Federal Housing Finance Agency

Review of Options Available for
Underwater Borrowers and Principal Forgiveness

In considering the use of principal forgiveness by Fannie Mae and Freddie Mac (the Enterprises), it is important to place this particular loss mitigation tool in the context of:

- the Enterprises' overall loss mitigation efforts;
- costs and benefits of using principal forgiveness, including the economic benefit to the Enterprises and taxpayers in general;
- the impact on borrowers' behavior;
- direct and indirect implementation costs; and
- the overall impact on the mortgage market.

Since principal forgiveness is associated with providing assistance to underwater borrowers, this paper begins with a review of the scope of the underwater borrower problem. It then describes the Enterprises' efforts related to underwater borrowers and summarizes the Federal Housing Finance Agency's (FHFA) analysis of principal forgiveness.

Underwater Borrowers: Scope of the Problem

A borrower is commonly referred to as being underwater when the current value of their home is less than the balance due on their mortgage. For underwater borrowers, their current loan-to-value (LTV) ratio is greater than or equal to 100.

The decline in house prices over the last few years has reduced the housing wealth of nearly all homeowners. The Federal Reserve has estimated that from the end of 2005 through 2011, the decline in housing wealth was $7.0 trillion. Although the problem of lost housing wealth spans all homeowners, the population of underwater borrowers has received the most attention in terms of seeking solutions, which includes the use of principal forgiveness as a loan modification tool.

There are multiple reasons why households may be underwater on their mortgages. Whether homeowners live in areas where house prices have fallen dramatically, perhaps fueled by extensive housing speculation or the collapse of the local economy; purchased homes at the top of the market with little or no money down; or refinanced, extracting equity that had been built up over many years; they are not responsible for the drop in house prices that has caused them to be underwater, but they are responsible for the contractual commitment to pay their mortgages.

It is important to put in perspective the scope of the underwater borrower problem, and where the Enterprises fit into the landscape. According to data from CoreLogic, there were approximately 11.1 million underwater borrowers at the end of 2011. However, Enterprise mortgages represent less than half of the overall underwater population. As of the end of 2011, there were approximately 4.6 million underwater borrowers with Fannie Mae or Freddie Mac backed loans. Of those, 2.5 million have mortgages with current LTVs above 115 percent, and the remaining 2.1 million have mortgages with current LTVs between 100 and 115 percent.

Furthermore, the problem of underwater borrowers is not evenly distributed across the nation but rather concentrated among a few states. As shown in Table 1, more than 50 percent of the Enterprises' underwater borrowers are located in five states, and more than 70 percent of the Enterprises' underwater borrowers are located in ten states. In contrast, these five states account for 29 percent of the U.S. population, and the ten states account for 39 percent of the U.S. population.

Table 1
Enterprise Underwater Borrowers - Top 10 States

		Enterprise Underwater Borrowers Loan Count[a]	% of Total Enterprise Underwater Borrowers	State Population Count[b]	% of U.S. Population
1	Florida	736,000	16%	19,058,000	6%
2	California	620,000	13%	37,692,000	12%
3	Michigan	389,000	8%	9,876,000	3%
4	Illinois	357,000	8%	12,869,000	4%
5	Georgia	308,000	7%	9,815,000	3%
6	Arizona	268,000	6%	6,483,000	2%
7	Ohio	203,000	4%	11,545,000	4%
8	Nevada	155,000	3%	2,723,000	1%
9	Washington	145,000	3%	6,830,000	2%
10	Minnesota	111,000	2%	5,345,000	2%
	Top 5 Total	**2,409,000**	**52%**	**89,310,000**	**29%**
	Top 10 Total	**3,290,000**	**71%**	**122,236,000**	**39%**
	Total U.S.	4,630,000	100%	311,592,000	100%

Source: 2011 Q4 Historical Loan Performance dataset.
[a]Enterprise loans with current loan-to-value ratios greater than or equal to 100. Loan counts rounded to the nearest thousand. Current loan-to-value ratios are estimated using the FHFA ZIP-Level Expanded-Data HPI.
[b]Estimate of 2011 population, according to U.S. Census Bureau. Population counts rounded to the nearest thousand.

The under-reported story through the housing downturn has been that despite the number of people underwater on their mortgages, the vast majority have continued to pay their mortgages, meeting their contractual obligations. For example, approximately 80 percent of the Enterprise's underwater borrowers are current on their loans. Of the Enterprise borrowers whose current LTV is greater than 125, approximately 75 percent are current. However, despite most underwater borrowers remaining current on their mortgages, we have also seen borrowers default on their underwater mortgages without apparent disruption to their other financial obligation, and various commentators have actually encouraged such "strategic default."

Consequently, one challenge in considering potential solutions to the underwater population is to discourage or prevent, or at least not reward, voluntary behavior by homeowners to default on their mortgage obligations if they have the ability to pay.

Options for Underwater Borrowers

FHFA found it helpful to think about underwater borrowers in three broad groups:

1. Those with an ability to pay their mortgages and a willingness to do so;

2. Those with a reduced ability to pay – perhaps because of a reduction in household income as a result of the severe recession and its aftermath – but a continued willingness to make an affordable mortgage payment in order to remain in their homes; and

3. Those with either an inability to make an affordable mortgage payment or an unwillingness to do so, indicating a need for a graceful exit from the home or a foreclosure.

Each group presents its own challenges and opportunities, and the appropriate policy response to each is different according to their particular circumstances. What follows is FHFA's assessment of these policies for each group. The policies are tailored to borrowers in mortgages owned or guaranteed by Fannie Mae and Freddie Mac and reflect the legal and contractual circumstances associated with those loans and with the Enterprises operating in conservatorships. Different considerations may lead to different conclusions for mortgages owned by banks or other investors.

An Ability and Willingness to Pay

Most underwater borrowers have the ability and willingness to pay their mortgages and have continued to do so. Simply put, they entered into financial contracts, effectively agreeing that the house was worth to them what they had borrowed (or more) and that they had the financial capacity and intent to make the stated payments.

For all or virtually all Enterprises loans, the borrowers also acquired with their mortgages an option to prepay at will, commonly done through refinancing. Their ability to exercise that option, however, was curtailed when house prices fell as lenders generally would not or could not make new mortgages at or above the current value of the house, and the Enterprises by law require a third-party credit enhancement for loans above 80 percent LTV. The Home Affordable Refinance Program (HARP) was introduced by FHFA in 2009 to deal directly with this set of borrowers by providing opportunities to refinance existing Fannie Mae or Freddie Mac mortgages.

Although more than 1 million loans were refinanced through this program from inception to late 2011, FHFA recognized that more could be done. FHFA led an effort in the second half of 2011 to revamp HARP. The new version, dubbed HARP 2.0, removed frictions and limits that inhibited full participation. Today, any underwater homeowner with an Enterprise-owned mortgage who is current on their mortgage payments is eligible for a one-time refinance through HARP. Two key changes made in HARP 2.0 were the removal of certain legal liabilities on lenders and the removal of the 125 percent LTV cap. From January through May 2012, more than 78,000 refinances were completed for underwater borrowers, representing a 30 percent increase during that five-month period over the total number completed in 2011.

These early returns on HARP 2.0 are exceeding expectations. This program provides meaningful and accessible opportunities for underwater homeowners whose mortgages are owned or guaranteed by Fannie Mae or Freddie Mac to refinance into new mortgages with lower interest rates, shorter terms, or both. Indeed, the program is priced to encourage shorter terms, which would assist borrowers in

regaining equity in their homes. That strategy is working, as evidenced by a steady increase in homeowners choosing shorter terms. On average, 10 percent of borrowers with current LTVs greater than 105 percent opted for shorter terms in 2011; from January 2012 to May 2012 15 percent chose shorter terms, and in May 2012 alone, 19 percent.

In short, HARP represents the most effective response to assisting the vast majority of underwater borrowers, and virtually all underwater Enterprise borrowers who have not yet refinanced through HARP are eligible to if they are current on their mortgages. At today's record low interest rates, a HARP refinance into a shorter-term mortgage provides most eligible borrowers the chance to lower their monthly payments and shorten the time when they will be back above water on their mortgages. This approach respects existing contracts and fulfills FHFA's duties to conserve Enterprise assets while promoting market stability and liquidity.

A Reduced Ability but Continued Willingness to Pay

The economic upheaval of the past several years, plus the more ordinary set of life circumstances such as divorce or health issues, have left some borrowers with reduced abilities to meet their financial obligations relative to their situations when they had first obtained their mortgages. Loan modification efforts over the past four years have specifically targeted this group, whether underwater or not. The original Home Affordable Modification Program (HAMP), as well as the Enterprises' proprietary modification programs give households experiencing decreases in financial resources the opportunity to meaningfully reduce their monthly mortgage payments to affordable levels and keep their homes. The debt itself is not forgiven; instead, it is restructured to make repayment of the debt more manageable given the household's changed circumstances.

The Enterprises' leadership in loan modification efforts is well established. They have offered nearly a million HAMP modifications and account for more than half of all HAMP permanent modifications despite owning or guaranteeing only 30 percent of delinquent mortgages. Recognizing the limitations of HAMP, FHFA worked with each Enterprise early on to supplement HAMP with each company's own proprietary modification. In 2011, FHFA aligned these programs into a standard modification program for those unable to benefit from HAMP.

Furthermore, with the Servicing Alignment Initiative announced in 2011, FHFA worked with the Enterprises to develop mortgage servicing standards for Enterprise loans that aligned their requirements for servicers, emphasizing early contact with troubled borrowers, rapid response to their particular circumstances, and loan modifications offering meaningful reductions in monthly mortgage payments to affordable levels. In the most recent quarter, roughly half of all completed loan modifications resulted in a payment reduction of 30 percent or more.

The performance of Enterprise loan modifications has exceeded many analysts' expectations. Less than 15 percent of loans modified in the second quarter of 2011 had missed two or more payments nine months after modification.

Loan modifications typically rely on interest rate reductions and term extensions to achieve lower monthly payments. For underwater borrowers eligible for loan modifications, the lower monthly payment may also be reached using principal forbearance. This is the same approach used by government-guaranteed loan programs, including the Federal Housing Administration program, because these programs have statutory prohibitions against forgiving principal on an existing loan.

With principal forbearance, a portion of the principal due is set aside and no interest is charged for the remaining life of the loan. The debt is not forgiven, however. Should the borrower become re-established in the modified loan, successfully making payments over time, those payments (perhaps combined with future house price appreciation) could pay down the mortgage sufficiently to put the borrower back above water, even counting the forborne amount. In Enterprise modifications for underwater borrowers, the use of principal forbearance has increased from 11 percent of total modifications in 2010, to 26 percent in 2011, and to 32 percent in the first quarter of 2012. Relative to foreclosure, this is true success – it is a modification that preserves homeownership for borrowers in trouble and preserves for the taxpayer an ultimate repayment of principal owed.

In HAMP, principal forgiveness was always permitted but was rarely used. In 2010, to encourage greater use of principal forgiveness for loans with current LTV ratios above 115 percent, the U.S. Department of the Treasury supplemented HAMP with the principal reduction alternative (HAMP PRA). HAMP PRA requires that principal forgiveness be used as the first step in the loan modification process. The take-up rate on HAMP PRA has been low, and earlier this year Treasury announced it would triple its current payment incentives to investors who use this approach in HAMP and for the first time offered to pay incentives to the Enterprises.

It is important to note that HAMP PRA produces the same monthly payment for a borrower as HAMP – 31 percent of gross monthly income. But HAMP PRA achieves that payment amount in a different way -- first forgiving a portion of the underwater principal over three years, then applying rate reductions and/or term extensions and/or forbearance, as necessary to reach a housing payment that is 31 percent of gross monthly income. While both original HAMP and HAMP PRA focus on a borrower's ability to pay, HAMP PRA also addresses a borrower's willingness to pay by reducing the loan balance. The rationale for the reduction in the loan balance is that a borrower whose mortgage exceeds the home's value may not be willing to continue to make affordable monthly mortgage payments. In other words, even though the borrower may achieve an affordable monthly payment (the ability to pay) through an original HAMP modification, the borrower may not be willing to pay because they are underwater. By forgiving principal as part of HAMP, the lower loan-to-value ratio should improve a borrower's willingness to pay, which is a reasonable expectation. (This effect is captured in the Net Present Value (NPV) model used by FHFA to assess HAMP PRA).

Yet, for the Enterprises, HAMP PRA surrenders the opportunity for taxpayers to share in the upside success of the loan modification – all the upside goes to the individual borrower. Should house prices appreciate over the three year period, perhaps because the market over-compensated during the recent years of price declines, the adjustment upward would accrue to the borrower without any provision for compensation to the taxpayer.

Principal forbearance, as noted above, would give taxpayers a share in that price appreciation. Principal forbearance operates in a manner very similar to shared appreciation, except that with forbearance the investor's share of any appreciation from the current home value is paid first and is capped at the time of loan modification to the amount of forborne principal. If house prices rise above the forborne amount the borrower captures all the additional appreciation. Furthermore, principal forbearance does not require any infrastructure changes for lenders and investors to account for future assets and liabilities, as does shared appreciation.

In any event, principal forbearance puts off for another day the final reconciliation of the debt so long as the borrower remains in the house and paying a mortgage. Should the borrower later need to move or if the borrower loses the willingness to stay in the house, principal forgiveness through a short sale or deed-in-lieu (see below) of foreclosure remains an option. Importantly, though, principal forbearance gives those borrowers with a reduced ability to pay but a continued willingness to do so a meaningful opportunity to retain homeownership if they have the desire to do so.

An Inability or Unwillingness to Pay

The third group of borrowers includes those whose economic fortunes have changed so that they lack the ability to make *any* affordable mortgage payment. It also includes those who lack the desire to stay in their homes, whether because they are so far underwater, or they never had substantive equity in their homes, or because the home no longer meets their needs, or whatever other reason might apply. For these borrowers, several programs offer a graceful exit, perhaps with financial assistance that avoids the cost and stress of foreclosure. For borrowers in this group, the Enterprises offer several options to ease their transitions from their current homes, each of which avoids foreclosure and its long-term consequences for the borrowers, the neighborhood, and investors.

Short sales allow eligible borrowers to sell their houses in arm's-length transactions at today's market prices, using the proceeds of the sale to satisfy the mortgage obligations. In certain circumstances, if the borrower has sufficient assets, some portion of those would also be expected to be used to satisfy a portion of the debt. If that is not the case, the short sale will be all that is required. Such transactions are effectively a form of principal forgiveness—the remaining portion of the mortgage debt is forgiven so the borrower can put that in the past, but he or she does not get to keep the house as well. .

The Enterprises also offer deed-in-lieu of foreclosure (sometimes referred to as cash-for-keys) a program where the borrower surrenders title to the house and may be compensated for relocation expenses and associated costs for working with the lender to exit the home. This approach ensures the protection of the property, provides the borrower with financial assistance in relocating and getting re-established, and avoids foreclosure, which could take a long time and negatively affect neighborhoods.

A recent change to the short sale program has shortened the waiting period for approval and other enhancements will be announced soon.

These are meaningful options for relieving borrowers of a portion of their mortgage obligations if they lack the ability or willingness to make mortgage payments on their properties. In an otherwise tough situation, these options respect the interests of borrowers, neighbors, and lenders alike.

Principal Forgiveness Analysis

As noted in the previous section, the Enterprises have an array of tools to assist underwater borrowers. Principal forgiveness in the context of HAMP PRA is focused on assisting borrowers who are delinquent or in danger of imminent default. The primary focus of the Enterprises' modification programs is to provide borrowers the opportunity to obtain an affordable mortgage payment for borrowers who have the ability and willingness to make a monthly mortgage payment.

The first modification program the Enterprises use to evaluate a borrower is HAMP[1]. If a borrower does not qualify for HAMP modification, the Enterprises then look to employ a proprietary modification[2].

Economic Analysis

Before describing FHFA's analysis of principal forgiveness, a few other relevant factors should be noted. The data on modifications from Enterprise loans shows that performance is not strongly related to current LTV but tied more to the reduction in payment. While not a definitive analysis, if current LTV had a strong effect, we would expect that the more underwater the borrower, the higher the re-default rate. However, Fannie Mae data (see Table 2) shows that performance on modified loans does not vary much across current LTV.

[1] For HAMP, an affordable payment is achieved by taking specified sequential steps (called the waterfall), as needed, in order to bring a troubled borrower's monthly payment down to 31 percent of their gross monthly income. Specifically, servicers:

- Capitalize the arrearages, including accrued interest and escrow advances.
- Reduce the interest rate in increments of 1/8 to get as close as possible to 31 percent of the homeowners gross monthly income with the lowest possible interest rate set at 2 percent.
- If reducing the interest rate does not achieve an affordable monthly payment, servicers then extend the term and re-amortize the mortgage by up to 480 months (40 years).
- If reducing the interest rate *and* extending the term does not achieve an affordable monthly payment, servicers then provide principal forbearance down to 115 percent of the property's current market value or as much as 30 percent of the unpaid principal, whichever is greater.

[2] If a borrower does not qualify for HAMP, the Enterprises' then look to employ a proprietary modification, sometimes referred to as a "standard modification." The features of a proprietary modification are also applied sequentially to a loan's mark-to-market LTV and include:

- Capitalizing the arrearage, including accrued interest and escrow advances.
- Providing principal forbearance down to 115 percent of the property's current value or as much as 30 percent of the unpaid principal balance, whichever is less.
- Setting the interest rate to a fixed-rate mortgage, currently at 4.625 percent.
- Extending the term to 480 months (40 years).

After calculating the modified payment terms, the mortgage loan must result in at least a 10 percent reduction in the homeowner's principal and interest payment.

Table 2
12-Month Modification Re-performance by Mark-to-Market Loan-to-Value Ratio

Mark-to-Market LTV at time of Modification	Permanent HAMP		2010 Fannie Mae Permanent Proprietary Modifications (with Trials)	
	% of Total	Current and Performing[1]	% of Total	Current and Performing[1]
Current LTV <= 80%	19%	76%	22%	72%
LTV>80 and <=90	13%	75%	14%	72%
LTV>90 and <=100	15%	73%	16%	71%
LTV>100 and <=125	26%	74%	25%	72%
LTV>125 and <=150	13%	76%	11%	74%
LTV>150 and <=175	7%	75%	6%	74%
LTV>175 and <=190	2%	74%	2%	74%
LTV>190	4%	72%	4%	70%

[1] Includes loans that are paid off

It is also important to note that the performance of modified loans is a function of the payment change (see Table 3). Payment change can be achieved through a number of modification tools, such as reducing the interest rate and lengthening the loan term.

Table 3
12 Month Modification Re-performance by Change in Monthly Principal and Interest Payment

Percent Change in Monthly Principal and Interest	Permanent HAMP		2010 Fannie Mae Permanent Proprietary Modifications (with Trials)	
	% of Total	Current and Performing[a]	% of Total	Current and Performing[1]
Payment Increase	0%	59%	1%	44%
Payment Decrease 0 <-10%	8%	60%	7%	57%
Payment Decrease 10 <-20%	12%	65%	12%	62%
Payment Decrease 20 <-30%	16%	69%	15%	69%
Payment Decrease > 30%	64%	79%	64%	79%

[a] Includes loans that are paid off

While the aggregate data in Table 2 does not show a substantial relationship between current LTV and the performance of modified Enterprise loans, historically data has shown that the probability of default correlates with the borrower's current LTV ratio - the higher the ratio, the greater the likelihood of default. So, in theory, by forgiving principal and reducing a borrower's current LTV ratio, the probability of default is reduced and losses are reduced. The historic relationship between default and current LTV, supported by analytic work over many years preceding the introduction of recent modification programs, is embedded in the HAMP NPV model, which FHFA used in its analyses of principal forgiveness.

FHFA's technical model-based analysis of principal forgiveness took into consideration:

- the impact of new subsidy payments from Treasury and the likely number of homeowners eligible to receive this type of modification; and
- the effect of strategic modifiers on the economic benefit to the Enterprises and to taxpayers. Strategic modifiers are borrowers who either claim financial hardship or do not make two mortgage payments to attempt to qualify for HAMP PRA.

FHFA's model-based analysis assumed principal forgiveness modifications to be fully operational today. The operational complexity and associated costs of designing and implementing a new program involving principal forgiveness have to be considered separately. They are key considerations in FHFA's decision concerning HAMP PRA, and are described later in this paper.

As with any analysis of policy actions for which no historical data exists, FHFA faced limitations in conducting its technical analysis. While the results are based on Enterprise loan level data, they are the product of several assumptions regarding take up, performance, and behavioral impacts, many of which are programmed into the HAMP NPV Model, and all of which introduce a level of uncertainty and imprecision. The complete FHFA model-based analysis of principal forgiveness is presented in an appendix to this paper. FHFA's review starts with an isolated analysis of principal forgiveness compared to principal forbearance, and then refines the methodology to more fully capture the features of HAMP and to estimate the eligible HAMP population.

The results that are most relevant to considering the Enterprises' use of principal forgiveness are presented in Table 3 of the appendix. In particular, analyses 10 and 11 in Table 3 of the appendix present estimates of the HAMP eligible population and the projected benefits of using principal forgiveness across two different debt-to-income (DTI) distributions. FHFA does not have current DTI information for these borrowers, so estimates had to be constructed. While both analyses 10 and 11 show a benefit to the Enterprises from employing principal forgiveness, the benefit to taxpayers varies from negative to positive depending on the DTI distribution. This further illustrates the sensitivity of the model-based results to certain assumptions.

Analyses 10 and 11 in Table 3 of the appendix also assume that all HAMP eligible borrowers will enter into a HAMP modification, which is clearly an unreasonable assumption. Taking Analysis 11, which has the most favorable result for principal forgiveness, analyses 12A, 12B, and 12C, in Table 3 of the appendix (which is replicated below in Table 4) provide more realistic estimates based on various HAMP take-up rates.

Table 4 (Appendix-Table 3: Analyses 12A, 12B, and 12C)

Standard HAMP Modifications versus Optimal HAMP Option ($ in billions; loan counts rounded to nearest thousand; totals may not add due to rounding)	**Expected Losses, No Modification**	**Reduction in Losses, Standard HAMP**	**Reduction in Losses, Optimal HAMP Modification**	**Enterprise Benefit, Optimal HAMP Modification vs. Standard HAMP**	**Treasury Subsidy**	**Taxpayer Benefit**
Analysis 12A Assumptions: #11, but scaled by 50 percent# of Loans: 248,000UPB), $49.7 billion	$22.5	$3.3	$5.1	$1.8	$1.3	$0.5
Analysis 12A **Assumptions:** #11, but scaled by 25 percent # of Loans: 124,000; UPB, $24.8 billion	$11.2	$1.7	$2.6	$0.9	$0.7	$0.2
Analysis 12C Assumptions: #11, but scaled by 15 percent # of Loans: 74,000; UPB, $14.9 billion	$6.8	$1.0	$1.5	$0.5	$0.4	$0.1

The three sets of results reported in Table 4 differ based on take-up assumptions for HAMP modifications, which range from 15 to 50 percent. For these take-up assumptions, under HAMP-PRA the estimated benefits to the Enterprises range from $0.5 billion to $1.8 billion, the estimated incentives paid by Treasury range from $0.4 billion to $1.3 billion, and the net taxpayer benefit ranges from $0.1 billion to $0.5 billion.

While those results seem to indicate a benefit to adopting HAMP PRA, it is important to understand the source of those benefits in the model. First, the vast majority of the benefits are derived from those loans where the homeowner has not made a mortgage payment in more than a year and whose current LTV is greater than 140 percent, as shown in Table 4 of the appendix. Given that early intervention is the key factor to the success of modifications, relying on successful modifications from borrowers who have not made a mortgage payment in more than a year as supporting the Enterprises' use of principal forgiveness does not seem warranted, despite the modeled results. Second, the HAMP NPV model by assuming principal is fully reduced at the outset as compared to over the course of three years, likely overstates the benefits of principal reduction on reducing default probabilities.

Borrower Incentive Effects

A key concern with principal forgiveness is borrower incentive effects. That is, will some percentage of borrowers who are current on their loans be encouraged to either claim a hardship or actually become delinquent to capture the benefits of principal forgiveness?

This is a particular concern for the Enterprises because unlike other mortgage market participants that can selectively offer principal forgiveness in cases tailored to their particular circumstances, the Enterprises must develop the program to be implemented by more than a thousand seller/servicers across the nation. In addition, the Enterprises will have to publicly announce this program, and borrower awareness of the possibility of receiving a principal reduction modification will be heightened among

Enterprise borrowers. So, as opposed to more targeted individual efforts, there is a greater possibility that borrower incentive effects would take place on an Enterprise-wide principal forgiveness program.

It is difficult to model these borrower incentive effects with precision. What we can do is give a sense of how many current borrowers would have to become strategic modifiers for the projected NPV economic benefit of HAMP PRA with triple incentives to be eliminated. In this context, a "strategic modifier" would be a borrower who either claims a financial hardship or misses two consecutive mortgage payments in order to attempt to qualify for HAMP PRA.

Table 5 shows the number of strategic modifiers that would eliminate the Enterprises' benefits of HAMP PRA. Based on the take-up assumptions in Tables 12A-C, the number of strategic modifiers needed to eliminate the Enterprises' benefits ranges from 14,000 to 126,000, which corresponds to between one and nine percent of the Enterprises' current underwater borrowers.

Table 5 (Appendix-Table 6)
Number of Strategic Modifiers Needed to Offset Benefit of HAMP PRA Savings
(Loan counts rounded to the nearest 1,000)

Eligible Borrower Take-Up Rates			Number of Strategic Modifiers			
Percentage of Borrowers Obtaining HAMP PRA Modifications	Number of Modifications	Optimal Modification Savings Relative to Standard HAMP ($B)	Based on Average Enterprise Loss, Calculated for All PRA Eligible Loans[a]	As a Percentage of Potential PRA Eligible Current Borrowers (1.4M)	Based on Average Enterprise Loss, Calculated for Only Current PRA Eligible Loans[b]	As a Percentage of Potential PRA Eligible Current Borrowers (1.4M)
To Offset Enterprise Benefit						
50%	210,000	$1.8	47,000	3.4%	126,000	9.0%
25%	105,000	$0.9	23,000	1.7%	63,000	4.5%
15%	63,000	$0.5	14,000	1.0%	38,000	2.7%
To Offset Taxpayer Benefit						
50%	210,000	$0.5	9,000	0.6%	19,000	1.3%
25%	105,000	$0.2	5,000	0.3%	9,000	0.7%
15%	63,000	$0.1	3,000	0.2%	6,000	0.4%

[a]For purposes of Enterprise benefit offset, assume a $54,000 average forgiveness amount and $15,000 average Treasury subsidy. Taxpayer benefit assumes only the forgiveness amount.

[b]For purposes of Enterprise benefit offset, assume a $26,000 average forgiveness amount and $1,500 average Treasury subsidy. Taxpayer benefit assumes only the forgiveness amount.

A broader perspective would be to consider the same analysis in the context of taxpayer benefits. In fact, the Emergency Economic Stability Act of 2008, which established FHFA as a Federal property manager, requires FHFA to consider taxpayer costs, not just cost to the Enterprises. Table 5 also shows the number of strategic modifiers that would eliminate the taxpayer benefits of HAMP PRA. Based on the take-up assumptions in Tables 12A-C, the number of strategic modifiers needed to eliminate the

projected taxpayer benefits ranges from 3,000 to 19,000, which corresponds to between 0.2 percent and 1.3 percent of the Enterprises' current underwater borrowers.

There are different views on whether borrower incentive effects are something that should be considered. Some take the view that the implementation of HAMP PRA by individual lenders has not had any effect on borrower behavior, and that the opacity of the HAMP process (i.e., borrowers would not know in advance if they qualified for HAMP PRA) limits potential negative borrower incentive effects.

However, the systematic implementation of HAMP PRA by the Enterprises would be unlike anything undertaken by individual lenders that typically select borrowers to whom they offer principal forgiveness based on internal, proprietary decision-making criteria. For the Enterprises to undertake HAMP PRA there would be clear public announcement of a nationwide program, widespread media coverage, uniform program eligibility standards, and a set of published decision rules for more than a thousand mortgage servicers to apply. Such an approach would:

- inform current borrowers that the government endorses forgiving a portion of your mortgage debt if you can demonstrate a hardship;

- establish far greater awareness regarding the availability of the program than exists today; and

- publicize the basic requirements for demonstrating hardship.

Thus, Enterprise implementation of HAMP PRA would create a broad incentive for underwater borrowers to seek ways to become eligible, particularly those who had been current on their mortgages up to now. Since approximately 80 percent of Enterprise underwater borrowers have remained current on their loans, a change in their behavior as a result of the incentives offered could substantially affect loan performance and increase Enterprise costs by encouraging strategic defaults. In addition, the analysis described above shows that approximately 80 percent of modifications in the best of standard HAMP and HAMP PRA would include principal forgiveness, which would also inform borrowers of the likelihood of obtaining principal reduction if they choose to stop paying their mortgage and are eligible for a HAMP loan modification.

The perverse incentives go beyond that, however. Broad availability of HAMP PRA for Enterprise loans creates incentives for other market participants to encourage, or even assist, underwater borrowers in taking steps to attain principal forgiveness. This is not mere speculation – we have already witnessed an array of commentators, even academics, advocating that people strategically default on their mortgages.

FHFA and the Enterprises are greatly concerned with the real possibility of such outcomes. Indeed, past experience with the implementation of HAMP showed that mortgage delinquency increased once the program was in place. Furthermore, Fannie Mae has been measuring strategic default behavior and has found a meaningful number of borrowers each month default on their mortgages without defaulting on any other consumer credits.

Perhaps the greatest risk, though, is a different kind of moral hazard, one with far greater long-term consequences for mortgage credit availability. Fundamentally, principal forgiveness rewrites a contract in a way that the other loan modification programs in place do not.

The current suite of loan modification programs are aimed at helping borrowers and mortgage investors alike by seeking an economically superior outcome for both sides, relative to foreclosure Forgiving a debt owed risks a longer-term view by investors that the mortgage contract is less secure than previously thought. Longer-term, this could very well lead to higher mortgage rates, reduced mortgage credit availability, or both. Even worse, this could come at the expense chiefly of those communities for which policymakers and lenders alike have invested so much effort the past few decades to enhance credit access.

It is important to note that the moral hazard view of principal forgiveness is far different for the Enterprises than for any individual lender or mortgage investor. In the latter case, operating in a much smaller piece of the market than the Enterprises and without all the transparency required of the Enterprises, individual lenders and investors have much less concern that their strategic actions with a small number of borrowers would have any meaningful effect on other borrowers, including other borrowers in their own portfolio. The sheer size and public awareness associated with the Enterprises, including the need for a consistent set of public rules regarding implementation, greatly enhances the likelihood of altering borrower incentives by implementing HAMP PRA. Even within HAMP PRA as undertaken by other lenders, the subjective, internal decision-making of those lenders creates an opaque environment that inhibits a general rule that borrowers might use to engage in strategic efforts to attain principal forgiveness.

In short, even before considering operational costs, FHFA concluded that the potential for near-term behavioral effects that would increase Enterprise losses, thereby swamping any small but possible benefit of HAMP PRA as modeled. That, plus the longer-term risks to mortgage credit availability and pricing, made systematic Enterprise implementation of HAMP PRA a poor choice relative to established, performing alternative means of assisting borrowers and reducing costs.

Operational Costs

The Enterprises have fully implemented the operations and accounting systems required to support HAMP and their own proprietary modification programs. The same is not true for principal forgiveness. Treasury does not currently pay the Enterprises any of the HAMP-related incentives for HAMP modifications that it pays all other investors. Consequently, Enterprise systems have not been reengineered to support HAMP in this manner.

Receiving Treasury subsidies would require new processes, involving mechanisms to reconcile amounts with Treasury and servicers and to adjust homeowner balances based on Treasury's forgiveness schedule. Related new operational controls, validation processes, investor reporting, and exception tracking would be required. In addition to making these changes to support HAMP PRA, the Enterprises would have to develop and publish new servicer guidance, train servicers on the new guidance, and establish new monitoring protocols to ensure compliance with program requirements and combat fraud.

These operational complexities and their associated costs are not trivial. The Enterprises report that HAMP PRA implementation would affect multiple systems in their technology infrastructure, including major applications, supporting models, databases and servicer interfaces. The master servicing, finance, accounting, credit loss management and data warehouse functions would also be affected, and extensive internal and servicer integration testing would be required.

Based on the Enterprises estimates for executing HAMP PRA, it appears that prudent implementation could cost approximately $70-90 million and could take a year or more to implement. Details of the Enterprises' respective level of effort required for HAMP PRA are described in each company's report to FHFA on implementing HAMP PRA. (Please see: Fannie Mae—www.fhfa.gov/webfiles/24107/PF_FannieMae73112.pdf; Freddie Mac—www.fhfa.gov/webfiles/24109/PF_FreddieMac73112.pdf.) Treasury has offered to pay the direct costs of implementation, but such payments, of course add to the cost to taxpayers.

There are also attendant opportunity costs that must be considered. Implementing a principal forgiveness program would involve the same Enterprise staff responsible for other required activities and existing initiatives, and divert them from projects that might better serve a larger population of homeowners in need of assistance. Of greatest concern are the servicing activities that are underway, which are focused on improving servicer performance in aggressively pursuing existing alternatives to foreclosure. Servicers would also experience opportunity costs and actual implementation costs as they too would be required to divert limited human and capital resources. Instead of devoting those resources to aggressively offering modifications, short sales, and deeds-in-lieu to homeowners in need now, servicers would re-direct them to implementing a new program with the Enterprises that would help too few borrowers in the future.

Conclusion

Existing Enterprise loss mitigation efforts provide opportunities for all types of underwater borrowers. For borrowers who have the ability and willingness to pay there is HARP, which as the result of recent changes has been helping an increasing number of underwater borrowers. For borrowers who do not have the ability but do have the willingness to pay, both HAMP and the Enterprises' proprietary modifications provide at least as much monthly payment relief as HAMP PRA. Finally, for borrowers who do not have the ability or willingness to pay, the Enterprises' foreclosure alternatives, either through short sales or deed-in-lieu of foreclosure, provide an opportunity to exit their home without the harm to their credit standing that foreclosure produces.

In terms of the Enterprises' adopting HAMP PRA, once the impact of strategic modifiers and the operational costs and complexity of implementing HAMP PRA were fully considered, the results of the model-driven analysis were insufficient to warrant the Enterprises participation in HAMP PRA. Both Fannie Mae and Freddie Mac conducted their own analysis of principal forgiveness, and that analysis is also being released by FHFA. The results are similar to those described above and in the appendix.