Discussion document: Potential changes to the FHA COVID-19 modification options to keep more borrowers in their homes

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Introduction

Millions of homeowners across the country are having difficulty affording their monthly mortgage payments because of the COVID-19 pandemic. The most vulnerable group of borrowers is concentrated within the Federal Housing Administration (FHA) program, with over 900,000 borrowers who are more than 90 days delinquent.

While the CARES Act provided homeowners with access to a mortgage forbearance and while subsequent FHA policy actions have extended these periods, forbearance is an inherently temporary solution. Ultimately, what will determine whether these homeowners are able to stay in their homes and continue to build wealth or whether they must sell their house or face foreclosure is the efficacy of the effort to place them into a post-forbearance solution that they can afford.

Given the stakes involved for FHA borrowers, their families' futures, and the neighborhoods in which they live, FHA should continue to evaluate its post-forbearance options to determine whether further improvements would be beneficial. Research provides clear evidence that immediate and substantial payment reduction is the most effective mortgage default prevention tool available, so proposals to increase the number of borrowers who can access relief, and increase the relief provided, are worth considering.[1]

This paper suggests several changes that FHA should consider to provide more borrowers with deeper payment reductions, many at no cost to the Mutual Mortgage Insurance Fund (MMIF), and to help mortgage servicers assist homeowners in navigating the available home retention options. These potential changes include:

- Allow the term of modified mortgages to be extended to 480 months instead of 360, which would significantly increase the affordability of modifications to borrowers.
- Make three key adjustments to FHA-HAMP:
    - Permit borrowers to receive the modification even if the waterfall steps cannot reach a payment-to-income (PTI) ratio of 40%;

[1] Peter Ganong and Pascal Noel, *Liquidity Versus Wealth in Household Debt Obligations: Evidence from Housing Policy in the Great Recession*, American Economic Review, 110(10): 3100-3138 (2020).

    - Reduce the minimum PTI limit from 25% to 10% for modifications with a Partial Claim, which would allow more homeowners to receive a 20% payment reduction; and
    - Reduce or waive FHA monthly Mortgage Insurance Premiums (MIP) as the final waterfall step if necessary to permit homeowners to reach the target level of payment reduction.
- Provide a single FHA streamlined modification in the COVID-19 home retention options that can offer borrowers substantial payment reduction with a minimum of delays.

These adjustments would provide borrowers in need of financial assistance with greater eligibility as well as more substantial payment reductions that help them retain their home and avoid foreclosure, as well as simplify the post-forbearance process for borrowers and mortgage servicers alike.

The Current COVID-19 Home Retention Options

FHA acted quickly as the economic effects of the pandemic began to be felt to create the COVID-19 home retention options, which are significantly more streamlined than FHA's standard options and therefore can better accommodate the hundreds of thousands of borrowers needing assistance in a compressed time frame. Appendix 1 provides a full discussion of the four COVID-19 home retention options for owner-occupied borrowers, which are summarized in Table 1 below.

Table 1: The COVID-19 home-retention options.

Step	Standalone Partial Claim	Loan Mod	Combo Mod	FHA-HAMP
Target	None	None	None	Target total monthly payment = lesser of 31% of gross income and (the greater of 80% of the current total mortgage payment and 25% of gross income)
1	Place arrearages in principal, interest, taxes, insurance, and MIP in Partial Claim*	Capitalize arrearages for unpaid accrued interest and escrow advances and shortages	Place arrearages for unpaid accrued interest and escrow advances and shortages in any remaining Partial Claim*	Capitalize arrearages for unpaid accrued interest and escrow advances and shortages
2		Set interest rate to market rate and term to 360 months	Capitalize arrearages for any remaining unpaid accrued interest and escrow advances and shortages	Set interest rate to market rate and term to 360 months. If new monthly payment is less than or equal to target, stop.
3			Set interest rate to market rate and term to 360 months	If not, forbear principal using the Partial Claim until target is met*
Rule				Offer modification only if PTI is less than or equal to the 40% PTI threshold

*Subject to the 30% statutory maximum.

Potential Revisions to the COVID-19 Home Retention Options

The purpose of the potential changes is to ensure that each of the FHA home retention options can deliver sufficient payment reduction to borrowers in need of assistance due to financial hardship resulting from the COVID-19 pandemic. Research based on mortgage modifications performed during the post-Great Recession period provides substantial evidence that payment reduction modifications reduce foreclosures; in fact, a 16% reduction in total monthly payments led to a 36% reduction in default rates over the next 5 years.[2]

In addition, research has found that reaching a particular PTI target is less effective in preventing foreclosures than significant payment relief, regardless of the resulting PTI ratios.[3] Therefore, while a borrower reaching the 40% PTI threshold to qualify for FHA-HAMP is better than the borrower not reaching it, because the added payment relief helps borrowers recover, there is no magic to this or any other PTI number.

While current economic conditions are different from the post-Great Recession period along many dimensions, we can use the lesson from the past that deeper payment reductions are likely to improve subsequent mortgage performance to consider changes to the COVID-19 options that may help more borrowers and yet may not be harmful to the MMIF.

The recommended COVID-19 home retention changes are summarized in Table 2 below.

[2] In *ibid*, the authors, in the Online Appendix, estimate that a 25% reduction in principal and interest payment reduces subsequent defaults by 36%. For consistency, we scale their payment reduction by the ratio of principal and interest ($903) to principal, interest, taxes, insurance, and MIP ($1,406) from the average Government-backed mortgage in forbearance. We define default as 90-day delinquency.

[3] *Ibid*.

Table 2: Potential revised COVID-19 home retention options. Additions are noted in red, deletions with strike-throughs.

Step	Standalone Partial Claim	Loan Mod	Combo Mod	FHA-HAMP
Target	None	None; sole streamlined modification option if 40-year term is permitted and FHA waives MIP	None; sole streamlined modification option if 40-year term or MIP waiver for Loan Mod are not permitted	Target total monthly payment = lesser of 31% of gross income and (the greater of 80% of the current total mortgage payment and ~~25%~~ 10% of gross income)
1	Place arrearages in principal, interest, taxes, insurance, and MIP in Partial Claim*	Capitalize arrearages for unpaid accrued interest and escrow advances	Place arrearages for unpaid accrued interest and escrow advances in any remaining Partial Claim*	Capitalize arrearages for unpaid accrued interest and escrow advances
2		Set interest rate to market rate and term to ~~360~~ 480 months	Capitalize arrearages for any remaining unpaid accrued interest and escrow advances	Set interest rate to market rate and term to ~~360~~ 480 months. If new monthly payment is less than or equal to target, stop
3			Set interest rate to market rate and term to ~~360~~ 480 months	If not, forbear principal using the Partial Claim until target is met
4				If necessary, reduce or waive MIP payments to meet target total monthly payment
Rule				Offer modification only if PTI is less than or equal to the ~~40%~~55% PTI threshold

*Subject to the 30% statutory maximum.

The impact of the potential changes is quantified in Table 3 below. In each case, the home retention option in question has been applied to the average Government-backed mortgage in forbearance. This mortgage has a 4.26% fixed rate, $183,000 original loan amount, 320 months remaining upon entering forbearance, and payments of $903 in principal and interest, $384 in taxes and insurance, $119 for MIP, for a total monthly payment of $1,406.[4] In addition, we assume the homeowner missed 18 payments in forbearance and the FHA Market Rate is 3%. Table 3 also includes the estimated reduction in 5-year default probabilities created by each home retention option, both as currently defined and with the potential adjustments.[5] (The income assumptions used for FHA-HAMP are discussed below.)

Table 3: A comparison of the payment reduction and estimated default reduction of the current and potential FHA home retention options.

Current Options	**Standalone Partial Claim**	**Loan Mod**	**Combo Mod**	**FHA-HAMP**	**FHA-HAMP with MIP waiver**
Monthly Gross Income				2,720	
Target Total Monthly Payment				843	
Interest Rate	4.26%	3.00%	3.00%	3.00%	
Term (months)	302	360	360	360	
Partial Claim	25,302	0	21,201	51,865	
Remaining Partial Claim	26,564	51,865	30,664	0	
Interest-bearing UPB	167,507	194,085	172,884	142,220	
P&I	905	818	729	600	
T&I	384	384	384	384	
MIP	119	119	119	119	
Total Payment	1,407	1,321	1,232	1,102	
Payment Reduction	0%	6%	12%	22%	
Modified PTI				41%	
PTI Threshold				PTI <= 40%	
Estimated Default Reduction	0%	13%	28%	FAIL	
Potential Options					
Monthly Gross Income				2,720	1,624
Target Total Monthly Payment				843	503
Interest Rate	4.26%	3.00%	3.00%	3.00%	3.00%
Term	302	480	480	480	480
Partial Claim	25,302	0	21,201	51,865	51,865
Remaining Partial Claim	26,564	51,865	30,664	0	0

[4] Source: Black Knight, Inc. MIP is calculated assuming the MIP rate was 0.85% at origination.
[5] Estimates of default reduction driven by payment reduction are based on the results from Ganong and Noel (2020).

Interest-bearing UPB	167,507	194,085	172,884	142,220	142,220
P&I	905	695	619	509	509
T&I	384	384	384	384	384
MIP	119	119	119	119	0
Total Payment	1,407	1,197	1,122	1,012	893
Payment Reduction	0%	15%	20%	28%	36%
Modified PTI				37%	55%
PTI Threshold				PTI <= 55%	PTI <= 55%
Estimated Default Reduction	0%	33%	45%	60%	67%
Incremental Foreclosures Avoided per 100 Modifications		10	9	31	35

Discussion of the Potential Revisions to the COVID-19 Retention Options

1. Extending the Term of Modified Mortgages to 40 Years

This paper recommends extending the term of modifications from 360 to 480 months. The FHA statute permits such an extension when a modification is paired with a Partial Claim, as is the case with the Combo Mod and FHA-HAMP options. The statute is silent on whether a stand-alone Loan Mod term can be extended to 40 years as well, but there is nothing in the statute that appears to prohibit such an extension, and it may simply not have been contemplated as a possibility by the drafters.

Maturity extension is the most cost-effective method of reducing a homeowner's monthly payment within the context of a modification. As shown in Table 3, if the Combo Mod were adjusted to offer maturity extension to 480 months, the payment reduction would increase from 12% to 20% and default reduction would increase from 28% to 45%. The additional ten years of maturity extension create incremental payment reduction that results in lower default rates and would be at no cost to the MMIF.

In fact, we estimate that every 100 Combo Mods completed with a 40-year maturity instead of a 30-year maturity would allow 9 more homeowners to retain their home, reducing future claims on the MMIF.[6] Increasing term extension to 480 months would also bring FHA modifications into alignment with the modifications offered by the Government Sponsored Enterprises (GSEs) Fannie Mae and Freddie Mac.

Concerns raised when the GSEs created their 40-year term modification were that the additional ten years of maturity extension would create greater lifetime interest costs and delay the building

[6] See Appendix 2 for a description of how we calculate the estimated reduction in foreclosures.

of equity for the borrower.[7] While these concerns are valid and would also apply to FHA modifications, there are several mitigating factors that support FHFA's decision to proceed with 40-year modifications (which have worked well over time) and our decision to include this adjustment in the paper. First, borrowers facing pressing financial difficulty will likely find that the benefit of the additional immediate payment reduction and greater chance of holding onto their home created by the longer maturity extension more than outweighs the cost of possibly paying interest for 40 years. Second, many borrowers are likely to move well before then, and thus will not be subject to the full 40 years of payments on the modified loan. Third, to the extent that the financial situation of the borrower improves, she could resume making her originally scheduled monthly payments, shortening her mortgage and avoiding the greater interest costs of the 40-year maturity.

The impact of the term extension for FHA-HAMP payment reduction and estimated default reduction for the average Government-backed mortgage in forbearance is presented in Table 3. We assume the borrower earned $4,535 per month at origination but since the COVID-19 pandemic has suffered an income loss of 40%.[8] Her current monthly gross income is $2,720, which creates a target total monthly payment of $843. The current FHA-HAMP steps can deliver 22% payment reduction (a $1,102 monthly payment) but fails to reach the target total monthly payment. Because the modified total payment would be greater than the 40% PTI threshold, the borrower would not be offered the modification and would instead be evaluated for FHA home disposition options.

In contrast, FHA-HAMP with term extension to 480 months can reduce the total monthly payment to $1,012, and by creating a PTI (37%) that is below the 40% PTI threshold, it would allow the borrower to receive the modification. The 28% payment reduction is estimated to reduce the probability of default over the next 5 years by 60%. *For every 100 FHA-HAMP modifications that were able to meet the 40% PTI threshold because of the additional 10 years of maturity extension, an additional 31 homeowners would be able to keep their homes, assuming the 40% requirement is not changed.*

An additional advantage of maturity extension to 480 months is that, for some borrowers, it will require less use of their PC. While in this example the entire PC is exhausted in an attempt to reach the target total monthly payment, for borrowers with a higher income, the additional maturity extension to 480 months may leave them with a portion of their PC unused and available should they encounter future financial difficulty.

If the FHA statute does permit the Loan Mod term to be extended to 40 years, taking this step would make the Loan Mod significantly more helpful to borrowers. In the Loan Mod example provided in Table 3, maturity extension to 40 years increases the payment reduction from 6% to

[7] To be clear, we would not support purchase mortgages with 40-year terms; this term length should only be available to facilitate home retention following a hardship.
[8] The monthly income assumption is consistent with the average debt-to-income (DTI) ratio of 43% for FHA borrowers at origination in 2017Q4 and a 12 percentage point spread between DTI and PTI.

15% and reduces the subsequent default rate from 13% to 33%. *For every 100 Loan Mods completed with a 40-year maturity instead of a 30-year maturity, 10 additional borrowers could avoid foreclosure or a foreclosure alternative.*

Federal Reserve support for the housing market through its purchase of $40 billion of mortgage-backed securities (MBS) per month and the resulting low level of interest rates currently allows servicers to provide borrowers with modifications that reduce the interest rate to the permitted market rate or below while extending the term to 30 years and receive a significant premium upon delivery in Ginnie Mae To Be Announced (TBA) pools. If modifications were extended to 40 years, the 40-year re-performing FHA loans would be placed in custom pools, where there is inherently less liquidity.

That said, we believe custom pools that include 40-year modifications will be able to find sufficient liquidity to trade well. First, Ginnie Mae currently issues custom pools, called C RG pools, composed of re-performing loans that were reinstated after forbearance either through the use of a Partial Claim or without the use of a loss mitigation option. Even though these pools are not TBA eligible, they are trading very well.

Second, the GSEs have securitized their 40-year modified loans, which have also found strong demand; Fannie Mae's re-performing loan securitization program was recently updated to include loans with principal forbearance.[9] Third, the prepayment speeds of 40-year pools will likely be slower than that of 30-year MBS. Borrowers with a 40-year mortgage will be less likely to execute a 30-year rate/term refinance because their monthly payment would increase due to the shorter term. In addition, the deeper payment reduction created by maturity extension to 40 years would result in lower re-default rates and therefore fewer buyouts of 40-year MBS as compared to 30-year MBS also composed of re-performing loans. In the current environment of loans being delivered at a premium, slower prepayment speeds are a mitigating factor, and would offset some or all of the discount between 40-year pools and 30-year MBS.

Finally, FHA defines the market rate at which modifications can occur as up to the Primary Mortgage Market Survey rate plus 25 basis points. Servicers could choose to offer 40-year modifications using the full 25 basis point cushion as another way to offset any discount to the delivery of 40-year modified loans.

As a result of these factors, several major servicers we know of are supportive of moving to 40-year modifications, given the borrower benefit and belief that there will be sufficient liquidity. In order to ensure that borrowers have a consistent modification experience across servicers and maximize the chances that there would be a sufficient supply of these loans to create a liquid market for MBS investors, we recommend that FHA require all FHA COVID-19 modifications to use the 40-year term.

[9] See https://capitalmarkets.fanniemae.com/media/20951/display.

However, since some borrowers may prefer 30-year modifications, FHA might consider providing for this possibility in limited circumstances. For example, FHA could require servicers to offer a 30-year streamlined modification if it provides at least 20% PITI reduction or if requested by the borrower, while also mentioning the terms of the 40-year in the cover letter.

2. <u>Three Adjustments to FHA-HAMP</u>

a. Remove the requirement that payment-to-income must reach the 40% threshold

Changing FHA-HAMP so borrowers who are unable to afford their regularly scheduled monthly payment can be offered a modification even if the waterfall steps cannot reach the 40% PTI threshold would be the second most impactful change to FHA's post-forbearance options beyond the 40-year term.

Research provides compelling evidence that modifications should focus on delivering material payment reduction rather than meeting an arbitrary affordability target, such as the 40% requirement. This can be accomplished by specifying that the borrower will be offered the FHA-HAMP modification as long as the post-modification PTI is less than 55%. *Every 100 FHA-HAMP modifications completed under the 55% PTI threshold that would have failed to meet the 40% PTI threshold would prevent an additional 31 borrowers from undergoing foreclosure or a foreclosure alternative.*[10]

The FHA-HAMP example in our discussion of the 40 year term shows a modification that would have been denied because it didn't reach the 40% PTI threshold. (While the 40-year term put the borrower under the 40% PTI threshold in that example, many other borrowers, particularly lower-income borrowers and borrowers of color, would still have been denied even with the longer term.)

b. Reduce the minimum PTI limit from 25% to 10%

Under current FHA-HAMP, if the modification includes a Partial Claim, the modified PTI cannot be less than 25%, even if the payment reduction provided is less than 20%. That 25% minimum PTI limit may prevent homeowners who are facing a prolonged increase in expenses from potentially receiving enough payment reduction to retain their home. As research does not demonstrate a close linkage between PTI and modification performance, it would be preferable to permit the greater payment reduction, which is directly tied to modification success. To do so, FHA could reduce the modified PTI minimum to 10%.[11]

To demonstrate the impact of the current 25% PTI limit, refer to Table 3. Consider a borrower with the average Government-backed mortgage in forbearance who experienced an increase in

[10] The suggested 55% PTI threshold is consistent with the HAMP Tier 2 program, which permitted borrowers to receive modifications so long as the post-modification PTI was not more than 55%.

[11] The 10% minimum would also be consistent with the lower limit of the HAMP Tier 2 program.

expenses due to the COVID-19 pandemic that made her unable to afford her current $1,406 total monthly payment. Given the increase in her expenses, she indicates that neither the 6% payment reduction offered by the Loan Mod nor the 12% payment reduction offered by the Combo Mod is sufficient.

Next, she is evaluated for FHA-HAMP. Assume that her current monthly income is $5,400. This would mean that her target total monthly payment through use of a Partial Claim, calculated as per the formula in Table 1 above, would be limited to $1,350, the amount that creates a PTI of 25% and a savings of $56, resulting in payment reduction of just 4%. Because in this example the Loan Mod would generate more payment reduction (6%) than FHA-HAMP (4%), the borrower would be re-offered the Loan Mod. The Combo Mod could not be offered because the Partial Claim cannot be used to bring the modified monthly payment below the 25% minimum PTI limit.[12]

If the 25% PTI limit were reduced to 10%, the target total monthly payment under FHA-HAMP would be $1,125 (a 20% payment reduction) and the post-modification PTI would be 21%, well above the new 10% limit. The target could now be achieved by adding to the Partial Claim amount, and FHA-HAMP would deliver this homeowner nearly double the payment reduction offered by the Combo Mod, enabling her to retain her home rather than moving down the waterfall to be evaluated for home disposition options.

c. Permit the reduction or waiver of MIP if necessary to reach target monthly payment

This paper recommends waiving the MIP as the final payment reduction step, if additional steps are needed to reach target total monthly payment after the PC has been exhausted. To illustrate the full power of this proposed FHA-HAMP option, we have provided an example that maximizes the amount of payment reduction that would be delivered for the average Government-backed mortgage in forbearance. For the same loan example, we assume a monthly income at origination of $3,700, followed by a severe income loss of 56% due to the COVID-19 pandemic.[13] As indicated in the final column of Table 3, monthly gross income is now $1,624, and the proposed FHA-HAMP waterfall steps with the MIP waiver can deliver a maximum of 36% payment reduction, which is projected to reduce subsequent default rates by 67%. The modified total payment, $893, is just below the 55% PTI threshold, so the borrower would receive this FHA-HAMP modification.

While waiving MIP will reduce inflows into the MMIF, reducing the borrowers' total monthly payment by waiving their MIP may help them avoid re-default and foreclosure and therefore provide savings to the MMIF. In the example above, waiving MIP alone created an additional 8.5 percentage points of payment reduction and 7 percentage points of default reduction. *For*

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[12] See Step 5 in the Loss Mitigation Home Retention Waterfall Options in [SFH Handbook 4000.1 | HUD.gov / U.S. Department of Housing and Urban Development (HUD).]

[13] The monthly income assumption of $3,700 is consistent with the 50% DTI that was the 25th percentile of FHA borrowers at origination in 2017Q4 and a 12 percentage point spread between DTI and PTI.

every 100 borrowers who were able to qualify for an FHA-HAMP modification because 40-year maturity extension and the MIP waiver allowed them to meet the PTI threshold, an additional 35 borrowers would be able to avoid foreclosure or a foreclosure alternative. Without the waiver, borrowers would not have been eligible for a modification at all, and home disposition options or foreclosures may be more costly to the MMIF. FHA may find waiving MIP to be a prudent trade-off, as assisting homeowners today with deeper payment reductions may avoid future foreclosures and the associated MMIF claim losses.

If FHA chooses to waive MIP as the last step in the FHA-HAMP waterfall, then it should remove the requirement that in order to be eligible for FHA-HAMP, borrowers cannot have exhausted their Partial Claim; without this adjustment, those borrowers who have already exhausted their Partial Claim will not be eligible for the additional payment reduction provided by the MIP waiver in FHA-HAMP.

3. <u>Provide a Single Streamlined Modification Option that Provides Substantial Payment Relief</u>

Finally, this paper recommends that FHA provide borrowers and servicers with a single streamlined modification option that offers borrowers substantial payment reduction. Under the current options, there are two streamlined modification options: the Loan Mod and the Combo Mod. Having one would likely increase the number of borrowers who ultimately receive a successful modification.

The way that the current FHA options read, a borrower will have to respond whether the small amount of payment relief delivered by the Loan Mod (6% in our example) is sufficient for them to sustain their mortgage, which they may not be in a good position to evaluate. Currently, some servicers will not provide a borrower with information about the more generous Combo Mod (12% payment reduction in our example) unless and until the borrower asserts that the Loan Mod doesn't provide sufficient relief. This is a very difficult determination for the borrower to make.

For example, to consider whether to take the Loan Mod with higher payments versus the Combo Mod with lower payments, a borrower would need to weigh how much more likely they would be to re-default due to the higher payment, how much more Partial Claim room they would keep and the likelihood they would need this room due to a future re-default, and how long they expect to stay in the modification and therefore how much greater net present value benefit the Combo Mod provides since it does not charge interest on the PC amount. If every borrower had a good housing counselor to guide them through the process, preserving the choice would likely be preferable, but the reality is that only a small percentage will.

Therefore, FHA should select one, improved, streamlined option to present to borrowers.[14] If the FHA statute limits the Loan Mod to a 30-year term, the difference in payment reduction between

[14] Certainly if FHA keeps both streamlined options, it should require servicers to provide information about both at the same time.

the newly-40-year Combo Mod and the 30-year Loan Mod would be too large to justify having the Loan Mod as the sole streamlined modification option. As a result, it would be an easy choice to select the Combo Mod as the streamlined option. Similarly, even if FHA can provide the Loan Mod with a 40-year term, if FHA can institute the 40-year term by Mortgagee Letter only for the Combo Mod, then we would favor the Combo Mod as the sole streamlined option.

If the Loan Mod can also be extended to 40 years and by Mortgagee Letter (which would increase the payment reduction delivered to the average Government-backed mortgage in forbearance to 15%), and FHA is willing to waive MIP payments on the Loan Mod to provide borrowers the same level of payment relief that it does through the more generous Combo Mod, then FHA may prefer the Loan Mod instead.

One factor in determining which option to choose as the streamlined offer is to compare the relative cost to the MMIF of providing the same payment relief through the Loan Mod with reduced MIP or through the Combo Mod with the Partial Claim. We can use our example mortgage to compare the two choices. As per Table 3, the Combo Mod generates the incremental payment reduction by placing $21,201, which is 12.3% of UPB, into the Partial Claim and would cost the MMIF about 0.37% of UPB per year. Reducing the the MIP in the Loan Mod from 0.85% to 0.31% to match the 20% payment reduction delivered by the Combo Mod would cost the MMIF an additional 0.15% to 0.89% of UPB per year depending on the duration of the mortgage.[15] For any duration less than 20 years, the Partial Claim is cheaper. The full details of these calculates are provided in Appendix 4.

Even though the Combo Mod is the cheaper alternative, there are two counterbalancing factors that favor the Loan Mod. First, the Loan Mod does not result in the borrower using up some of their Partial Claim allowance. Second, the Loan Mod does not require a second lien and the associated paperwork and notarization and is therefore simpler to administer. Takeup rates for the Loan Mod may be higher than for the Combo Mod. If the additional complexity of the Combo Mod does lead to lower takeup rates, the additional defaults would create increased claims on the MMIF.

However, FHA may reasonably conclude that it prefers the cheaper-to-the-MMIF Combo Mod. Further, if FHA is not willing to match the payment reduction provided by the Combo Mod through waiving MIP, we would recommend the deeper Combo Mod to be the sole streamlined offering. If FHA does choose the Combo Mod as the sole streamlined option, then it should waive the requirement that in order to be eligible for the Combo Mod, borrowers cannot have exhausted their Partial Claim; without this adjustment, those borrowers who have already

[15] Reducing MIP to 0.31% would match the post-modification total monthly payment of the Combo Mod. However, because the MIP rate is applied to a declining UPB, the dollar difference between a MIP rate of 0.85% and 0.31% also declines over time. Therefore the total monthly payment of the Loan Mod with reduced MIP would slowly increase relative to the Combo Mod.

exhausted their Partial Claim will not be eligible for any of the COVID-19 home retention options.

The Potential Changes Significantly Increase the Availability of FHA-HAMP for Borrowers with Lower Incomes and Higher Debt-to-Income Ratios, particularly Black and Hispanic Borrowers

The two FHA-HAMP examples in Table 3 illustrate how much of a difference the options we've proposed can make in determining which borrowers can qualify for an FHA-HAMP modification based on their income. Under the current options, assuming they have the average Government-backed mortgage in forbearance, any homeowner with a gross monthly income *at or below* $2,720 (the first example) will not receive an FHA-HAMP modification because the waterfall steps cannot produce enough payment reduction to meet the 40% PTI threshold.[16] As a result, borrowers with an income below $2,720 would instead be evaluated for home disposition options and would lose their homes one way or another – a forced sale, deed-in-lieu, short sale, or foreclosure.

In contrast, the recommended changes to FHA-HAMP will enable homeowners with a gross monthly income as low as $1,624 (the second example) to receive an FHA-HAMP modification (at that income level, the modified total monthly payment ($893) just meets the suggested 55% PTI threshold).

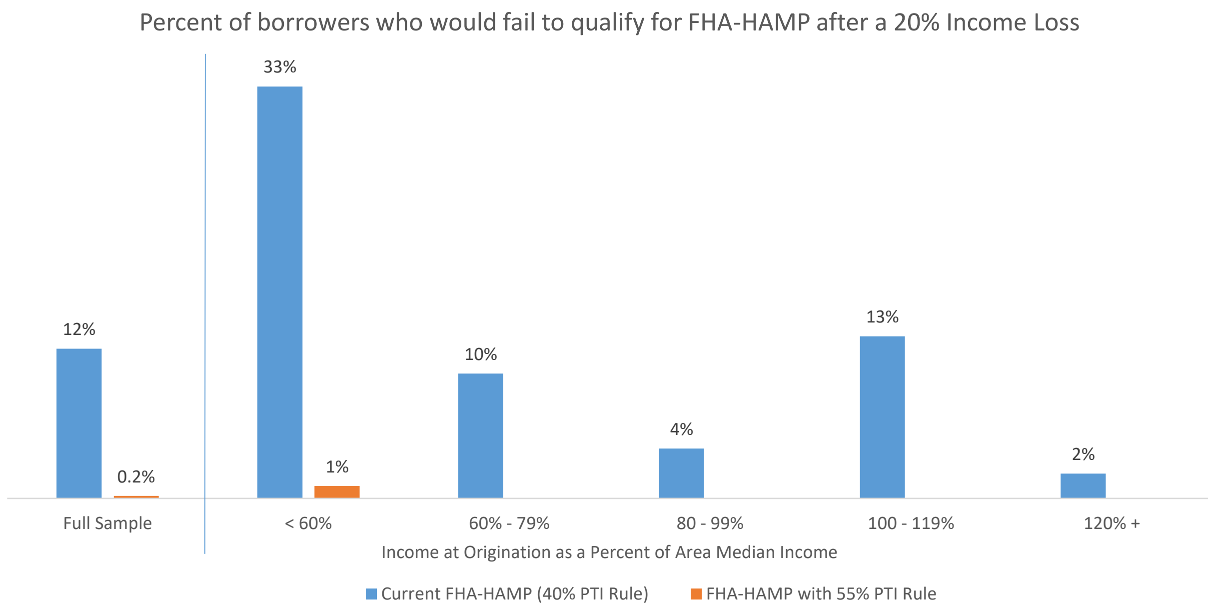
A large FHA servicer provided us an analysis of a sample of borrowers in forbearance with an FHA-insured mortgage to see the percentage of borrowers in the sample who would fail to qualify for an FHA-HAMP modification under the current and proposed options after experiencing an income loss. The analysis uses the terms of the borrowers' existing mortgage and monthly payments and their unused Partial Claim to step through the current and proposed FHA-HAMP options to arrive at their modified total monthly payment. Then, using the borrower's income at origination as a proxy for their pre-COVID-19-pandemic income, it applies an income loss of 20% and 40% and calculates their post-modification PTI for each waterfall step and income loss scenario. It then calculates the percentage of borrowers who would fail to qualify for an FHA-HAMP modification because their post-modification PTI was above the applicable PTI threshold. As a final step, it groups the borrowers according to their income at origination as a percentage of area median income (AMI), which permits it to examine how the disqualification rate varies with this normalized measure of income.

Figure 1 shows the results for the 20% income loss scenario. The leftmost section of Figure 1 indicates that 12% of FHA borrowers in the sample would fail to qualify for FHA-HAMP after a 20% income loss because the current guidelines could not deliver sufficient payment reduction to meet the post-modification 40% PTI threshold (blue bars). In contrast, if the PTI threshold were

[16] The monthly income of $2,720 is consistent with the average debt-to-income (DTI) ratio of 43% for FHA borrowers at origination in 2017Q4 and a subsequent 40% income loss.

increased from 40% to 55%, just 0.2% of all borrowers would fail to qualify for FHA-HAMP (orange bars).

Figure 1: Percent of borrowers in forbearance who would fail to qualify for FHA-HAMP after a 20% income loss because the waterfall steps cannot meet the post-modification PTI threshold.



Source: A large FHA servicer.

Figure 1 also shows the percentage of borrowers who would fail to qualify for FHA-HAMP after a 20% income loss according to the ratio of their income at origination to AMI. For borrowers with an income at origination below 60% of AMI, one-third would fail to qualify for FHA-HAMP after a 20% income loss. In comparison, 13% of borrowers with an income at origination between 100 and 119% of AMI would fail to qualify for FHA-HAMP after the same income loss, and for borrowers with an income at or above 120% of AMI, the disqualification rate drops to 2%.[17]

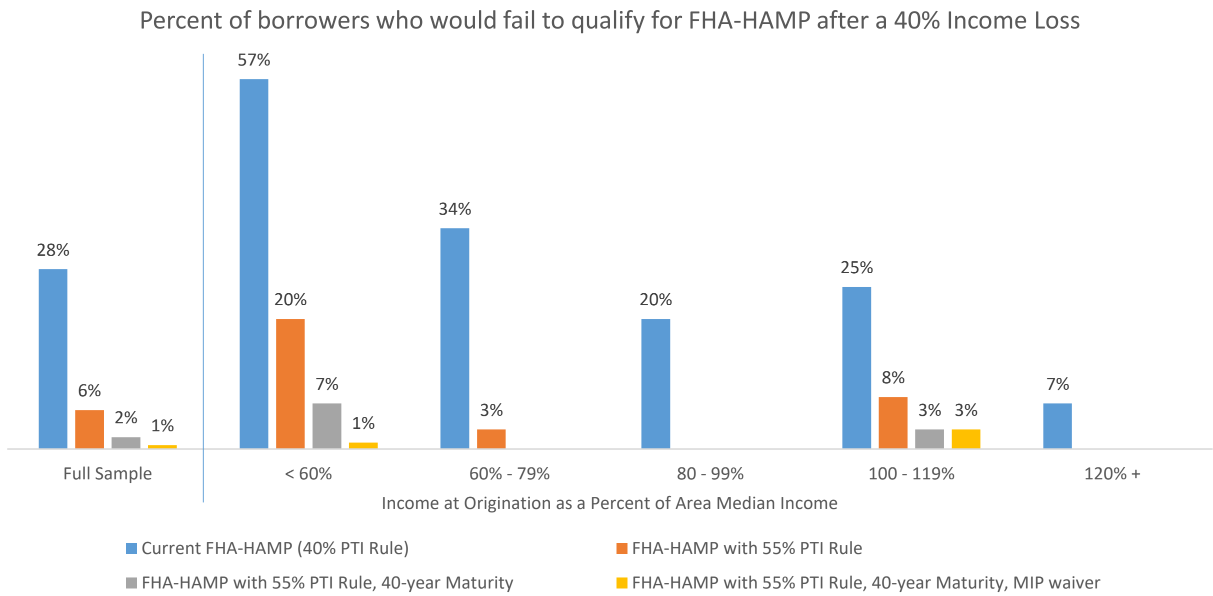
As Figure 1 makes clear, the 40% PTI threshold leads to considerable income-based inequity in the current FHA-HAMP modification. Borrowers with an income below 60% of AMI are more than twice as likely to fail to qualify for FHA-HAMP after a 20% income loss than borrowers with an income between 100 and 119% of AMI, and are fifteen times more likely to fail to qualify for FHA-HAMP than borrowers with an income above 120% of AMI. Raising the PTI threshold to 55% would eliminate nearly all of the income-based inequity in the FHA-HAMP

[17] Because incomes are not necessarily increasing and initial PTIs are not necessarily declining as income as a percentage of AMI increases, the percentage of borrowers that fail to qualify for FHA-HAMP can increase for higher levels of income as a percentage of AMI.

guidelines. With the 55% PTI threshold in place, just 1% of borrowers in the lowest income group would fail to qualify for FHA-HAMP.[18]

Similarly, Figure 2 indicates the percentage of borrowers who would fail to qualify for FHA-HAMP after experiencing a deeper income loss of 40%. In the full sample, 28% of borrowers would be unable to qualify for an FHA-HAMP modification after experiencing a 40% loss of income. Increasing the PTI threshold to 55% decreases the percentage of borrowers who would not qualify to 6%, whereas also including maturity extension to 40-years drops the percentage to 2%. Inclusion of the MIP waiver would cut the percentage of borrowers who would fail to qualify for FHA-HAMP after a 40% income loss to 1%.

Figure 2: Percent of borrowers in forbearance who would fail to qualify for FHA-HAMP after a 40% income loss because the waterfall steps cannot meet the post-modification PTI threshold.



Source: A large FHA servicer.

Examining the results in Figure 2 according to the borrower's normalized income illustrates the same income-based inequity described above. Over half of the borrowers with an income at origination below 60% of AMI would fail to qualify for FHA-HAMP after a 40% loss of income because the current waterfall steps cannot reach the 40% PTI threshold. Just 7% of the borrowers with an income at origination above 120% of AMI would fail to qualify for FHA-HAMP after a 40% income loss. At this higher level of income losses, increasing the PTI threshold to 55%

[18] Assumes a 3% FHA Market Rate. Only the first potential waterfall step adjustment, increasing the PTI threshold to 55%, is shown in Figure 1 because it eliminates nearly all disqualifications due to the PTI threshold.

would cut the percentage of disqualifications and the income-based inequity considerably, while including maturity extension to 40 years and the MIP waiver would nearly eliminate both.

As currently implemented, the 40% PTI threshold has a disparate negative impact on borrowers of color, because they are disproportionately more likely to have lower incomes and higher debt-to-income (DTI) ratios.[19] First, Black and Hispanic homeowners make up a disproportionately large fraction of FHA borrowers. In 2019, about one-third of Black and Hispanic borrowers took out an FHA-insured mortgage, whereas less than 15% of white and 7% of Asian borrowers did so,[20] largely because Black and Hispanic borrowers have to borrow more to purchase a home due to lower family wealth and less access to financial resources. In addition, lower incomes lead to higher DTIs for Black and Hispanic borrowers. Of mortgages originated in 2019, about one in three of Black and Hispanic home buyers had a DTI above 45%, whereas roughly one in five white or Asian home buyers had a DTI above 45%.[21] The DTI difference is more severe at higher levels of DTI: 16% of Black home buyers and 14% of Hispanic home buyers had a DTI at or above 50% as compared to just 5% of Asian and 6% of white home buyers.[22]

If implemented, the potential change to increase the post-modification PTI threshold to 55% would open up FHA-HAMP to borrowers suffering from deeper income losses and allow them the opportunity to retain their home, particularly those at the lower end of the income distribution and borrowers of color. With the 55% PTI threshold in place, the income-based inequity described above would be significantly reduced for those experiencing income losses up to 20%. If borrowers are experiencing deeper income losses, then the additional adjustments of 40 year term and waiving MIP would be necessary to bring eligibility for FHA-HAMP into balance for homeowners across the income spectrum.

It is important to note that this analysis assumes that the sample provided by the large FHA servicer is representative of all FHA borrowers in forbearance and that the borrower's income did not change between origination and when they entered forbearance. In addition, the number of borrowers in each normalized income group is not the same. However, a consequence of the 40% PTI threshold in the current implementation of FHA-HAMP is to limit its effectiveness for precisely the lower income and higher DTI borrowers who are most likely to be at risk of losing their homes to foreclosure.

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[19] DTI includes a wide variety of obligations in the numerator, whereas PTI only includes mortgage-related obligations. We assume that DTI and PTI are highly correlated.

[20] Alanna McCargo and Jung Hyun Choi, *Closing the Gaps: Building Black Wealth through Homeownership*, Urban Institute (2020).

[21] Ibid.

[22] Ibid.

The Benefits and Costs of the Potential Adjustments to the MMIF

The changes recommended in this paper could have substantial benefits for the MMIF. Each of the potential changes would either make the COVID-19 home retention options available to a broader set of homeowners who suffered deeper income losses or increase the amount of payment reduction offered to borrowers facing financial difficulty related to the COVID-19 pandemic. As noted above, payment reduction is the most effective default prevention tool available. Therefore, implementation of each of the potential adjustments would benefit the MMIF by reducing foreclosures and their associated claims (about 40% of UPB).[23]

The potential changes would potentially impose costs on the MMIF if they lead to increased use of the Partial Claim or if MIP payments are reduced or waived. Eliminating the Loan Mod in favor of the Combo Mod would increase the use of the PC. In addition, by adjusting the PTI threshold to 55% and removing the 25% PTI minimum for loans with Partial Claims, more borrowers may qualify for an FHA-HAMP modification, increasing use of the PC. Because the PC is an interest free advance from the MMIF to the lender, the MMIF will have to absorb the cost of funding this advance, which we estimate to be 3% of the PC per annum. However, by allowing term extension to 40 years in FHA-HAMP, or by making the recommended changes to the Loan Mod so that it would be appropriate as the sole streamlined option, FHA can offset the increase in the use of the PC.

Each potential change would provide tangible benefits to the MMIF through reduced claims, while increased use of the PC and the MIP reduction/waiver would impose additional costs on the MMIF. In considering the sum total of the benefits and costs of all of the potential adjustments, it is likely that the cumulative benefit to the MMIF stemming from reduced foreclosures and fewer claims will more than offset the cost of funding additional PCs and the foregone inflows from the subset of recipients who require a MIP reduction or waiver. And in any case, if costs to the MMIF increased to any degree, helping thousands of FHA borrowers avoid foreclosure resulting from a nation-wide pandemic may be the most effective use of the currently over-capitalized Fund.

Conclusion

These potential changes to the COVID-19 home retention options would help ensure that homeowners facing a sustained period of financial distress due to the COVID-19 pandemic can be offered modifications that provide substantial and immediate payment reduction. Expanding the availability and amount of relief to consumers would achieve the intended goal of keeping more COVID-19-impacted borrowers in their homes while avoiding the MMIF claims and high societal costs of foreclosures.

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[23] Loss severities are published quarterly in Exhibit A-7 of the [Quarterly Report to Congress on FHA Single-Family Mutual Mortgage Insurance Fund Programs - HUD | HUD.gov / U.S. Department of Housing and Urban Development (HUD).]

Appendix 1: FHA's Current Modification Options

As described in HUD Mortgagee Letter 2021-05, FHA has provided four home retention options for owner-occupant borrowers in need of assistance due to the COVID-19 pandemic. Servicers are to evaluate borrowers for each home retention option in turn. If the homeowner does not meet the eligibility requirements or states that they are unable to make the modified payment, the servicer is to move to the next home retention option. Homeowners who cannot afford the modified payments offered by the fourth option are then evaluated for FHA's home disposition options. The four home retention options are summarized in Table 1.

The first option, the **COVID-19 Standalone Partial Claim (Partial Claim or PC)**, is designed for borrowers who can resume their regularly scheduled monthly payments. Arrearages in principal, interest, taxes, and insurance (PITI) are placed in the Partial Claim, which is a non-interest bearing junior mortgage that is due at maturity, sale of the property, loan payoff, or non-FHA refinance, which results in a lower loan balance upon which the borrower must pay interest. The mortgage is reinstated to current status. To be eligible, the borrower must indicate they have the ability to resume making on-time mortgage payments. In addition, the Partial Claim must not exceed the 30% of unpaid principal balance (UPB) statutory maximum value of all Partial Claims (the PC cap).

The second option, the **COVID-19 Owner-Occupant Loan Modification (Loan Mod)**, reduces the borrower's monthly mortgage payment without using the Partial Claim. After capitalizing arrearages for unpaid accrued interest and escrow advances and shortages, the interest rate is changed to the current market rate, which today generally means a reduction, and the term for the modified mortgage is extended to 360 months. For the borrower to be eligible to receive the Loan Mod, the principal and interest payment may not increase as a result of the modification, and the borrower must indicate they have the ability to make the modified mortgage payment.

The third option, the **COVID-19 Combination Partial Claim and Loan Modification (Combo Mod)**, offers the homeowner slightly more payment reduction than the Loan Mod. In this case, arrearages for unpaid accrued interest and escrow advances and shortages are first placed in any remaining available Partial Claim and, if the borrower hits the 30% PC cap, any remaining arrearages are capitalized. The interest rate is changed to the market rate, and the term for the modified mortgage is extended to 360 months. In order to be eligible, the borrower must indicate they have the ability to make the modified mortgage payment.

The fourth and final home retention option, the **COVID-19 FHA-HAMP Combination Loan Modification and Partial Claim with Reduced Documentation (FHA-HAMP)**, can provide still more payment reduction. Unlike the first three options, which are streamlined, to be eligible for FHA-HAMP the homeowner is asked to provide income documentation, which is used to set the target for the modified total monthly payment. FHA requires less documentation for FHA-HAMP than for their standard options (e.g., the former doesn't require any documentation of expenses).

The FHA-HAMP target total monthly payment is set to the lower of 31% of monthly gross income (31% PTI) and 80% of the current total monthly mortgage payment (and thus creating 20% payment reduction). The total monthly payment includes principal, interest, taxes, and insurance (PITI), as well as MIP. However, if the modification includes a Partial Claim, the modified total monthly payment cannot be less than 25% of the borrower's monthly gross income (the 25% minimum PTI limit) even if this means that the borrower does not receive the full 20% payment reduction.

Because the FHA-HAMP target is based on total monthly payment, FHA-HAMP targets a deeper payment reduction than the Flex Mod offered by Fannie Mae and Freddie Mac. The Flex Mod targets a 20% reduction in principal and interest only. For the average Government-backed mortgage in forbearance, the 20% FHA-HAMP target payment reduction translates into a 31% reduction in principal and interest payment.

To achieve the payment reductions, as with the Loan Mod, arrearages for unpaid accrued interest and escrow advances and shortages are capitalized, the interest rate is changed to the market rate, and the term is extended to 360 months. At that point, if the modification results in a total monthly payment that is less than or equal to the target (i.e., the new PTI is at or below 31% and the total payment is reduced by 20% or more), the borrower is offered the modification, even if the resulting PTI is less than 25%. In this case, because the Partial Claim has not been used, the 25% minimum PTI limit does not apply.

If the modified total monthly payment is greater than the target after providing the equivalent to the Loan Mod (i.e., either the 31% PTI target or the 20% payment reduction target is not met, or neither is met), then the loan balance is reduced and placed in the Partial Claim until the target is met or the Partial Claim reaches the 30% statutory maximum. Note that the full 20% payment reduction would not be provided using the Partial Claim if the 25% minimum PTI limit is reached first. If, when the borrower hits the 30% of UPB Partial Claim cap, the modification does not hit the 40% PTI threshold, even if it reaches a 41% PTI ratio, the borrower is ineligible and must be evaluated for FHA's home disposition options.

Appendix 2: Estimating Foreclosure Rates from Default Rates

To estimate the probability of foreclosure for borrowers with the average Government-backed mortgage in forbearance, we need two inputs: a probability of default if the borrower does not receive a modification and a probability of liquidation (through foreclosure or a foreclosure alternative) for borrowers who default.

For the first, we assume that 75% percent of borrowers would default upon exiting forbearance if they do not receive a modification. This is a conservative assumption considering that 75% of borrowers in forbearance were already 90+ days delinquent as of the end of January 2021.[24] For the second, we assume that 69% of borrowers who default would end up in liquidation, based on re-default rates from the HAMP program.[25] The product of these two probabilities indicates that without a modification, 52% of borrowers who exit forbearance will end up in foreclosure. While this is likely a conservative estimate, it is important to note that it is an estimate of the foreclosure rate for the specific subset of borrowers who needed forbearance due to the COVID-19 pandemic, and therefore will be far higher than historical foreclosure rates for all homeowners with a mortgage.

With these two inputs in hand, we can use the default reduction estimates presented in Table 3 to compute the foreclosure rates for each of the current and potential home retention options. In each case, the probability of a borrower entering foreclosure or a foreclosure alternative is the product of the probability of default after receiving a modification and the probability of liquidation given default. The results are shown in Table 4 below.

For example, the Combo Mod as currently structured offers borrowers a 12% payment reduction, which is estimated to reduce re-defaults by 28%. If, as noted above, 75% of borrowers who exited forbearance would default without a modification, then 75% x (1 - 28%) = 54% would re-default after receiving a Combo Mod. Of those borrowers who re-default, 69% end up in foreclosure or a foreclosure alternative, making the foreclosure rate 54% x 69% = 37%. Executing the same calculation for the Combo Mod with maturity extension to 40 years yields a foreclosure rate of 28%. Taking the difference of the two foreclosure rates (37% - 28% = 9%) indicates that adoption of the 40-year term for the Combo Mod would avoid an additional 9 foreclosures for every 100 40-year Combo Mods completed.

The last line in Table 4 shows the number of additional avoided foreclosures per 100 modifications completed for each of the potential home retention options relative to the current options. If the Loan Mod could be extended to 40 years, for every 100 40-year Loan Mods completed, an additional 10 borrowers would avoid foreclosure. For every 100 FHA-HAMP modifications that could be completed because of the 40-year term and/or 55% PTI threshold, an additional 31 borrowers would retain their home. Similarly, with the 40-year term, 55% PTI

[24] Source: Black Knight Mortgage Monitor, January 2021.

[25] The re-default rate of HAMP recipients is sourced from Ganong and Noel (2020).

threshold, and the MIP waiver in place, 100 FHA-HAMP modifications would save an additional 35 homeowners from foreclosure.

Table 4. Estimating Foreclosure Rates from Default Rates.

Current Options	**Loan Mod**	**Combo Mod**	**FHA-HAMP**	**FHA-HAMP with MIP Waiver**
Term	30 years	30 years	30 years	
PTI Threshold			40%	
Payment Reduction (%)	6%	12%	22%	
Default Reduction (%)	13%	28%	FAIL	
P(Default | No Modification)	75%	75%	75%	
P(Default | Modification)	65%	54%	75%	
P(Liquidation | Default)	69%	69%	69%	
P(Foreclosure or Foreclosure Alternative)	45%	37%	52%	
Potential Options				
Term	40 years	40 years	40 years	40 years
PTI Threshold			55%	55%
Payment Reduction (%)	15%	20%	28%	36%
Default Reduction (%)	33%	45%	60%	67%
P(Default | No Modification)	75%	75%	75%	75%
P(Default | Modification)	50%	41%	30%	25%
P(Liquidation | Default)	69%	69%	69%	69%
P(Foreclosure or Foreclosure Alternative)	35%	28%	21%	17%
Additional Avoided Foreclosures per 100 Modifications	10	9	31	35

Appendix 3: Imputing the Lowest Income Eligible to Receive an FHA-HAMP Modification

Note that the examples that follow are illustrative and do not account for the variation in mortgage terms across borrowers or the positive correlation between income and total monthly payment. Nevertheless, they demonstrate the potential value of the FHA-HAMP adjustments.

We use the lowest post-modification total payment achievable by the current and potential FHA-HAMP waterfall steps to compute the lowest possible income that will qualify for a modification by meeting the PTI threshold. As shown in Table 3, when applied to the average Government-backed mortgage in forbearance, the current FHA-HAMP waterfall steps can create a total monthly payment of $1,102. At that total monthly payment, the PC is exhausted and no further steps can be taken to reduce the monthly payment. Dividing $1,102 (the lowest total monthly payment possible) by the PTI threshold of 40% indicates that the lowest income borrower who can qualify for the current FHA-HAMP waterfall would have a monthly gross income of $2,755.

We use a similar process with each of the potential FHA-HAMP adjustments, exhausting all of the available waterfall steps to find the lowest post-modification payment achievable and dividing by the PTI threshold to calculate the lowest income that can qualify for a modification. As shown in Table 5, each of the potential FHA-HAMP adjustments reduces the lowest income that can qualify for a modification. Adjusting the PTI threshold from 40% to 55% has the most powerful impact on the range of borrower incomes that will qualify to receive an FHA-HAMP modification. By offering additional payment reduction, maturity extension to 40 years and the MIP waiver further reduce the lowest borrower income that will qualify to receive a modification.

Table 5: The lowest achievable post-modification total payment determines the lowest income borrower who will meet the PTI threshold and receive a modification.

	Lowest Post-Modification Total Payment Achievable	**PTI Rule**	**Lowest Income Eligible for Modification**
Current FHA-HAMP (40% PTI Rule)	1,102	40%	2,755
FHA-HAMP with 55% PTI Rule	1,102	55%	2,004
FHA-HAMP with 55% PTI Rule, 40-year Maturity	1,012	55%	1,840
FHA-HAMP with 55% PTI Rule, 40-year Maturity, MIP waiver	893	55%	1,624

Appendix 4: Comparing the Costs of a Partial Claim and a MIP Reduction

To determine the cost of funding a Partial Claim, FHA calculates a per annum cost on the Partial Claim amount using the interest rate from the President's Economic Assumptions, which we estimate was 3% for 2020. The per annum cost of funding the $21,201 Partial Claim for the Combo Mod with a 40-year maturity shown in Table 3 can be calculated as shown in Table 6: it costs the FHA about 0.37% of UPB annually to fund the Partial Claim.

Table 6: The per annum cost of funding a Partial Claim expressed as a percentage of pre-modification UPB.

Per Annum Cost of Funding a Partial Claim	
A. Pre-modification UPB	172,884
B. Partial Claim Amount	21,201
C. Partial Claim as % of UPB (B / A)	12.3%
D. Interest Rate	3.00%
E. Per annum cost as a percentage of UPB (C x D)	0.37%

The cost of a MIP reduction expressed as a percentage of pre-modification UPB, which will allow us to make an apples-to-apples comparison with the cost of the Partial Claim, is slightly more complicated to calculate. This is because the dollar amount of MIP paid by the borrower is recalculated each year based on the average UPB of the loan for that year, so how long the loan remains outstanding will determine the average MIP expressed as a percentage of pre-modification UPB. In addition, for modified loans, the MIP schedule is not recalculated; instead, it is based on the scheduled UPB of the original loan.

To match the payment reduction of the Combo Mod, the MIP in the Loan Mod would need to be reduced from 0.85% to 0.31%, and FHA would give up the difference between the two cash flow streams. The per annum cost to FHA for various mortgage durations is shown in Table 7. If the modified loan only lasts for 1 year and is then prepaid, the cost of the MIP waiver to the MMIF is 0.52% of pre-modification UPB.[26] If the modified loan lasts for 7 years, the average annual cost to the MMIF falls to 0.48% of pre-modification UPB per annum.

Table 7: Per annum cost of a MIP reduction expressed as a percentage of pre-modification UPB.

	Duration of Mortgage					
	1y	5y	7y	10y	15y	20y
F. Original MIP	0.82%	0.78%	0.75%	0.72%	0.65%	0.58%
G. Reduced MIP	0.30%	0.28%	0.27%	0.26%	0.24%	0.21%
H. Per Annum Cost as a % of UPB (F - G)	0.52%	0.49%	0.48%	0.46%	0.42%	0.37%

[26] The MIP is no longer 0.85% or 0.31% in year 1 of the modification because the UPB includes capitalization of arrearages and no longer matches the original UPB scheduled.

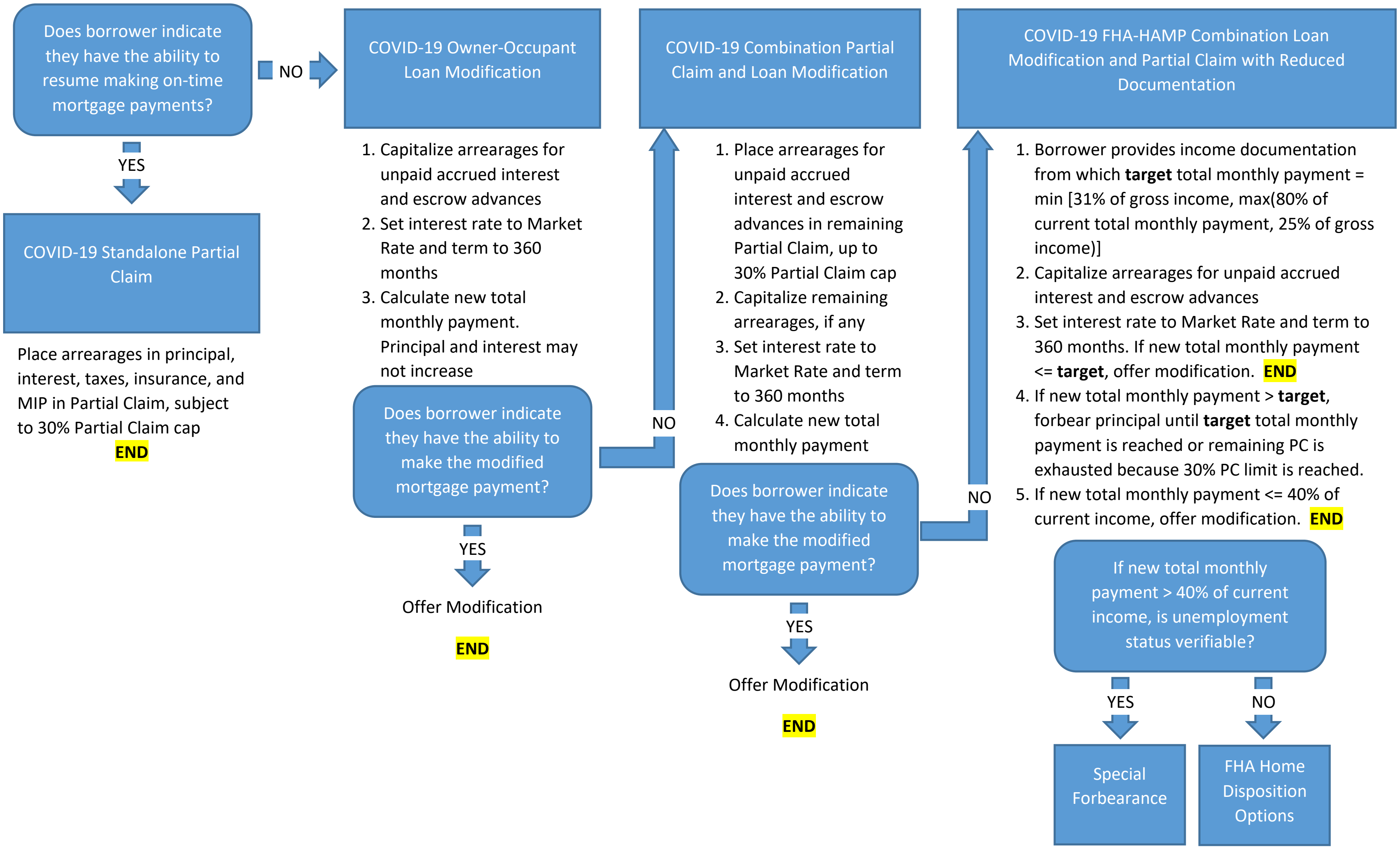
Table 8 shows the incremental cost of a MIP reduction relative to the cost of the Partial Claim shown in Table 6 for various mortgage durations. To estimate the total cost difference to the MMIF, we need to estimate how many loans that receive a Loan Mod or Combo Mod refedault and end up in foreclosure or a foreclosure alternative. Because the amount of MIP reduction applied in the Loan Mod has been chosen to match the 20% payment reduction delivered by the 40-year Combo Mod, the probability of the borrower redefaulting and ending up in foreclosure or a foreclosure alternative are the same in each case, and our estimate from Table 4 is 28%. Assuming that redefaults happen in year 1 whereas successfully modified mortgages are outstanding for 7 years on average, the weighted average cost to the MMIF of reducing MIP rather than using the Partial Claim would be an additional 0.60% of UPB, calculated as 28% x 0.15% + (1-28%) x 0.78%.

More generally, as long as the mortgage is outstanding for fewer than 20 years, the Partial Claim will be less costly to the MMIF. At 20 years, the costs of the two options are the same, and if the mortgage remains in place for more than 20 years, the MIP reduction will be less costly to the MMIF.

Table 8: The difference between the per annum and total cost as a percentage of pre-modification UPB of a MIP reduction and a Partial Claim for various mortgage durations.

	Duration of Mortgage					
	1y	5y	7y	10y	15y	20y
J. Per Annum Cost Difference (MIP – PC)	0.15%	0.12%	0.11%	0.09%	0.05%	0.00%
K. Total Cost Difference (J x Duration)	0.15%	0.62%	0.78%	0.89%	0.71%	-0.01%

Appendix 5: Current OVID-19 Home Retention Options



Sources: [HUD Mortgagee Letter 2021-05](#) and [SFH Handbook 4000.1 | HUD.gov / U.S. Department of Housing and Urban Development (HUD)](#)