No. 09-1

A Proposal to Help Distressed Homeowners: A Government Payment-Sharing Plan

Chris Foote, Jeff Fuhrer, Eileen Mauskopf, and Paul Willen

Abstract:
This public policy brief presents a proposal, originally posted on the website of the Federal Reserve Bank of Boston in January of this year, designed to help homeowners who are unable to afford mortgage payments on their principal residence because they have suffered a significant income disruption and because the balance owed on their mortgage exceeds the value of their home. These homeowners represent a subset of the population of distressed homeowners, but according to our research they face an elevated risk of default and are unlikely to be helped by current foreclosure-reduction programs. The plan is a government payment-sharing arrangement that works with the homeowner's existing mortgage and provides a significant reduction in the homeowner's monthly mortgage payment. The plan does not involve principal reduction. Two options are presented; both are designed to help people with negative equity and a significant income disruption, such as job loss. In one version, the assistance comes in the form of a government loan, which must be repaid when the borrower returns to financial health. The second version features government grants that do not have to be repaid. In either case, the homeowner must provide evidence of negative equity in the home and of job loss or other significant income disruption. The costs of the plan are moderate, and the benefits should help not only the participating homeowners but also the housing industry, the financial markets, and the economy more broadly.

Chris Foote, Jeff Fuhrer, and Paul S. Willen are research economists at the Federal Reserve Bank of Boston. Eileen Mauskopf is a research economist at the Board of Governors of the Federal Reserve System.

This paper, which may be revised, is available on the web site of the Federal Reserve Bank of Boston at http://www.bos.frb.org/economic/ppb/index.htm

This version: July 9, 2009.
Previous version: February 10, 2009; original version: January 15, 2009.

A Proposal to Help Distressed Homeowners: A Government Payment-Sharing Plan

Chris Foote, Jeff Fuhrer, Eileen Mauskopf, and Paul Willen[1]
Federal Reserve System
January 15, 2009
Revised: February 10, 2009

Highlights of the plan

- The plan is designed to help homeowners who are unable to afford mortgage payments on their principal residence, because they have suffered a significant income disruption and because the balance owed on their mortgage exceeds the value of their home. These homeowners represent a subset of the population of distressed homeowners, but according to our research they face an elevated risk of default, and are unlikely to be helped by current foreclosure-reduction programs.[2]
- A major advantage of the plan is that it does not involve the loan originator, the investor pool, or a second lien holder and thus avoids a major stumbling block in some proposals.[3] As a consequence, the plan works well for both securitized and un-securitized mortgages.
- The plan is a government payment-sharing arrangement that works with the homeowner's existing mortgage. It provides a significant reduction in the monthly payment for the homeowner—no less than 25 percent and potentially much larger—which greatly exceeds the reductions afforded in loan modification programs to date. The plan is therefore more likely to be effective in preventing foreclosures.[4]

---

[1] Foote, Fuhrer, and Willen are research economists at the Federal Reserve Bank of Boston. Mauskopf is a research economist at the Board of Governors of the Federal Reserve System. The views and recommendations in this proposal do not necessarily reflect the official positions of the Boston Fed, the Board of Governors, or the Federal Reserve System.

[2] As described in the "Background" section, negative equity by itself does not necessarily result in default, unless the magnitude of negative equity is so large that the prospect of regaining positive equity is minimal. Defaults typically occur when negative equity is combined with a significant income disruption: the so-called "double trigger" model of default.

[3] For the difficulties involved in getting mortgage servicers to modify mortgages in securitized pools, see Cordell, Dynan, Lehnert, Liang, and Mauskopf, "The Incentives of Mortgage Servicers: Myths and Realities," Finance and Economics Discussion Series, 2008–46, Federal Reserve Board.

[4] In advancing temporary help to troubled borrowers, this plan is similar to the Homeowner Mortgage Support Scheme recently announced by the U.K. Treasury. Details on the U.K.

- The plan does not involve principal reduction.
- This document provides policymakers with two options for devising a shared government-payment program. Both options are designed to help people with negative equity and a significant income disruption, such as job loss. In one version of the plan, this help comes in the form of a government *loan*, which must be paid back when the borrower returns to financial health. The second version features government *grants* that do not have to be repaid. In either case, homeowners who participate must provide evidence that their home equity position is negative and that they have in fact suffered a job loss or other income disruption.[5]
- The costs of the plan are moderate, and the plan should be more politically acceptable than other foreclosure-prevention plans, because—in either version—it is more likely to prevent a large number of foreclosures. The plan will benefit not only the participating homeowners, but also the housing industry, financial markets, and the economy more broadly.

Background: The causes of mortgage defaults

An appropriate policy to reduce foreclosures requires an understanding of the primary causes of mortgage defaults. Foreclosures may occur for a variety of reasons, but our research indicates that they most often occur when two things happen at the same time. First, the homeowner must have *negative equity*, that is, she owes more on the house than the property is worth.[6] Second, the borrower must have suffered some *adverse life event* (for example, job loss, illness, or divorce) that makes it difficult for her to keep up with her mortgage payments. According to this "double trigger" model of default, negative equity by itself does not necessarily lead to default, unless the amount of negative equity is

---

Treasury plan can be found at http://www.hm-treasury.gov.uk/press_135_08.htm. We suggest an income disruption of 25 percent or greater because it represents a *significant* decline in income, such as the income reduction associated with job loss. In addition, restricting the program to borrowers who have suffered significant income loss limits the incentive to become unemployed in order to gain access to the program, as discussed below.

[5] The eligibility requirements for both versions of the program are the same, and clearly consistent with the "double-trigger" model of defaults. However, verifying that the household meets these requirements should be less onerous for the loan version of the program: Borrowers who have not suffered an income loss are unlikely to want to participate in the loan version, as they will incur a financial obligation to the government that generally makes them worse off than if they had not participated.

[6] A situation of negative equity is sometimes described as the owner being "underwater" or "upside down" on her mortgage.

extremely high.[7] Owners with negative equity who have not suffered adverse life events generally stay current on their mortgages, a strategy that is both consistent with economic theory and borne out in the available data.[8] However, negative equity is a necessary condition for default.[9] If a borrower has positive equity, she can generally sell or refinance her home if she suffers an adverse life event. The reason that foreclosures are rising today is that falling housing prices have increased the prevalence of negative equity at the same time that unemployment is rising. Thus, refinancing or selling the house and paying off the mortgage—traditional ways of mitigating a disruption of income—become impossible.

By this logic, the best way to prevent foreclosures is to offer borrowers *significant but temporary assistance* in paying their mortgages. Such assistance allows borrowers who are suffering adverse life events the chance to "get back on their feet" without having to give up their homes. Unfortunately, most foreclosure proposals today offer borrowers *moderate but permanent assistance*, through reductions in principal, interest, or both. These reductions are likely to be too small to do much good for many borrowers. For example, the recent loan modifications performed by the FDIC for troubled IndyMac borrowers reduced monthly payments by an average of only 23 percent of borrowers' monthly payments of principal and interest, an amount that would not be sufficient to keep an unemployed borrower current on her payments.[10] A borrower who has

---

[7] If the value of the house falls sufficiently below the balance of the mortgage, it may be rational to default even *without* any disruption to income. The reason is that the borrower will face little or no prospect of achieving positive equity in the home over a reasonable horizon. As house prices continue their decline, we may well see more such defaults. The proposals in this document are not intended to address defaults arising only from dramatically reduced equity positions. In fact, our sense is that such defaults are likely to be unpreventable.

[8] A research paper by Foote, Gerardi, and Willen (published in the September 2008 issue of the *Journal of Urban Economics*) studies the severe housing bust that took place in Massachusetts during the early 1990s. The paper finds that more than 90 percent of Massachusetts owners with negative equity at the end of 1991 avoided foreclosure over the next three years.

[9] Strictly speaking, defaults can be triggered by homeowners who suffer an income disruption and who have limited but still positive equity. The reason is that their equity may be insufficient to cover the transactions costs entailed in refinancing or selling their home. Thus, by negative equity we mean that the value of the home after paying these transactions costs is less than the outstanding balance of the mortgage.

[10] See "Statement of Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation on Oversight of Implementation of the Emergency Economic Stabilization Act of 2008 and of Government Lending and Insurance Facilities,'' Committee on Financial Services; U.S. House of Representatives; Room 2128, Rayburn House Office Building, November 18, 2008. Available at: http://www.fdic.gov/news/news/speeches/chairman/spnov1808.html.

lost his job may well be unable to pay 77 percent of his mortgage.[11]

The government payment-sharing plan described below is informed by the double-trigger theory of default, so it is likely to be considerably more effective in preventing defaults and foreclosures than other recent proposals. In effect, the government would provide liquidity to temporarily troubled borrowers because the private market is currently unable or unwilling to do so. In this sense, it is not unlike the steps the government has taken in shoring up financial institutions or nonfinancial firms who borrow via commercial paper markets. As noted, there are two versions of the plan that differ according to the degree to which the homeowner repays the government for its assistance; both versions include features designed to significantly limit moral hazard problems.

Features common to both versions of the plan

1. Upon determination of eligibility (described below), the government pays a significant share of the household's current mortgage payment directly to the mortgage servicer. (This share will vary case by case, depending on the borrower's circumstances, and will be at least 25 percent and may be 50 percent or more.) The government assistance allows the borrower to remain current on her mortgage by making the household's share of the payment affordable, given the household's compromised income.
2. The government's share of the mortgage payment is equal to the percentage decline in family earned income. For example, a household that loses fifty percent of its earned income (and for simplicity receives no unemployment insurance) will receive a government payment equal to 50 percent of its monthly mortgage payment.
3. In both cases, the plan requires proof of a recent and *significant* income disruption—we suggest 25 percent or greater. One way this could be verified would be for the state unemployment insurance office to provide evidence that the borrower has registered for unemployment insurance; tax statements and monthly income statements could also be referenced for evidence of a loss of income. In the grant version of the plan, this

[11] Some programs may be unable to lower the monthly payment by as much as 50 percent, because such a reduction would violate the so-called "net present value rule" in the servicing agreement—that is, that the net present value to investors of the modified loan must be greater than the net present value likely to be obtained from foreclosure, or from other routes available in disposing of the property, such as a short sale.

requirement is critical in order to address the moral hazard problems discussed below.

4. Upon resumption of the borrower's normal income stream, the government ceases payment sharing. The assistance terminates after two years, sooner if the borrower's income stream recovers before then.
5. The plan caps the maximum payment (in dollars) that the government will pay. The plan is not designed to provide mortgage assistance to homeowners from the very high percentiles of the income or wealth distribution who can use non-housing assets to make their mortgage payments or who can relocate to more modest homes commensurate with their reduced income. A plausible cap for the maximum monthly payment is $1500, but the amount will vary by region, reflecting regional variations in home prices and loan balances.[12]

Eligibility requirements and the form of government assistance

Any plan that offers significant help to individual homeowners must confront difficult design challenges. The most important of these is designing a program that helps homeowners in need without inadvertently providing incentives for other homeowners to take unfair advantage of the program—the so-called "moral hazard" problem. This concern is particularly acute when the government assistance takes the form of grants.

Consistent with the double-trigger model of defaults, the program would require that the homeowner have very little or negative equity. Specifically, the government would determine, in conjunction with servicers and available house price or appraisal data, whether the borrower meets this criterion. Homeowners

---

[12] This cap is based on data suggesting that the average loan balance on seriously delinquent loans is about $200,000 and the average interest rate on such loans is about 7.7 percent. Assuming a 30-year term for the loan implies a monthly principal and interest payment of $1426, not including payments for property tax or private mortgage insurance. It would be reasonable to allow the dollar value of the government cap to vary according to the median house price by SMSA. Thus, for example, suppose we use the round number of $1500 for the cap for a house in an SMSA where the median-priced house is at the national average of median house prices: For a house in a SMSA where the median-priced house is 30 percent above the national average, the maximum monthly payment by the government would be $1950, 30 percent higher than the national average. One might consider truncating the regional variation in the cap, as this would help to limit the incidence of moral hazard in areas where the ratio of house price to income is higher than elsewhere – that is, it lessens the probability that the government payment would be high enough to convince some homeowners to leave employment or to turn down job offers.

with significant positive equity generally have options available from private lenders to avoid foreclosure, as discussed above.

But any homeowner with negative equity would want the government to pay part of her mortgage, even if she has not suffered an income disruption and has no intention of stopping payment. To mitigate this potential problem, both versions of the plan require documentary evidence of a significant reduction in family income (such as job loss) before a homeowner is allowed into the program.[13] Further safeguards are embedded into the different versions of the plan to ensure that aid is efficiently directed to those intended to be served by the program. Thus, in the loan version of the plan, the interest rate on the government loan would be set to reflect the elevated risk the government bears in lending to this subset of homeowners; as such, the interest rate is likely to be higher than the rate homeowners with access to private-sector loans would have to pay, effectively discouraging their participation in this program. In the grant version of the plan, the pool of eligible participants would explicitly exclude those homeowners who are likely to have sufficient assets to carry them through the period of income disruption.

<u>Version 1: Payment sharing via government loans</u>

The government loan program would work as follows:

1. The government's payments on the household's behalf accrue to a loan balance, which is repaid to the government with interest at a future date. The interest rate on the government loan appropriately reflects the risk entailed in lending to the borrower, and thus may be above the rate on prime mortgages. This latter provision should serve as a deterrent to borrowers who would wish to unfairly take advantage of a shared-payment program.
2. Government payments end when the homeowner's income stream has been restored, or after two years, whichever is sooner. Because the household's mortgage payments may rise over time (perhaps because an ARM resets), the

[13] Households who are unemployed and are currently receiving unemployment benefits will qualify in this dimension by obtaining documentation from the unemployment insurance office. Households who have exhausted benefits and are not currently on the rolls must provide documentation that they became unemployed at some time in the past two years. All households who wish to be eligible for the program must provide income tax information that allows the government to verify a significant loss of earned family income (i.e., 25 percent or greater). The self-employed will, in general, not provide evidence of receiving unemployment benefits.

government's payment on behalf of the household is capped at a predetermined amount. When the borrower stops receiving government payments, she begins repaying them (perhaps after a brief grace period) and has up to five years to do so.[14]

3. If at any time the homeowner sells the home for more than the value of the mortgage balance, then the government has first claim on any equity that remains after the mortgage balance has been paid off, up to the value of the loan balance, including accrued interest.
4. If, at the end of the term of the loan, the homeowner still cannot afford to pay the monthly payment on the original mortgage, the investors/servicers have the option to begin the foreclosure process.
5. If necessary to secure repayment, the government would exercise recourse that is similar to that which it exercises in obtaining payment on government-insured education loans.[15] For example, the government could place liens on the future income of nonpaying borrowers.

<u>Version 2: Payment sharing via government grants</u>

The government grant program would work as follows:

1. The government provides a fraction of the monthly payment (at least 25 percent, and in many cases much larger) on behalf of the homeowners for up to two years, and does not require repayment.
2. As in the loan version of the plan, we propose that the income reduction be shown to represent a 25 percent or greater reduction in family income, thus qualifying as a "significant" income reduction. Proof of significant income reduction is particularly critical for the grant version of the plan, as it reduces the possibility that individuals who earn a small share of family income might attempt to gain access to the program by becoming unemployed, thereby lowering their family income marginally but receiving a large share of their mortgage payment.

---

[14] Depending upon the interpretation of tax law, the government's payments on behalf of the household may qualify as a deduction against the *household's* income in the year that the government payments are paid. Alternatively, the government may choose to allow future repayments to the government to qualify as deductions against future household income. In any case, the interest paid on the government loan would not qualify as deductible.

[15] Federal student loans can be discharged without payment in a limited number of circumstances, including death and permanent disability. Student loans are not forgiven if a borrower declares bankruptcy, unless a bankruptcy court decides that the loan constitutes an "undue hardship" to the borrower.

3. This version of the program includes an income limit to exclude from eligibility those households who have significant assets which could be used to keep current on their mortgage obligations in the event of a disruption to income. Hence, homeowners whose adjusted gross income (on average in the two years prior to income disruption) exceeds some to-be-specified multiple of median family income in 2008 would not be eligible.[16] Screening by income is an admittedly imperfect device to identify those homeowners with significant assets, and policymakers may wish to refine this criterion.
4. Government grants end when the homeowner's income stream has been restored or when the two-year limit on payments is reached.
5. It is unlikely that many will find it advantageous to become unemployed in the current environment so as to qualify for this program, strongly limiting the number of "dead-beat" borrowers who might wish to take advantage of the program.

Advantages of the payment-sharing plan

1. We believe that the plan will stop most preventable foreclosures from occurring. This benefits everyone, first of all the borrower, but also the lender/investor, communities with many distressed homeowners, and the financial markets more broadly.
2. The plan provides a significant reduction in the homeowner's payment during the period of income loss, a distinct advantage over existing loan modification programs. The re-default experience of the existing programs has been disappointing and likely owes in part to modifications that either lower payments insufficiently or even raise monthly payments (by adding missed payments to the outstanding loan balance and amortizing them over the life of the loan).
3. The plan does not depend on lender/servicer or second lien-holder cooperation, a major stumbling block to making aid available to a wider group of distressed homeowners. The plan works equally well for individual loans held in portfolio and for securitized loans.

---

[16] The income limit could be set to be consistent with existing tax programs where benefits phase out at higher income levels. Thus, a multiple of three or four times median income might be appropriate. Note that we do not impose an income cut-off in the loan version of the program, because individuals with significant assets would find it disadvantageous to borrow from the government at the above-prime interest rate that the government would require on such loans.

4. The private lender should be considerably better off under this plan than with foreclosure, as it holds the promise of up to two years of payment in full on the mortgage that would not otherwise occur. When the government aid terminates, the state of the housing market is likely to have recovered to the point where, even if foreclosure cannot be avoided, the disposal of the property results in a higher price that it would today.
5. In contrast to a program like "Hope for Homeowners," the plan does not require lenders/investors to take writedowns.

Disadvantages of the payment-sharing plan

1. The plan is unlikely to stop homeowners with very large negative equity positions—say 40 percent or greater—from defaulting when government aid ends. But, it is unclear whether any program can or should prevent such foreclosures. Indeed, to the extent that such foreclosures are ultimately unavoidable, this plan may delay such an outcome, without any guarantee that such a delay is beneficial on either economic or social concerns.
2. Other potential disadvantages are specific to the way government assistance is delivered. When the assistance takes the form of loans, some borrowers who need help may be wary of taking out a government loan and may choose to default instead. However, extending grants instead of loans means that moral hazard problems could be more serious, even though the plan reduces moral hazard by requiring evidence of a significant income disruption and by limiting the family income of participants.
3. Administering this program would likely require some cooperation from the mortgage servicer, who could provide outstanding loan balances for applicants. The program would also require obtaining reasonably accurate home price information for each applicant, in order to estimate the current equity position of the homeowner. The government could offer some payment to the servicer for performing this function. The authors will provide a separate document that discusses options for administering the program.

Estimated cost of the plan

The cost of the plan depends on which version policymakers choose—loans or grants. The cost is perhaps easiest to estimate when the assistance takes the form of grants. The civilian labor force is about 155 million persons. If the unemployment rate rises to 8 percent by mid-2009, then this implies that roughly 12.4 million workers will be unemployed. An upper bound on the share of unemployed persons who are likely to be homeowners is the national homeownership rate of about 68 percent, which suggests 8.4 million unemployed homeowners.[17] A very generous upper bound on the share of unemployed homeowners who are likely to have negative equity is 35 percent, which implies that about 3 million persons would be eligible for the program. According to nationwide data on individual mortgages, the average mortgage balance of those who are 60+ days delinquent is approximately $200,000, and the average interest rate on such mortgages is 7.7 percent.[18] Assuming a 30-year amortization schedule, the average yearly payment on these delinquent mortgages is $17,111. If the government pays 50 percent of the yearly cost on average, then the cost to the government of providing help to 3 million homeowners is about $25 billion annually, perhaps $50 billion overall.[19]

The cost of the program under the loan version would be significantly smaller. Indeed, if all participants paid back their government loans, the program would cost virtually nothing in present value, since all government outlays (aside from administrative expenses) would be recouped. Some borrowers, however, will default on their loans and the government may therefore incur substantial unrecovered costs (but certainly less than the aforementioned $50 billion). It is hard to estimate the degree of default on these loans, but these defaults are likely to be substantially smaller than the re-defaults common in existing programs, because the payment-sharing plan extends more assistance.

[17] The number of houses/mortgages involved would be smaller if both spouses lost their jobs.
[18] The interest rate estimate of 7.7 percent is the average interest rate on loans that are currently 60 or 90+ days delinquent, according to a loan-level dataset purchased from Lender Processing Services, Inc (LPS). The FDIC estimates an outstanding balance of seriously delinquent loans of $200,000, which is close to average the balance we find in LPS data ($172,450).
[19] Payments to servicers for providing borrower information would not raise costs significantly. A $500 payment for each of 3 million loans would increase the cost by $1.5 billion.