July 2016, Number 16-11

CENTER *for* RETIREMENT RESEARCH *at* BOSTON COLLEGE

REDUCING DEFAULT RATES OF REVERSE MORTGAGES

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Introduction

For many U.S. households, Social Security benefits and 401(k) assets will not provide enough for a comfortable retirement. To supplement these sources, homeowners could turn to their other major asset: home equity. One way to tap home equity is through a reverse mortgage, which does not need to be paid back until the borrower dies, sells the house, or moves. The most common reverse mortgage is the Home Equity Conversion Mortgage (HECM), which is regulated by the U.S. Department of Housing and Urban Development (HUD).

The HECM program insures both borrowers and lenders against certain risks but, in the wake of the financial crisis, rising loan defaults raised concerns about the program's solvency. In response, HUD announced new rules in 2013 to limit a borrower's initial withdrawals and require an up-front assessment of an applicant's ability to pay property taxes and homeowner's insurance. The goal of these changes is to lower default risk without significantly restricting access to reverse mortgages. This *brief* summarizes the results of a recent study that estimates the effects of such changes on both defaults and take-up of reverse mortgages using a unique dataset of applicant and borrower characteristics and loan activity.[1]

The *brief* proceeds as follows. The first section provides a primer on reverse mortgages and the recent HUD changes. The second section describes the dataset. The third section examines which borrower characteristics help predict defaults and take-up. The fourth section simulates how policy changes to impose initial withdrawal limits and underwriting standards – similar to those enacted by HUD – could affect defaults and take-up. The final section concludes that both policy changes are likely to reduce defaults, with only a modest impact on take-up.

Reverse Mortgages and Default Risk

A reverse mortgage is like a traditional (or "forward") mortgage in that it is a loan with the borrower's home as collateral. But unlike a forward mortgage, borrowers do not have to repay the loan as long as they remain in their home. To qualify, borrowers must be age 62 or older and either have already paid off their forward mortgage or be able to pay it off with proceeds from the reverse mortgage. Borrowers can tap

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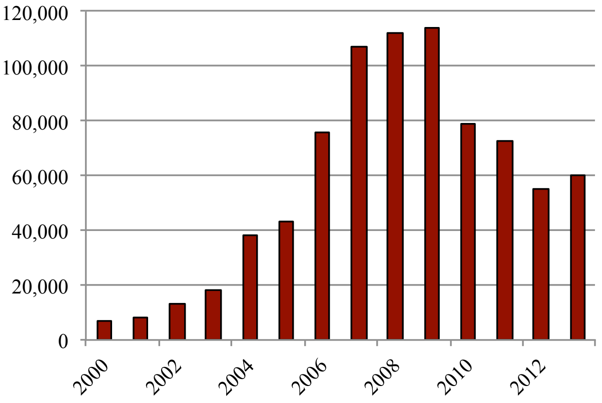
their available equity through lump-sum withdrawals, regular payments, or a line of credit. Due to the relative complexity of the product, potential borrowers are first required to receive counseling from a certified housing counselor. To date, only about 2 percent of eligible seniors have reverse mortgages. But demand for reverse mortgages has generally been rising over the past decade (see Figure 1), and many anticipate that this trend will continue as more people reach retirement with inadequate income from traditional sources.

Figure 1. HECM Loan Originations, FY 2000-2013



Source: Integrated Financial Engineering (2015).

The vast majority of reverse mortgages are issued through the HECM program, which provides insurance both to the borrower – against the risk that the lender cannot make the necessary payments – and to the lender – against the risk that the loan balance exceeds the property's value when it is sold. Borrowers retain title to the property throughout their residence and are responsible for paying the property taxes and homeowners insurance.

If a borrower fails to pay the taxes or insurance, the lender is notified and – if the borrower has untapped HECM funds – the lender can make the payments on the borrower's behalf. A borrower who has exhausted all available HECM funds is in "technical default" on the reverse mortgage. After this point, if attempts to establish a workout plan between the borrower and lender do not succeed, the house could end up in foreclosure.

In the wake of the financial crisis, a rising default rate – which hit 10 percent in 2013 – coupled with a negative balance in HUD's insurance fund generated concerns about the plight of troubled borrowers and the program's solvency. In response, in the fall of 2013, HUD announced two major changes designed to lower default risk. The first, which took effect immediately, restricts the amount that a borrower can withdraw as a lump sum in the first year of the loan to 60 percent of the initial principal limit.[2] The second, which took effect in April 2015, requires lenders to underwrite HECMs by taking into account an applicant's financial and credit risk profile in deciding whether to approve a loan. While underwriting is standard practice for forward mortgages, such a requirement is new for HECMs. Applicants who fail to meet the new criteria can: 1) be denied a loan; or 2) be required to set aside a portion of their available principal in an escrow account – known as a Life Expectancy Set Aside – managed by the lender to cover future property tax and insurance payments.

The *general* impact of these policy changes is clear: they should help reduce the default rate by screening out applicants who are high risk and/or by helping borrowers avoid the financial trouble that can lead to default. What is not clear is the magnitude of these effects and how the changes will impact take-up of reverse mortgages. To shed light on these questions, this study first identifies household characteristics associated with defaults and take-up and then simulates how HUD's policy changes – with some assumptions for specific underwriting criteria – could affect defaults and take-up.

The Data

The analysis uses a unique linked dataset with rich information on homeowners and reverse mortgage activity.[3] The primary source consists of confidential data for households that received reverse mortgage counseling during 2006-2011 from a large nonprofit organization.[4] These data include standard demographic characteristics, along with FICO credit scores and other indicators of household financial health. This primary dataset is then linked to HECM loan data from HUD, with details on reverse mortgage originations, withdrawals, terminations and defaults. The linked dataset thus allows for an analysis of borrowers who ended up in default based on their financial characteristics at the time that the loan was originated.

The sample used in the analysis includes 27,894 households, and a majority – 58 percent – of these households took up a reverse mortgage. The analysis consists of two parts. The first part explores which borrower characteristics increase the likelihood of taking up a reverse mortgage and, conditional on take-up, of ever defaulting. These results are then used in the second part to evaluate what types of changes to the HECM program would be most effective in reducing default rates without overly restricting access to reverse mortgages.

What Factors Affect Take-Up and Default Rates?

The study uses regression analysis to examine two outcomes: whether an individual who receives reverse mortgage counseling takes up a loan and whether a borrower ever enters into default.[5] The main independent variables of interest relate to a household's financial health and its management of HECM funds.[6] A key explanatory variable – the initial withdrawal from a reverse mortgage as a percentage of available loan proceeds – is included in the default equation.

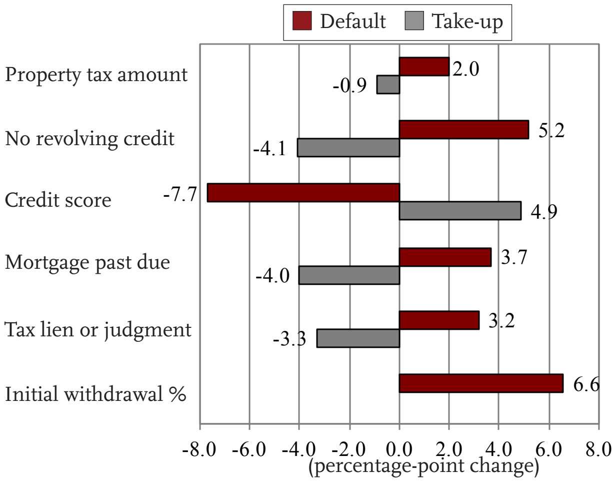
The basic equations for the probability of take-up and the probability of default are:

(P) Take-Up = *f* (hshld finances, hshld demographics,
reverse mortgage characteristics)

(P) Default = *f* (hshld finances, hshld demographics,
reverse mortgage characteristics, initial
withdrawal, house price changes)

Figure 2 shows the impact of selected variables on both take-up and defaults. Since the main contribution of this research is on defaults, we will focus on these effects (denoted by the red bars).[7] The results confirm expectations that a household's overall financial health is tied to default rates.[8] For example, a one-standard-deviation increase in a household's credit score at the time of reverse mortgage counseling reduces the default rate by 7.7 percentage points.[9] The size of the initial withdrawal for a reverse mortgage is also important – a one-standard-deviation rise is associated with a 6.6-percentage point increase in the default rate.[10] To put the size of these effects into context, the baseline default rate for borrowers is 15.6 percentage points.

Figure 2. Effects of Selected Characteristics on Default Rate & Take-Up, Percentage-Point Change



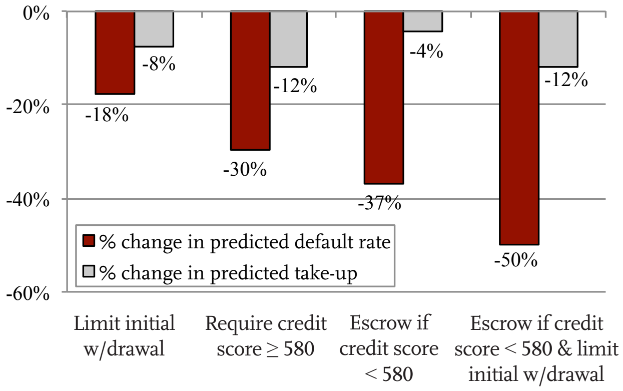
Note: The bars represent a change from zero to one for dichotomous variables, and a one-standard-deviation increase for continuous variables. All bars are statistically significant.
Source: Moulton, Haurin, and Shi (2015).

How Do Policy Changes Affect Default and Take-Up?

The second part of the analysis uses the estimates from the regressions to simulate the extent to which an initial withdrawal limit and underwriting requirements could affect defaults and take-up. Unlike the marginal effects from the regressions, these simulations allow for feedback between the equations.

The results for four simulations are shown in Figure 3 on the next page. The first simulation imposes the new withdrawal limit on all households in the sample that have a reverse mortgage, using the lesser of HUD's limit of 60 percent of the initial principal limit or the actual amount withdrawn at origination. As higher withdrawal percentages are associated

Figure 3. Percentage Change in Probability of Default and HECM Take-Up by Policy Simulation



Source: Moulton, Haurin, and Shi (2015).

with higher default rates, imposing this restriction results in an 18-percent drop in the probability of ever defaulting. However, imposing a withdrawal limit also makes a reverse mortgage less attractive to some borrowers, so the limit reduces HECM take-up by 8 percent.

The second simulation, which does not include the withdrawal limit, assesses the impact of using a specific underwriting threshold – a credit score of 580 – for determining whether an applicant should be approved for a loan. While HUD lays out criteria that a lender must consider in screening an applicant's credit history and financial information, it provides the lender with discretion to document reasons for negative items on credit reports, and thus the new credit requirements are not implemented as hard underwriting thresholds.[11] For the simulation depicted in Figure 3, if a household fails to meet the 580 credit-score threshold, it is not allowed to take up a reverse mortgage. This threshold reduces both take-up and defaults more substantially than the first simulation.[12]

The third simulation, like the second one, excludes the withdrawal limit and includes a credit score threshold of 580 for screening applicants' finances. This time, however, instead of rejecting applicants below the threshold, it allows them to take up a reverse mortgage *if* they have sufficient funds to set aside in a reserve to cover estimated future property taxes and insurance; this escrow account protects against default. This approach more closely reflects HUD's current financial assessment guidelines, in that applicants failing particular financial assessment criteria can be required to establish a set-aside to cover future property tax and insurance payments, rather than being rejected for a HECM altogether. Compared to the other simulations, this approach would achieve *both* a much larger drop in the default rate and a smaller drop in take-up.

The fourth simulation simply combines the policy changes tested in the first and third simulations. Thus, it includes HUD's initial withdrawal limit and an escrow account for borrowers below the credit score threshold of 580. This simulation shows the largest drop in the default rate – a full 50 percent – and a 12-percent drop in take-up.

Conclusion

Reverse mortgages could become increasingly popular as more households reach retirement with insufficient income. However, a recent concern is a rising default rate among borrowers. HUD has responded by restricting initial withdrawals and introducing underwriting criteria. According to the analysis summarized above, the combined impact of both types of policy changes could reduce property tax and insurance default by as much as 50 percent.

One of the concerns about imposing underwriting criteria is that they could significantly reduce the take-up of HECMs, potentially conflicting with the program's public mission. However, the simulated impact of credit-based underwriting standards on HECM take-up is estimated to be small, particularly when such standards are accompanied by a required set-aside for tax and insurance payments rather than a hard cutoff. The combined impact of both types of policies could reduce take-up by 12 percent – primarily due to the restrictions on the initial withdrawal amount rather than the underwriting criteria. However, this impact on take-up is relatively small for a rather large reduction in estimated defaults.

Endnotes

1 For the full study, see Moulton, Haurin, and Shi (2015).

2 A higher percentage can be withdrawn if needed to pay off mandatory obligations, primarily existing mortgages.

3 The only previous empirical analysis of tax and insurance default in the HECM program appears in a series of actuarial reports prepared for HUD (Integrated Financial Engineering, 2011-2014). These reports provide some insights on characteristics associated with defaults, but the dataset does not include important borrower financial information. More generally, previous research on reverse mortgages has identified factors associated with take-up and terminations. For a literature summary, see Moulton, Haurin, and Shi (2015).

4 The nonprofit is ClearPoint Credit Counseling. Most of the households were counseled between 2008 and 2011.

5 The measure of default used in this brief – known as "technical default" – is indicated by the lender making a corporate advance to cover property taxes or insurance payments. A separate equation used a dependent variable for households in "severe default," which is defined as a borrower in technical default who also has an outstanding property tax or insurance balance of $2,000 or more, net of any repayments. See Moulton, Haurin, and Shi (2015) for all of the results.

6 The selection of the household finance measures was influenced by prior research on the forward mortgage market. For a summary of this research, see Moulton, Haurin, and Shi (2015).

7 For more on the factors that influence take-up rates, see Moulton, Haurin, and Shi (2014).

8 The results also include a few exceptions. Specifically, indicators for foreclosure and prior bankruptcy are not significantly associated with default. The measure for property tax burden has a small positive effect on defaults, but it is not statistically significant. However, it does have a statistically significant effect on the alternative "severe default" measure used in a separate equation.

9 The estimate for the elasticity of default with respect to credit scores in this analysis is similar to that found in research for closed-end home equity loans, but higher than that for home equity lines of credit (Agarwal et al. 2006).

10 The positive relationship between withdrawals and default accords with prior research on equity extractions from forward mortgages; see Mian and Sufi (2011); Laufer (2011); and Kumar (2014).

11 See U.S. Department of Housing and Urban Development (2014) for more details on the implementation of the financial assessment and property charge requirements.

12 The full study also tests two other thresholds – a credit score of 500 and a measure for "bad credit" that relies on whether a borrower has any history of delinquency or foreclosure. The results for the less stringent credit score threshold show much smaller reductions in default rates and HECM take-up, while the "bad credit" definition shows reductions in default risk that are similar to those of the 580-credit-score threshold but somewhat larger reductions in take-up.

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The Center for Retirement Research thanks BlackRock, Capital Group, Citigroup, Fidelity & Guaranty Life, Goldman Sachs, MassMutual Financial Group, Mercer, Prudential Financial, State Street, and TIAA-CREF Institute for support of the preparation of this brief.

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The preparation of this brief was supported by the Center's Partnership Program. The findings and conclusions expressed are solely those of the authors and do not represent the views or policy of the partners or the Center for Retirement Research at Boston College.