Reverse Mortgage Motivations and Outcomes: Insights From Survey Data

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Abstract

The primary goal of this article is to inform assumptions used by researchers and policymakers to model the demand for and takeup of reverse mortgages. Our article describes the characteristics of more than 1,700 households that sought counseling for a reverse mortgage between 2006 and 2011; of those households, 74 percent obtained a reverse mortgage. Using data collected at the time of counseling and also followup survey data collected in 2014, we summarize self-reported motivations for seeking a reverse mortgage, including reasons for not getting a reverse mortgage, if applicable. We also compare the characteristics of households that seek reverse mortgages with the general population of senior homeowners using the 2008, 2010, and 2014 waves of the Health and Retirement Study. A final goal of the article is to compare selected outcomes of reverse mortgage borrowers with outcomes in the general population of senior homeowners.

Introduction

Equity in a home can serve as an important source of supplemental income in retirement. Indeed, home equity makes up a substantial portion of wealth for senior households. Approximately 79 percent of households age 65 or older owned a home as of the beginning of 2016 (U.S. Census Bureau, 2016) and equity in owner-occupied homes comprises a major source of wealth for most seniors (CFPB, 2012; Sinai and Souleles, 2008). As of 2013, the average senior in the United States had about $200,000 in net equity (Rosnick and Baker, 2014). Homeowners may not be willing to sell their homes to access the equity, however, and may be unwilling or unable to make additional payments that are required to borrow equity from their home using traditional mortgage products.

Reverse mortgages are designed to address this tradeoff by allowing seniors to draw down equity without selling their home and without incurring a monthly mortgage payment. The reverse mortgage loan and the accumulated interest is repaid when the individual dies, moves out of the home, sells the home, or is foreclosed upon due to unpaid property taxes and homeowner's insurance, which remain the obligation of the borrower. The most widely used reverse mortgage product is offered by the Federal Housing Administration's Home Equity Conversion Mortgage (HECM) program, first initiated in the Housing and Community Development Act of 1987.[1]

Since program inception through 2015, nearly 1 million HECMs have been originated, more than 80 percent since fiscal year (FY) 2006, with peak volume in FY 2009 (Haurin et al., 2016; NRMLA, 2016). Although only about 2 percent of seniors currently hold reverse mortgages, the demand for reverse mortgages has been projected to grow as the baby boomer generation enters retirement with low levels of assets outside the equity in their homes (Munnell and Sass, 2014; Nakajima and Telyukova, 2014; Sacks and Sacks, 2012; Salter, Pfeiffer, and Evensky, 2012). Projections of demand rely on assumptions about seniors' perceptions of reverse mortgages and anticipated uses of extracted equity. For example, to the extent that seniors use reverse mortgages to pay off forward mortgage debt, an increase in the proportion of seniors entering retirement with mortgage debt could lead to increased demand for reverse mortgages.[2]

A primary goal of this article is to inform assumptions that researchers and policymakers can use to model demand for and takeup of HECMs. Given the small size of the market, previous research on the characteristics of reverse mortgage borrowers and their motivations for seeking reverse mortgages is limited. Studies estimating potential demand generally rely on survey data of the senior population (Mayer and Simons, 1994: Nakajima and Telyukova, 2014). A few early descriptive studies examined the differences between seniors obtaining reverse mortgages and seniors in the general population (for example, Redfoot, Scholen, and Brown, 2007; Rodda, Herbert, and Lam, 2000).

Since the time of these studies, substantial policy changes have occurred to the HECM product and also changes have occurred in the macroeconomic environment. Our article updates and expands previous literature by describing the characteristics of more than 1,700 households that sought counseling for a reverse mortgage between 2006 and 2011; of those households, 74 percent obtained a reverse mortgage. Using survey data collected as part of the Aging in Place (AIP) study, we summarize self-reported motivations for seeking a reverse mortgage, including reasons for not getting a reverse mortgage, if applicable. Respondents also indicate the extent to which particular individuals influenced their decision, including their experiences with reverse mortgage professionals (for example, counselors and lenders).

We also consider how households that seek reverse mortgages compare with the general population of senior homeowners. We supplement the AIP data with data collected during the reverse mortgage counseling session, including household financial and demographic characteristics.

[1] Pub. L. 100-242, 101 Stat. 1015.

[2] In an analysis of U.S. census data, the Consumer Financial Protection Bureau noted that the percentage of homeowners ages 65 and older carrying mortgage debt increased from 22 to 30 percent (3.8 to 6.1 million) from 2001 to 2011. Additional data from the Federal Reserve show that consumers older than age 75 had the greatest increase during this period. The proportion of consumers ages 75 and older with mortgage debt more than doubled, from 8.4 to 21.2 percent (CFPB, 2014).

Data on seniors in the general population are drawn from the 2008, 2010, and 2014 waves of the Health and Retirement Study (HRS), administered by the University of Michigan, with funding from the National Institute on Aging and the Social Security Administration.

A secondary goal of this article is to explore outcomes of reverse mortgage borrowers, comparing indicators of financial and overall well-being for reverse mortgage borrowers relative to the general population of senior homeowners. The policy intent of the HECM program is to improve the financial stability of seniors by providing a way to "supplement Social Security, meet unexpected medical expenses and make home improvements" (HUD, 2016); however, limited data exist on longer-term outcomes of reverse mortgage borrowers. Thus far, the only long-term outcomes models have been prepayments and terminations (for example, Rodda, Herbert, and Lam, 2000; Szymanoski, Enriquez, and DiVenti, 2007) and tax and insurance default (Moulton, Haurin, and Shi, 2015). Through the AIP survey, ours is the first study to directly measure indicators of well-being for reverse mortgage borrowers for 4 to 7 years after obtaining the loans. When similar indicators are available in the HRS, we compare the outcomes of seniors who sought and obtained (and did not obtain) reverse mortgages with seniors in the general population.

Previous Literature on Reverse Mortgages

Several streams of previous literature inform this study. To inform assumptions about who takes up a reverse mortgage, we review studies estimating demand for reverse mortgages, including theoretical models based on assumptions about factors that may affect demand. More related to our current study, we also review descriptive summaries of reverse mortgage borrower demographics in comparison with the general population. Finally, we consider analyses of the takeup rate of reverse mortgages. With regard to reverse mortgage borrower outcomes, the previous literature is limited. Here, we summarize the findings from studies modeling loan outcomes of HECMs, including withdrawals, terminations, and defaults and also previous survey data documenting reverse mortgage borrower experiences.

A series of early studies estimated the potential demand for reverse mortgages (Mayer and Simons, 1994; Merrill, Finkel, and Kutty, 1994; Rasmussen, Megbolugbe, and Morgan, 1995; Venti and Wise, 1991). Using national survey data, these studies based their estimates on the proportion of senior homeowners in the population with sufficient home equity to originate a reverse mortgage. In an analysis of 1990 U.S. census data, Rasmussen, Megbolugbe, and Morgan (1995) estimated that as many as 6.7 million senior households—approximately 80 percent of senior homeowners—had sufficient equity to qualify for a reverse mortgage, creating a large potential market. Beyond sufficient equity, other estimates of the potential demand for reverse mortgages were based on assuming the demand for reverse mortgages would be greater among seniors for whom home equity release would translate into a larger share of their income, including lower-income homeowners, single female-headed households, and older homeowners who have drawn down other nonhousing assets (Mayer and Simons, 1994; Merrill, Finkel, and Kutty, 1994). Using 1990 Survey of Income and Program Participation (SIPP) data, Mayer and Simons (1994) estimated that nearly one in four seniors could increase their monthly income by 25 percent or more from a reverse mortgage. Merrill, Finkel, and Kutty (1994) estimated that demand for reverse mortgages would be greater in the Northeast United States and in California, where a higher share of seniors with low incomes and sufficient equity live.

Uncertainty exists, however, regarding the extent to which seniors are willing to liquidate home equity for consumption. Previous studies indicate that senior homeowners extract equity only in response to shocks, such as the death of a spouse, a medical event, or an unexpected retirement, rather than for supplementing current consumption (Venti and Wise, 2004, 1991, 1989). In a study using 1984 SIPP data, Venti and Wise (1991) found that households do not reduce liquid wealth as home equity increases. They thus suggested that demand for reverse mortgages would be low for most households, although demand would be higher for lower-income and single households and would be higher when the reverse mortgage is structured as a lump sum rather than an annuity.

Nakajima and Telyukova (2014) more recently developed a theoretical model of HECM demand, incorporating the decision to own or rent, the decision to sell the home or extract equity, and, finally, the decision to extract equity through a reverse mortgage. Their structural model incorporates assumptions about income, assets, and net worth and also individual preferences, including bequest and precautionary motives and idiosyncratic shocks to health, finances, and house prices, based on profiles of seniors in the HRS. In line with previous studies, their simulations indicated that takeup of reverse mortgages would be strongest among those seniors with low incomes and low levels of nonhousing wealth. They also predicted that those who use reverse mortgages would be more likely to have previous mortgages, have poorer health than the general population of seniors, and would use reverse mortgages to fund large medical expenditures and also general consumption.[3] They estimated that bequest motives dampen demand for reverse mortgages. Although the simulated takeup rates based on their theoretical model approximate the takeup rates for HECMs in the general population, their estimates do not use actual data on households with reverse mortgages.

A second group of studies examined reverse mortgage borrower demographics. A few unpublished reports compared reverse mortgage borrowers with the general population of seniors (Bishop and Shan, 2008; Redfoot, Scholen, and Brown, 2007; Rodda, Herbert, and Lam, 2000).[4] According to these reports, HECM borrowers tended to be older (although more recent reports indicate that the average age declined from 76 years of age in 2000 to 73.5 years of age in 2006), single female-headed households, and slightly more likely to be Black. In terms of finances, HECM borrowers tended to have higher-valued homes and higher amounts of home equity than did seniors in the general population.[5] As expected, they tended to have lower incomes than the general population, about 40 percent lower than the median income for other seniors. They also tended to be better educated than the general population, perhaps because those with education are more likely to

[3] Their model predicts a takeup rate of 10.8 percent among seniors with a mortgage compared with 0.01 percent for those with no mortgage debt and a takeup rate of 2.2 percent for those in poor health compared with 1.2 percent for those who rate their health as excellent.

[4] An early evaluation of the HECM program for HUD (Rodda, Herbert, and Lam, 2000) compared the characteristics of HECM borrowers originating loans through 1999 with data on seniors in the general population using data from the American Housing Survey (AHS). In 2007, AARP conducted a study of seniors counseled for a reverse mortgage through 2006. As part of that study, they provided comparisons of particular demographic characteristics to seniors in the general population using U.S. census data (Redfoot, Scholen, and Brown, 2007).

[5] Household financial characteristics, such as income and debt, were not consistently reported in the HECM loan data at the time of their evaluation and thus were excluded from comparisons relying strictly on HUD HECM data (Bishop and Shan, 2008; Rodda, Herbert, and Lam, 2000).

be aware of reverse mortgages (Redfoot, Scholen, and Brown, 2007). Although informative, these descriptive analyses were conducted early in the HECM program's evolution, before many of the substantial policy changes to the program and the peak in HECM volume in 2009. One contribution of our study is to update these comparisons with more recent data on HECM borrowers.

A third group of studies empirically models the takeup of reverse mortgages and characteristics associated with takeup. Given the lack of demographic and financial attributes in the HECM data set, such studies regressed takeup rates at the ZIP Code level (Shan, 2011) or state level (Haurin et al., 2016) on a vector of geographic-specific attributes, such as house price dynamics, credit conditions, and demographic characteristics. Using ZIP Code-level data from 1989 to 2007, Shan (2011) found that takeup rates were higher in ZIP Codes with higher percentages of Black and Hispanic residents, educational attainment, and house values but were lower in areas with high credit scores and median income. All characteristics were measured for the general population, not just for seniors.

Haurin et al. (2016) used data aggregated to the state level and compared HECM borrowers with other seniors in the state who were age 62 or older. They found that intertemporal and spatial variations in takeup rates were higher in states with real house prices substantially more than their long-term average and a history of large variations in house prices. Their interpretation of this finding is that some seniors used HECMs as a means to insure against house price depreciation, especially following the house price boom in the early and mid-2000s. Other results included a higher takeup rate for states with a larger proportion of Hispanic residents, greater house values, and more seniors with a mortgage but a lower takeup rate for states with a higher percentage of seniors with a past-due mortgage. Although aggregate analysis of HECM borrowing is useful for identifying trends and the importance of macro-level dynamics such as house prices and interest rates, these studies lack information about individual-level preferences regarding the reverse mortgage product.

In 2007, AARP conducted a survey of households that were counseled for a reverse mortgage from 2001 to 2006 (Redfoot, Scholen, and Brown, 2007). When asked about their motives for seeking a reverse mortgage, most households reported a desire to be prepared for unexpected expenses and/or generally improve the quality of their lives. About one-half reported the need for funds to cover everyday expenses, with a similar proportion reporting a need to cover expenses related to home repairs or maintenance, and 40 percent reporting a desire to pay off an existing mortgage. About 25 percent of respondents mentioned health or disability, paying off nonmortgage debt, and property taxes and insurance as motives. Only 13 percent reported investments, annuities, or long-term care insurance as motives, and only 4 percent reported using reverse mortgage funds for these purposes. The emphasis on current consumption is noteworthy, given a recent stream of literature in financial planning that promotes the use of reverse mortgages as a standby line of credit or as a strategy to delay draws from other retirement assets (Pfeiffer, Schaal, and Salter, 2014; Sacks and Sacks, 2012; Salter, Pfeiffer, and Evensky, 2012).

Knowledge and perceptions of reverse mortgages in the general population also influence takeup of reverse mortgages. In a 2013 survey of a random sample of seniors in the United States, Davidoff, Gerhard, and Post (2015) found that accurate knowledge of reverse mortgage contract terms is significantly associated with the intent to take out a reverse mortgage in the future. Although

most seniors correctly understood that a reverse mortgage allowed borrowers to access the equity in their homes, fewer than one-half of respondents could correctly answer 6 out of 13 questions about reverse mortgage contract terms. For example, two-thirds of respondents did not know that HECMs are structured as nonrecourse loans and only about one-half understood that they would not have to move out of the home if the loan balance grew larger than the home's value. Further, most respondents were unable to accurately estimate the costs associated with the reverse mortgage; most either indicated they "don't know" or overestimated the costs.

High costs are often noted as a factor for low takeup of reverse mortgages (Redfoot, Scholen, and Brown, 2007). Simulations based on actual loan data suggest that HECMs may be favorably priced to the benefit of the borrower, particularly if borrowers behave strategically and take advantage of the "put option" by withdrawing all equity on the credit line immediately before loan termination (Davidoff, 2015). This sort of strategic behavior, however, requires a high level of financial sophistication and the motivation to use HECMs as part of a longer-term financial planning strategy. In an analysis of loans originated through 2011, Davidoff (2015) and Davidoff and Wetzel (2014) documented that most borrowers do not appear to exercise the put option embedded in the HECM contract.[6] Our survey helps inform the current understanding of reverse mortgage borrower behaviors by including questions about motivations for taking out or deciding against a HECM, in addition to asking questions about financial literacy, risk aversion, and planning preferences.

The fourth group of studies, which provide research findings on reverse mortgage outcomes, is sparse. Only the AARP study has examined how reverse mortgages affect longer-term outcomes, based on survey responses for 807 reverse mortgage borrowers who received reverse mortgage counseling between 2001 and 2006 (Redfoot, Scholen, and Brown, 2007). This descriptive study reported overwhelmingly positive outcomes. More than 90 percent of respondents thought that the reverse mortgage had mostly positive effects on their lives: it provided peace of mind, a more comfortable lifestyle, and improved quality of life, and it enabled them to stay in their homes. Although this study provides insights into the perceptions of reverse mortgage borrowers in the first few years after loan origination, the sample is based on households surveyed within 2 years (on average) of the receipt of the reverse mortgage.[7] Further, the study does not attempt to compare measures of well-being with seniors in the general population. By contrast, the AIP survey includes borrowers up to 7 years after loan origination and compares reverse mortgage borrowers' outcomes with the outcomes of seniors in the general population on an array of attributes.

Aside from drawing insights from survey data, insights on reverse mortgage borrower outcomes can be drawn from a small number of empirical studies of loan outcomes that examine reverse mortgage terminations, loan assignment to HUD, and default. Loan termination is a terminal outcome for a reverse mortgage that is most often initiated when all borrowers die or move out of the property. Reverse mortgage lenders can also initiate termination if a borrower fails to maintain the obligations of his or her loan, including paying property taxes and homeowner's insurance.

[6] To exercise the put option, borrowers would originate a line of credit and extract remaining equity on the line of credit immediately before termination of the reverse mortgage, leaving no residual equity on the loan (and thus "putting" the property to HUD).

[7] For the AARP study, most respondents were surveyed within 1 year after receiving the reverse mortgage and 90 percent were surveyed within 3 years after obtaining the reverse mortgage.

In an early study, Rodda, Lam, and Youn (2004) modeled terminations using 1990-to-2000 data and found that significant explanatory variables included the borrower's age, income at the time of origin, gender, presence of a co-borrower, house price growth, and the spread between 30-year and 1-year Treasury bills. Not significant was the amount of the borrower's assets or home equity at the time of origination. Szymanoski, Enriquez, and DiVenti (2007), who also summarized the previous literature on terminations, reported the hazard rates of termination by the borrower's age (noting that the termination rate is greater than the mortality rate) and the type of borrower (couple or gender if single). A study by Moulton, Haurin, and Shi (2015) identified factors associated with reverse mortgage default, including large upfront withdrawals from the HECM, lower initial credit scores, high property taxes relative to income, low levels of available revolving credit, and a prior history of delinquency on the mortgage or property taxes.[8]

Some researchers have theorized that seniors who select into HECMs would be those who were more likely to stay in the home for a long period of time with possibly little incentive to maintain the home or move due to the insurance feature of the HECM that protects against negative equity—a type of moral hazard (Shiller and Weiss, 2000). Davidoff and Welke (2007), however, found that HECM borrowers did not appear to stay in the home longer than other seniors. The authors suggested that advantageous selection into HECMs may exist, because borrowers with high discount rates may be more likely to originate a HECM and may also be more likely to sell the home and move to extract additional equity when house prices rise.[9]

Another reason for potentially shorter durations of tenure among reverse mortgage borrowers is differing health conditions and expectations for future health. One hypothesis is that seniors who select into reverse mortgages are in poorer health than seniors in the general population and that they intend to use reverse mortgages to fund large medical expenditures (Nakajima and Telyukova, 2014). Thus, these seniors will be more likely to exit the home through death or by moving to a nursing home than will other seniors. Our study informs these hypotheses with information on HECM borrowers who have originated (and terminated) their reverse mortgage after the boom and bust in the U.S. housing cycle, including information about health and housing conditions.

Data

The primary data set for this analysis consists of 1,761 senior households that were counseled for a reverse mortgage between 2006 and 2011 and that subsequently responded to the AIP survey between July 1, 2014, and June 30, 2015. By law, all prospective borrowers are required to complete counseling with a HUD-certified, third-party nonprofit organization before completing a loan application for a reverse mortgage. The study sample consists of three groups of counselees:

[8] The study also estimated that policy changes to institute withdrawal limits and credit-based underwriting requirements for HECMs could reduce default by as much as 50 percent, with modest impacts on loan volumes (Moulton, Haurin, and Shi, 2015).

[9] The implications for periods of declining house prices, like those experienced during the Great Recession (December 2007 to June 2009), are unclear. Further, Davidoff and Welke (2007) did not observe the condition of the home or maintenance requirements in their analysis. Our AIP study includes borrowers who have originated (and terminated) their reverse mortgage after the boom and bust in the U.S. housing cycle, and it includes questions about housing conditions that we compare with housing conditions for seniors in the general population.

(1) 1,192 (68 percent) active borrowers who took out a reverse mortgage and retained it as of the survey date, (2) 102 (6 percent) terminated borrowers who took out and then terminated their reverse mortgage as of the survey date, and (3) 467 (26 percent) nonborrowers who decided not to take out a reverse mortgage. In addition to having data from the AIP survey, for each respondent we have baseline data collected at the time of counseling, including household demographics, financial characteristics, and credit attribute data from consumer credit files. For households counseled after October 2010, we have baseline information about health and well-being collected as part of the Financial Interview Tool, an added required component to the counseling session.

The sample of survey respondents is drawn from a larger population of 29,702 households counseled for a reverse mortgage between 2006 and 2011 by Clearpoint Credit Counseling Solutions, a HUD-approved 501(c)(3) nonprofit counseling agency with national reach headquartered in Atlanta, Georgia, who partnered with the research team for this study. Viable contact information was available for 16,653 households at the time of survey administration.[10] These households were contacted by mail, phone and e-mail (when available) with an invitation to complete the survey. A total of 1,918 individuals responded to the request and were provided with information about the survey, for a response rate of 11.5 percent. Of the 1,918 responding, 1,779 (93 percent) consented to participate in the AIP survey, and 1,761 completed at least the first set of questions on reverse mortgage status and are the base sample for the analysis.[11]

We examined differences in the respondent and nonrespondent groups on specific demographic, financial, credit, and housing indicators available in our administrative data sets. The comparison indicates that survey respondents are not necessarily representative of the broader study population of households counseled by Clearpoint for a reverse mortgage during our study period. Survey respondents tend to be in a better financial position at the time of counseling, with higher incomes (about 5 percent higher), assets (33 percent higher), and stronger credit portfolios (for example, credit scores are 15 points higher) than are nonrespondents. Further, respondents tend to have obtained a higher level of education than nonrespondents. Detailed statistical information about these differences is available in the AIP survey report (Moulton et al., 2016). For the analysis, we apply sample weights so that our sample of respondents is spatially representative of the distribution of counseled households by U.S. region who seek counseling for a reverse mortgage.

Most households in the AIP survey sample were counseled in the year 2010 (38 percent) and 2011 (37 percent), followed by 2008 and 2009 (about 10 percent each year), and about 4 percent were counseled in 2006 or 2007. The typical AIP respondent would thus be 3 to 5 years post-counseling at the time of the survey, with a smaller proportion of respondents (14 percent) 6 to 9 years post-counseling.

We supplement our data set on households counseled for a reverse mortgage with data on senior households in the general population, using data from the HRS, a nationally representative biennial panel survey of more than 26,000 adults older than age 50.[12] Individuals in the HRS, which began

[10] Not viable includes phone number disconnected/no longer in service, no forwarding information, no contact information, phone number blocked, death of both household members, no alternative contact person, and technical errors in the information.

[11] A more detailed discussion of the survey procedures is available in the full survey report (Moulton et al., 2016), available on line at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2749368.

[12] The HRS is administered by the University of Michigan, with funding from the National Institute on Aging and the Social Security Administration. See http://hrsonline.isr.umich.edu/.

in 1992, remain in the HRS until their death, with a new birth cohort of households in their 50s entering the panel every 6 years to refresh the panel. For our study, we use the "core" public data set, including detailed information at the individual level on household demographics, housing and financial characteristics, health status, and other indicators of well-being. We extract responses to survey items from the HRS that are comparable to survey items from the AIP study.

We limit the HRS sample to individuals residing in households where at least one member was age 62 or older as of the 2008 or 2010 survey wave and who was a homeowner at that time, and thus would have been eligible for a reverse mortgage.[13] Our analysis is at the household level. For questions asked of multiple household members, we use the responses of the primary respondent as coded in the HRS. If the primary respondent is under the age of 62, we use responses for the household member who is age 62 or older.

Results

Our analysis is descriptive and consists of three parts. First, we explore factors influencing the reverse mortgage decision, comparing AIP survey responses for counseled homeowners who obtained reverse mortgages (HECM borrowers) with those who were counseled and decided to not obtain a reverse mortgage (HECM nonborrowers). Second, we compare demographic and financial characteristics at baseline for AIP respondents (separating HECM borrowers and HECM nonborrowers) relative to homeowner households in the HRS as of the 2008 and 2010 survey waves. We limit the AIP survey sample to those counseled between 2008 and 2011, comprising 96 percent of the survey sample.[14] Third, we compare outcomes for the same sets of households using the 2014–2015 AIP survey and 2014 wave of the HRS. Sample sizes vary slightly, depending on the variables being compared, due to missing responses on particular items.

We report the weighted means and proportions for all items and test for statistical differences using *t*-tests (for means) or chi-2 tests (for proportions). It is important to caution that these comparisons do not control for other factors that may lead to the observed differences. Further, we do not model the decision to obtain a reverse mortgage. Observed differences could occur because the types of individuals who select into reverse mortgages differ from the general population (a selection effect) or because the reverse mortgage has an impact on borrowers' behavior and outcomes (a treatment effect).

Factors Influencing Reverse Mortgage Decisions

All the households responding to the AIP survey considered obtaining a reverse mortgage sometime within the 3- to 9-year period before the survey. Respondents were asked about their primary reasons for considering a reverse mortgage. Exhibit 1 summarizes the responses, comparing those

[13] Approximately 75 percent of HRS households were homeowners as of the 2008 or 2010 survey wave. We construct an alternative sample that does not limit HRS respondents to be homeowners. Results of comparisons with the full sample of seniors are available from the authors.

[14] Sample sizes in the AIP survey are not representative of the number of households counseled each year during the sample period or the distribution of respondents among regions. Thus, the AIP data are weighted, yielding a sample representative of seniors who received counseling for a reverse mortgage. The HRS household weights are applied to respondents within the HRS, yielding a nationally representative sample of seniors.

Exhibit 1

Factors Influencing Reverse Mortgage Decisions

	HECM Borrowers			HECM Nonborrowers		
	N	Mean	SD	N	Mean	SD
Reasons for considering a reverse mortgage (%)						
Everyday expenses	1,272	0.42	0.56	448	0.41	0.38
Pay off mortgage	1,272	0.38*	0.55	448	0.44	0.39
Pay off nonmortgage debt	1,272	0.27	0.50	448	0.23	0.33
Home improvements	1,272	0.22*	0.47	448	0.28	0.35
Financial help to family	1,272	0.19	0.45	448	0.18	0.30
Health or disability expenses	1,272	0.15	0.41	448	0.13	0.27
Postpone other retirement income	1,272	0.15	0.40	448	0.18	0.30
Lock in home equity	1,272	0.09*	0.32	448	0.13	0.26
Big purchase (such as a car or vacation)	1,272	0.06	0.28	448	0.06	0.19
Purchase new property	1,272	0.03	0.20	448	0.05	0.16
Other	1,272	0.16	0.42	448	0.13	0.26
Reasons for desire to pay off mortgage debt (%)						
Get rid of mortgage payments	534	0.67	0.53	147	0.66	0.36
Unable to afford mortgage payments	534	0.39**	0.55	147	0.26	0.33
Pay off home equity loan	534	0.20	0.45	147	0.28	0.34
High interest rate	534	0.19*	0.44	147	0.27	0.34
Behind on mortgage payments	534	0.11*	0.36	147	0.19	0.30
Facing foreclosure	534	0.09	0.32	147	0.13	0.25
Adjustable interest rate	534	0.06*	0.27	147	0.13	0.25
Other	534	0.12*	0.37	147	0.20	0.30

HECM = Home Equity Conversion Mortgage. SD = standard deviation.
** p < 0.05. ** p < 0.01.*
Notes: The mean column for HECM borrowers shows statistical significance of t-tests between borrowers and nonborrowers. HECM borrowers include active and terminated.

who subsequently originated a reverse mortgage (HECM borrowers) with the responses for those who were counseled for but did not obtain a reverse mortgage (HECM nonborrowers).

The most common motivation reported by both borrowers and nonborrowers was "to gain extra income for everyday expenses (other than health needs)," which is as expected from previous literature that suggests reverse mortgage borrowers are likely to be "house rich" but "cash poor." As found in previous surveys (for example, Redfoot, Scholen, and Brown, 2007), paying off mortgage debt is also a primary motivation for more than one-third of survey respondents. Per HUD regulations, reverse mortgages can be the only lien on the property; thus, homeowners with an existing mortgage must pay off their current mortgage before obtaining a reverse mortgage. Nonborrowers were significantly more likely to indicate a desire to pay off mortgage debt with a reverse mortgage than were borrowers. For some nonborrowers, the proceeds from the reverse mortgage may have been insufficient to pay off their existing mortgage debt, preventing them from taking out the reverse mortgage.

Paying off a mortgage that requires a regular monthly payment also enables people to free up income that can be used for other purposes. In a followup question (bottom panel of exhibit 1), most AIP survey respondents who indicated they wanted to pay off mortgage debt reported they wanted to eliminate their monthly mortgage payment. Nearly 2 in 5 of these respondents indicated they could no longer afford their mortgage payment. In fact, more than 1 in 10 borrowers seeking

a reverse mortgage to pay off their mortgage indicated they were behind on their mortgage payments when they sought a reverse mortgage. For nonborrowers, nearly twice as many respondents who desired to pay off their mortgage were behind on mortgage payments. Nonborrowers wishing to pay off their forward mortgages were also significantly more likely to report having high and adjustable interest rates than were borrowers.

About one in four respondents reported considering a reverse mortgage to pay for home improvements. Nearly one in five respondents reported a desire to provide financial help for family members. Despite theoretical models that predict health expenses will be a primary factor motivating use of reverse mortgages (Nakajima and Telyukova, 2014), only about 15 percent of respondents report seeking a reverse mortgage to help with such expenses. It is interesting that a similar proportion of respondents report seeking a reverse mortgage to postpone using other sources of retirement income, a strategy currently promoted in financial planning literature (for example, Pfeiffer, Schaal, and Salter, 2014; Sacks and Sacks, 2012; Salter, Pfeiffer, and Evensky, 2012).

A key feature of the HECM reverse mortgage is that, even if property values decline, the reverse mortgage line of credit retains and grows based on the initial home value. Savvy homeowners during the housing bubble could have used a reverse mortgage to hedge against house price risk. About 1 in 10 survey respondents reported considering a reverse mortgage as a means to "lock in home equity as insurance against declining housing prices." Few respondents planned to use a reverse mortgage for a big purchase (such as a car or vacation) or to purchase a new property. For recent cohorts of counseled households, the reverse mortgage is primarily viewed as a way to manage basic, ongoing finances.

In addition to considering motivations for seeking a reverse mortgage, it is illuminating to consider the reasons that counseled households provide for not obtaining a reverse mortgage. Exhibit 2 summarizes the proportion of nonborrowers identifying particular factors. Survey participants who decided against a reverse mortgage after the mandatory counseling session indicated three top reasons

Exhibit 2

Reasons for Not Obtaining a Reverse Mortgage

	HECM Nonborrowers		
	N	Mean	SD
Reasons for not obtaining a reverse mortgage—select all that apply (%)			
You liked knowing that you own your home completely free of any mortgages	430	0.30	0.43
The amount of money that you would have received was too small	430	0.29	0.43
You found another way to meet your financial needs	430	0.29	0.43
The costs of the reverse mortgage were too high	430	0.26	0.41
You wanted the home to remain in the family/leave it to children	430	0.26	0.41
Your property was not eligible	430	0.20	0.38
You were not eligible	430	0.16	0.35
The process of taking out a reverse mortgage was too complicated	430	0.13	0.32
Your children or family members did not want you to take out a reverse mortgage	430	0.08	0.26
You did not trust the loan officer offering you the loan	430	0.09	0.28
You wanted to sell your home and move	430	0.05	0.21
Your spouse was under age 62 and you did not want to take him/her off the deed	430	0.03	0.15
A financial planner/financial professional advised against a reverse mortgage	430	0.02	0.13
Other	430	0.20	0.38

HECM = Home Equity Conversion Mortgage. SD = standard deviation.

for this decision: (1) a desire to own their home completely free of any mortgages, (2) learning that the amount of money from a reverse mortgage was too small, and (3) finding another way to meet financial needs. Each of these three reasons was selected by nearly one-third of AIP study nonborrowers. Moreover, about one in five nonborrowers reported that they or their properties (or both) were ineligible for the reverse mortgage.

In line with bequest motivations, about one-fourth of nonborrowers reported not obtaining a reverse mortgage because of a desire to have the home remain in the family and/or leave the home as an inheritance to children. Close to 1 in 10 nonborrowers indicated that family members were opposed to their taking a reverse mortgage. Less than one-third of respondents (26 percent) indicated the high cost of a reverse mortgage as a reason for deciding against it. It is noteworthy that high cost is not the dominant reason, given that high costs are frequently cited as the primary barrier in the previous literature. In addition, perceptions of costs may be shifting over time. In the AARP survey, two-thirds of nonborrowers reported high costs as a reason for not applying for a reverse mortgage after counseling (Redfoot, Scholen, and Brown, 2007). About 1 in 10 nonborrowers mentioned lack of trust for the loan officer as a reason for not obtaining a reverse mortgage.

Individuals engaged in the reverse mortgage loan process may influence decisions. Borrowers and nonborrowers were asked about their experiences with the reverse mortgage counselor and loan officer and how well informed they felt about different items after receiving counseling for a reverse mortgage (exhibit 3). In general, those who obtained a reverse mortgage (HECM borrowers) were significantly more likely to report favorable experiences with lenders and counselors than were nonborrowers, and they were more likely to feel well informed about details regarding the reverse mortgage.

Most respondents indicated that they thought the reverse mortgage counselor and loan officer provided sufficient information about the reverse mortgage to inform their decision; however, borrowers were 13 percentage points more likely to feel informed by the lender than were nonborrowers. Perceived pressure from the loan officer or the counselor to take out a reverse mortgage was more often reported by nonborrowers than by borrowers, although the proportion that reported feeling pressured is quite small.

Respondents were asked whether, knowing what they know today, they felt like they were informed about four key items at the time of reverse mortgage counseling: (1) different ways to receive the proceeds from the reverse mortgage, (2) their responsibility to pay property taxes and homeowner's insurance, (3) the fact that mortgage balances increase over time, and (4) if they were married, the implications of not having their spouse on the deed to the home. Respondents felt best informed about the responsibility to pay property taxes and homeowner's insurance. Respondents also felt quite well informed about the different ways to receive the reverse mortgage money (for example a credit line, a lump sum, or a monthly payment). For both items, nonborrowers felt less well informed compared with borrowers. Knowledge levels differ regarding the fact that reverse mortgage loan balances increase due to accumulating interest and mortgage insurance premiums, with nonborrowers being significantly less informed. No difference regarding knowledge levels of married counselees and their understanding of the implications of removing or not having the spouse on the deed was indicated.

Exhibit 3

Reverse Mortgage Counseling Experience and Satisfaction With Decision

	HECM Borrowers			HECM Nonborrowers		
	N	Mean	SD	N	Mean	SD
Experience with reverse mortgage counselor, lender (% agree)						
Reverse mortgage counselor provided enough information	1,209	0.91***	0.32	439	0.84	0.29
Felt pressured by reverse mortgage counselor to take out reverse mortgage	1,209	0.04**	0.24	439	0.09	0.22
Reverse mortgage loan officer provided enough information	1,209	0.87***	0.38	439	0.74	0.34
Felt pressured by reverse mortgage loan officer to take out reverse mortgage	1,209	0.05***	0.24	439	0.11	0.24
Felt pressured by reverse mortgage loan officer to take out lump sum	1,209	0.07	0.29	439	0.07	0.20
Well informed after reverse mortgage counseling (% agree)						
Different ways to receive money from reverse mortgage	1,204	0.92**	0.31	428	0.86	0.27
Responsibility to pay property taxes and insurance	1,204	0.95***	0.25	428	0.87	0.26
Increasing loan balance from interest and mortgage insurance premium	1,204	0.68***	0.53	428	0.53	0.39
Implications of removing spouse from deed (if married)	563	0.50	0.56	179	0.45	0.38
Satisfaction with decision to obtain a reverse mortgage						
Decision satisfaction (1 to 5; 1 = very unsatisfied to 5 = very satisfied)	1,276	4.13***	1.40	448	3.55	1.20

HECM = Home Equity Conversion Mortgage. SD = standard deviation. y/n = yes or no response.
** $p < 0.01$. *** $p < 0.001$.
Notes: The mean column for HECM borrowers shows statistical significance of t*-tests between borrowers and nonborrowers. HECM borrowers include active and terminated.*

Finally, all respondents were asked about their satisfaction with their decision to obtain or not obtain a reverse mortgage. On a 5-point scale where 1 is "not at all satisfied" and 5 is "very satisfied," borrowers were significantly more likely to be satisfied than were nonborrowers, with an average score of 4.1 for borrowers and 3.6 for nonborrowers.

Comparison With Senior Homeowners in the General Population

In this section, we compare senior homeowners in the AIP survey who were counseled for a reverse mortgage between 2008 and 2011 with senior homeowners in the general population, using HRS waves for 2008 and 2010. We compare the average characteristics at the time of counseling for three groups: (1) counseled seniors who subsequently originated a HECM, (2) counseled seniors who did not obtain a HECM, and (3) senior homeowners in the HRS. We test for statistically significant differences between each counseled group and HRS respondents. We also compare these three groups of respondents on an array of survey indicators, measuring financial capability and financial planning, as of the 2014–2015 AIP survey and 2014 HRS survey wave.

Demographic and Financial Characteristics

First, regarding demographic characteristics, exhibit 4 shows that in the AIP survey a significantly higher proportion of reverse mortgage borrowers are Black than the proportion of senior homeowners who are Black in the general population. The difference is smaller for borrowers, however, than for counseled seniors who did not obtain a reverse mortgage: 14 percent of borrowers are Black compared with 27 percent of counseled nonborrowers and 10 percent of homeowners in the HRS.[15] These findings add nuance to previous findings that reverse mortgage borrowers are more likely to be located in high minority areas (for example, Davidoff and Wetzel, 2014; Shan, 2011).

Reverse mortgage borrowers in the AIP survey are also significantly less likely to be married than are homeowners in the general population. Previous studies noted that reverse mortgage borrowers are more likely to be single females (Bishop and Shan, 2008; Redfoot, Scholen, and Brown, 2007; Rodda, Herbert, and Lam, 2000). Our results indicate that this likelihood is true relative to the overall distribution of borrowers but not relative to the distribution of senior homeowners in the population. Although single females represent one-third of reverse mortgage borrowers in the AIP survey, the proportion is only slightly higher than in the general population of senior homeowners. By contrast, single males are significantly overrepresented in the AIP survey relative to the senior homeowners in the general population: nearly 1 in 5 reverse borrowers in the AIP survey is a single male contrasted with only 1 in 10 senior homeowners in the HRS.

It is interesting that homeowners who seek (or obtain) a reverse mortgage in the AIP survey tend to be better educated than senior homeowners in the general population. A significantly higher proportion of both AIP survey borrowers and nonborrowers obtained a 4-year degree than did homeowners in HRS.[16] No statistically significant differences exist in the age of the youngest household member comparing those in the AIP survey who were counseled for a reverse mortgages with seniors in the HRS. Our sample's mean age of 70 is younger than the average age of obtaining a reverse mortgage in previous studies (for example, Redfoot, Scholen, and Brown, 2007), but it is in line with the trend that a higher proportion of seniors are seeking HECMs at younger ages (CFPB, 2012).

Exhibit 4 also compares respondents on an array of financial variables. As a reminder, these indicators are measured here as of the baseline year, before obtaining a reverse mortgage for borrowers. We drop extreme outliers for each financial variable and report medians and means.[17] Overall, the results of the AIP survey confirm the assumption that reverse mortgage borrowers tend to be "house rich" but "cash poor" relative to the general population of senior homeowners. The median income for reverse mortgage borrowers is about 30 percent lower than the median income for respondents in the HRS. Further, households that seek (or obtain) reverse mortgages have substantially fewer assets (not including equity in the primary residence) than do households

[15] In the full AIP survey population, 17 percent of respondents are Black.

[16] These differences are not simply due to survey response bias. In the full AIP survey population, the proportion of reverse mortgage borrowers with higher levels of education is also significantly higher than the proportion with higher educations in the HRS.

[17] For income, we drop observations above $500,000. For home value, nonhousing assets, home equity, and total mortgage debt, we drop observations with values greater than $1.5 million. These restrictions drop 3 percent or less of the top distribution for a given variable.

Exhibit 4

Baseline Demographic Characteristics

	HECM Borrowers				HECM Nonborrowers				HRS			
	N	Mean	Median	SD	N	Mean	Median	SD	N	Mean	Median	SD
Demographics												
Hispanic (%)	1,218	0.04	NA	0.20	428	0.06	NA	0.23	13,516	0.06	NA	0.23
White (%)	1,142	0.76***	NA	0.43	404	0.64***	NA	0.48	13,513	0.89	NA	0.32
Black (%)	1,142	0.14***	NA	0.35	404	0.27***	NA	0.44	13,513	0.08	NA	0.27
Other race (%)	1,142	0.10***	NA	0.30	404	0.09**	NA	0.28	13,513	0.04	NA	0.19
Education: less than high school (%)	1,039	0.15	NA	0.36	383	0.15	NA	0.36	13,516	0.16	NA	0.37
Education: high school graduate or equivalent (%)	1,039	0.46***	NA	0.50	383	0.44**	NA	0.50	13,516	0.54	NA	0.50
Education: 2-year college degree (%)	1,039	0.09***	NA	0.29	383	0.11**	NA	0.31	13,516	0.04	NA	0.21
Education: 4-year college degree (%)	1,039	0.21***	NA	0.41	383	0.21*	NA	0.41	13,516	0.13	NA	0.34
Education: postgraduate degree (%)	1,039	0.08**	NA	0.27	383	0.09	NA	0.28	13,516	0.11	NA	0.32
Age of youngest household member (years)	1,210	70.16	NA	6.95	427	69.62	NA	7.44	13,516	69.76	NA	9.42
Unmarried male (%)	1,218	0.19***	NA	0.39	428	0.22***	NA	0.42	13,507	0.11	NA	0.31
Unmarried female (%)	1,218	0.35*	NA	0.48	428	0.38*	NA	0.48	13,510	0.31	NA	0.46
Married (%)	1,218	0.45***	NA	0.50	428	0.40***	NA	0.49	13,501	0.58	NA	0.49
Financial variables ($)												
Total household income	1,154	2,981***	2,488	2,010	414	2,682***	2,308	1,728	13,444	5,310	3,649	5,403
Assets other than primary residence	1,214	38,788***	0	139,498	425	39,535***	0	118,628	12,945	252,051	102,858	343,014
Assets other than primary residence > 0	669	99,976***	24,781	209,915	257	79,105***	12,443	158,300	11,772	274,365	125,296	347,516
Home value of primary residence	1,218	312,615***	248,850	219,289	428	242,715	192,596	166,279	13,516	239,649	173,120	214,184
Mortgage debt	1,217	84,150***	52,107	115,850	428	81,458***	54,079	106,442	13,514	43,647	0	94,089
Mortgage debt with a mortgage; mortgage debt > 0	798	132,644**	103,329	121,344	304	118,015	94,956	110,008	4,701	115,457	78,986	122,997
Home equity of primary residence	1,217	230,919***	176,960	193,526	428	163,853**	113,345	151,032	13,514	197,491	143,906	192,624
Monthly mortgage payment	1,180	699***	476	916	407	652***	542	760	12,577	348	0	648
Monthly mortgage payment with a mortgage; monthly mortgage payment > 0	702	1,132	974	932	250	1,007	882	731	3,803	1,048	867	730

HECM = Home Equity Conversion Mortgage. HRS = Health and Retirement Study. NA = not applicable. SD = standard deviation.

** p < 0.05. ** p < 0.01. *** p < 0.001.*

Notes: The mean column for HECM respondents shows statistical significance of t-tests between the appropriate group and HRS respondents. HECM borrowers include active and terminated. HRS sample includes both the 2008 and 2010 waves combined. All financial values are in 2014 inflation-adjusted dollars.

in the general population of seniors. Of note, the median reverse mortgage borrower reports zero value in financial assets outside of the equity in their home relative to a median of about $100,000 for homeowners in the HRS.

When it comes to the primary residence, however, reverse mortgage borrowers have significantly higher valued homes than do homeowners in the general population. It is interesting that reverse mortgage borrowers also tend to have significantly higher levels of mortgage debt than do senior homeowners in the general population. Despite higher levels of mortgage debt, home equity is significantly higher among reverse mortgage borrowers. Of note, higher home values, mortgage debt, and levels of equity are found only for counseled households that subsequently originate a reverse mortgage—no difference exists between counseled households that do not originate a reverse mortgage (nonborrowers) and the general population of seniors.

Financial Planning and Capability

We next consider differences in financial planning and capability (exhibit 5). These indicators are not available at baseline for the homeowners counseled for a reverse mortgage but, instead, are measured on the 2014–2015 AIP survey (compared with the 2014 wave of the HRS).

Regarding financial planning, the comparisons indicate that reverse mortgage borrowers (and counseled nonborrowers) in the AIP survey report being significantly less likely to leave any inheritance, in line with previous theoretical expectations regarding bequest motives (for example, Nakajima and

Exhibit 5

Financial Planning and Capability as of 2014

	HECM Borrowers			HECM Nonborrowers			HRS		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Willingness to take risks in financial matters (10 = most willing, 0 = least willing)	1,076	2.54***	2.28	370	2.68	2.45	2,542	2.93	2.59
Has a will (%)	1,104	0.74***	0.44	378	0.61	0.49	5,862	0.66	0.47
Has put assets in trust (%)	1,062	0.25***	0.43	370	0.19	0.39	5,767	0.17	0.38
Has living will or power of attorney (%)	1,095	0.68**	0.47	380	0.58*	0.49	5,763	0.63	0.48
Likelihood of leaving any inheritance (as a percent)	1,007	50.85***	42.99	347	54.81***	44.08	5,331	75.76	33.05
Gave a correct answer to lottery knowledge question (%)[a]	1,128	0.56***	0.50	388	0.48	0.50	5,642	0.43	0.50
Responded "don't know" to lottery knowledge question (%)	1,218	0.17	0.37	428	0.20***	0.40	5,926	0.00	0.00
Refused to answer lottery knowledge question (%)	1,218	0.02***	0.15	428	0.02	0.13	5,926	0.00	0.00
Rating of memory (scale of 1 to 5; 5 = "Excellent")	1,122	3.63***	1.01	386	3.68***	1.06	5,634	2.91	0.88

HECM = Home Equity Conversion Mortgage. HRS = Health and Retirement Study. SD = standard deviation.
** p < 0.05. ** p < 0.01. *** p < 0.001.*
[a] Lottery question asked respondents to give an open-ended response to the following question: "If 5 people all have the winning numbers in the lottery and the prize is 2 million dollars, how much will each of them get?"
Notes: The mean column for HECM respondents shows statistical significance of t-tests between the appropriate group and HRS respondents. HECM borrowers include active and terminated.

Telyukova, 2014). Although 76 percent of homeowners in the HRS plan to leave an inheritance to their families, only about 50 percent of reverse mortgage borrowers express the same intent. Lack of an intention to leave an inheritance is not necessarily due to a failure to plan on the part of reverse mortgage borrowers. In fact, households that obtain reverse mortgages are significantly more likely to exhibit financial planning behaviors, such as having a written will, a living will, or power of attorney or putting assets into a trust. By contrast, counseled nonborrowers are not more likely to demonstrate these financial planning behaviors than are HRS respondents. Further, reverse mortgage borrowers are significantly less likely to indicate a willingness to take risks with their finances. On a scale of 1 to 10, with 10 being very willing to take risks, reverse mortgage borrowers' average score is 2.54 compared with 2.93 for senior homeowners in the general population.

Regarding financial capability, we compare indicators of financial literacy and self-rated memory—as proxies for cognitive functioning. Regarding financial literacy, both AIP and HRS surveys include a simple measure of division, validated through previous studies (for example, Lusardi and Mitchell, 2007: 37)—"If 5 people all have the winning numbers in the lottery and the prize is 2 million dollars, how much will each of them get?" Survey participants were asked to provide the amount in an open-ended question format. Households in the AIP survey who obtained reverse mortgages were significantly more likely to provide the correct answer: 56 percent compared with 43 percent of HRS respondents. The proportion of counseled nonborrowers responding correctly is not significantly different than the proportion responding correctly in HRS. This finding may seem surprising; however, it corresponds with the finding that reverse mortgage borrowers have higher levels of education than does the general population of seniors. A certain level of financial sophistication may be necessary to obtain a reverse mortgage, as has been shown for annuitization and for other financial decisions in older age (Banks, Crawford, and Tetlow, 2015). On a scale of 1 to 5, where 5 is "Excellent," reverse mortgage borrowers also rate their "memory at the present time" significantly higher than did respondents in the HRS.

Outcomes of Borrowers and Nonborrowers

This section uses data from the 2014–2015 AIP survey to track outcomes for households that were counseled for a reverse mortgage in the 3 to 7 years before the survey (between 2008 and 2011). We begin by describing outcomes specific to two groups of reverse mortgage borrowers: (1) survey respondents who originated a reverse mortgage and still had the loan or (2) survey respondents who originated a reverse mortgage but had terminated the loan as of the time of the AIP survey. We then compare the outcomes for seniors who were counseled for a reverse mortgage (HECM borrowers and nonborrowers) with the outcomes for senior homeowners in the general population using the 2014 wave of the HRS.

Reverse Mortgage Specific Outcomes for Active and Terminated Borrowers

Little is known about the experiences of reverse mortgage borrowers who terminate their loans. To learn more about this population, the AIP survey included a sample of 102 terminated borrowers.[18] Termination occurs when the last borrower dies or moves out of the property for a period of 1 year

[18] Terminated borrowers comprise about 6 percent of the AIP survey sample. In the full population of 29,702 counseled households between 2006 and 2011, 5.1 percent had terminated their loans as of 2014. A large proportion of the counseled households that were terminated lacked viable contact information (75 percent), likely due to the death of the borrower.

or more. In addition, sale of the home or refinancing of the HECM with a forward mortgage results in loan termination. Finally, a HECM can be called due and payable (and subsequently terminated) if the borrower fails to maintain the property or fails to pay property taxes or homeowner's insurance.

Among AIP survey participants who had terminated their reverse mortgage at the time of the survey, about 45 percent reported they sold the home, 27 percent reported refinancing with another reverse mortgage, 19 percent reported refinancing with a forward mortgage, 7 percent lost their home to foreclosure, and 2 percent took other actions to terminate their reverse mortgage. Of AIP survey participants who sold their home to repay the reverse mortgage, 54 percent had not purchased a new home at the time of the survey.

Reverse mortgage borrowers have different reasons for why they might sell their home and terminate the loan. About 32 percent of terminated borrowers who sold their homes had done so because they desired to live in a smaller home. The desire to live closer to family or friends and to be released from maintenance duties associated with owning a home ranked second, each reason being reported by 27 percent. Death of a spouse or significant other and overly high property taxes were next, each being mentioned by 22 percent. The cost associated with home maintenance and the desire to live in a more accessible community were each mentioned by 19 percent. High cost of homeowner's insurance and the need for a more accessible home were mentioned by 16 percent of terminated borrowers as reasons for selling the home.

It is interesting to consider if terminated borrowers are still satisfied with their initial decision to obtain a reverse mortgage, and the extent to which they believe the reverse mortgage improved the quality of their life. Exhibit 6 compares select outcomes for terminated borrowers in our sample relative to counseled borrowers who were still active on their reverse mortgages as of 2014. The only significant difference is their agreement with whether the reverse mortgage improved the quality of their lives, with active borrowers more likely to agree. More than two-thirds of

Exhibit 6

Active and Terminated Borrower Outcomes

	HECM Active Borrowers			HECM Terminated Borrowers		
	N	Mean	SD	N	Mean	SD
Reverse mortgage to improve quality of life (scale of 1 to 5; 5 = "Strongly agree")	1,156	4.028	1.107	99	3.699	1.166
Satisfaction with reverse mortgage decision (scale of 1 to 5; 5 = "Very satisfied")[a]	1,176	4.145*	1.218	100	3.979	1.343
Reverse mortgage money lasted same or longer as expected (% agree)	970	0.735	0.442	47	0.657	0.475
Debt stress (scale of 1 to 5; 5 = "A great deal of stress")	1,118	2.395	1.217	87	2.288	1.280
Monthly cashflow deficit (% agree)[b]	1,094	0.255	0.436	86	0.311	0.464

HECM = Home Equity Conversion Mortgage. SD = standard deviation. y/n = yes or no response.

* $p < 0.05$.

[a] *Ratings scales significance tests are p-values on a chi-squared test.*

[b] *Monthly cashflow deficit question asked: "In a typical month, do you find that your expenses are greater than your income, less than your income, or about the same as your income?" The variable in the table was coded as 1 if the person answered "Less than your income" and 0 otherwise.*

Note: The mean column for HECM respondents shows statistical significance of t-tests between active and terminated borrowers.

terminated borrowers, however, still agreed that the reverse mortgage improved the quality of their lives. Further, terminated borrowers reported being about as satisfied with their decision to obtain a reverse mortgage, and they reported no significant differences regarding whether the money from the reverse mortgage lasted shorter, longer, or about as long as they expected. They also did not report having significantly higher levels of debt stress or being more likely to experience a monthly cashflow deficit.

Comparison of Outcomes With Senior Homeowner Population

The 2014–2015 AIP survey and 2014 wave of the HRS include several comparable outcome indicators, including measures of life satisfaction, financial security, and physical health. For each indicator, we compare counseled households that originated a reverse mortgage (HECM borrowers) with the general population of seniors, and we compare counseled households that did not originate a reverse mortgage (HECM nonborrowers) with the general population of seniors (HRS). Differences are noted but should not be considered causal, because they may be the result of both observed and unobserved factors that differ at baseline between the two populations and also any treatment effect of the reverse mortgage itself.

First, we compare respondents on satisfaction with six different areas of their lives as of today, on a scale from 1=very dissatisfied to 5=very satisfied. Exhibit 7 demonstrates that reverse mortgage borrowers in the AIP survey tend to be slightly less satisfied with various aspects of their lives than do homeowners in the general population; however, the differences are relatively small. Differences are greater for nonborrowers who were counseled but did not obtain a reverse mortgage relative to homeowners in the general population.

Next, we examine different indicators of physical health and financial security in more detail. With regard to physical health, results are mixed. Both AIP and HRS surveys ask respondents to rate their health on a scale of 1 to 5. Reverse mortgage borrowers in the AIP survey provide a slightly higher self-rating of their health than do homeowners in the HRS survey. When looking at specific activities of daily living (ADLs), however, reverse mortgage borrowers are slightly more likely to have spent a night in a nursing home or hospital in the past 2 years and are more likely to indicate difficulty climbing stairs and managing money. These differences are observed for both borrowers and nonborrowers. That seniors who select into reverse mortgages in the AIP survey perform slightly worse on ADLs is in line with the expectation that poor current (or expected) health may motivate seniors to seek reverse mortgages to help cover health expenditures (for example, Lusardi and Mitchell, 2007). It should be noted, however, that indicators of poor health are relatively rare in our sample of reverse mortgage borrowers.

Finally, we compare two indicators of food and health security. Most senior homeowners in the HRS report having health insurance, and all respondents in our reverse mortgage sample report having health insurance. A significantly higher proportion of reverse mortgage borrowers in the AIP survey report receiving Medicaid than do homeowners in HRS, although the proportion receiving Medicaid is even higher among counseled nonborrowers. It is important to keep in mind that reverse mortgage borrowers have significantly lower incomes at baseline than do senior homeowners in the HRS. It is perhaps not surprising that reverse mortgage borrowers are more likely to report lacking money for food or taking less medication than prescribed because of cost than are

Exhibit 7

Borrower and Nonborrower Outcomes as Compared With HRS, 2014

	HECM Borrowers			HECM Nonborrowers			HRS		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Satisfaction (scale of 1 to 5; 5 = "Completely satisfied")									
With life as a whole	1,145	3.72***	1.01	399	3.61***	1.08	5,586	3.90	0.83
With place you live	1,159	4.13***	0.84	399	3.88***	1.01	2,538	4.23	0.83
With city or town	1,159	4.10***	0.90	398	3.99*	1.03	2,538	4.18	0.86
With daily life	1,152	3.79***	0.99	400	3.64*	1.08	2,526	3.88	0.90
With family life	1,133	3.98**	0.98	392	3.81	1.09	2,527	4.02	0.93
With financial situation	1,152	3.20***	1.16	398	2.99***	1.20	2,529	3.59	1.06
With your health	1,153	3.44	1.15	397	3.42	1.16	2,523	3.49	1.09
Health									
Condition of health (scale of 1 to 5; 5 = "Excellent")	1,130	3.14	1.18	388	3.10	1.19	5,920	3.13	1.03
Health condition good or better (%)	1,130	0.71*	0.46	388	0.69	0.46	5,920	0.73	0.44
Nights spent in hospital or nursing home in past 2 years	1,123	1.29**	9.41	389	0.79*	2.30	5,905	0.56	1.46
Has spent at least 1 night in nursing home or hospital in past 2 years (%)	1,218	0.35***	0.48	428	0.30	0.46	5,926	0.28	0.45
Has difficulty with (%)—									
Climbing stairs	1,075	0.29***	0.46	374	0.31***	0.46	5,794	0.19	0.39
Bathing	1,104	0.11	0.31	384	0.13*	0.34	5,010	0.09	0.29
Shopping for groceries	1,103	0.18***	0.39	376	0.20***	0.40	5,676	0.08	0.27
Managing money	1,100	0.10***	0.31	378	0.11**	0.31	5,673	0.06	0.24
Food and medication security (%)									
Lacked money for food in past 12 months	1,115	0.08***	0.28	395	0.15***	0.36	5,843	0.05	0.22
Took less medication because of cost in past 12 months	1,114	0.14***	0.35	397	0.19***	0.39	5,898	0.06	0.24
Health insurance (%)									
Has health insurance	1,115	1.00***	0.00	381	1.00***	0.00	5,889	0.99	0.09
Covered by Medicaid	1,115	0.11***	0.31	381	0.16***	0.37	5,845	0.06	0.24

HECM = Home Equity Conversion Mortgage. HRS = Health and Retirement Study. SD = standard deviation.
** p < 0.05. ** p < 0.01. *** p < 0.001.*
Note: Means columns for HECM respondents show statistical significance of t-tests between the appropriate group and HRS respondents.

homeowners in the HRS; however, the proportion is still small among borrowers (for example, less than 1 in 10 lacked money for food in the past 12 months). The proportion unable to afford food or prescriptions is greater for counseled nonborrowers relative to the HRS.

Discussion and Conclusion

Using insights from survey data on households counseled for a reverse mortgage, this study provides a number of insights that can inform research and policy. In line with previous assumptions about being "house rich" and "cash poor," reverse mortgage borrowers in our sample tend

to have lower incomes, have very low (or no) nonhousing assets, and have substantial equity in their homes. "House rich" does not mean that they own their homes outright, however; we find that reverse mortgage borrowers have significantly higher levels of forward mortgage debt when they initially seek counseling than do senior homeowners in the general population, and paying off forward mortgage debt (thereby freeing up monthly cashflow from payments) is one of the top motivations for seeking a reverse mortgage. Recent studies indicate that the proportion of seniors entering retirement with mortgage debt has almost doubled during the past two decades, from 20 percent in 1990 to 38 percent in 2013 (JCHS, 2015). Higher levels of mortgage debt could increase future demand for reverse mortgages as a method of eliminating monthly mortgage payments.

On the other hand, high levels of mortgage debt could reduce a borrower's ability to qualify for a reverse mortgage. About one-third of counseled seniors reported that they or their properties (or both) were ineligible for the reverse mortgage. We are unable to determine the reason for perceived ineligibility from this survey; however, it is not related to income or credit requirements because no risk-based underwriting criteria were in place as of the time that these households were counseled for reverse mortgages. Seniors lacking sufficient equity to pay off existing mortgage balances would need to bring cash to the table to get a reverse mortgage; if they did not have additional cash, they would be ineligible for the reverse mortgage. Given the relatively low levels of liquid assets held by households counseled for a reverse mortgage, those with high mortgage balances are likely unable to originate a reverse mortgage.

In line with previous theoretical expectations, we find that reverse mortgage borrowers are less likely to have bequest motives than are senior homeowners in the general population. Our study is not able to disentangle the reasons for this finding. It could be that the types of seniors who sort into reverse mortgages are less likely to have bequest motives. Given their lower incomes and nonhousing assets, reverse mortgage borrowers may not expect to have financial resources left to leave an inheritance. Future studies can help inform these mechanisms.

A frequent concern about reverse mortgages is that the product is complex and that seniors are a potentially vulnerable population that may not be able to fully understand their decision. Indeed, this is the policy motivation for requiring independent counseling for all reverse mortgage borrowers before signing a loan application (CFPB, 2012). We find that, compared with senior homeowners in the general population, reverse mortgage borrowers are more likely to exhibit financial planning behaviors (such as the creation of a will). They also tend to be more risk averse and score higher on indicators of financial literacy. These behaviors and aptitudes are important to keep in mind when designing counseling protocols for this population.

Regarding outcomes, our study finds that 4 to 7 years later, most counseled homeowners were generally satisfied with their reverse mortgage decision, and borrowers—including terminated borrowers—thought it improved their quality of life. This finding extends previous studies that found high levels of satisfaction among borrowers shortly after counseling (Redfoot, Scholen, and Brown, 2007). When compared with the general population of seniors, seniors counseled for reverse mortgages (borrowers and nonborrowers) report slightly lower levels of overall life satisfication. Lower levels of satisfaction at the time of the survey may simply reflect differences in baseline levels

of satisfaction of homeowners who seek counseling for a reverse mortgage relative to the general population, rather than an attribute of reverse mortgages. Future research is needed that accounts for this type of selection.

Physical health is another outcome that is of research and policy interest when it comes to reverse mortgages. Some theoretical models assume that poor health will be one of the most influential factors that drive seniors to take out a reverse mortgage, with the intent of using home equity to help offset current and future medical expenses (Nakajima and Telyukova, 2014). On the other hand, seniors in poor health may be less able to remain in their homes during the longer term. Our findings on health are nuanced. In general, reverse mortgage borrowers do not rate their overall health to be any lower than senior homeowners in the general population; however, a slightly higher proportion of reverse mortgage borrowers report difficulty with particular ADLs. For example, 30 percent report having difficulty climbing stairs compared with 20 percent of homeowners in the HRS.

Taken together, the findings from this survey reaffirm some common assumptions about reverse mortgages, but they also offer new insights. The findings also raise interesting questions that can be the subject of future empirical research. How will increasing mortgage debt among seniors affect demand for (and takeup of) reverse mortgages? Why are households that seek reverse mortgages less likely to report an expectation that they will leave an inheritance and what is the role of housing and nonhousing wealth in shaping this expectation? What is the optimal design for providing information about reverse mortgages to prospective borrowers in light of differing levels of financial sophistication and planning? After accounting for differences in who selects to be counseled for a reverse mortgage, what is the treatment effect of reverse mortgages on borrowers' outcomes like health and financial well-being? Future analyses are needed to more precisely answer these types of questions. Nevertheless, the descriptive survey results provided in this study are useful to better understand the experiences of senior homeowners in this market.

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