

## ***Impact***

*A regulatory impact analysis must accompany every economically significant federal rule or regulation. The Office of Policy Development and Research performs this analysis for all U.S. Department of Housing and Urban Development rules. An impact analysis is a forecast of the annual benefits and costs accruing to all parties, including the taxpayers, from a given regulation. Modeling these benefits and costs involves use of past research findings, application of economic principles, empirical investigation, and professional judgment.*

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# **Increased 40-Year Term for Loan Modifications**

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## **Summary of Rule and Analysis**

On April 1, 2022, the U.S. Department of Housing and Urban Development (HUD) proposed a rule to allow lenders to extend the repayment period of a mortgage loan to 40 years. HUD's current regulations allow mortgagees to modify a Federal Housing Administration (FHA)-insured mortgage by extending the total unpaid loan for a term limited to 30 years after a borrower's default. The loan modification is intended to assist borrowers with FHA-insured mortgages who are experiencing financial hardship due to negative life events or economic conditions and whose existing mortgages are in default or imminent default. Being able to offer a longer-term loan eases the burden of loss mitigation on lenders and FHA, and it prevents default, foreclosure, or other negative outcomes for certain borrowers who would not be able to retain their homes without an immediate reduction of their periodic mortgage payment.

A loan modification is a change to one or more terms of a borrower's loan to help cure the default, generally by reducing the monthly payment to a more affordable level. A loan modification typically involves extending the number of months to repay the loan, reducing the interest rate, adding missed payments to the principal, forbearing or reducing the principal balance, or some combination of those options. The 40-year repayment period would provide an additional option for a loan modification that could be used independently or combined with other options to assist FHA-insured borrowers at risk of default.

The 40-year mortgage remains rare but has become more commonly recognized in the mortgage industry. The Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) provide a 40-year mortgage loan modification option.<sup>1</sup> The National Credit Union Association (NCUA) also allows for 40-year mortgages, and the U.S. Department of Agriculture (USDA) allows for loan modification up to 40 years if certain conditions are met beyond the requirements for a 30-year loan modification. An FHA Mortgagee Letter (ML 2022-07) established the 40-year loan modification as part of the COVID-19 Recovery Loss Mitigation Options but only under very specific conditions. By allowing 40-year loan modifications more generally, HUD would align with the government-sponsored enterprises (GSEs; Fannie Mae and Freddie Mac), NCUA, and USDA, ensuring that borrowers with FHA-insured mortgages receive equivalent options for home retention.

An advantage to the lender of extending the loan term is that it does not necessarily reduce the income from mortgage payments. The mortgage payments are calculated such that the net present value (NPV) of a stream of scheduled mortgage payments is equal to the principal. Extending the loan compares favorably with other methods, such as interest rate buydowns or principal reductions, both of which lower the NPV of mortgage loan payments.

The success of the 40-year loan modification will depend upon how it is combined with other loan modification policies and the prevailing market conditions. The aggregate impact will similarly depend upon the accessibility of the loan modification to borrowers. FHA encourages lenders to modify the loans if feasible. For a loan modification to be a preferred solution for both lenders and borrowers, the outcome for both must be better than that of a foreclosure, which involves costs to FHA, the lender, and the borrower. The estimated net quantifiable benefits of the modification range from approximately \$84 million to \$550 million in a given year, whereas transfers range from \$87 million to \$780 million. Some of the costs and benefits to lenders and borrowers and the transfers are likely to occur in the first year of the loan modification, whereas other effects will be periodic until the property is sold or the mortgage is fully paid.

## Evidence of Success of Loan Modification Strategies

Loan modifications became a significant component of government intervention during the Great Recession. Modification programs to reduce foreclosures included the Home Affordable

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<sup>1</sup> For information on trends in the use of different types of loan modification, see FHFA (2021). Over the last 10 years, the fraction of loan modifications by FNMA and Freddie Mac that “extend the term only” has increased to include approximately two-thirds of their loan modifications.

Modification Program (HAMP)<sup>2</sup> and loan modifications by GSEs. Effective policy design became a critical issue: Should the government assist borrowers by reducing the loan principal or subsidizing the payment? The right answer depends on borrowers' motivations.<sup>3</sup> Up to 70 percent default on their mortgages because they suffered a significant negative economic shock resulting in the inability to pay. Some choose to default once their home has become a depreciating financial asset. If negative equity is a primary motivator, then principal reduction would be more effective. Although some theoretical and empirical studies on the performance of modified loans have shown that principal reduction is the optimal type of modification due to its dual effect on payment burden and negative equity for the borrowers,<sup>4</sup> it is also the costliest option for lenders and, thus, the least used option.

To be considered effective, a loan modification should assist borrowers in continuing their scheduled payments long after modification.<sup>5</sup> Industry experience and empirical evidence<sup>6</sup> on loan modification programs during the Great Recession have determined that reducing monthly payments by 20 to 30 percent is the most cost-effective long-term modification strategy for borrowers, lenders, investors, and communities. Modifications that reduce mortgage payments by at least 10 percent consistently result in lower redefault rates than modifications that reduce payments by less than 10 percent (U.S. Treasury, FHFA, and HUD, 2016). Other research on the success rate of loan modification has suggested that the probability of re-default depends on several factors: the type and timing of modification, the characteristics of the borrower, and whether the loan is securitized.<sup>7</sup> Ganong and Noel (2020) found that modifications involving payment reductions are far more cost-effective than a principal reduction in preventing defaults. Agarwal et al. (2011) found that significant reductions in mortgage payments are associated with lower re-default rates. An analysis of GSE-backed mortgages using either HAMP or GSE loan modification programs during the Great Recession found that a 1-percent mortgage payment reduction reduced default rates in the 2 years after modification by 0.26 percentage point on average (Farrell et al., 2017). However, no consensus exists on the effect of extending loan duration on re-default. Voicu et al. (2012) found a positive correlation, whereas Agarwal et al. (2011) found a negative correlation.

## **FHA Loss Mitigation Program**

The FHA Loss Mitigation Program, established in 1996, offers a comprehensive approach to promoting alternatives to foreclosure, enhancing lender flexibility to meet that goal, and reducing

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<sup>2</sup> In 2009, the U.S. Department of the Treasury rolled out the federal government's foreclosure prevention initiative, the Making Home Affordable (MHA) program, which included the Home Affordable Modification Program (HAMP).

<sup>3</sup> For a comprehensive review of this literature, see Ganong and Noel, 2020.

<sup>4</sup> Das and Meadows (2013) find that reducing the principal amount is the optimal type of loan modification. Quercia and Ding (2009) and Haughwout, Okah, and Tracy (2016) confirm Das and Meadows' findings, but their small samples have limited statistical power because principal forbearance is relatively rare.

<sup>5</sup> Earlier performance of loan modifications in 2008 shows that within 6 months, more than one-half of all modified loans were 30 days or more delinquent, and more than one-third were 60 days or more delinquent (OCC and OTS, 2008, in Quercia and Ding, 2009).

<sup>6</sup> See An et al. (2021) for the list of studies supporting this finding.

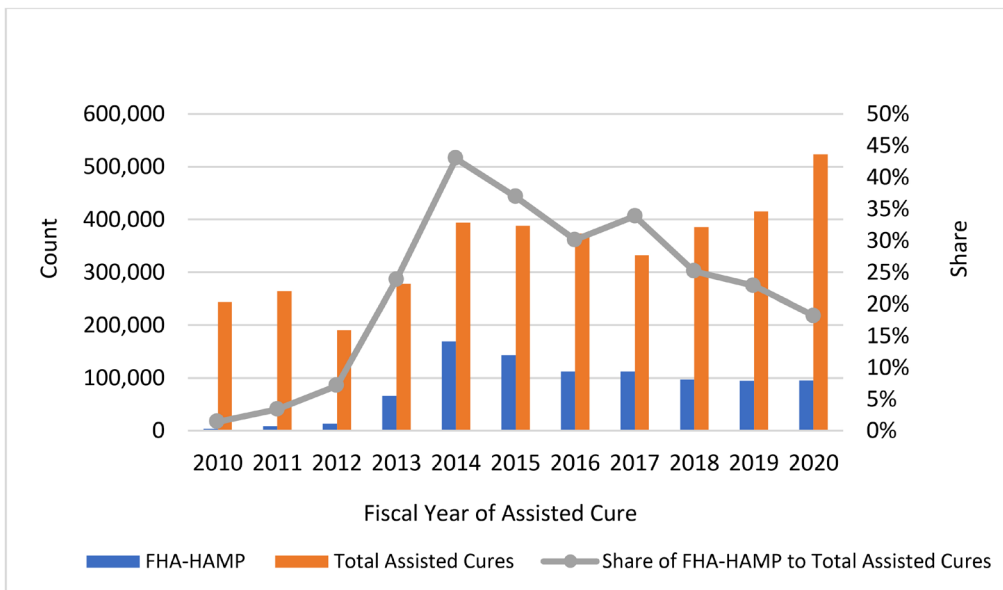
<sup>7</sup> See Le (2016).

losses to FHA's Mutual Mortgage Insurance (MMI) Fund.<sup>8</sup> Current loss mitigation options for borrowers whose mortgages are in default or imminent default include home retention options (e.g., informal and formal forbearances, Special Forbearance [SFB]-unemployment, and FHA-HAMP) and home disposition options (e.g., pre-foreclosure sales [PFS] and deed-in-lieu [DIL]). Home disposition options are available immediately upon default if the cause of the default is incurable—i.e., the borrower has no realistic opportunity to replace the lost income or reduce expenses sufficiently to meet the mortgage obligation. FHA's first objective is to help the homeowner remain in the home whenever possible; however, the home disposition options allow the disposition of the property without the full adverse impact of foreclosure.

Since FHA-HAMP was introduced in 2009 in response to the Great Recession, the use of that option has significantly increased. Exhibit 1 shows the number of cured defaults using FHA-HAMP between FY 2010 and FY 2020, which may include standalone loan modification, standalone partial claim, or a combination of loan modification and partial claim. FHA-HAMP gained traction starting in FY 2013 and peaked in FY 2014. FHA-HAMP has declined since then as the housing market has improved and delinquencies have fallen. In FY 2020, FHA-insured mortgages with assisted cures totaled 523,574, and FHA-HAMP represented 18 percent of all cures.

**Exhibit 1**

**Total Assisted Cures and Total Cures by FHA-HAMP**



FHA = Federal Housing Administration. HAMP = Home Affordable Modification Program.  
 Source: HUD/FHA

<sup>8</sup> The FHA Loss Mitigation Program replaced FHA's Mortgage Assignment Program effective April 26, 1996. See Mortgagee Letter 1996-24 (Termination of the Mortgage Assignment Program), Mortgagee Letter 1996-32 (Loss Mitigation – Mortgage Modification), and Mortgagee Letter 1996-61 (FHA Loss Mitigation Procedures).

## Impacts on FHA

FHA's MMI Fund receives positive cash flows from mortgage insurance premiums (MIPs) paid by FHA-insured borrowers. The MMI Fund experiences outflows for loss mitigation efforts and claims paid to lenders for mortgages that have defaulted. Borrowers pay an upfront MIP of 1.75 percent of the loan value and an annual MIP of 0.80 percent of the loan value for loans with an initial loan-to-value ratio of 95 percent or less.<sup>9</sup> The MMI Fund is typically estimated to generate a negative credit subsidy in the year that loans are insured, which means that it provides an offsetting receipt for the federal government and does not need appropriations to cover the expected costs of insuring loans. Loans are valued based on their estimated NPV lifetime costs in the year they are insured.

FY 2020 witnessed positive loan performance until the onset of the COVID-19 crisis in March 2020. Although the share of loans originated with higher risk attributes declined in FY 2020, the overall portfolio performance worsened as early payment defaults increased from 1 to 3 percent, and seriously delinquent mortgages increased from 4 to 12 percent (FHA, 2021b).

As shown in exhibit 2, the bulk of total claims paid (by number) was for conveyance, or transfer of ownership to FHA; for claims from loss mitigation, partial claims made up by far the highest share. Compared with the average amount of a claim from conveyance, which was \$144,000, the average claim from loss mitigation through partial claim was significantly lower, at \$29,000.<sup>10</sup> Claims from loss mitigation accounted for a majority of the increase in the total claim amount. Before FY 2021, the share of total claims paid for loss mitigation was consistently lower than that of claims paid for the disposition of assets. However, in FY 2021, the share of loss mitigation claims reached 82 percent of total claims.

### Exhibit 2

FHA Single-Family Insurance: Total Claims Paid by Claim Type (in million \$)

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<b>Loss Mitigation Claims</b>					
Special Forbearance	0.97	1.03	1.19	0.94	0.03
Loan Modification	77	71	71	74	30
Partial Claim	1,747	1,477	1,769	1,993	5,333
<b>Total</b>	<b>1,826</b>	<b>1,550</b>	<b>1,841</b>	<b>2,068</b>	<b>5,363</b>
<b>Home Disposition Claims</b>					
Conveyance or Deed-in-lieu (DIL)	4,653	3,144	2,286	1,965	527
Without Conveyance	2,347	2,455	1,948	1,054	476
Pre-Foreclosure Sale (PFS)	601	384	257	205	171
<b>Total</b>	<b>7,600</b>	<b>5,983</b>	<b>4,491</b>	<b>3,224</b>	<b>1,174</b>
<b>Grand Total</b>	<b>9,426</b>	<b>7,532</b>	<b>6,332</b>	<b>5,291</b>	<b>6,537</b>
<i>Loss Mitigation Claims (% share)</i>	19	21	29	39	82
<i>Home Disposition Claims (% share)</i>	81	79	71	61	18

FHA = Federal Housing Administration. FY = fiscal year.

Source: U.S. Department of Housing and Urban Development/National Servicing Center

<sup>9</sup> For loans with an initial loan-to-value ratio of more than 95 percent, the MIP is 0.85 percent of the loan value.

<sup>10</sup> This amount is computed by dividing the total amount paid by the total number of claims.

## Gains to FHA of the 40-Year Repayment Period

FHA incurs a loss from a mortgage claim event, and the loss amount depends on many factors, including the disposition channel. Foreclosed properties generally have higher severity compared with PFSs. When an FHA-endorsed mortgage terminates as a claim, the property is conveyed to FHA, and FHA makes a payment to the lender to settle the claim and acquire the underlying property (i.e., the underlying property becomes real estate owned, or REO). The net loss to the MMI Fund is the difference between the acquisition cost to HUD and recoveries realized by FHA on properties owned.

The acquisition cost, which is the claim payment FHA makes to the servicer, consists of the outstanding unpaid principal balance on the mortgage, foregone interest advanced by the servicer as a result of the mortgage default, and foreclosure expenses (e.g., legal and administrative costs paid by the servicer, including any expenses incurred in repairing or maintaining the property before conveyance). Each component is affected by several factors—for example, note rate and length of default-to-claim lag, use of judicial foreclosure process, borrower's financial condition, house price appreciation, and prevailing housing market conditions. Following acquisition, some properties are sold at a reduced price. For those properties that are not yet sold, FHA incurs holding costs associated with maintenance, repairs, tax payments, and other expenses related to preparing the property for sale. Upon sale of a property, FHA receives the sales price less any sales expenses.

Since the peak of \$129,000 in FY 2012 (in nominal \$), the average net loss decreased to \$74,000 by FY 2021 (except for a slight increase in FY 2020).<sup>11</sup> The authors estimate that the average net loss to FHA from a foreclosure could range from \$32,000 to \$111,000 (2021\$) per property, depending on economic conditions.<sup>12</sup> Using this range, the authors estimate that the annual total prevented net loss to FHA from foreclosures if distressed borrowers have the option of modifying their loans to 40 years could be between \$237 million and \$833 million.<sup>13</sup>

The reduction in losses to FHA can be considered a transfer that arises in the year the default is prevented by the 40-year loan modification. Alternative methods of expressing the impact could be to spread the costs avoided over the maximum life of a loan or the expected life of a loan.

## Costs to FHA of 40-Year Repayment Period

The cost to FHA of helping a borrower cure a default by extending the repayment period is small compared with the interest expense, legal fees, and property management costs associated with foreclosure (see exhibit 2). Similarly, FHA would incur no incremental administrative cost in offering a 40-year versus a 30-year mortgage.

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<sup>11</sup> This amount is the average net loss for the combined foreclosure (REO and TPS, or third-party sale) and PFS claims (see FHA, 2021b).

<sup>12</sup> The low estimate was the average net loss for 2017–2021, whereas the high estimate was the average for 2008–2011.

<sup>13</sup> This figure is estimated by multiplying the range by 7,500. The authors estimated a total of 7,500 borrowers could be prevented from ending in foreclosure or termination claim if the 40-year modification were an available option to them. See the computation of 7,500 mortgages in the following discussion.

## Impacts on Lenders

A lender could face both gains and losses from a requirement to offer an extension of the loan repayment period. If the net effect of a loan modification on the value of the mortgage is positive, then the lender would incur no compliance cost. The loan modification would have been pursued regardless of any requirement by FHA. If, however, the lender incurs net costs for modifying a loan, then an incentive may be required for the lender to pursue a loan modification that generates benefits for other parties.

## Considerations for All Types of Loan Modification

The gains of a loan modification to an FHA-insured lender are not as obvious as they would be to FHA, which guarantees the loss, or to the borrower, who could lose their home. For lenders, a loan modification can represent as much of an administrative burden as a foreclosure.<sup>14</sup> The lender will choose the least costly alternative (HUD, 2009).

**Costs to FHA-insured Lenders of Loan Modification.** The primary source of income for servicers is the monthly servicing fee, which is a fixed percentage of the loan's unpaid principal balance. In the case of default, the servicer can recover foreclosure costs but not modification costs. Offering loss mitigation options to borrowers can be costly and is not covered by insurance claims to FHA. In addition, the labor and overhead costs (e.g., staffing, physical infrastructure, and out-of-pocket expenses such as credit reports and financing costs) associated with modifications are not billable to investors (Cordell et al., 2009; Eggert, 2007).<sup>15</sup>

An additional cost of a loan modification is the repurchase of a loan once it is securitized. The cost to modify a loan will thus depend on whether a lender holds the mortgages on their balance sheets or with the servicers on behalf of mortgage-backed securities (MBS) investors in the case of securitized mortgages.<sup>16</sup> Although most FHA-insured mortgages are in mortgage pools held in the Government National Mortgage Association's (Ginnie Mae's) loan pools, loan modification requires that servicers purchase loans from those pools with their own funds and re-pool them after modification.<sup>17</sup>

Unlike modifications of conventional loans, this repurchase requirement applies to almost all FHA-insured mortgages. Beyond the direct costs of repurchasing a loan, executing a loan modification

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<sup>14</sup> A lender would be more willing to incur costs to modify a loan for loans that are not fully insured. The loss of income from default is likely to outweigh any costs of loss mitigation. This kind of moral hazard has been empirically detected by comparing the performance of FHA and non-FHA loans (Park, 2016).

<sup>15</sup> In recent years, the Mortgage Bankers Association (in Goodman, McCargo, et al., 2018, and Fratantoni, 2020) has estimated that the per-loan cost of servicing a nonperforming loan is approximately \$2,000.

<sup>16</sup> This section uses "lender" and "servicer" interchangeably. Although FHA-approved lenders may service their own mortgages or may subcontract out the servicing of their mortgages, they are responsible for all servicing actions, including the acts of their servicers, in line with FHA regulations. See FHA Single Family Handbook 4000.1, Section III.

<sup>17</sup> The repurchase decision is related because servicers are responsible for forwarding monthly payments to Ginnie Mae investors even when borrowers have failed to make those payments. Although HUD generally only reimburses lenders for missed payments at a debenture rate (the interest rate used by HUD to reimburse lenders for missed interest payments) and not the note rate (the interest rate paid by the borrower on the mortgage), lenders will lose the difference in those interest rates if they continue to forward the payments. Regarding re-pooling, achieving a sufficient volume to form a new pool is a challenge to servicers (see HUD, 2000).

incurs other risks. Because the process of purchasing and re-pooling could take several months, servicers are exposed to the risk that interest rates will change before the loan can be re-pooled, which could result in a loss for the servicers. The risk of loss from an interest rate increase could dampen the willingness to offer loan modifications (HUD, 2016, 2000).

**Gains to Lenders of Avoiding a Foreclosure.** FHA limits what it will reimburse an insured lender on a claim, which provides some motivation to avoid foreclosure. HUD may require the lender to repair a property before conveyance. When a borrower defaults, the disinvestment in property can be significant.<sup>18</sup> Depending on the type of damage to the property, the charges may or may not be reimbursable.<sup>19</sup>

Lenders bear some foreclosure costs. FHA limits the reimbursement of foreclosure costs to two-thirds of approved foreclosure costs. Some types of foreclosure costs are partially or fully reimbursable, whereas others are not reimbursable at all.<sup>20</sup> The loss in income to lenders from not receiving interest payments is limited by HUD's "debenture interest rates," which are typically lower than the prevailing market rate.<sup>21</sup> The estimates of interest costs of a foreclosure are approximately 10 percent of the unpaid balance.<sup>22</sup> The FHA-insured lender would bear a fraction of that cost depending on the difference between the loan rate and HUD's debenture rate. Whether the loss in interest income from a foreclosure is greater than the loss in income from modifying the loan depends on the duration of the two processes.

FHA offers servicers incentive payments<sup>23</sup> for the successful completion of the approved loss mitigation options and, at the same time, imposes financial penalties for failing to engage in loss mitigation and adhere to FHA's loss mitigation guidelines.<sup>24</sup> A HUD report (2000) found that incentive payments do not cover the full costs associated with using each loss mitigation option, especially regarding payment for loan modifications.<sup>25</sup> The compensation structure of servicers does not cover the extra modification costs.

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<sup>18</sup> Stress discounts—or the reduction in property value of a foreclosed home—can vary between 3 and 9 percent or be up to 27 to 30 percent for houses with low-priced characteristics in low-priced neighborhoods (Campbell, Giglio, and Pathak, 2009) and during economic events such as the Great Recession (Madar, Been, and Armstrong, 2008; UBS, 2008; White, 2009).

<sup>19</sup> Only surchargeable damage to a property caused by fire, flood, earthquake, hurricane, tornado, boiler explosion (for condominiums only), or mortgagee neglect is not reimbursable. In cases of nonsurchargeable damage that occurs during the time of the mortgagee's possession, HUD may require the mortgagee to repair such damage before conveyance, and HUD will reimburse the mortgagee for reasonable payments, less any insurance recovery.

<sup>20</sup> For instance, attorney fees are limited to 75 percent of the maximum attorney fee for incurred fees associated with a routine foreclosure that was not completed because any of the following occurred after the mortgagee-initiated foreclosure: the borrower filed for a bankruptcy petition; the borrower executed a DIL of foreclosure; or the borrower successfully completed a PFS.

<sup>21</sup> See [https://www.hud.gov/program\\_offices/housing/comp/debnrate](https://www.hud.gov/program_offices/housing/comp/debnrate).

<sup>22</sup> See HUD (2010) for a discussion of the estimates of the transaction costs of a foreclosure.

<sup>23</sup> Current incentive payments include \$100–\$200 for SFB-Unemployment; \$500 for an FHA-HAMP Partial Claim; \$750 for an FHA-HAMP Loan Modification, plus up to \$250 for reimbursement of title search, endorsement of the title policy, and recording fees; \$1,000 for PFS; and \$250 for DIL. Additional incentive payments are offered to servicers on the basis of their performance. See FHA Single Family Handbook 4000.1.

<sup>24</sup> See 24 C.F.R. § 203.500 *et seq.* and 24 C.F.R. 30.35(c) (2).

<sup>25</sup> The report also mentioned that the maximum reimbursement of \$250 for title search costs was inadequate in many cases.



## Interest Costs of Extending the Loan Repayment Period

Extending the repayment period of a fixed-rate mortgage could affect the market value of other terms of the loan, such as the interest rate, so that a lender is indifferent between a 30-year and 40-year repayment period.<sup>26</sup> Extending the repayment period could expose the lender (or investor) to greater risk in the performance of the loan (either prepayment or default) or interest rate risk (the opportunity cost of funds for the lender). A lender could pass the costs of managing the risk of a longer repayment period onto the borrower, making it less advantageous. If, instead, the interest rate is restricted to that of a 30-year loan, then a lender could be less willing to offer the loan modification. Establishing a reference interest rate is necessary when evaluating whether extending the repayment period puts any burden on lenders.

**Effect on Default Risk.** The immediate (conditional) risk of default would be diminished by extending the repayment period and thus issuing a mortgage with more affordable payments. This short-run reduction of default risk from an income shock to the borrower could be partly offset by a stronger incentive for strategic default later on. A 40-year repayment period could discourage the borrower from building equity after having survived the initial serious delinquency. A longer term in which to repay potentially presents a greater probability that the owner will find themselves underwater at some point in the future. However, given that liquidity constraints have been shown to be a greater motivator for default than negative equity, the prospect of redefault should not raise the interest rate.

**Effect on Prepayment Risk.** The typical life span of a mortgage is less than 10 years, well under the agreed-upon repayment period of either a 30- or 40-year loan. Prepayment behavior could be different with a longer-term loan, although the direction is difficult to determine, just as for default. On the one hand, the lower periodic mortgage payment of a 40-year loan would reduce the urgency of refinancing, making prepayment less likely. On the other hand, the prospect of greater long-run interest costs of a longer-term loan could hasten the decision to refinance and prepay.

**Effect on Interest Rate Risk.** Even if a loan continues to generate income, lenders of fixed-rate mortgages face interest rate risk (Fuster and Vickery, 2015; Hoffman et al., 2019). An anticipated increase in current interest rates reduces the expected value of a mortgage's revenue stream. If banks lend long-term and borrow short-term, then the financing costs of borrowing could exceed the revenue received from mortgage payments. The reverse is also true: if interest rates fall, then the value of the mortgage would increase. Aversion to this type of risk makes longer-term loans costlier. The ability of financial institutions to handle this interest rate risk varies.<sup>27</sup>

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<sup>26</sup> Informal evidence shows that there could be a difference. Freddie Mac's Primary Mortgage Market Survey shows that the rate for a 30-year FRM has never been lower than that for a 15-year mortgage; the median difference is 50 basis points. A reliable comparison between 30- and 40-year rates is more difficult because survey data on loans with a 40-year term are not as prevalent. Ganong and Noel (2020) estimate a difference of 32 basis points between 40- and 30-year rates.

<sup>27</sup> Banks with longer maturity liabilities retain more mortgages; banks with shorter maturity liabilities transfer interest rate risk by securitizing more loans (Xiao, 2021).

## Liquidity Costs of Extending the Loan Repayment Period

The secondary market for 40-year loans may not be as advanced as for standard 30-year loans. Goodman, Kaul, et al. (2018) estimate that the rate on mortgage-backed securities composed of 40-year loans is 50 basis points higher than that of MBS of comparable 30-year loans. If additional cost arises from the secondary market being less competitive, then this difference can be expected to fall as investors become more familiar with the 40-year loan. Any remaining difference in interest rates would be due to the slight but potential interest rate risk of holding a 40-year loan.

Opinions differ on how quickly the secondary market will develop.<sup>28</sup> Ginnie Mae announced the creation of a new pool type to support the securitization of modified loans with terms up to 40 years.<sup>29</sup> That action will allow Ginnie Mae issuers to offer loan modifications that carry a lower monthly payment than that for a 30-year term while retaining the ability to securitize the loans for sale in the secondary market.

## Impacts on Borrowers

A 40-year modification may be a solution for borrowers who defaulted earlier in the life of the loan, have accumulated more arrearages, or face higher interest rates at the time of modification. The immediate benefit to the seriously delinquent borrower would be to ameliorate the financial distress that would cause foreclosure. If prevailing interest rates have increased since a loan was originated, then lengthening the repayment could either partially or completely offset the increase in mortgage payments of a modified loan at a higher rate (Goodman, Kaul, et al., 2018).<sup>30</sup>

Extending the repayment period will reduce a borrower's periodic mortgage payment by distributing the payments over more years. The level of reduction of mortgage payments achieved by extending the repayment period has limitations. The reduction of the mortgage payment attainable through extension diminishes as interest rates are higher because the interest that accumulates over a longer repayment period adds to the cost of the loan. Accumulated arrearages limit the effectiveness of repayment extensions to reduce the mortgage payments below the initial loan payment.

The additional interest cost will vary with the borrower's time value of money, as expressed by a discount rate (the rate at which the consumer discounts future consumption relative to the present). If the discount rate and interest rate are equivalent, then the present value of future

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<sup>28</sup> Goodman, Kaul, et al. (2018) suspected that the secondary market would grow slowly if implemented but that "some subsidy will probably be needed to assure economic execution during the interim period" (p. 7). Bhagat and Stein (2021) are confident that FHA-insured 40-year loan modifications will find a market niche based on a comparison with similar pools of FHA-insured modified loans reinstated after undergoing loss mitigation. The experience of GSEs in securitizing their 40-year modified loans suggests that such custom pools that include 40-year loan modifications would be able to find sufficient liquidity.

<sup>29</sup> See Ginnie Mae, 2021.

<sup>30</sup> Guidance for loan modification requires that the refinance be offered at an interest no greater than the "market rate," which is often defined as no more than 25 basis points greater than the most recent Freddie Mac modification interest rate for a 30-year fixed rate mortgage, rounded to the nearest one-eighth of 1 percent (0.125 percent) as of the date the borrower is offered a permanent loan modification. See FHA Single Family Handbook 4000.1 Glossary.

mortgage payments is not affected by extending the repayment period of the loan.<sup>31</sup> Future interest will be discounted by the same rate at which it accumulates. A borrower with a higher discount rate than the interest rate would gain from the intemporal tradeoff of extending the repayment period. A borrower would gain as the loan balance accumulates at an interest rate less than the borrower's discount rate. Thus, borrowers with a lower discount rate are not likely to gain as much from extending the loan repayment period.<sup>32</sup> For those borrowers, the increase in interest payments over the course of the loan would outweigh the gains from reducing the periodic payment. However, HUD expects that the financial gains from avoiding a foreclosure could outweigh any loss from higher interest costs of the modified loan.

A borrower is not obligated to carry the loan for 40 years. The average life of an FHA-insured mortgage is 7 years. If a higher present value of mortgage payments incurs a financial burden, then, after the loan is cured and as soon as interest rates are favorable, a borrower would refinance into a less expensive loan. Similarly, if the financial situation of the borrower improves, they could choose to resume their previously scheduled payments, which would shorten the mortgage and reduce the higher interest costs of the 40-year modification (Bhagat and Stein, 2021). Alternatively, many borrowers are likely to move and sell their home before the end of their mortgage term and would, thus, not be subjected to the full costs of additional years of payments and interest made.

## **Value to Borrowers of Avoiding Foreclosure**

The homeowner's benefit of avoiding foreclosure includes escaping various losses from foreclosure. Direct costs include moving costs, legal fees, tax penalties, and administrative charges to the borrower.<sup>33</sup> Other losses include the loss of equity (for loans with a loan-to-value ratio of less than one) and the option value of realizing future housing price appreciation (Eberly and Krishnamurthy, 2014). Even if a borrower is in a position of negative equity, the net value of the mortgaged home could be positive to the occupant if the borrower has developed a unique attachment to the structure or neighborhood.<sup>34</sup> All households need shelter regardless of the asset value of their residence. A lower credit rating stemming from a foreclosure would make finding alternative housing more expensive, regardless of tenure.<sup>35</sup>

Nonfinancial costs include emotional stress imposed on affected household members, financial instability, living in a neighborhood with a lower quality of life, physical health problems induced by the move, and even an increased likelihood of divorce. Diamond, Guren, and Tan (2020) stress

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<sup>31</sup> If all borrowers were identical, then interest rates would equal borrowers' discount rates. However, several types of loans, borrowers, and housing markets exist. Gerardi, Shapiro, and Willen (2007) argue that housing finance decisions vary across households due to the heterogeneity of the cost of funds to borrowers.

<sup>32</sup> A borrower with a lower discount rate than the interest rate would not borrow unless they face temporary liquidity constraints, value the purchased item at more than the market price, expect asset price growth, or expect a future decline in interest rates so that they can refinance their loan.

<sup>33</sup> A previous analysis by HUD (2009) estimated those direct costs to be approximately \$12,000 (2021\$).

<sup>34</sup> Owners could also value a home at a higher value than a potential buyer simply because they have an aversion to loss (Tversky and Kahneman, 1991).

<sup>35</sup> Brevoort and Cooper (2013) find that credit scores decline into the subprime range as a borrower's mortgage enters foreclosure. However, Diamond, Guren, and Tan (2020) find that the impact on credit scores of a foreclosure is not significant because the primary reduction to the credit score results from serious delinquency, which has already occurred before the foreclosure.

the importance of accounting for such nonfinancial costs, especially for marginal homeowners on the brink of avoiding foreclosure.

The primary driver of default is a negative economic shock to a household from unemployment, illness, or divorce (Foote, Gerardi, and Willen, 2008). The loss of income and the inability to borrow at reasonable rates would force a borrower into an undesirable foreclosure. In some cases, a foreclosure could be preferable to a household if it is severely underwater. However, empirical work has shown that the market value of a home must be as low as 50 percent of the loan balance before becoming the primary cause of default (Bhutta, Dokko, and Shan, 2017).<sup>36</sup> A loan modification supported by FHA may be the only option for FHA-insured borrowers who are delinquent and struggling to remain in their homes due to financial hardship.

### **Demand for 40-Year Loan Modification by Borrowers**

A modification that lowers monthly payments could be key to a borrower's ability to bring their mortgage current, prevent imminent re-default, and ultimately retain their home and build wealth through homeownership. The demand for the 40-year modification would be correlated with the number of borrowers who are seriously delinquent. The serious delinquency (SDQ)<sup>37</sup> rate rose from 4 percent at the end of April 2020 to 12 percent by the end of FY 2020, as the number of seriously delinquent borrowers grew from about 328,000 to approximately 926,000. That increase occurred because a substantial number of borrowers requested to defer their monthly loan payments under HUD's administrative authority to provide forbearance options that aligned with or exceeded those options under the Coronavirus Aid, Relief, and Economic Security (CARES) Act, as forbearance requests transitioned into serious delinquencies a few months later.

The number of participants in a 40-year loan modification would depend upon the characteristics of borrowers and lenders, the specifics of FHA policy, and market trends. The authors assume that FHA would require lenders to offer the 40-year refinancing on terms specified by a mortgagee letter or regulation. The longer repayment period could be a first, intermediate, last, or even only step of a loan modification plan. The relevant comparison is to the 30-year refinance.

To understand what drives demand by borrowers for a 40-year loan modification, the authors assume that the 30-year mortgage is an alternative modification offered by FHA. To ensure demand for a 40-year loan modification, it must improve a borrower's well-being by more than a 30-year extension. For example, the 40-year modification would be the choice of a borrower who needs greater liquidity and discounts the future at a higher rate.<sup>38</sup> The difference between the monthly payment provided under a 40-year loan modification and a 30-year loan modification may be

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<sup>36</sup> If, instead, the monthly cost of owning is higher than the cost of renting, then providing an incentive to homeowners to remain in their homes (by providing lower mortgage payments at a level comparable to area rents) could benefit the public.

<sup>37</sup> The SDQ rate tracks the percentage of FHA-insured mortgages when the borrower is 90 or more days delinquent, including mortgages in foreclosure and bankruptcy.

<sup>38</sup> The present value is a more accurate measure of the burden to a consumer of a future stream of loan payments. The present value of additional interest payments depends on how borrowers discount the future, or how they value future consumption relative to the present. A 40-year extension would increase the total amount paid over the course of the loan because of the increase in interest. However, it could also result in smaller mortgage payments. A borrower who discounts the future more would be more likely to be interested in a 40-year extension because he or she would benefit from the smaller nearer-term payments and discount the longer-term payments.

significant for a borrower and their ability to afford the modified payment. The choice between a 40-year and 30-year mortgage can also be influenced if one entails higher administrative costs (such as having to prove the need for the 40-year loan term). HUD expects that the distribution of borrower and loan characteristics will be sufficient to generate a positive demand for the 40-year term extension.

For a borrower to agree to a 40-year loan modification, the modification must also be preferred to the alternatives, such as defaulting, selling the home, or self-curing. The 40-year loan modification is preferable to self-curing when the household is liquidity constrained and does not expect an imminent recovery; preferable to foreclosure when the costs of foreclosure and leaving the home are greater than the costs of remaining in the home with a loan modification; and preferable to selling when moving costs are higher than remaining in the home.

Available data on completed loan modifications show that 524,000 loan modifications were processed between FY 2012 and FY 2016. The authors use those data to estimate the potential number of loans that could be prevented from ending in foreclosures or with a termination claim paid by HUD by modifying the mortgages to 40 years. If borrowers receive a 16- to 26-percent payment reduction to the principal and interest portion of their monthly mortgage payments, 15.56 percent will end up in foreclosure or termination claim. However, if borrowers receive a payment reduction of 26 to 50 percent, that share decreases to 10.22 percent, for a difference of 5.34 percent of borrowers prevented from ending in foreclosure or termination claim.

Using the 90+ day FHA-defaulted portfolio as of the end of November 2021, the authors found two potential groups of seriously delinquent borrowers could have benefited from a 40-year loan modification. The first group is the 75,000 borrowers who were at risk because either their partial claim was already maxed out or the remaining amount of partial claims available to them was insufficient to cover their current delinquencies. Of those borrowers, if one assumes that 5.34 percent would not end up in foreclosure or termination claim if they obtained the 40-year modification, that would be 4,000 borrowers ( $75,000 \times 0.053$ ). Second, approximately 40,000 borrowers have interest rates that are already lower than the (then) Freddie Mac PMMS of 3.125 percent. If those borrowers were to need a loan modification, their payments would increase if they had to modify their mortgages to 30 years. However, if they could receive a 40-year term, then their payments would decrease an average of 14.4 percent, meaning that approximately 3,500 borrowers ( $40,000 \times 0.087$ )<sup>39</sup> would have been prevented from ending in foreclosure or a termination claim.

In sum, of the current total number of 90+ day defaulted cases, 7,500 borrowers could potentially be prevented from ending in foreclosure or termination claim if the 40-year modification were an available option. That number of prevented foreclosures is a high estimate because it was based on FHA's defaulted portfolio as of November 2021, when many FHA-insured borrowers were financially affected by the COVID-19 pandemic. For the low estimate, the authors estimated that approximately 3,000 borrowers could have been prevented from ending in foreclosure or termination claim. As previously discussed, the nominal losses to a homeowner from a foreclosure

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<sup>39</sup> Comparing the number of borrowers who could be prevented from ending in foreclosure or claim termination based on the reduction of payment shows an 8.7-percentage-point difference between those borrowers receiving a payment reduction of 1 percent or less (29.9 percent) and those receiving a 2- to 15-percent payment reduction (21.2 percent).

would be at least \$12,000. If a 40-year modification were available to borrowers, the authors estimate that the total annual costs to borrowers that could be saved would be approximately \$36 million to \$90 million.

Whether demand for the 40-year loan modification exists among borrowers is not a sufficient criterion for success. The first and most desirable outcome for other stakeholders (FHA, lenders, and the general public) is when the 40-year extension prevents a default (40-Year > Default > 30-Year). Less desirable is when no efficiency gains are realized from the 40-year alternative but only a transfer to a borrower (40-Year > 30-Year > Default). For that reason, conditions can be placed on offering the 40-year option, such as a targeted payment reduction.

## Social Benefits of Avoiding Foreclosure

Foreclosures create negative externalities that make them costly not just for foreclosed homeowners but also for society overall. The authors' current estimates of the external cost of a foreclosure range from \$0 to \$28,000, with \$14,000 as a central estimate.

### Exhibit 3

Estimates of Economic Externalities of Foreclosure			
	Low Estimate	Middle Estimate	High Estimate
Externalities from Blight	\$0	\$10,000	\$20,000
Local Government Costs	\$0	\$4,000	\$8,000
<b>Total</b>	<b>\$0</b>	<b>\$14,000</b>	<b>\$28,000</b>

Source: Estimates by the authors

## Property Market Spillovers

Disinvestment will adversely affect occupied homes in addition to foreclosed ones. Multiple empirical studies have detected the negative effect on housing prices of a nearby foreclosure. Immergluck and Smith (2006) found an approximately 1-percent reduction in values of surrounding properties within one-eighth of a mile of a foreclosure.<sup>40,41</sup> Accurate estimation of such a foreclosure externality is difficult because of self-selection: homes that are foreclosed on are more likely to be in neighborhoods characterized by a weak housing market. According to Lee (2008), the sources of foreclosure spillovers are poor property maintenance causing worsening urban blight, lower property appraisals based on comparable properties, and an increase in the supply of vacant properties. A number of studies have attempted to separate the impacts of foreclosure, abandonment, and vacancy. Most conclude that the negative impact on surrounding prices of nearby properties is approximately 1 to 2 percentage points (Campbell, Giglio, and Pathak, 2009; Fisher, Lambie-Hanson, and Willen, 2015; Harding, Rosenblatt, and Yao, 2009; Zhang and Leonard, 2014). However, Geraldi et al. (2015) refute any significant impacts of foreclosures on neighboring home values by including the neighborhood level of serious delinquencies as a control.

<sup>40</sup> Given that 31.4 acres are in a radius of one-eighth of a mile and a reasonable density is three units per acre, HUD estimated that the impact on 94 properties was likely driven by neighborhood-wide market trends.

<sup>41</sup> A relevant finding of the Immergluck and Smith (2006) study was that the foreclosure of government-guaranteed loans seemed to have no measurable impact on sales prices.

For this analysis, HUD assumes that the price of surrounding properties is best approximated by the national average of the sales price of a home insured by FHA (approximately \$250,000) and that the externality is a 1-percent decline in home value of the immediately surrounding properties. If an average of four properties suffers a decline in value, then the aggregate impact would be \$10,000. If the property remains abandoned, the adverse hedonic impacts on neighborhood quality will linger. This wider and deeper impact could be twice as high, at \$20,000, but would be expected only during a severe property downturn. The authors' low estimate is \$0, reflecting empirical findings of no real effect.

### **Costs to Local Government of Foreclosure**

The local government experiences losses from a foreclosure through unpaid property taxes on the foreclosed property, unpaid utility bills, property upkeep, policing, legal costs, building inspections, an increase in demand for social services, and, in some extreme cases, demolition of a building that has become a public nuisance. HUD adapted the median case for a property that is foreclosed on, sold at auction, and vacant for some time, for which occasional police intervention is required to secure the property. The estimate includes only direct costs to the jurisdiction of a foreclosure, which can be considered a deadweight loss of public resources. The costs to the local government would be approximately \$6,200<sup>42</sup>; accounting for inflation, that amount would be \$8,200 in 2021.<sup>43</sup>

### **External Costs of Displacement**

The social costs associated with the disruption of housing tenure would merit greater policy flexibility during a crisis. Displacement of households from eviction during a pandemic could impose additional private and public costs. During a public health crisis, being forced to seek temporary housing solutions, such as public shelters or staying with family and friends, would lead to greater crowding and thus higher transmission rates of infectious disease. Avoiding overcrowding would represent an unambiguous gain for the affected households and the general public. One study of New York City during the COVID-19 pandemic estimated that a 10-percent increase in the number of occupants in a housing unit could lead to a 7-percent increase in hospitalizations (Clement, 2021).

### **Equity Impacts**

The goal of FHA programs is to assist borrowers traditionally underserved by conventional markets. Those underserved borrowers—including qualified first-time, low- and moderate-income, and minority homebuyers—are expected to have fewer resources to respond to a financial setback, more difficulty recovering from such a setback, and a greater possibility of foreclosure. In FY 2021, the composition of borrowers served by FHA-insured mortgages was 32 percent minority (Native

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<sup>42</sup> See Apgar et al. (2005), scenario 4a/4b.

<sup>43</sup> Another estimate is from the Office of the State Comptroller of New York (2016), which published the results of a survey of local governments showing that the average annual maintenance costs resulting from a foreclosure were approximately \$1,200 (2021\$).

American, Asian, Black, or Hispanic); 44 percent White; and 24 percent not reported.<sup>44</sup> Home Mortgage Disclosure Act (HMDA) data from 2020 show that FHA's share of lending to Black (17 percent) and Hispanic households (25 percent) is higher compared with the rest of the housing market (6 percent for Black and 10 percent for Hispanic households) (FHA, 2021a). For first-time homebuyers, FHA reached record highs in insurance endorsements in FY 2021 in terms of both share (85 percent) and volume (\$176 billion in unpaid principal balance). FHA's share of lending to first-time homebuyers was almost 40 percentage points higher than that of the rest of the housing market.

FHA data show that minority borrowers presently make up a larger share of the seriously defaulted cases than their share of the active portfolio. Their seriously defaulted rate is also higher than for White borrowers or borrowers who did not disclose their race. First-time homebuyers also presently make up a larger share of the seriously defaulted cases than their share of the active portfolio. Among minority borrowers, Black borrowers appear to be significantly more affected. Specifically, first-time homebuyers who are Black seem disproportionately affected, with a higher percentage of the seriously defaulted portfolio and a much higher seriously defaulted rate.

Because minority and first-time homebuyers constitute the majority of those individuals with FHA-insured mortgages, extending the repayment period could provide additional flexibility to prevent defaults and retain homeownership and wealth for those underserved households.

## Homeownership and Wealth Creation

Low-income and minority borrowers (controlling for other factors such as income and credit score) were disproportionately affected by foreclosures during the Great Recession (Bocian et al., 2008; Kermani and Wong, 2021) and, recently, by the COVID-19 pandemic<sup>45</sup> (see, e.g., An et al., 2021; Chakrabarti and Nober, 2020; van Dorn, Cooney, and Sabin, 2020). A study by Kermani and Wong (2021) of racial differences in property appreciation shows that most of the disparity between Black- and White-owned properties (on average, 3.7 percent per year) stems from distressed sales, either through a short sale to a third party or foreclosure to the lender. Homeownership must be sustainable for a family to build wealth.

## Disparities in Loan Modification

The loan modification policy is intended to promote equity by preserving the housing wealth of lower-income households. However, unfair practices have been identified throughout the housing market and even within institutions designed to promote fair housing (Oliver and Shapiro, 2006). The implementation of loan modification policy must be applied fairly to achieve the higher goal of wealth equity. Findings concerning loan modification terms and subsequent loan performance by race and ethnicity vary. Some studies find no evidence of racial disparities in the incidence of loan modifications (Been et al., 2013; Collins, Reid, and Urban, 2015; Collins and Reid, 2010) or find that race, ethnicity, gender, and income have “very little” impact on borrowers’ successful

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<sup>44</sup> Declaration of race and ethnicity is voluntary for borrowers. FHA's share of nonrespondents increased from 17.30 percent in FY 2020 to 24.32 percent in FY 2021.

<sup>45</sup> An et al. (2021) find that “between April 2020 and December 2020, minority and lower-income borrowers had twice the nonpayment rates of White and higher-income borrowers. Even after controlling for conventional risk factors, Black borrowers have about 40 percent higher rates of nonpayment, the lowest-income borrowers around 80 percent higher” (p. 2).



participation in HAMP (Mayer and Piven, 2012). Other studies find that neighborhoods with large shares of Black residents are more likely to receive modifications (Been et al., 2013; Chan et al., 2014) and that some differences are present in the incidence of HAMP modifications across protected classes, but those disparities stem from differences in servicers' determination of borrowers' eligibility (GAO, 2014). Evidence supports that the 40-year term would be implemented fairly to advance the economic interests of all protected classes.

## Summary of Economic Impacts

A cost-benefit analysis of the incremental impact of the 40-year loan modification is difficult without more information concerning the context and method of implementation.<sup>46</sup> The contribution of a repayment extension, and thus its incremental impact, will depend on the design of the loan modification.<sup>47</sup> Increasing the repayment period could be the first, final, intermediate, or only step of a loan modification. How the repayment period is used in conjunction with other term modifications should affect the incremental impact of the 40-year opportunity. The sequence of the 40-year loan modification could determine both the number and types of loans modified. External market factors will also play a role in determining the incremental impact of this policy. Whether the allowed modification can achieve the target reduction of monthly mortgage payments will depend on the terms of the original loan, its evolution, and economy-wide interest rates at the time of modification.

Exhibit 4 summarizes the economic impacts of an increased 40-year term for loan modifications. Assumptions concerning economic trends and details of the loan modification policy would be necessary to provide more reliable estimates for many of the impacts outlined in exhibit 4. Whether FHA chooses to use the term extension as a standard practice or to reserve the option for national crises will also determine its regulatory impact.

Once it occurs, the cost of a foreclosure becomes a burden to FHA, the lender, and the borrower and could cause social externalities. The loss of a foreclosure to FHA-insured lenders includes the unreimbursed costs of a default. The loss to FHA will be the largest because FHA insures the lender against default. The payment of the claim is essentially a transfer from the taxpayer. The gains to FHA can be passed on to the U.S. Treasury or other participants of FHA's programs in the form of lower mortgage insurance premiums. More information on economic conditions, which affect loss severity and recidivism, would allow one to calculate those gains to FHA more precisely.

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<sup>46</sup> One of the most complete studies of loan modification policy found term extensions to be a Pareto optimal loan modification strategy for borrowers, lenders, and the government (Ganong and Noel, 2020).

<sup>47</sup> How a loan is modified could determine whether there is a reduction of mortgage payments. For example, extending the loan term, reducing the interest rate or the mortgage's outstanding balance, or a combination of those practices can lower monthly payments. In contrast, adding delinquent payments to the unpaid principal balance can result in higher monthly payments (Cordell et al., 2009; White, 2008).

**Exhibit 4**

Summary of Economic Impacts

	Gains	Losses	Net Impact
<b>FHA</b>	Reduces expected claim expenses and net loss from foreclosures	<ul style="list-style-type: none"> <li>• Could lower value of modified loans because of longer maturity or a lower coupon</li> <li>• Incentive payments to lenders</li> <li>• In cases where not effective, it possibly increases the cost of claim from greater depreciation</li> </ul>	Expected Positive Net Cash Flow
<b>Borrower</b>	Relief allows household to sustain homeownership and avoid costs of foreclosure (financial and nonfinancial costs).	Higher interest payments over life of loan and thus slower equity buildup	Expected Positive (if negative, then borrowers would refuse)
<b>Lender</b>	Avoidance of costs of processing foreclosure <sup>48</sup>	<ul style="list-style-type: none"> <li>• Out-of-pocket costs in modifying loans not covered by FHA insurance claims</li> <li>• Interest rate risk from repurchase and re-pooling of loans, or longer repayment period</li> <li>• Loss of income if debenture rate is lower than market rate</li> <li>• Administrative cost of modification</li> <li>• Avoided stress discount from sale of foreclosed properties</li> <li>• Potential loss in liquidity from re-pooling of loans indirectly affecting financial markets</li> </ul>	Net impact depends on whether there is any risk to extending the term of the loan.
<b>External Effects</b>	Avoidance of costs of foreclosure to public	N/A	Positive
<b>Equity Considerations</b>	Enhancing mission of FHA to increase access to homeownership, especially to underserved communities, through greater flexibility	N/A	Most likely positive

N/A = not applicable.

The gain to a borrower from avoiding a foreclosure is at least \$12,000. This estimate includes some of the more easily identifiable transaction costs of foreclosure. Other costs, or “frictions,” of foreclosure are potentially more significant to homeowners. Precise estimates of those extra costs do not exist but likely vary by the availability of alternative housing and the underlying cause of a foreclosure. Eligible borrowers who would not have defaulted without the loan modification gain by reducing the NPV of their loan payments. Such gains occur regardless of the impact on the probability of default.

<sup>48</sup> The term extension should not reduce income from mortgage payments. The cost of foreclosure is not included in the claim (property repair, legal fees, etc.).

The social costs of a foreclosure are more difficult to monetize. However, the external impacts of avoiding a foreclosure are always positive. External gains of avoiding foreclosures justify a loan modification policy even when internal gains and losses are equivalent.

Lenders bear the costs of modifying eligible loans. Depending on how the policy is implemented, administrative costs would be identical regardless of whether a loan term is 30 years or 40 years. Extending the repayment period could produce an incremental opportunity cost of funds to lenders. The conclusion of a benefit-cost analysis would depend on the amount of the cost and how much is passed on to borrowers in the loan modification.

If a lender can pass on the full cost of modifying the loan, then the NPV of the loan to the lender remains the same, but the payment reduction for the borrower declines. In this scenario, the negative impact on the probability of default would be weaker. If the lender were to bear the full cost of the term extension, then the NPV of the loan to the lender would decline. A rough estimate of the potential cost to lenders compares favorably to the upper range estimate of the gain to FHA.<sup>49</sup> In the case of the lower estimate of gain to FHA, expected gains of only 2 percent of the loan balance from borrowers, lenders, and the public combined would bring about net gains.

Focusing on the quantifiable costs and benefits of the proposed rule, exhibit 5 presents the authors' estimates of the net benefits of a 40-year loan modification for an average mortgage of \$250,000 insured by FHA. The authors then multiply the per-loan cost, benefit, and transfer to the range of the estimated total number of mortgages (3,000 to 7,500) that could be prevented from ending in foreclosure or termination claim if the 40-year modification were an available option to those defaulted mortgages.

**Exhibit 5**

Estimated Annual Quantifiable Economic Impacts (1 of 2)

	Amount per Loan <sup>a</sup>		Total Costs, Benefits, and Transfers <sup>b</sup>	
	Low Value	High Value	Low Estimate	High Estimate
<b>Costs</b>				
<b>Lenders</b>				
Servicing a nonperforming loan	\$500	\$2,500	\$1.5 million	\$19 million
<b>Borrowers</b>				
Increased interest paid <sup>c</sup>	-\$259	\$359	-\$780,000	\$2.7 million
<b>Total</b>	<b>\$241</b>	<b>\$2,860</b>	<b>\$723,000</b>	<b>\$21.5 million</b>
<b>Benefits</b>				
<b>Lenders</b>				
Avoided loss of interest from foreclosure <sup>d</sup>	\$11,500	\$11,500	\$34.5 million	\$86 million
Avoided stress discount <sup>e</sup>	\$7,500	\$37,000	\$22.5 million	\$281 million

<sup>49</sup> For example, suppose that a lender is neutral between a 30-year loan at 5 percent and a 40-year loan at 5.25 percent. The annualized cost to the lender for extending the repayment period is 25 basis points. The NPV of this loan would fall by approximately 3 percent of the loan principal. This cost to lenders is less than if they were required to buy down the interest rate to reduce mortgage payments by 10 percent.

**Exhibit 5**

Estimated Annual Quantifiable Economic Impacts (2 of 2)

	Amount per Loan <sup>a</sup>		Total Costs, Benefits, and Transfers <sup>b</sup>	
	Low Value	High Value	Low Estimate	High Estimate
<b>Borrowers</b>				
Avoided foreclosure (loss of equity, cost of moving, loss of credit)	\$12,000	\$12,000	\$36 million	\$90 million
<b>Local Government</b>				
Avoided direct costs	\$0	\$8,200	\$0	\$61.5 million
<b>Public</b>				
Avoided price decline to neighbors	\$0	\$20,000	\$0	\$180 million
<b>Total</b>	<b>\$31,000</b>	<b>\$88,700</b>	<b>\$93 million</b>	<b>\$665 million</b>
<b>Transfers</b>				
<b>FHA (to Treasury)</b>				
Avoided net loss per foreclosure	\$32,000	\$111,000	\$96 million	\$833 million

Note: Totals may not add up due to rounding.

a. The estimates for costs, benefits, and transfers are calculated using the FHA average loan size of \$250,000.

b. These estimates are computed by multiplying amount per loan by 3,000 (low estimate) or 7,500 (high estimate).

c. This amount depends on unpaid principal balance, interest rates of existing and modified loans, and borrower's discount rate. It is computed using a 5-percent interest rate and an average FHA unpaid principal balance of \$115,000 to get the NPV of the difference in interest paid throughout the term between a 30-year and a 40-year term, annualized over 40 years. The annualized amount is a positive cost for consumers with low discount rates and negative for those with high discount rates. To simplify the analysis, the interest rate is assumed to be equal to the discount rate.

d. This amount is 10 percent of the unpaid balance.

e. This figure is 3 to 15 percent of home value, depending on the cause of discount (e.g., death or bankruptcy of seller) and housing market conditions, among others.

## Conclusion

Allowing lenders to provide a 40-year loan modification would support HUD's mission of fostering homeownership by assisting more borrowers with retaining their homes after a default episode while mitigating losses to FHA's MMI Fund. HUD believes that, in some situations, a borrower seeks to engage in loss mitigation but is unable to provide loss mitigation to a degree sufficient to prevent default. In such cases, an additional 120 months on the length of the recast mortgage would allow for a lower monthly payment and additional opportunity to account for missed payments. Longer repayment periods allow the loan principal to be divided into smaller periodic repayments and thus pose less of an immediate burden to borrowers facing an unexpected loss of income. Compared with other types of loan modification, a term extension does not necessarily reduce the value of the loan to lenders. The largest gain from providing immediate liquidity would be to lower the probability of default and thus the expected costs of foreclosure to FHA, borrowers, lenders, and the general public. Lenders may incur costs, but the authors expect those losses to be outweighed by the gains of preventing defaults.

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