%
<b>Race**</b>						
White	606	43.7%	189	31.2%	417	68.8%
Black	454	32.8%	133	29.3%	321	70.7%
Hispanic	262	18.9%	143	54.6%	119	45.4%
Other	64	4.6%	27	42.2%	37	57.8%
<b>Marital status**</b>						
Married or living with partner	523	37.7%	230	44.0%	293	56.0%
Widowed, divorced, separated	448	32.3%	139	31.0%	309	69.0%
Never Married	415	29.9%	123	29.6%	292	70.4%
<b>Number of Children**</b>						
No child	718	51.8%	229	31.9%	489	68.1%
1	300	21.7%	97	32.3%	203	67.7%
2	218	15.7%	101	46.3%	117	53.7%
3 or more	150	10.8%	65	43.3%	85	56.7%
<b>Education**</b>						
11th grade or less	281	20.3%	129	45.9%	152	54.1%
High school graduate/GED	468	33.8%	163	34.8%	305	65.2%
Some 2 year college	221	16.0%	68	30.8%	153	69.2%
2 year degree	108	7.8%	33	30.6%	75	69.4%
Some 4 year college	87	6.3%	40	46.0%	47	54.0%
Bachelor's degree	159	11.5%	45	28.3%	144	71.7%
Some graduate school or more	62	4.5%	14	22.6%	48	77.4%
<b>Income</b>						
Less than \$10,000	306	22.4%	106	34.6%	200	65.4%
\$10,000-\$14,999	199	14.5%	72	36.2%	127	63.8%
\$15,000-\$19,999	205	15.0%	72	35.1%	133	64.9%
\$20,000-\$24,999	164	12.0%	48	29.3%	116	70.7%
\$25,000-\$34,999	303	22.1%	105	34.7%	198	65.4%
\$35,000-\$49,999	150	11.0%	55	36.7%	95	63.3%
\$50,000-\$74,999	34	2.5%	14	41.2%	20	58.8%
\$75,000 or greater	8	0.6%	5	62.5%	3	37.5%
<b>Employment</b>						
Employed	868	62.6%	304	35.0%	564	65.0%
Unemployed, looking for work	168	12.1%	73	43.5%	95	56.6%
Unemployed, not looking for work	280	20.2%	96	34.3%	184	65.7%
Retired	70	5.1%	19	27.1%	51	72.9%
<b>Age (mean)</b>	39.0		36.8		40.3	
<b>N^</b>	1,386		492		894	

Note: Percentage shown in columns 2 and 3 are row percentages. \* = p<.05; \*\* = p<.01

**Appendix C**  
**Owners Attrition: Baseline Demographics and Loan characteristics**  
**by Year 6 Completion Status**

Variable	All		Dropped out		Completed	
<b>Gender**</b>						
Male	1,953	53.9%	844	43.2%	1,109	56.8%
Female	1,674	46.2%	603	36.0%	1,071	64.0%
<b>Age</b>						
25 years old or less	706	19.5%	270	38.2%	436	61.8%
26 - 30years old	848	23.4%	338	39.9%	510	60.1%
31 - 35 years old	632	17.4%	263	41.6%	369	58.4%
36 - 40 years old	479	13.2%	194	40.5%	285	59.5%
41 years old or more	962	26.5%	382	39.7%	580	60.3%
<b>Race**</b>						
White	2,235	61.6%	823	36.8%	1,412	63.2%
Black	707	19.5%	281	39.8%	426	60.3%
Hispanic	563	15.5%	292	51.9%	271	48.1%
Other	122	3.4%	51	41.8%	71	58.2%
<b>Marital status</b>						
Married or living with partner	2,067	57.0%	848	41.0%	1,219	59.0%
Widowed, divorced, separated	716	19.7%	274	38.3%	442	61.7%
Never Married	844	23.3%	325	38.5%	519	61.5%
<b>Education**</b>						
11th grade or less	358	9.9%	179	50.0%	179	50.0%
High school graduate/GED	882	24.3%	360	40.8%	522	59.2%
Some 2 year college	645	17.8%	244	37.8%	401	62.2%
2 year degree	505	13.9%	207	41.0%	298	59.0%
Some 4 year college	381	10.5%	168	44.1%	213	55.9%
Bachelor's degree	531	14.6%	171	32.2%	360	67.8%
Some graduate school or more	325	9.0%	118	36.3%	207	63.7%
<b>Employment</b>						
Employed	3,353	92.5%	1,327	39.6%	2,026	60.4%
Unemployed, looking for work	113	3.1%	51	45.1%	62	54.9%
Unemployed, not looking for work	100	2.8%	40	40.0%	60	60.0%
Retired	61	1.7%	29	47.5%	32	52.5%
<b>Fist-time homebuyer</b>						
Not a first-time homebuyer	1,668	46.0%	657	39.4%	1,011	60.6%
Fist-time homebuyer	1,959	54.0%	790	40.3%	1,169	59.7%
<b>Income as percentage of AMI</b>						
0 - 50% AMI	1,232	34.0%	504	40.9%	728	59.1%
51 -80% AMI	2,081	57.4%	799	38.4%	1,282	61.6%
>80% of AMI	314	8.7%	144	45.9%	170	54.1%
<b>Borrower origination credit score**</b>						
No credit score	198	5.5%	104	52.5%	94	47.5%
Less than 580	178	4.9%	82	46.1%	96	53.9%
581 - 620	430	11.9%	182	42.3%	248	57.7%
621 - 660	855	23.6%	357	41.7%	498	58.3%
661 - 720	1,146	31.6%	460	40.1%	686	59.9%
>720	820	22.6%	262	32.0%	558	68.1%

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<b>Origination year**</b>						
1999	105	2.9%	42	40.0%	63	60.0%
2000	891	24.6%	363	40.7%	528	59.3%
2001	1,105	30.5%	481	43.5%	624	56.5%
2002	1,403	38.7%	524	37.4%	879	62.7%
2003	123	3.4%	37	30.1%	86	69.9%
<b>Loan to value**</b>						
1 - 90%	366	10.1%	139	38.0%	227	62.0%
91 - 95%	259	7.1%	108	41.7%	151	58.3%
96 - 97%	1,594	44.0%	720	45.2%	874	54.8%
> 97%	1,408	38.8%	480	34.1%	928	65.9%
<b>States**</b>						
Other states	817	22.5%	365	44.7%	452	55.3%
Arizona	115	3.2%	59	51.3%	56	48.7%
California	159	4.4%	79	49.7%	80	50.3%
Illinois	181	5.0%	75	41.4%	106	58.6%
Michigan	109	3.0%	39	35.8%	70	64.2%
Mississippi	105	2.9%	60	57.1%	45	42.9%
North Carolina	974	26.9%	347	35.6%	627	64.4%
Ohio	433	11.9%	147	34.0%	286	66.1%
Oklahoma	419	11.6%	137	32.7%	282	67.3%
South Carolina	97	2.7%	44	45.4%	53	54.6%
Texas	102	2.8%	54	52.9%	48	47.1%
Virginia	116	3.2%	41	35.3%	75	64.7%
<b>N</b>	<b>3,627</b>		<b>1,447</b>		<b>2,180</b>	

Note: Percentage shown in columns 2 and 3 are row percentages. \* = p<.05; \*\* = p<.01