OCTOBER 2019

Unlocking housing wealth for older Americans:

Strategies to improve reverse mortgages

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STATEMENT OF INDEPENDENCE

Funding for this report, which draws on prior research funded by the U.S. Department of Housing and Urban Development and the MacArthur Foundation, was provided by the Brookings Institution and the Northwestern University Kellogg School of Management. The authors did not receive any financial support from any firm or person for this article or from any firm or person with a financial or political interest in this article. They are currently not an officer, director, or board member of any organization with an interest in this article.

ABSTRACT

Housing wealth is a largely untapped resource that can help older adults supplement their incomes and buffer financial shocks in retirement. The federally insured reverse mortgage offers adults age 62 and older access to home equity with no required monthly payment, and protection for homeowners and their heirs against negative equity. Despite estimates of a large potential market, take-up of reverse mortgages in the U.S. is very low, with less than 2 percent of the population age 62 and older holding a reverse mortgage. In this paper, we review barriers to borrowing from home equity, including an estimate of the size of the population who may be unable to borrow due to an inability to afford monthly mortgage payments. We describe the market for federally insured reverse mortgages, including trends and challenges over time, as well as recent policy reforms. We then present a set of reforms to improve the market for reverse mortgages, including streamlined product offerings that target specific consumer segments, and the use of risk-based underwriting and preventing servicing. These reforms are intended to reduce the probability of default, foreclosure, and negative equity (crossover risk), while reducing frictions in the market for consumers and lenders.

ACKNOWLEDGEMENTS

We would like to thank Martin Baily, Laurie Goodman, Lauren Lambie-Hanson, Benjamin Harris, Chris Mayer, and Joshua Miller for their helpful comments and feedback on this white paper. The views and findings expressed here are those of the authors.

Introduction

The economic security of older adults in the U.S. is a critical policy issue. The Social Security Administration projects that unless there are changes in the program, the Old Age and Survivors Insurance fund will be depleted by 2034. As a result, older adults will see a 23 percent reduction in their monthly benefit amounts.[1] Researchers and policymakers have proposed various solutions, including reforms to social security and strategies to build and manage private wealth in retirement (Munnell 2014; Baily and Harris 2018).

Housing wealth is a largely untapped resource that can help older adults supplement their incomes and buffer financial shocks in retirement. Nearly 80 percent of adults age 65 and older own their homes. In 2017, homeowners over age 62 held approximately $6 trillion of the over $11 trillion of total home equity in the U.S. (Haurin and Moulton 2017). According to the 2016 Survey of Consumer Finances, the median home equity of the primary residence held by homeowners age 62 and greater was $139,000. In contrast, the median value for financial assets was $101,800, with 18 percent of homeowners age 62 and older having less than $10,000 in financial assets but holding at least $40,000 in home equity.[2]

While housing wealth comprises a substantial share of wealth for many older adults, it is illiquid when held in the form of home equity, and is costly to convert to a liquid form. Options to liquidate home equity include selling the home and renting, selling and purchasing a lower price home (downsizing), or borrowing through a mortgage. Historically, homeowners have not consumed home equity in retirement as might be expected following a life cycle model (Poterba, Venti and Wise 2011). Most older adults express attachment to their homes and do not sell their homes and move until they experience a major negative health event or death of a spouse (Poterba, Venti and Wise 2011). Between 1998 and 2014, only about one-fourth of homeowners age 50 and older who moved purchased a home of a lower price, allowing for liquidation of some portion of home equity (Begley and Chan 2019). Older homeowners who sell their homes and move tend to have higher incomes and wealth than homeowners who do not move prior to death (Englehardt and Eriksen 2019). Further, borrowing through a traditional forward mortgage can be costly, with some households unable—or unwilling—to afford the monthly payment.

Reverse mortgages are one way for adults age 62 and older to extract equity from the home with no monthly repayment required until the loan becomes due, typically upon the death of the last borrower. Unlike a traditional forward mortgage where the balance falls over time as a borrower makes monthly payments, the balance on a reverse mortgage grows over time as interest and fees are added to the amount borrowed.

The predominant type of reverse mortgage in the U.S. is the federally insured Home Equity Conversion Mortgage (HECM). Despite estimates of a large potential market (Mayer and Simons 1994; Kaul and Goodman 2017), take-up of reverse mortgages in the U.S. is very low, with less than 2 percent of the population age 62 and older holding a reverse mortgage.

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1. Estimates from U.S. Social Security and Medicare Board of Trustees 2019 Annual Report, available at https://www.ssa.gov/oact/TRSUM/

2. Authors' calculations using the 2016 SCF.

We assert that both supply and demand factors contribute to the low take-up of reverse mortgages. Our general premise is that in order for the reverse mortgage market to provide a viable option to liquidate home equity in retirement, we need product options that meet the needs of different consumer segments while mitigating risks to borrowers, lenders, private investors, and government. The product options need not (and likely should not) all be provided by government.

We propose two new product options to better align the government-insured program to the consumer segments it is uniquely qualified to serve. First, small-dollar reverse mortgages are a low-cost option targeting an estimated 6.1 million homeowners for whom equity in their homes is their primary asset in retirement and who can benefit from access to short-term liquidity. Second, streamlined forward-to-reverse mortgages target the more than 3 million older homeowners with a forward mortgage who could significantly improve their housing affordability by eliminating their monthly mortgage payment.

In addition to new product offerings, reforms are needed that streamline the origination and servicing processes for prospective borrowers and market participants—while reducing the risk that the loan will terminate in foreclosure. On the front end, our proposed reforms include risk-based underwriting based on credit score and draw amounts. This reduces the costs associated with the reverse mortgage for lower risk borrowers while building in default protections for higher risk borrowers. On the back end, our proposed reforms include required preventative servicing and proactive steps by servicers and the Federal Housing Administration (FHA) to enhance the collateral value of properties owned by reverse mortgage borrowers.

Before presenting these reforms in greater detail, we begin by describing the trends and challenges associated home equity borrowing in retirement, including borrowing through a reverse mortgage.

Home equity borrowing in retirement: Trends and challenges

In this section, we address three related questions. First, to what extent—and how—do older adults borrow from home equity? Second, what are the barriers to borrowing from home equity for older adults? Third, how do reverse mortgages address or exacerbate these barriers?

Types and rates of home equity borrowing

The primary way that older adults access housing wealth is by borrowing through a mortgage. The most common form of borrowing among older adults is a home equity line of credit, or HELOC. Similar to a credit card, a HELOC is an open-ended line of credit that allows borrowers to draw funds as needed up to a maximum loan limit. HELOCs are typically structured with an initial five- or 10-year draw period during which the borrower repays only interest (Agarwal, Ambrose, and Liu 2006b). Another borrowing option is a

home equity loan. Home equity loans are closed-end mortgages, where borrowers withdraw a set amount of funds at the time of origination and do not have the option to continue to draw funds in the future without refinancing or originating a new loan. If the borrower currently has a mortgage on their property, the home equity loan is structured as a smaller, second mortgage on their property for a shorter term, typically less than 20 years (Agarwal, Ambrose, and Liu 2006b).

A third borrowing option is to refinance a first mortgage for a larger amount than the current loan balance, and to use the additional loan funds as "cash" for consumption or to pay off consumer debt, often referred to as "cash-out" refinancing. While the first mortgage term can be shortened, it is common for the loan to be refinanced for a 30-year term, resulting in a lower total mortgage payment than would result from taking out a second mortgage or HELOC. HELOCs tend to have lower origination costs, interest rates, and fees than home equity loans, but typically have more stringent underwriting criteria (Agarwal et al. 2006a; Lee, Mayer, and Tracy 2012).

A final option available only to adults age 62 and older is to borrow through a reverse mortgage. Reverse mortgages can be structured as an open-ended line of credit, a full-draw loan, or as an annuitized monthly payment for a set number of years (term) or until the termination of the loan (tenure). Regardless of the payout structure, no repayment is required until the loan is terminated, with the amount borrowed plus interest and fees being added to the balance over time. The federal insurance on the HECM reverse mortgage protects borrowers and their heirs from negative equity, if the balance grows to exceed the current value of the home. From 2010 through 2018, the majority of HECM borrowers structured their loans as a line of credit but withdrew most of their available funds at the time of loan closing. Only about 6 percent chose to structure even a portion of their available HECM funds as a monthly tenure or term payment (Pinnacle 2018).[3]

Rates of home equity borrowing can be examined as a stock or a flow. Using data from the 2014 Health and Retirement Study, Goodman, Kaul, and Zhu (2017) estimate the stock of home equity borrowing by homeowners age 65 or older between 2012 and 2014. Specifically, during the two-year period, about 9.6 percent of older homeowners held a home equity line of credit (HELOC), 1.4 percent had a second mortgage, 0.5 percent had a home equity loan, 4.6 percent refinanced and extracted cash, and 0.9 percent had a reverse mortgage (Goodman, Kaul, and Zhu 2017). Only 1.8 percent extracted home equity through home sale during the same two-year period.

In a recent study, we analyzed the flow of new home equity borrowing over time as a proportion of the population age 62 and older, using data from the Federal Reserve Bank of New York/Equifax Consumer Credit Panel (CCP) and the U.S. Department of Housing and Urban Development (Moulton et al. 2019a). Here, we define new originations as those who originated a loan and extracted cash in the particular period—we do not count as originators those who originate a HELOC without drawing any money, or those who draw from a HELOC originated previously. Figure 1 summarizes the trends, documenting a peak in forward mortgage originations in 2003 and 2004, corresponding to a period of low interest

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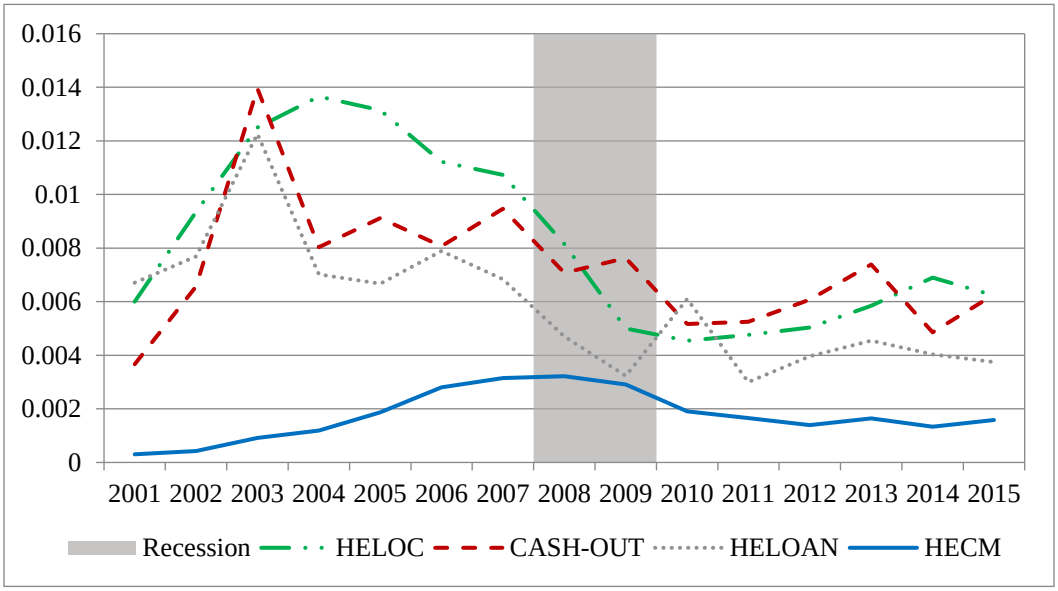
3. Per the 2018 actuarial report, just over 50 percent of HECM borrowers in 2018 withdrew more than 60 percent of their available proceeds at closing, with only about 20 percent withdrawing less than 40 percent of their available proceeds at closing and leaving the remainder on a line of credit. Prior to a 2013 policy change limiting the amount of the withdrawal at closing, nearly 80 percent of HECM borrowers in 2012 withdrew more than 60 percent of their available proceeds at closing with the majority of these borrowers extracting all available proceeds.

rates and rising house prices. While forward originations declined substantially during the 2008–2010 recession, rates of HECM originations peaked in 2008 and did not decline until 2010.

Figure 1: New Home Equity Borrowing Origination Rates as a Proportion of Population 62 and Older



Source: Moulton et al. (2019a) calculations from HUD HECM data and the Federal Reserve Bank of New York/Equifax Consumer Credit Panel (CCP)

Barriers to borrowing from home equity

Overall, rates of new home equity borrowing among older adults are lower than predicted by economic theory.[4] Reasons for not accessing housing wealth in retirement include limited demand as well as supply constraints. With regard to demand, the 2016 Fannie Mae National Housing Survey indicates that 80 percent of homeowners age 55 and older are "not at all interested" in borrowing from home equity in retirement. Primary reasons include not wanting to have debt on the home (36%), a desire to leave home equity to their heirs (19%), and saving home equity for future emergencies (10%). Dunn and Mirzaie (2016) and Haurin, Loibl, and Moulton (2019) find that, on average, all types of mortgage debt create stress for older adults, controlling for the levels of assets and income. However, stress due to mortgage debt is lower per dollar of debt than for other types of non-collateralized consumer debt, such as credit card debt.

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4. The standard lifecycle model in economic theory predicts that individuals will borrow money to fund consumption during their early working years, save money during their high-earning working years, and then spend from savings to finance consumption during retirement. As a form of wealth, individuals may thus be expected to spend from home equity in retirement; however, this behavior is often not observed.

Aside from general aversion to borrowing, some older adults may desire to borrow from home equity but be unable to do so—which we refer to as being borrowing constrained. Lender underwriting standards generally require total monthly mortgage payments including property taxes and homeowners insurance to be less than 28 percent of monthly income (Bourassa and Haurin 2016). As a result, even if older homeowners have accumulated a substantial share of housing wealth, they may be unable to borrow against it due to an inability to meet lenders' underwriting standards.

Mortgage debt carried into the retirement years may reduce the ability to be approved for additional borrowing in the future. The proportion of homeowners age 65 and older holding mortgage debt has doubled over the past two decades, from 20 percent in 1992 to more than 40 percent in 2016.[5] There are a variety of factors contributing to higher rates and levels of mortgage debt, including purchasing homes later in life with smaller down payments and more frequent refinancing (Gist, Figueiredo, and Verma 2012), slower payoff of mortgage balances, and higher relative rates of new borrowing compared to 1990s (Goodman, Kaul, and Zhu 2017). Homeowners with low incomes are particularly constrained, as they may be unable to afford the mortgage payment associated with new mortgage borrowing. In 2014, nearly one-third of older homeowners with a mortgage spent more than 50 percent of their monthly income on housing costs (JCHS, 2014).

The proportion of older homeowners who are potentially borrowing constrained is substantial, and has been increasing over time (Figure 2). Using data from the Survey of Consumer Finances from 1989 through 2016, we plot the proportion of older homeowners, by age cohort, who are potentially borrowing constrained based on common criteria, including (1) monthly housing costs that are greater than or equal to 28 percent of monthly income;[6] (2) or poor credit, defined as being 60 days or more late on debt payments, experiencing bankruptcy or foreclosure, or reporting being turned down for credit or having fear of being turned down for credit in the past five years. In 2016, nearly one-third of older adults age 62 to 75 were borrowing constrained based on one or both of these criteria, with 23 percent of those over age 75 being borrowing constrained. Of those who were constrained in 2016, 60 percent were constrained only by monthly housing costs with no evidence of credit problems.

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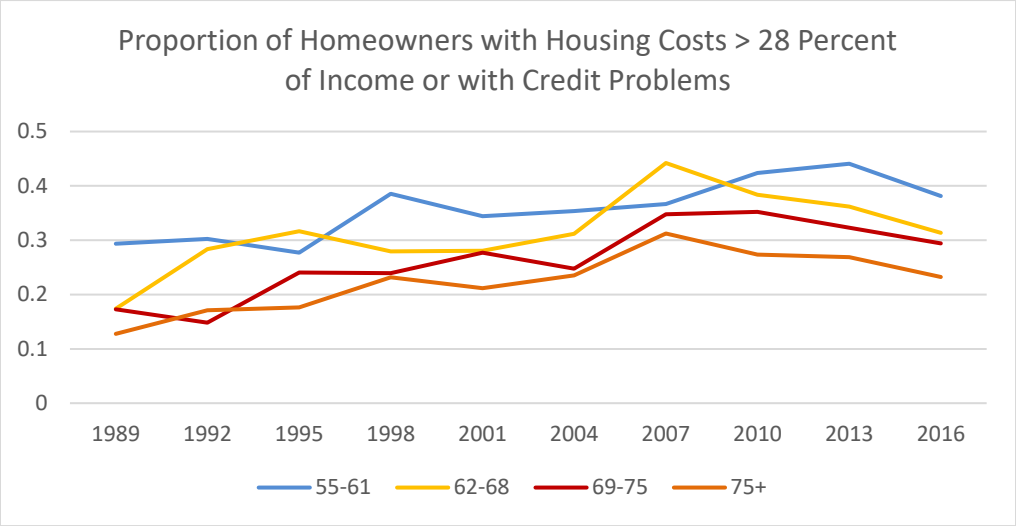
5. Authors' calculations from the Federal Reserve Board's 2016 Survey of Consumer Finances, includes homeowners age 62–100.

6. We calculate housing costs as the total of monthly mortgage payments, property taxes, homeowners insurance and maintenance costs. Monthly property taxes, homeowners insurance, and home maintenance are estimated as 0.012, 0.0035, and 0.01 of the home value, divided by 12.

Figure 2: Proportion of Older Homeowners Potentially Borrowing Constrained



Source: Author's calculations from the Survey of Consumer Finances (population weighted).

As shown in Figure 2, the proportion of borrowing constrained older adults has been increasing over time across all age cohorts. For example, from 1995 to 1998, about 24 percent of homeowners age 69 to 75 were borrowing constrained. In 2007, the proportion increased to 35 percent and remains close to 30 percent in 2016.

Barriers to borrowing and reverse mortgages

Reverse mortgages reduce barriers to borrowing that are due to having a low income or weak credit history. There is no monthly payment required for reverse mortgages, and thus borrowing through a reverse mortgage does not increase a homeowner's debt-to-income ratio. In fact, reverse mortgages require the repayment of all forward mortgages. Nearly 60 percent of borrowers through the HECM program use at least a portion of the proceeds from a reverse mortgage to pay off a forward mortgage, thereby eliminating monthly mortgage payments (Moulton, Loibl, and Haurin 2017). Because there is no monthly payment, reverse mortgages have historically had minimal credit-based underwriting requirements, making them more accessible for homeowners who are credit constrained. Prior studies document higher rates of HECMs among lower credit score homeowners and in areas with lower average credit scores (Shan 2011; Moulton et al. 2019a).

Reverse mortgages have lower borrowing constraints, but they face other obstacles to take-up, including general aversion to mortgage debt (Moulton, Loibl, and Haurin 2017), high origination costs (Lucas 2015), lack of accurate information about a relatively complex product (Davidoff, Gerhard, and Post 2017), and a generally negative public perception

(Fannie Mae 2016). According to the Fannie Mae National Housing Survey (2016), 49 percent of homeowners age 55 and older were familiar with reverse mortgages, and only 6 percent of homeowners indicated preferring reverse mortgages to extract equity. Twenty percent of the homeowners who were familiar with reverse mortgages reported that the risk of being scammed was their biggest concern about reverse mortgages.

In a survey of a random sample of older adults in the U.S. population, Davidoff, Gerhard, and Post (2017) found that while the majority of respondents were aware of the reverse mortgage, many had inaccurate information about the product. For example, only 47 percent responded correctly that the loan balance grows over time, and only 56 percent answered correctly that the borrower can stay in the home if the loan balance exceeds the value of the home. They find a significant and positive relationship between accurate knowledge of reverse mortgages and the intention to use them in the future.

In a survey of older adults who were counseled for a reverse mortgage between 2006 and 2011, Moulton, Loibl, and Haurin (2017) found that the most common reasons for not getting a reverse mortgage included a desire to own the home without mortgage debt (30%), not being able to get enough money from the reverse mortgage (29%), a perception that the costs were too high (26%), and a desire to leave the home to the family (26%). Of those who took out a reverse mortgage, the most common motivations included additional money for everyday expenses (42%), paying off forward mortgage debt (38%), paying off non-mortgage consumer debt (27%), and money for home repairs or improvements (22%).

Who are reverse mortgage borrowers? Our prior research compares the characteristics of reverse mortgage borrowers who were counseled for a reverse mortgage from 2008 to 2011 to the characteristics of homeowners age 62 and older in the 2008 and 2010 waves of the Health and Retirement Study (Moulton, Loibl, and Haurin 2017). Compared to homeowners age 62 and older in the general population, prior to obtaining a reverse mortgage, reverse mortgage borrowers have lower monthly incomes (median of $2,488 compared to a median of $3,649 in the general population), higher levels of home equity (median of $176,960 compared to a median of $143,906 in the general population), were more likely to have a forward mortgage (66% compared to 35%), and had much lower levels of non-housing financial wealth (with only 55% reporting some amount of non-housing assets compared to 91% in the general population). While reverse mortgage borrowers have lower incomes and levels of non-housing wealth, they actually perform better on a financial literacy test than older adults in the general population—56 percent respond correctly to a financial literacy question compared to 43 percent of older homeowners in the general population responding correctly to the same question (Moulton, Loibl, and Haurin 2017).

Despite negative public perceptions, homeowners who obtain reverse mortgages generally report being well informed about their decision and report high levels of satisfaction with the product. A survey of reverse mortgage borrowers three to five years after originating the loan indicated that 87 and 91 percent of borrowers felt that their loan officer and reverse mortgage counseling session (respectively) provided enough information to inform their decision about the reverse mortgage, with 85 percent being satisfied or very satisfied with their decision to obtain a reverse mortgage (Moulton, Loibl, and Haurin 2017). A follow-up analysis indicated that older adults who obtained a reverse mortgage subsequently exhibited higher levels of financial and housing satisfaction than those who were counseled and did not obtain a reverse mortgage (Loibl et al. 2018).

The reverse mortgage market

Background on the Federal Home Equity Conversion Mortgage

In 1987, Congress authorized the Home Equity Conversion Mortgage (HECM) program as a demonstration program, administered by the U.S. Department of Housing and Urban Development (HUD), with the first HECM originated in 1989. At the time, there were a small number of lender-issued reverse mortgages and public reverse mortgages as part of property tax deferral programs. Yet these programs were small and not scalable (Begley et al. 2019). While there are private market alternatives to HECMs, in the U.S. these tend to be for very high value homes (e.g. $850,000 or more) and comprise less than 5 percent of the current market for reverse mortgages.[7]

HECMs are federally insured through the Federal Housing Administration's mutual mortgage insurance (MMI) fund, protecting borrowers and creditors from losses if the balance on the HECM grows to exceed the value of the home. To be eligible for a HECM, a homeowner must be 62 years of age or older and live in the home as their principal residence. Any existing mortgages or liens on the property must be paid off prior to originating the HECM, typically with funds from the HECM. The home must meet certain minimum property requirements, and as of April of 2015, the borrower must demonstrate the ability to pay ongoing property tax and insurance payments or have sufficient home equity to set aside funds to pay these expenses in an escrow-type account at the time of loan closing.[8]

The amount of funds that a homeowner can receive from a HECM is based on the value of the property, the age of the homeowner, and the expected interest rate—with the borrowable funds rising with property value and homeowner age and falling with expected interest rates.[9] HUD incorporates these criteria in a calculation known as a "principal limit factor" that denotes the share of the home value that can be received through a reverse mortgage. For example, the current principal limit factor is 0.465 for a 70-year-old homeowner at an expected interest rate of 5 percent, and is 0.534 for an 80-year-old homeowner at the same expected rate.[10] If both homeowners have a home valued at $200,000, the 70-year-old homeowner could borrow up to $93,000 from a HECM and the 80-year-old homeowner could borrow up to $106,800.

HUD sets a limit on the maximum value of the property that can be used as a basis for borrowing, called the maximum claim amount. The maximum claim amount is the lesser

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7. There is no aggregate data on the share of proprietary mortgages in the market, but estimates are based on interviews with individual lenders offering such products. See https://www.housingwire.com/articles/48887-how-many-borrowers-are-taking-out-jumbo-reverse-mortgages-no-one-really-knows ; and https://www.housingwire.com/articles/47706-more-borrowers-turn-to-proprietary-reverse-mortgages

8. For more details regarding this policy, see HUD Mortgagee Letter 2013-28; Mortgagee Letter 2014-21 and Mortgagee Letter 2015-06. https://www.hud.gov/sites/documents/13-28ML.PDF; https://www.hud.gov/sites/documents/15-06ML.PDF

9. The expected interest rate is equal to the actual interest rate charged on the loan for a fixed-rate HECM. For an adjustable-rate HECM, the expected rate is an estimate of the future rate of interest on the loan, calculated using a 10-year index (most often the LIBOR) plus the lender's margin.

10. Principal limit factor tables are available from HUD at https://www.hud.gov/program_offices/housing/sfh/hecm.

of the appraised value at the time of origination of the HECM or the HECM-specific maximum loan limit. The 2019 maximum claim amount of $726,525 nationwide is based on 150 percent of the Federal Housing Finance Agency's conforming loan limit of $484,350 for Fannie Mae and Freddie Mac. The current HECM maximum claim amount is much higher than the FHA county-specific loan limit that was originally established as the maximum claim amount for the HECM program, with a median of $314,827 in 2019.[11]

Costs of a HECM include an up-front origination fee, closing costs, interest on the balance, monthly servicing fees (if charged by the lender), and an up-front and monthly premium for the federal mortgage insurance on their loan. The origination fee is subject to a limit set by HUD (ranging from $2,500 to $4,500) and can be negotiated by the borrower.[12] The amount of the insurance premium is set by HUD and has changed over time. Currently, the up-front premium is 2 percent of the maximum claim amount with an ongoing premium equal to 0.5 percent of the outstanding loan balance.[13] The balance on a HECM loan grows in reverse, with interest, fees, and insurance premiums added to the balance each month—in addition to the amount borrowed by the homeowner. When a HECM loan is terminated, (typically due to death, no longer occupying the property, or failing to maintain the property including paying taxes and insurance), the borrower or their heirs can sell the home to pay off the HECM loan balance and keep any residual home equity. Neither the borrower nor their heirs are responsible for any negative equity upon termination if the balance on the HECM exceeds the value of the home.

Figure 3 graphs the number of HECMs endorsed by HUD over time, highlighting key policy and market changes affecting volume. The first decade of the HECM program served as a pilot with about 40,000 loans originated through 1998, when the program was permanently authorized. From 1993 through 2008, Fannie Mae was the largest purchaser of HECMs, acquiring 492,465 HECM endorsements through 2010, or 75 percent of all HECMs originated during that time (Begley et al. 2019). Fannie Mae held most of these loans in portfolio. In 2006, the first private label securities for HECMs were introduced. In 2007, Ginnie Mae introduced a new securitization model for HECM Mortgage Backed Securities (HMBS), shifting this secondary market instrument to be the dominant source of financing for HECMs in 2009 through today.

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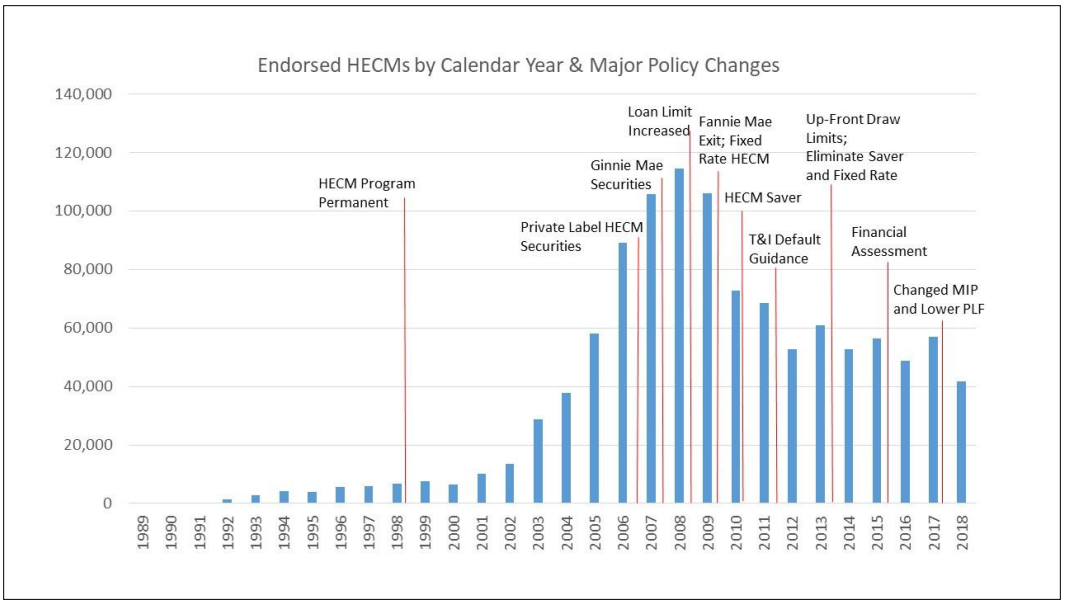
11. The HECM MCA limit was increased in 2009 in an effort to stimulate the economy during the housing crisis, first to a nationwide limit of $417,000 as part of the Housing and Economic Recovery Act of 2008, and shortly after to $625,500 under the American Recovery and Reinvestment Act of 2009. See GAO-09-836, https://www.gao.gov/assets/300/293312.pdf

12. The limit is $2,500 for homes valued at $125,000 or less, and 2 percent of the home value from $125,000 to $200,000 plus an additional 1% of the home value for homes above $200,000, up to a max of $4,500.

13. See HUD HECM Mortgagee Letter 2017-12, https://www.hud.gov/sites/documents/17-12ML.PDF.

Figure 3: Endorsed HECMs by Calendar Year and Major Policy Changes



Source: Author's calculations from HUD HECM data.

Securitization brought changes to the structure of the HECM loan, including a fixed-rate full-draw option that dominated the market from 2009 through 2011. Investors paid a higher premium for the fixed-rate, full-draw option, with 70 percent of borrowers choosing this option during this period (IFE 2016). HUD also introduced a lower-cost HECM "Saver" option in 2010, reducing the amount that could be borrowed (on average, 12.6 percentage points lower) in exchange for a virtually non-existent up-front mortgage insurance premium of 0.01 of the home value compared to 2 percent for standard HECMs.[14] The HECM Saver struggled to gain traction in the market, with investors paying less for securities of Saver HECMs than Standard HECMs, resulting in a higher interest rate on the Saver offsetting the lower origination costs (CFPB 2012). HUD eliminated the fixed-rate, full-draw HECM and the HECM Saver through a series of mortgagee letters in 2012 and 2013.[15]

The 2012–2019 period has marked a particularly volatile time for the HECM program, with a series of policy changes designed to reduce tax and insurance defaults and to reduce estimated losses to the FHA mortgage insurance fund. As of July 2011, 8.1 percent of HECM borrowers were in "technical default" on their HECM loans due to failure to pay property taxes or homeowners insurance (CFPB 2012). When a borrower fails to pay these expenses and is out of money on their HECM line of credit, the lender advances funds to keep taxes and insurance current on the home and adds the advanced funds to the balance of the loan. Beginning with a series of mortgagee letters in 2011, HUD required lenders to follow a loss mitigation protocol when borrowers fail to pay property taxes and homeowners insurance,

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14. Mortgagee Letter 2010-34, https://www.hud.gov/sites/documents/10-34ML.PDF

15. Mortgagee Letter 2013-27, https://www.hud.gov/sites/documents/ML13-27.PDF

including reporting the delinquent loans to HUD, working with the borrower to cure the delinquency, and taking steps to foreclose on the property if loss-mitigation options fail.[16]

In 2013, HUD restricted the size of the initial draw to 60 percent of the available proceeds, unless a higher draw amount was required to repay existing forward mortgage debt.[17] Beginning in April of 2015, HECM borrowers are required to undergo a financial assessment of their ability to make property tax and insurance payments, based on prior credit history and income relative to expenses (Moulton, Haurin, and Shi 2015).[18] Those with weak credit histories or low incomes may be required to set aside money from the HECM to pay future property taxes and insurance but are not denied the loan unless they have insufficient home equity for the tax and insurance set-aside. In FY2018, about 14 percent of HECM borrowers were required to set aside a portion of their available HECM funds to cover future property taxes and insurance (HUD 2018).

The HECM portion of the FHA mutual mortgage insurance (MMI) fund was in the red in 2016 through 2018 actuarial reports. By statute, the MMI fund is designed to be revenue neutral; mortgage insurance premiums should be adequate to cover the claims against the fund in the long run. Projected losses to the mortgage insurance fund led to additional changes to the HECM program in 2017, including reducing the principal limit factor and changing the amount of the up-front and ongoing mortgage insurance premiums.[19] As of the 2018 actuarial report, the MMI fund has a projected $14 billion deficit (Pinnacle 2018). The actuarial estimates of the HECM mortgage insurance fund are quite volatile, with swings from large surpluses to large deficits over the last decade, based in part on assumptions about future house prices and interest rates underlying the estimates.[20] Nonetheless, questions about the fiscal solvency of the program have prompted a reexamination of the fundamentals underlying the HECM program, including recent reports from the CBO (2019), GAO (2019), and HUD (2019

Risks in the reverse mortgage market

Unlike forward mortgages, reverse mortgages have no fixed maturity date but instead are due when the loan is terminated. Further, borrowers are not required to make payments on the loan, and the loan balance grows based on (uncertain) draw amounts over time and interest charged. These fundamental differences in the structure of reverse mortgages presents risks to loan pricing including borrower termination and longevity risk, property

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16. The specific HUD policies regarding technical defaults have changed over time, beginning in 2011 (Mortgagee Letter 2011-1). As of April 23, 2015 (Mortgagee Letter 2015-11), lenders are required to call a loan "due and payable" if funds are advanced by the lender on behalf of the borrower to pay past due property taxes or homeowners insurance. After a loan is called due and payable, the lender must initiate the foreclosure process if the borrower is unable to repay the HECM loan balance in full (e.g., through home sale). If the borrower enters a repayment plan, the lender can request an extension to the foreclosure timeline. For details, see Mortgagee Letter 2016-7. https://www.hud.gov/sites/documents/16-07ML.PDF

17. Mortgagee Letter 2013-27, https://www.hud.gov/sites/documents/ML13-27.PDF

18. Mortgagee Letter 2013-28; Mortgagee Letter 2014-21; and Mortgagee Letter 2015-06. https://www.hud.gov/sites/documents/13-28ML.PDF; https://www.hud.gov/sites/documents/15-06ML.PDF

19. Mortgagee Letter 2017-12, available online at https://www.hud.gov/sites/documents/17-12ML.PDF

20. https://www.urban.org/urban-wire/were-not-accurately-assessing-federal-housing-administrations-solvency

value uncertainty, and interest rate risk (Szymanski 1994; HUD 2019). For investors and lenders, risks include the unpredictability of cash inflows as loans are only repaid upon termination, the uncertain outflows for open-ended lines of credit, and *crossover risk*—or the risk that the balance on the HECM will exceed the value of the home.

Federal insurance on HECMs is intended to reduce crossover risk to consumers and lenders. Loans *in good standing* are eligible to be assigned to HUD when the balance grows to reach 98 percent of the maximum claim amount. Investors are protected against crossover risk, as HECMs are required to be bought out of HECM securities when the loan reaches 98 percent of the maximum claim amount. Borrowers and their heirs are protected against negative equity, as repayment of the HECM loan upon termination is limited to the lesser of 95 percent of the current appraised value of the home or the unpaid loan balance.

For example, if the appraised value of a home was $200,000 at the time of origination in 2009, this is the maximum claim amount. At the time of origination, the borrower extracted $120,000 up front on a HECM loan. Based on a 5 percent interest rate and the monthly mortgage insurance premium added to the balance, the balance on the loan in 2019 is $196,000. This is 98 percent of the original maximum claim amount, and thus the lender is eligible to assign the loan to HUD as long as the loan is in good standing. The borrower dies in 2021 and the heirs inherit the home. At this point, the balance on the HECM loan is $220,000. Assume that the house did not experience much appreciation over the prior 12 years, and the appraised value of the home in 2021 is only $210,000. In this situation, the heirs or the estate are not responsible for the negative equity on the home, as this will be covered by the federal mortgage insurance. In this situation, it is common that the property would be sold (by HUD if it was assigned to HUD) through a foreclosure sale. Alternatively, if the value of the house in 2021 is greater than the HECM loan balance, the heirs can sell the home and retain the residual equity.

The risk assumed by the lender depends in part on whether or not the loan was assigned to HUD. A considerable proportion of HECM loans have historically not been assigned to HUD when they reach 98 percent of the maximum claim amount, and in some cases, assignment of the loan to HUD may not cover all of the mortgage holder's costs (Begley et al. 2019). If the loan is not in good standing when the balance reaches 98 percent of the maximum claim amount (e.g., if the borrower is in default on property taxes or homeowners insurance), the lender *cannot* assign the loan to HUD. If the loan is in good standing and the lender assigns the loan to HUD, then the lender receives the claim payment (up to the maximum claim amount) and has no further obligations on the loan, and also earns no further revenue from the loan. However, if the loan is not assigned, the mortgage holder retains the risk.

Begley et al. (2019) estimated that Fannie Mae experienced $1.2 billion in economic losses from HECMs. One-third of the HECM loans purchased by Fannie Mae had adverse terminations, meaning they liquidated without a third-party payoff such as through home sale. While some of these loans were assigned to HUD when they reached 98 percent of the MCA, the majority were not and went through foreclosure and became Real Estate Owned (REO). Loss severities to Fannie Mae on loans that were assigned to HUD were much lower than those sold by Fannie Mae through REO. For example, Fannie Mae estimates a loss severity of 0.5 percent (or $1,058 in average net loss per loan) for an assigned loan, com-

pared to 10.7 percent (or $16,158 in average net loss per loan) for an unassigned loan liquidated by Fannie Mae through REO.[21] In this case, Fannie Mae absorbed losses (on unassigned loans) that otherwise would have been a loss to the FHA mortgage insurance fund.

Several factors exacerbate risk in the HECM program and have motivated the recent policy reforms. First, crossover risk is directly related to the amount and timing of draw amounts on the HECM. Since program inception, HUD has lowered the amount of funds available to borrowers by adjusting the principal limit factor three times, most recently in 2017. The timing of HECM draws is also related to crossover risk, as larger initial draws accrue more interest and fees over the life of the loan than draws that occur later. Policy reforms in 2012 restrict the size of the initial draw.

Second, while borrowers are not required to make monthly mortgage payments, they are required to pay property taxes and homeowners insurance. If a borrower fails to make these payments, the lender pays property taxes and purchases homeowners insurance on behalf of the borrower (called a "corporate advance"). If the borrower has remaining funds on a HECM line of credit, these funds are used to advance the payments and the loan is still in good standing. If the borrower does not have remaining funds, the lender adds the corporate advance to the loan balance and the loan is in "technical default." Being in technical default exacerbates risk in the HECM program by (1) accelerating the growth of the balance by adding property taxes and homeowners insurance payments to the balance of the loan, (2) increasing uncertainty of when (or if) the loan will be assigned to HUD, as it cannot be assigned at 98 percent of the MCA unless it is in good standing, and (3) increasing the probability of foreclosure with higher expected loss severity than if the loan did not have an adverse termination.

A third set of risks to the HECM program are those related to the collateral value of the property. Higher collateral values reduce crossover risk, while homes worth less than anticipated upon termination increase crossover risk. Hwang and Mayer (2018) examine property record data for 76,000 HECM loans originated between 2000 and 2012, that terminated by 2017. They measure excess depreciation as the change in value on homes of HECM borrowers from origination to termination, relative to other homes during the same time period in the same ZIP code. They find that HECM properties depreciate at a rate of about 1 percent per year more than other properties in the ZIP code for the first 10 years after origination, with no observed excessive depreciation after 10 years.

Part of the reason for this loss in value may be due to homes that were overvalued at the time of HECM origination. Positive appraisal bias is more common for homes that that are appraised without a third-party sale (Agarwal, Ambrose, and Yao 2019),[22] as is the case with HECMs. Using a repeat sale price methodology, Park (2017) finds the initial appraisal valuations for HECMs are 16 percent higher than those for purchase loans. To reduce risk

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21. The loss severity of unassigned loans sold through REO occurs because the mortgage holder can only file a claim to HUD for the lesser of the maximum claim amount or the appraised value at the time of the REO. If a loan balance has grown to exceed the maximum claim amount (or the current appraised value), the mortgage holder takes a loss on the balance.

22. Using repeat sale data, Agarwal, Ambrose, and Yao (2019) find that homes that were initially appraised as part of a refinance later exhibit returns on sale that are 8.4 percent below the returns obtained for an otherwise similar property that was appraised as part of an initial market sale.

of appraisal bias in the future, HUD issued a new policy in 2018 that requires HECM appraisals that fail a collateral risk assessment (conducted by HUD) to undergo a second appraisal, with the lesser of the values being used to set the maximum claim amount.[23]

Another risk to collateral value is lack of maintenance on the property. Prior studies find that older homeowners are less likely to engage in home maintenance (Begley and Lambie-Hanson 2015; Baker and Kaul 2002; Davidoff 2004), and that failure to perform regular maintenance contributes to an additional decline in property value of about 1 percent per year (Harding, Rosenthal, and Sirmans 2007). This lack of maintenance may be exacerbated in the HECM program by moral hazard, where there is less incentive to continue to maintain the property if the borrower assumes that the balance will eventually exceed the value of the loan (Davidoff and Welke 2007). Currently, HUD requires all HECM borrowers to maintain the property, and failure to maintain the property is a reason to call the loan due and payable. However, it is difficult for lenders to monitor properties for adequate maintenance, and frequent property inspections add to the cost of the loan and have the potential to be abused (Park 2017).

Rationales for government intervention in the reverse mortgage market

Policy proposals begin with a solid justification for the failures that are to be addressed. Thus, prior to presenting our proposals to improve the reverse mortgage market, we examine the justification for government involvement in the market and its role in addressing specific challenges.

An assumption behind HUD's entry into the market was that supply factors were a significant barrier to consumer use of reverse mortgages. In an early HUD report on the HECM demonstration program, Szymanoski (1990) wrote, "The fundamental reasons that reverse mortgages have not enjoyed wider market acceptance as vehicles for home equity conversion by elderly households are due to the inherent risks in these loans and not necessarily to any lack of demand for an efficiently designed and priced instrument." Thus, at its inception, the program was not only designed to meet the needs of older homeowners, but also to encourage the development of a primary and secondary market for reverse mortgages (Szymanoski 1994).

The rationale for the HECM demonstration program was to manage risks more efficiently without charging a large risk premium to borrowers—achieved by providing lenders with FHA insurance against losses. The assumption was that the size of the premium (or the reduction in the principal limit) absent government involvement would be too high (or the amount to be borrowed too low) to make the program attractive to borrowers—particularly those with lower-valued homes for whom the risk premium would consume a larger share of their home equity (Szymanoski 1994). Still, the program was *not* intended to operate at a subsidy, and the FHA was to charge premiums and adjust the principal limit factor to adequately offset losses.

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23. Mortgagee Letter 2018-06, https://www.hud.gov/sites/dfiles/OCHCO/documents/2018-06hsgl.pdf

Inherent in this justification is the idea that consumers who may benefit the most from a reverse mortgage may be unwilling or unable to pay the higher risk premiums associated with a private product, and that the private market may simply not offer the product to consumers with lower-valued properties. Indeed, the proprietary market today primarily serves those with higher-valued homes. Further, there may be a social (positive) externality that the private market does not recognize by providing these consumers with access to their home equity and allowing them to remain in their homes. For example, remaining in the home has been associated with reduced health care costs, much of which is borne by government through Medicare and Medicaid (Marek et al. 2004; Popejoy et al. 2015). This suggests a potential government role for serving *a specific segment* of consumers who would otherwise have access to less home equity or be shut out of the market altogether.

With regard to the types of borrowers to be served, the initial statute indirectly targeted low-income borrowers by setting relatively low property value limits, while not excluding higher-income homeowners from participating as long as they were willing to accept the relatively low maximum claim amounts (Szymanoski 1994). Serving lower income homeowners who are less likely to be served by the private market remains the public purpose of the FHA program, including the HECM book of business (HUD 2019).

Lending to a vulnerable population (older, often lower income adults) creates the potential for "headline risk" when foreclosure occurs, either due to default or due to borrowing, dying, or exiting the property without remaining home equity. This is a type of negative externality that leads to undersupply of the product, as lenders may avoid the market for fear of damaging their reputations. The Bank of America and Wells Fargo exits from the market in 2011 are a case in point. When announcing their exit from the reverse mortgage market, Wells Fargo cited the increasing rates of property tax and insurance default of loans in their portfolio, which increased future risk of foreclosure.[24] At the time, lenders were prohibited from underwriting HECMs based on credit or financial factors at the time of origination, yet foreclosing on borrowers who were unable to pay these expenses created substantial headline risk to the banks. A 2018 industry survey of lending institutions indicates reputational risk as the leading reason that certain banks do not originate reverse mortgages.[25]

Another justification for government involvement in the reverse mortgage market is the complexity of the product, and the potential for asymmetric information between consumers and lenders. An example is the rise of the fixed rate, full draw HECM that dominated the market from 2009 through 2011. Fixed rate, closed-end HECMs generated more revenue in the secondary market and thus lenders had a financial incentive to sell the full-draw option—even if borrowing all funds at the time of closing was not in the best interest of the borrower (CFPB 2012). These potential asymmetries justify some role for government regulation of the market and provision of information to consumers. Indeed, this is the rationale behind required third-party counseling from a nonprofit housing counseling organization prior to originating a HECM loan.

Our general premise is that the federally-insured HECM is intended to serve a segment of the market who would otherwise experience considerable barriers to accessing their

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24. http://business.time.com/2011/06/20/mortgage-giants-wells-fargo-and-bank-of-america-opt-out-of-reverse-mortgage-business/

25. https://www.stratmorgroup.com/insights_article/moving-forward-in-reverse/

home equity. These include financial barriers (e.g., the private market version of a reverse mortgage not providing enough equity to homeowners with lower-valued homes), as well as informational barriers (e.g. consumers have less information than lenders about the appropriateness of particular products, and are concerned about being scammed and thus do not trust the private market providers). Reforms to the HECM program are needed that allow it to better meet the needs of this consumer segment.

A second, reciprocal premise is that not all reverse mortgages need be—or perhaps even should be— provided by government. Innovations for private market reverse mortgages are currently taking place for older homeowners with home values in excess of the HECM loan limit, which is currently set at 150 percent of the FHFA loan limit for forward mortgages, or $726,525. Essentially, the loan limit is the demarcation that separates the public program from the private market. [26] It is not clear that this is the "right" demarcation, relative to a lower limit. HUD's 2019 Housing Finance Plan for FHA reform recommends lowering the maximum claim amount to the pre-2008 county specific loan limit used for FHA forward mortgages (HUD 2019). Another alternative is to lower the limit to 100 percent of the FHFA limit for forward mortgages rather than 150 percent of that limit as it is currently.

Lowering the maximum claim amount for the government insured product is a sensible strategy to refocus the HECM program on the homeowners for whom the public program was intended to serve, while allowing the private market to innovate for those with higher value homes. Figure 4 graphs the proportion of homeowners with HECMs endorsed between 2009 and 2019 whose property values would have been in excess of the FHFA loan limit or the county specific FHA loan limit if it had been in effect when the HECM was endorsed.[27] The bars indicate the median value of the endorsed properties in a given year. If 100 percent of the FHFA limit had been used to set the MCA from 2009 to 2019, only 7 to 10 percent of HECMs would have had home values in excess of the limit. If the FHA county-specific loan limit had been in effect, this proportion increases to 15 to 20 percent of HECM loans in recent years.

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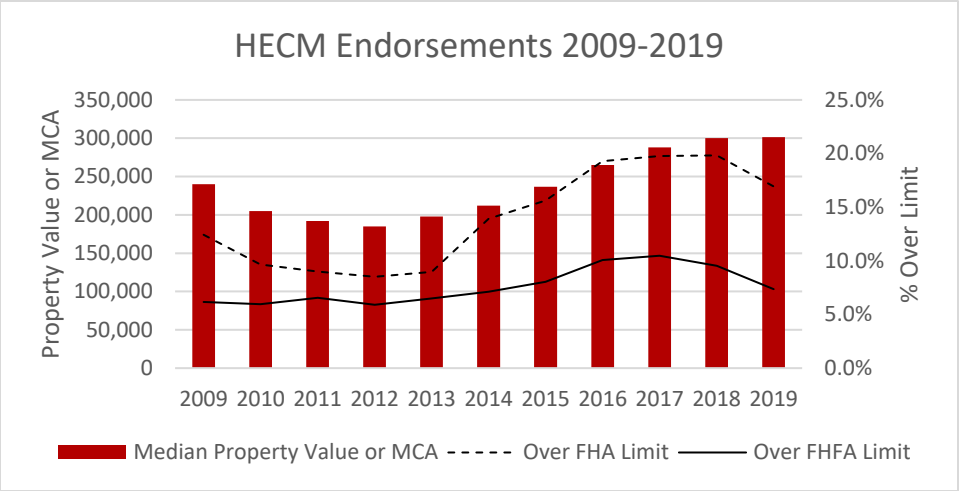
26. We implicitly assume that the private market would offer reverse mortgages to lower-valued property owners if the HECM program lowered the maximum claim amount.

27. The FHFA conforming loan limits over time and by geography can be found at https://www.fhfa.gov/DataTools/Downloads/Pages/Conforming-Loan-Limits.aspx. Our estimates account for the higher FHFA limits in high cost areas. FHA loan limits by year and county can be found online at https://apps.hud.gov/pub/chums/cy2009-forward-limits.txt, substituting in the respective year in the URL.

Figure 4: Median Value of Homes for Endorsed HECMs and Proportion Exceeding Alternate Loan Limits



Source: Author's calculations from HUD HECM data and FHA and FHFA loan limits.

To what extent does a lower MCA achieve the policy objective of serving consumers with lower incomes and financial wealth? We explore this question using data on homeowners age 62 and older from the 2016 Survey of Consumer Finances. For this exercise, we use the 2016 FHFA limit of $417,000 given that the FHFA loan limit currently serves as the base for the HECM program.

Table 1 summarizes the average financial characteristics of these homeowners. Those with home values below the FHFA limit have substantially lower levels of non-housing financial assets compared to the full population of older homeowners, with a median of $63,000 and 25 percent of homeowners holding $6,500 or less in financial assets. In addition, equity in the home is nearly twice as large as financial assets for this population. Incomes are slightly lower for this population, with a median household income of about $46,277 compared with $53,670 in the full population. Lowering the MCA to the FHFA limit allows the HECM program to target homeowners for whom housing wealth is a substantial share of their assets without severely limiting the size of the eligible population.[28]

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28. A potential concern about reducing the MCA is the claim that HECM loans for high-valued properties cross-subsidize HECM loans for low-valued properties; that is, their mortgage insurance payments to the MMI exceed the expected costs to the fund from foreclosures of this property value. If true, reducing the MCA could increase the MIP for lower valued MCA loans. Our position is that mortgage insurance costs should be actuarially fair for all MCA levels, and that there are more efficient and transparent ways to reduce risks to the MMI fund.

Table 1. Financial Characteristics of Homeowners Age 62+, 2016 Survey of Consumer Finances

	All Homeowners Age 62+			Homeowners Age 62+ with Property Values < FHFA Limit ($417k)		
	25th %tile	*50th %tile*	*75th %tile*	*25th %tile*	*50th %tile*	*75th %tile*
House Value	$100,000	$180,000	$325,000	$87,000	$150,000	$240,000
Home Equity	$66,000	$139,000	$271,000	$53,000	$110,000	$188,000
Mortgage Balance	$0	$0	$55,000	$0	$0	$47,000
LTV	0.000	0.000	0.329	0.000	0.000	0.352
Financial Assets	$10,000	$101,800	$415,000	$6,500	$63,000	$238,300
Income	$29,366	$53,670	$99,238	$26,329	$46,277	$78,986
Any mortgage		0.399			0.394	
SCF Sample Size		8,150			4,782	
Population Size		31,226,623			25,749,887	

Note: All estimates are weighted using the SCF survey weights to be representative of the U.S. population.

Proposed reforms to improve the market for reverse mortgages

In this section, we describe two types of reforms to the federally insured HECM program that we believe will better allow the public program to meet the needs of the consumers it is uniquely intended to serve.

Proposal 1: Differentiate product types by consumer segments

Our first proposal is to create streamlined HECM product options that target specific consumer segments. We focus on two consumer segments: (1) those who have demand for short-term liquidity from home equity but are unlikely to access a forward mortgage home equity loan or HELOC; and (2) those who have a desire to eliminate existing forward mortgage debt to free up monthly cash flow for consumption. We refer to these options as a "small-dollar HECM" and "forward mortgage conversion HECM," respectively. Creating simple, need-based product options helps reduce the complexity of the HECM for the consumer, and reduces some of the risk and uncertainty of the HECM to the government, lenders, and investors, thereby likely reducing the cost to consumers.

There is a general perception by researchers and policymakers that reverse mortgages are most similar to annuities, where homeowners supplement their monthly incomes from equity in their homes until they die. Many research studies estimating the potential market for reverse mortgages assume an annuitized stream of monthly income from home equity. This strategy requires a substantial amount of home equity to make the monthly increase in income worthwhile. And, lifetime annuities are generally in low demand by consumers (Davidoff 2009). Even in the HECM program, only about 6 percent of HECM borrowers from 2010 through 2018 choose to structure even a portion of their HECM proceeds as an annuity-like monthly tenure or term payment (Pinnacle 2018). Currently, the majority of HECM borrowers structure their loans as a line of credit, but withdraw a large proportion of available funds up front to pay off a forward mortgage and as cash, rather than as a series of frequent draws over their retirement years. Small-dollar HECMs and forward mortgage conversion HECMs are designed to simplify the structure of HECMs to align with these expressed preferences.

Streamlined small-dollar reverse mortgage

According to data on older adults from the Health and Retirement Study, the median balance on a home equity line of credit from 2000 to 2012 was about $20,000 (Butrica and Mudrazija 2016). This is a relatively small amount of borrowed home equity. Yet, some households are borrowing constrained, making it difficult to afford the monthly payments for even $20,000 on a forward mortgage. A small-dollar HECM product meets this need by offering a low loan-to-value (likely 30 percent or less), low-cost, streamlined reverse mortgage. By restricting the initial loan-to-value ratio (LTV) to be very low, the risk of the balance growing to exceed the value of the home (crossover risk) is virtually eliminated, resulting in a much lower mortgage insurance cost to HUD to insure the loan against crossover risk. The entire amount borrowed on a small-dollar HECM could be withdrawn up front, thus allowing the loan to be structured as a "closed-end" mortgage. If a homeowner subsequently needed additional funds, they could originate a new loan, perhaps with a streamlined origination process. The closed-end structure of the loan reduces uncertainty for investors about future draws, ideally resulting in competitive interest rate pricing, further driving down the cost of this option.

The now defunct "HECM Saver" introduced by HUD in 2010 followed a similar logic, with a lower limit on the amount that could be borrowed in exchange for a virtually nonexistent up-front mortgage insurance premium. However, as discussed in the prior section, the HECM Saver was introduced at a tumultuous time in the history of the HECM program, dominated by the fixed-rate, full-draw HECM. The Saver was an open-ended mortgage with uncertain future draws, thus resulting in a higher (and adjustable) interest rate compared to the full-draw (fixed-rate) HECM option. The elimination of the fixed-rate, full-draw HECM was justified by the higher rates of tax and insurance default and crossover risk from extracting all available home equity at the time of closing. The small-dollar HECM captures some of the market benefits of the full-draw, fixed-rate HECM, but the substantially lower loan amount ensures that homeowners have sufficient equity remaining to reduce crossover risk, and to cover property related expenses as needed.

We explore the potential market for a small-dollar HECM using the 2016 Survey of Consumer Finance data for homeowners age 62 and older. We limit the sample to those with property values less than the 2016 FHFA limit of $417,000, which we view as the primary consumer segment for HECMs. If the 25.7 million homeowners in Table 1 borrowed an additional $20,000 through a small-dollar HECM, the median resulting LTV would be 26.6 percent. If they borrowed an additional $50,000, the median resulting LTV would be 52.6 percent. This suggests that more than half of the homeowners, or 12.85 million, could originate a $20,000 HECM with a principal limit factor of less than 30 percent of their home value, and about one quarter, or 6.4 million, could originate a $50,000 HECM with a similar principal limit factor.

We expect that those with the highest demand for a small-dollar HECM would be those who have little other financial wealth to turn to for liquidity, such as to cover a financial shock. Table 2 reports the financial characteristics of homeowners age 62 and older who have less than $10,000 in non-housing financial wealth, but who have at least $20,000 in home equity—an estimated population size of 6.1 million homeowners. The median non-housing financial assets for this group is only $1,500, with median home equity of $83,000. The data indicates that nearly half of these homeowners could borrow $20,000 in home equity with a resulting LTV of 34 percent or less. However, most would not be able to afford the resulting monthly payment if the home equity was borrowed as a forward mortgage. We estimate that an additional mortgage payment on a $20,000 loan would push the median monthly housing cost ratio for this group to 26 percent—only two percentage points lower than the 28 percent affordability threshold often used in underwriting.[29]

Table 2. Homeowners Age 62+, 2016 Survey of Consumer Finances

	Liquid Assets<$10k and Home Equity >$20k		
	25th %tile	*50th %tile*	*75th %tile*
House Value	$76,000	$117,000	$200,000
Home Equity	$49,000	$83,000	$136,000
Mortgage Balance	$0	$0	$50,000
LTV	0.000	0.000	0.383
LTV with a 20k loan	0.194	0.343	0.649
LTV with a 50k loan	0.420	0.667	1.000
Financial Assets	$440	$1,500	$4,250
Income	$17,215	$25,316	$39,493
Mortgage Payment	$0	$0	$600
Other Housing Costs	$162	$249	$425

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29. We calculate the housing cost ratio as the total of monthly mortgage payments, property taxes, homeowners insurance and maintenance costs, divided by monthly income. Monthly property taxes, homeowners insurance, and home maintenance are estimated as 0.012, 0.0035, and 0.01 of the home value, divided by 12. The mortgage payment for a $20,000 forward mortgage is estimated as a 5% fixed-rate mortgage for a 30-year term, yielding an estimated monthly payment of $160.

Housing Cost Ratio	0.105	0.197	0.386
Housing Cost Ratio with $20k loan	0.159	0.260	0.444
Housing Cost Ratio with $50k loan	0.238	0.352	0.549
Any mortgage		0.470	
SCF Sample		937	
Population Size		6,135,584	

Note: All estimates are weighted using the SCF survey weights to be representative of the U.S. population.

Forward-to-reverse mortgage conversion product

As noted in Section II of this paper, an increasing share of older adults are carrying forward mortgage debt into retirement, with a large proportion facing high housing costs relative to their incomes. Further, more than 60 percent of HECM borrowers used at least a portion of their proceeds to pay off a forward mortgage, with paying off the forward mortgage ranking as one of the top two reasons survey respondents reported obtaining a HECM—indicated by 38 percent of respondents (Moulton, Loibl, and Haurin 2017). Given the expressed preference to use a reverse mortgage to pay off forward mortgage debt, combined with the increasing mortgage debt burden faced by older adults (JCHS 2014), it is sensible to explicitly design a HECM product for the purpose of converting forward mortgage debt into a reverse mortgage. In essence, paying off a forward mortgage operates as a type of annuity, freeing up monthly cash flow for other needs.

A forward mortgage conversion product could be structured as a fixed-rate, closed-end mortgage with the only draw being the payoff of existing mortgage debt. This restriction reduces draw uncertainty and thus attractiveness to investors in HECM securities, potentially resulting in a higher premium for the closed-end, fixed-rate securities and a lower interest rate charged to borrowers (CFPB 2012).[30] In addition, forward mortgage lenders could directly offer the product to their customers, substantially reducing the sales and marketing costs associated with HECMs and further reducing costs to consumers. These loans would likely have higher principal limit factors than those of the small-dollar HECMs, resulting in a higher mortgage insurance premium to offset increased crossover risk. We suggest that the amount of this mortgage premium be established using risk-based pricing as discussed in Proposal II.

To reduce the risk of default on property taxes and homeowners insurance when converting the debt to a HECM,[31] and to reduce the monitoring costs to private lenders and

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30. According to the CFPB (2012): "In early 2012, investors in Ginnie Mae HECM securities were willing to pay between 10 and 12 percent of the loan balance as a premium on fixed-rate HECMs. Adjustable-rate HECMs were commanding premiums of 6 to 9 percent of the loan balance….In contrast, typical premiums in the traditional mortgage market for market-rate loans are in the 1 to 4 percent range."

31. We estimate that about two-thirds of the borrowers in this population would have had escrow accounts for their property taxes and homeowners insurance as part of their forward mortgage (Avery et al. 2016).

HUD to ensure these expenses are paid by borrowers, we recommend that the "base" product option include a life expectancy set-aside or LESA (similar to a pre-funded escrow) at the time of closing to cover future property tax and insurance payments for the expected life of the borrower.[32] Borrowers could have the ability to "opt-out" of this option by completing a detailed financial assessment, as is currently required for all HECM borrowers. If they demonstrate ability to pay for the expenses on their own, they could be exempt from the LESA requirement. As discussed in Proposal II, borrowers with credit scores above a particular threshold, such as 680, could also be automatically exempt from a required LESA. Borrowers electing to take the base LESA would be exempt from the financial assessment and could potentially be offered a higher maximum LTV to repay their mortgage debt and finance the LESA. From a behavioral perspective, the "opt-out" option reduces the transaction costs on the loan for those accepting the LESA, thereby incentivizing the take-up of LESAs.

Table 3 explores the characteristics of homeowners age 62 and older who have mortgage debt of at least $10,000 with home values below the FHFA 2016 limit of $417,000—a population size estimate of about 9.4 million households in 2016. Of these homeowners, the median housing cost ratio is 24 percent, close to the 28 percent affordability threshold. These households would likely be unable to borrow any additional equity from their homes and may be burdened by monthly housing costs. We estimate that the median LESA amount set aside in an escrow at closing would be $37,805.[33] Without the LESA, the median LTV is 0.482, increasing to 0.714 with a LESA. If the principal limit factor were set at 60 percent of the home value, we estimate that about one-third of the homeowners with a mortgage—3.3 million households in 2016—would be able to pay off their forward mortgages with a HECM and take the required LESA. While the SCF does not include credit score information, we proxy credit problems with an indicator for having been turned down for credit, having fear of being denied credit, or filing bankruptcy in the prior five years. Using this indicator, 19 percent of the homeowners in Table 3 have evidence of credit problems. Of the 79 percent without credit problems, we estimate that two-thirds have an LTV of 60 percent or lower without a required LESA, corresponding to 5 million households.

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32. The LESA is described in more detail in Mortgagee Letter 2013-27, 2013-33, and 2015-09. Essentially, at the time of loan application, the lender estimates the total amount of future property taxes and homeowner's insurance based on the life expectancy of the youngest borrower. A portion of available HECM proceeds is set-aside to pay these future expenses, with the amount set-aside less than the total expected cost of the future expenses, as the set-aside grows at a rate equal to the interest rate on the loan plus the monthly mortgage insurance premium (similar to the growth rate on a line of credit).

33. We estimate the amount of the LESA for each respondent in the SCF using the HUD formula provided in Mortgagee Letter 2013-27, Property Charge Guide https://www.hud.gov/sites/documents/2013-28HECMATTACHMENT.PDF. For each respondent, we estimate current annual property taxes to be 0.012 of house value, insurance costs to be 0.0035 of house value, and the expected interest rate to be 5 percent.

Table 3. Homeowners Age 62+, 2016 Survey of Consumer Finances, with Forward Mortgage Debt

	Mortgage debt of >$10k		
	25th %tile	*50th %tile*	*75th %tile*
House Value	$100,000	$175,000	$250,000
Home Equity	$34,000	$73,000	$140,000
Mortgage Balance	$40,000	$72,000	$127,000
LTV	0.288	0.482	0.701
LTV with a required LESA	0.509	0.714	0.950
Estimated LESA amount	$21,465	$37,805	$58,685
Financial Assets	$3,350	$26,800	$167,100
Income	$32,404	$52,657	$89,112
Mortgage Payment	$500	$800	$1,200
Other Housing Costs	$213	$372	$531
Housing Cost Ratio	0.161	0.240	0.377
SCF Sample Size		1,746	
Population Size		9,366,917	

Note: All estimates are weighted using the SCF survey weights to be representative of the U.S. population.

Proposal 2: Implement risk-based underwriting and preventative servicing

Our second proposal is to reduce crossover risk in the HECM program through risk-based underwriting and preventative servicing. Crossover risk not only creates costs for the government insurance fund, but it also creates reputational risk to the HECM program—particularly when a loan terminates with no residual equity and is resolved through the foreclosure process. Even though borrowers and their heirs are not responsible for negative equity when a HECM is underwater, the foreclosure process that eventually results from underwater loans is often viewed negatively by homeowners, communities, and the general public (GAO 2019; HUD 2019). Further, in the HECM program, homes that are sold through the foreclosure process sell for substantially less than homes sold directly into the market (Begley et al. 2019; Hwang and Mayer 2018; Park 2017)—increasing the amount of negative equity that must be covered by the insurance fund. The cost to the insurance fund can be offset in part by charging higher insurance premiums for loans that are at higher risk of crossover. However, a more direct approach is to mitigate the probability that a HECM loan will become underwater in the first place.

Risk-based underwriting

On the front-end, there are known factors at the time of origination that indicate the probability that a HECM borrower will end up in technical default or a negative equity situation and face foreclosure upon loan termination. Specifically, the LTV and borrower credit score at origination are two of the most significant predictors of subsequent adverse terminations and crossover risk (Begley et al. 2019; Moulton, Haurin, and Shi 2015; Hwang and Mayer 2018; IFE 2016). These risk factors are systematically used in underwriting for forward mortgages, including FHA mortgages. We propose that these factors should be systematically incorporated in the origination of HECM loans, including application and underwriting requirements, requirements for LESAs, and the pricing of mortgage insurance. This will not only reduce default and crossover risk, but will also reduce frictions in the HECM market by simplifying the origination process for both borrowers and lenders.

Credit scores at origination have been linked to increased rates of tax and insurance default among HECM borrowers (Moulton, Haurin, and Shi 2015), as well as the amount of negative equity associated with a HECM property upon termination (loss-severity), particularly for those that end in foreclosure (Begley et al. 2019). The average credit score of HECM borrowers from 2008 to 2011 was about 700, compared to an average score of 760 for adults age 62 and older in the general population (Moulton et al. 2016). However, nearly half of prior HECM borrowers had credit scores above 740, while around one quarter had credit scores below 680 (Begley et al. 2019). Moulton, Haurin, and Shi (2015) found that imposing a minimum credit score of 580 for required LESAs would cut rates of default in half while only decreasing HECM volume by about 10 percent. In a subsequent analysis, Begley et al. (2019) find a minimum credit score of 670 to be the most efficient threshold for minimizing defaults while having the least negative impact on HECM volume.

Rather than proposing a minimum floor credit score for HECM loans, we propose streamlining the underwriting process for HECM applicants with credit scores above 680. Currently, all HECM applicants are required to undergo a detailed, manual assessment of their ability to pay property taxes and homeowners insurance. Rather than relying on credit score or affordability ratios, the current assessment includes a detailed analysis of the applicants' monthly income and expenditures, as well as a manual review of the applicants' credit reports to identify the presence of derogatory items including past-due debt payments. Applicants who fail to demonstrate sufficient residual income to pay property taxes and homeowners insurance or who have credit problems can describe extenuating circumstances and compensating factors that may allow the lender to waive the requirement for a LESA.[34]

The financial assessment has been associated with significant reductions in tax and insurance default among new HECM originations since its enactment in 2014. We support risk-based underwriting for HECM loans, and the financial assessment is a positive step in that direction. However, the current manual process adds frictions to the market and may be less efficient than relying on more conventional, potentially automated strategies for

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34. The financial assessment worksheet is available online at https://www.hud.gov/sites/documents/HECM_MODEL_FIN_AN_WS.PDF

mortgage underwriting. Based on prior research indicating very low risk for HECM borrowers with higher credit scores, we propose exempting applicants with credit scores above 680 from the financial assessment.

For applicants with higher risk based on credit score or LTV at origination, we recommend requiring a LESA as the base option. This includes the higher LTV forward mortgage conversion HECMs as discussed in Proposal I. Higher risk applicants wishing to waive the LESA requirement would be required to complete a manual financial assessment to demonstrate their ability to pay future property taxes and homeowners insurance. We expect a substantial share of higher-risk borrowers may opt for the LESA if it is included as the default option, thereby reducing the transaction costs associated with manual underwriting and increasing LESA take-up. LESAs not only reduces the probability of tax and insurance default, but also increase the probability that a loan will terminate with residual equity, as the LESA requires a share of the available home equity be set aside up front in an escrow. This escrow creates an equity cushion. For example, if the maximum principal limit on a forward mortgage conversion HECM is 0.60 and half of this is reserved in a set-aside, the net LTV of the balance of the amount actually expended is 0.30 at origination, growing over time as tax and insurance payments are disbursed.

Finally, we propose using risk-based pricing for mortgage insurance premiums, where risk is defined by the proportion of home equity extracted at the time of origination. From 2010–2017, there was differential pricing for the up-front mortgage insurance premium. As mentioned in Proposal I, the HECM Saver had a nominal up-front mortgage insurance premium in exchange for a lower proportion of home equity eligible for withdrawal. HUD eliminated the "Saver" and "Standard" distinctions in 2013, instead charging a mortgage insurance premium of 0.5 percent of the mortgage claim amount for initial draws less than 60 percent of the available proceeds, and an up-front premium of 2.5 percent of the mortgage claim amount for draws exceeding the 60 percent threshold.[35] Reforms to the HECM program in 2017 eliminated the pricing differential altogether, resulting in a single up-front premium of 2.0 percent of the mortgage claim amount regardless of the amount of the initial draw, and annual mortgage insurance premium of 0.5 percent of the loan balance.[36]

The small-dollar and forward mortgage conversion HECMs are closed-end HECMs where the amount borrowed is extracted at the time of origination. This simplifies the calculation of the mortgage insurance premium, as it can be determined at the time of origination. As closed end loans, risk depends upon the duration of the loan rather than unknown future draws. We propose eliminating the up-front mortgage insurance premium (similar to the Saver), and instead only charging monthly premiums, tiered based on the proportion of equity borrowed at origination. Small-dollar HECMs by definition have very low LTVs (likely 0.30 or lower), and thus can carry very low monthly mortgage insurance premiums. By contrast, forward mortgage conversion HECMs may have much higher LTVs (e.g., 0.60), and thus should carry a higher monthly mortgage insurance premium.

It is also important to mention that accurate appraisals of property values at the time of origination are critical to reducing loss severity in the HECM program (Park 2017; Hwang and Mayer 2018). HUD recently enacted a rule requiring a second appraisal for

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35. Mortgagee Letter 2013-27, https://www.hud.gov/sites/documents/ML13-27.PDF

36. Mortgagee Letter 2017-12, https://www.hud.gov/sites/documents/17-12ML.PDF

properties that fail an automated collateral risk assessment.[37] We support this reform as an important tool to reduce crossover risk.

Preventative servicing

The policy proposals we have suggested thus far focus on front-end changes to the HECM program, affecting new originations in the future. Here, we highlight the need for preventative servicing practices that can be applied to the entire HECM book of business, including loans originated in the past as well as new HECMs in the future. While front-end strategies can be put in place to reduce the likelihood that a loan will end up in a negative equity situation, servicing practices after origination also influence crossover risk and loss severity.

Reverse mortgage servicers have a variety of important responsibilities, including sending monthly statements to borrowers, administering withdrawals from available HECM funds, overseeing any required repairs on the home identified at the time of origination, certifying annually that the borrower is occupying the home as the primary residence, monitoring to ensure that property taxes and homeowners insurance payments are current (and taking action if not), and terminating a loan through home sale or foreclosure when the last borrower dies or fails to meet the obligations on the loan. How servicers carry out these responsibilities can significantly affect the growth of the loan balance and the collateral value of the property. We propose providing additional incentives and resources for preventative servicing strategies that minimize crossover risk and reduce the probability of a negative termination (e.g., through foreclosure).

For example, servicers, the FHA, or counseling agencies can proactively send reminders to borrowers about their obligations to pay property taxes and homeowners insurance in advance of the due dates. While borrowers are made aware of these obligations as part of the required pre-HECM counseling session, they may forget to take actions to ensure they meet these obligations after closing. Because there are no monthly payments on the HECM, there is less-frequent interaction between the borrower and loan servicer until a problem arises. Our recent research indicates that simple, automated quarterly mail reminders to HECM borrowers about future property tax and insurance obligations reduce the rate of default on these expenses by as much as half (Moulton et al. 2019b). These reminders could be sent from the lender-servicer, or could be automatically generated from HUD, or from the nonprofit counseling agency that provided the mandatory pre-HECM counseling session.

When problems do arise, HECM servicers can take actions to reduce the probability of foreclosure and to maximize the collateral value of properties. Servicers have information on borrowers that can signal that a borrower is in trouble, such as failure to return the annual certification of residency, or failing to pay property taxes or homeowner's insurance payments. Some of these signals—such as failure to pay property taxes or homeowners insurance—require lenders to call a loan "due and payable" or engage in loss mitigation strategies following HUD protocol. However, there may be early alternatives to foreclosure that

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37. HUD Mortgagee Letter 2018-06, https://www.hud.gov/sites/dfiles/OCHCO/documents/2018-06hsgl.pdf

result in less loss in the value of the property and better outcomes for borrowers. For example, in 2017, HUD announced a cash-for-keys option that allows servicers to provide up to $3,000 to help a borrower transition out of a home they can no longer maintain or afford, into an alternative living arrangement.[38] Currently, the cash-for-keys program is only available to borrowers with HECMs originated in 2017 or later. Given that crossover risk is likely greatest for HECMs originated prior to the recent policy reforms, it makes sense to extend this program to the entire HECM book of business.

Preventative strategies for servicing are critical throughout the life of the loan—including after the loan has been assigned to HUD when it reaches 98 percent of the maximum claim amount. Some industry experts claim that the biggest costs to the FHA mutual mortgage insurance fund stem from losses incurred towards the end of the life of a loan, after the loan has been assigned to HUD, through property disposition.[39] A recent CBO (2019) report estimates that the disposition costs of a HECM, including maintaining the property post-assignment to HUD and disposing of it through the foreclosure process, equal 25 percent of the home's value at the time of termination.[40] More analysis is needed to determine differences in disposition costs by servicer type (including HUD's central servicer) for otherwise similar loans to otherwise similar borrowers, and to identify servicing practices that are causally related to disposition costs. The findings from this analysis could lead to establishing incentives for servicers to engage in specific activities that would reduce default, maximize collateral value, and ultimately mitigate losses to the FHA mutual mortgage insurance fund.

Conclusions

Equity in the home comprises a substantial share of wealth for a large proportion of older adults in the U.S. Our estimates suggest that more than 6 million homeowners age 62 and older in the U.S. have less than $10,000 in non-housing financial wealth, but have at least $20,000 in home equity. Housing wealth for this group of homeowners can provide additional liquidity for consumption and serve as a financial buffer against unexpected financial shocks. Yet this resource is largely untapped. Why? Longstanding explanations include general aversion to holding mortgage debt in retirement and a desire to leave the home as an inheritance. While these factors are certainly part of the story, we suggest that a sizeable share of older adults—as many as one in three homeowners in 2016—may be unable to borrow from home equity through a traditional mortgage, even if they wanted to do so.
The federally insured reverse mortgage is designed to serve this group of homeowners, offering access to home equity with no required monthly payment, and protection for homeowners and their heirs against negative equity. However, between 2008 and 2018 the volume of HECM originations has declined almost continuously from near 115,000 loans to slightly more than 40,000 loans. This decline is surprising for at least two reasons. One is

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38. Mortgagee Letter 2017-11 https://www.hud.gov/sites/documents/17-11ML.PDF

39. See Urban Institute blog post (May 31, 2019): https://www.urban.org/urban-wire/fha-can-improve-its-reverse-mortgage-program-changing-servicing-protocol. Industry experts also suggest that loss severities are higher for loans that have been assigned to HUD than for loans that not assigned to HUD and are disposed of by private servicers.

40. https://www.cbo.gov/system/files/2019-05/55247-ReverseMortgages.pdf

that the eligible population is growing, the increase from 2008 to 2018 being about 33 percent. The other is that house prices have increased both in real and nominal values during this period. Federal Housing Finance Agency data indicate the nominal national price index for housing increased by 26 percent between the second quarter of 2008 and the second quarter of 2018, while the national CPI increased by only 15.2 percent.

The numerous policy and market changes to the HECM program during this period have resulted in a rather complicated, patchwork product that has struggled to gain a foothold in the market—for both consumers and lenders. We suggest that the market can be improved by offering simple, streamlined product options that target specific consumer segments with demonstrated demand for home equity borrowing. Small-dollar HECMs and forward-to-reverse mortgage conversion HECMs are two such options. We recognize that many of the recent policy changes, including limits on initial withdrawals, financial assessment, and second appraisals are sensible strategies to reduce risk in the market. Our second set of proposals builds from these strategies and describes how risk-based underwriting and preventative servicing can reduce the probability of tax and insurance default and reduce crossover risk, while reducing frictions in the market.

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