| CHAPTER TWELVE |

Crisis-Era Housing Programs

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INTRODUCTION

Housing was at the center of the financial crisis. Losses from financial instruments based on defaulted mortgages were the initial spark that started the downturn, while the corresponding wave of foreclosures led to some of its most profound and long-lasting consequences for American families. Credit expansion, including through subprime and Alt-A mortgage products, gave rise to mutually reinforcing increases in home prices and household debt, creating an unsustainable situation that began to unwind after house prices peaked in 2006.[1] As prices flattened, then declined, and the economy entered a recession

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1. Subprime loans are made by creditors that specialize in lending to borrowers with FICO scores generally below 620. Alt-A loans do not meet standard underwriting guidelines; for example, many Alt-A loans lack full documentation of borrower income or have unusual features such as nonamortizing monthly mortgage payments.

that led to widespread job losses, it became more difficult for homeowners to refinance or service their mortgages. Defaults grew, first in the subprime sector and then more broadly.[2] With the expiration of teaser rates, many homeowners faced further challenges from increasing monthly mortgage payments. A vicious cycle of rising defaults, sinking home prices, and declining housing construction led to immense losses on housing-related assets, pushing the undercapitalized financial system to the brink of collapse.

A broad set of policies and initiatives stabilized and improved housing markets during the crisis. Under the July 2008 Housing and Economic Recovery Act (HERA), the Treasury provided backstops to the government-sponsored enterprises (GSEs)—Fannie Mae and Freddie Mac—that ensured mortgage financing remained available even as many financial markets experienced severe strains and as mortgage funding outside the government-guaranteed sector dried up. Capital injections through the Troubled Assets Relief Program (TARP) stabilized a wide range of financial institutions, including some of the largest that played key roles in the mortgage market. Monetary policy easing by the Fed, which included purchases of mortgage-backed securities (MBS) as part of quantitative easing (QE), aided millions of homeowners and housing markets more broadly by driving down interest rates and supporting the overall economy. Fiscal stimuli enacted in January 2008 and February 2009 (and thereafter) supported consumer and business spending. A common criticism of the Bush and Obama responses to the crisis is that too much attention was focused on financial institutions at the expense of individual homeowners, but helping homeowners required stabilizing the financial system and ensuring that the mortgage market continued to function.

The focus of this chapter is on policies aimed at helping homeowners avoid foreclosure. Some programs were put in place during the Bush administration: HERA and the Emergency Economic Stabilization Act (EESA), enacted in October 2008, provided authorities and funding that were eventually used to implement a wide range of housing-related programs. But the main use of taxpayer funds for foreclosure prevention started in 2009. Within its first few weeks, the Obama administration announced programs aimed at helping

2. "S&P/Case-Shiller U.S. National Home Price Index," S&P Dow Jones Indices, McGraw Hill Financial, accessed Jan. 18, 2019, http://us.spindices.com/indices/real-estate/sp-case-shiller-us-national-home-price-index.

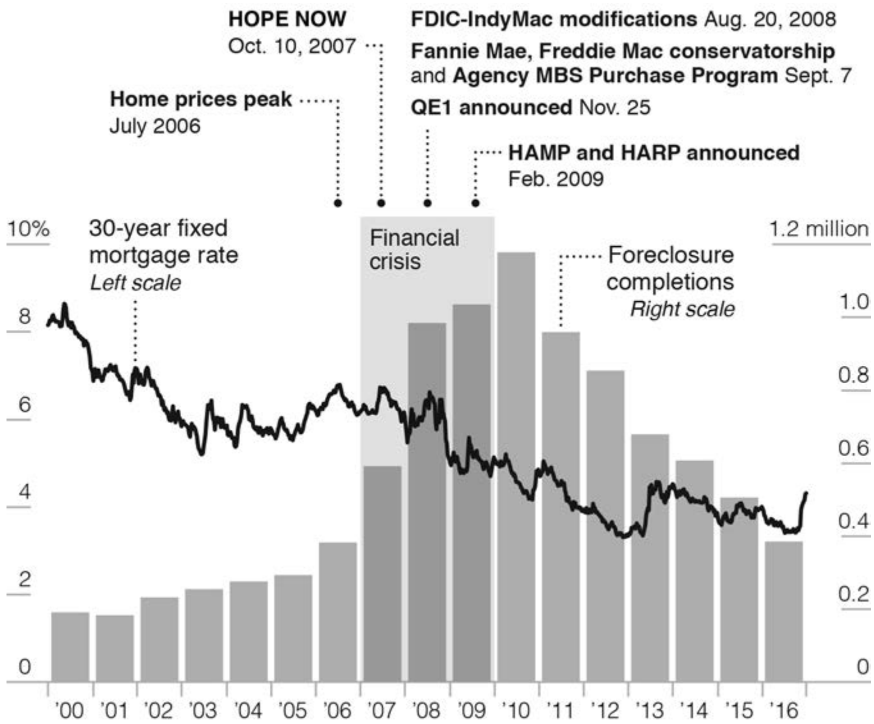

Figure 12.1 Programs, Mortgage Rates, and Foreclosure Completions

Note: Acronyms used in this figure are defined in the list of abbreviations at the front of this book.

Sources: Mortgage rates: Freddie Mac via Federal Reserve Economic Data; foreclosure completions: CoreLogic

homeowners, notably the Home Affordable Refinance Program (HARP) and the Home Affordable Modification Program (HAMP). Efforts to improve these programs continued for years. The administration also sought to catalyze modifications of GSE-guaranteed mortgages outside of TARP, launched a new Federal Housing Administration (FHA) refinance program, and provided funds to state and local Housing Finance Agencies and Community Development Financial Institutions (CDFIs) to support their responses to the foreclosure crisis. Efforts in some of these dimensions, such as expanded use of FHA refinancing, were also undertaken during the Bush administration. Figure 12.1 illustrates a timeline of major programs as well as the level of mortgage rates and foreclosure completions.

Despite these programs and the broad-based effort to overcome the crisis, federal housing policy was widely seen as having been unsuccessful because the programs prevented fewer foreclosures than predicted and produced results at a slower pace than expected. Millions of foreclosures took place. Americans suffered greatly during the crisis, and this experience has had a long-standing effect on housing choices as well as the opportunities available to households to get access to mortgage credit.

We understand critics' frustration with mortgage modifications: The policy responses did not resolve the housing crisis and were not as effective as hoped or predicted. Even so, foreclosure prevention policies were more consequential than commonly thought, with positive impacts on millions of families, and the full suite of housing-related policies together contributed to the housing market and macroeconomic recovery. Although HAMP directly reached only a third of delinquent borrowers with government-subsidized loan modifications, private-sector modifications modeled on HAMP but not involving taxpayer money helped many others, as did other GSE, FHA, and other governmental modification programs.[3] The programs we implemented led to 8.2 million mortgage modifications, 9.5 million targeted refinancings, and 5.3 million other mortgage assistance actions.

Future policymakers can learn from these responses, specifically from how our thinking evolved as the crisis unfolded. With uncertain data and analytic frames, we proceeded with the options we thought would best serve the most people. In hindsight, pushing more quickly to bolder options would have been better. At the same time, legal and operational constraints affected the policy responses, and political constraints limited our ability to obtain new authority to overcome some of the obstacles we faced.

DIAGNOSING THE PROBLEM AND CONSTRAINTS

Figure 12.2 summarizes some of the key variables that affected our policy choices: house prices, consumer bankruptcy filings, the initial notices of default (NOD) that marked the start of the foreclosure process, and the delinquency rate on mortgages. During the peak years of the foreclosure crisis, from 2007 to

3. Sumit Agarwal, Gene Amromin, Itzhak Ben-David, Souphala Chomsisengphet, Tomasz Piskorski, and Amit Seru, "Policy Intervention in Debt Renegotiation: Evidence from the Home Affordable Modification Program," *Journal of Political Economy* 125, no. 3 (2017): 654–712.

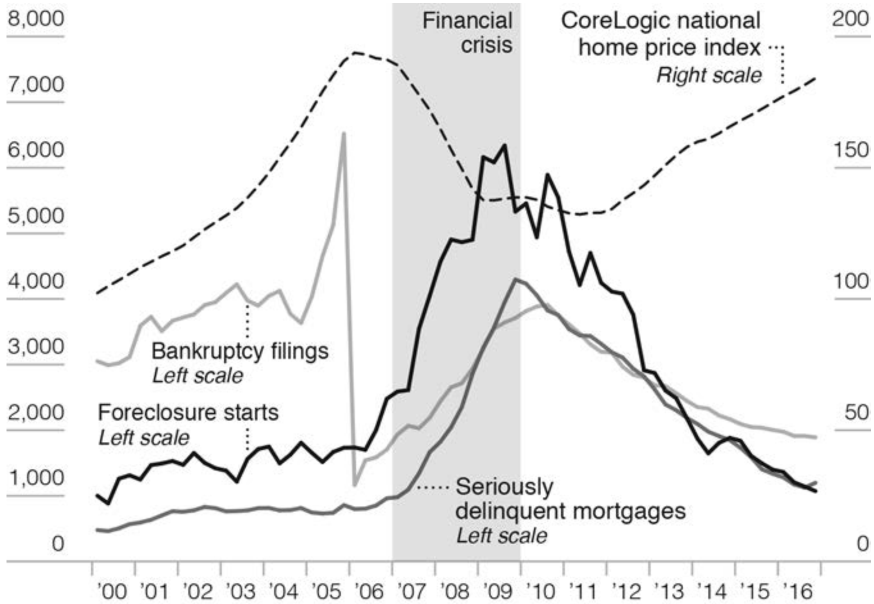

Figure 12.2 **Housing Market Trends during the Crisis**

Note: U.S. Courts Chapter 7 and Chapter 13 bankruptcy filings as well as foreclosure starts are charted in hundreds. Seriously delinquent mortgages are charted in thousands.

Sources: Bankruptcy filings: U.S. Courts; foreclosure starts and seriously delinquent mortgages: Mortgage Bankers Association National Delinquency Survey; CoreLogic House Price Index: CoreLogic via Financial Accounts of the United States, Federal Reserve Board (Z.1 Release)

2010, about 5.8 million households received their first NODs, compared with 2.5 million during the precrisis period, suggesting something like 3.3 million additional foreclosure starts attributable to the crisis itself (Table 12.1). Many, but not all, of these initiated foreclosures ultimately forced households out of their homes, causing harm to the families affected and to their communities.

Several factors explain the high level of foreclosures during the crisis, including changes in mortgage origination practices, serious problems in mortgage securitization, the speculative nature of the housing boom, and then, as the boom turned to bust, rapidly falling house prices combined with widespread job losses. Most obviously, large volumes of mortgages were originated requiring little equity on properties where values were stretched, and with not enough attention to borrowers' ability to pay. Although such origination prac-

Table 12.1 Foreclosures before and during the Crisis

Years	Foreclosures started (in millions)	Households receiving first notice of delinquency (in millions)	Difference: Proxy for investor-owned (in millions)
Precrisis (2003–2006)	2.7	2.5	0.2
Crisis (2007–2010)	7.8	5.8	2.0
Difference: "Excess" foreclosures	5.1	3.3	1.8

Sources: Foreclosures started: Mortgage Bankers Association National Delinquency Survey; households receiving first notice of delinquency: Equifax, Federal Reserve Bank of New York

tices became widespread throughout the industry, they were particularly prevalent in loans destined for securities packaged through so-called private mortgage conduits, meaning by companies other than the GSEs or the government-backed loans of the FHA and the Department of Veterans Affairs. As shown in Figure 12.3, these private-label mortgages formed a growing share of total mortgages outstanding from the late 1990s through 2006. But by the time the GSEs were put into conservatorship in September 2008, the private-label market driven by securitization had collapsed.

Some of the worst underwriting practices were evident among the subprime sector, but the misconduct was especially notable in Alt-A lending and beyond. Although subprime losses were large, they alone do not account for the magnitude of the Great Recession.[4] The recession's depth and severity were the result of losses from poorly underwritten mortgages hitting an economy that featured overextended households, highly leveraged financial institutions, and large volumes of assets held in unstable funding structures vulnerable to runs. Moreover, basic information was lacking on the extent of poorly underwritten mortgages and their distribution through the system, feeding contagion across institutions and sectors. The system was highly interconnected because

4. Statement by Ben S. Bernanke, chairman of the Board of Governors of the Federal Reserve System, before the Financial Crisis Inquiry Commission, Sept. 2, 2010, https://www.federalreserve.gov/newsevents/testimony/bernanke20100902a.pdf.

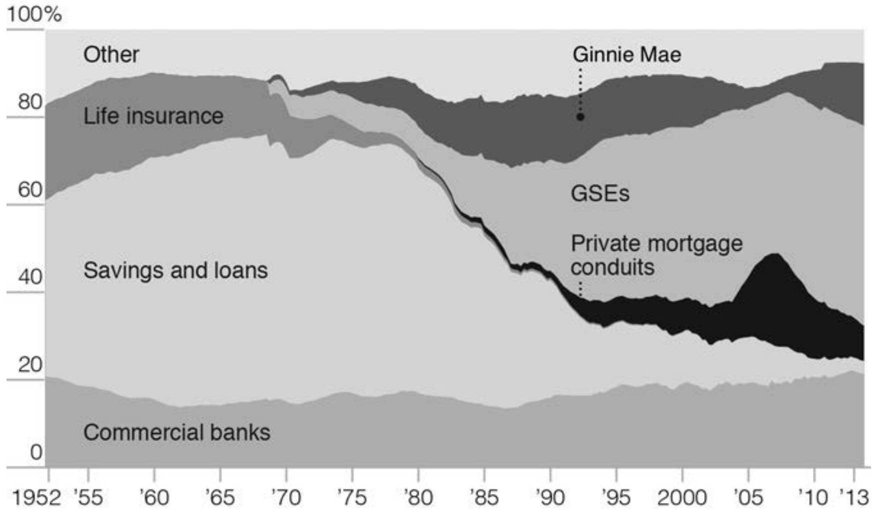

Figure 12.3 **Distribution of Outstanding Single-Family Mortgages**

Note: GSEs are government-sponsored enterprises.

Source: Michael S. Barr, Howell E. Jackson, and Margaret E. Tahyar, *Financial Regulation: Law and Policy, Second Edition* (St. Paul, MN: Foundation Press, 2018), relying on original chart from Laurie Goodman, "A Realistic Assessment of Housing Finance Reform" (Washington, D.C.: Urban Institute, 2014)

risk was spread throughout the financial sector in asset-backed securities, derivatives, and collateralized debt obligations.

Diagnosing the problem in real time was difficult. Basic data of the kind we now take for granted were not available. Thus, estimates of total losses, the distribution of those losses, the extent and distribution of negative equity, and other key statistics were subject to even greater uncertainty than normal. Further, there was no consensus at the time on the degree to which households defaulted strategically—responding to negative equity or program eligibility requirements—rather than when faced with cash flow problems that made it impossible for them to make their monthly payment. Contemporaneous evidence, including a host of anecdotes, supported both views. We fundamentally did not know whether the most important problem was household cash flow or negative equity.

The policy responses of both administrations were also seriously hampered by a series of practices within the industry that had grown during the credit boom.

First, commonly used securitization structures frustrated attempts to modify loans. Private-label securities, at their peak, had bundled loans worth a quarter of mortgage debt outstanding (Figure 12.3); an even larger share of the most troubled mortgages, notably subprime and Alt-A, were securitized in the private-label system. In such securitizations, the underlying mortgages were transferred to a special purpose vehicle (SPV) that issued securities backed by the cash flows from these mortgages, including regular monthly payments, the proceeds of refinancings, and any prepayment penalties or other fees. Ownership of these securities was highly dispersed, and the timing and priority of payments to various securities often resulted in sharply differing incentives to modify the underlying loans. Further, the legal structure of the SPVs did not allow for large-scale changes in the underlying loans, and in many structures, modifications were prohibited or severely restricted. The SPVs were designed to operate entirely on automatic pilot, with no active management by the securitizing institution, the trustee, or in many cases the servicers of the underlying loans. Each SPV was overseen by a trustee, typically a large bank. Trustees acted as custodians and undertook additional administrative functions but were not expected to broker deals among owners of the SPV or between the SPV and the government.

Second, the holders of junior liens had to agree to foreclosure alternatives such as loan modifications, presenting both operational hurdles and a classic "hold up" problem, meaning that junior lien holders could try to block modifications. Gerardi et al. show that the use of junior liens was instrumental in permitting the increase in leverage among subprime borrowers; nearly 30 percent of subprime loans at their peak originated simultaneously with a second lien.[5] Because of underreporting, the true prevalence of such loans was higher. In principle, once house prices had fallen sufficiently to wipe out their equity, junior liens should have been worth very little; nonetheless, the lien holder's consent was required for modification programs, effectively giving them a veto. Moreover, distressed homeowners were surprisingly likely to make payments on a junior lien even after having gone delinquent on the senior lien, presumably because the payment was smaller and thus easier to meet. In cases where junior lien holders were getting paid, they had little incentive

5. Kristopher Gerardi, Andreas Lehnert, Shane M. Sherlund, and Paul Willen, "Making Sense of the Subprime Crisis," Brookings Papers on Economic Activity, 2008 (2), 69–159.

to cooperate. Addressing this problem required time and resources during the design and implementation phases of the mortgage rescue programs.

A third hurdle was the lack of capacity or willingness among many mortgage servicers to modify loans. Indeed, had the lower end of the servicer spectrum been as effective as the top tier, the number of permanent modifications would have been 70 percent higher. Yet the performance of even the best servicers fell well short of what we expected.[6] Servicers had not anticipated the need to undertake large-scale actions to modify loans to avoid foreclosures, so they did not have the resources or systems needed for the efforts they were called on to make (and which, indeed, they were contractually obligated to make). Problems in servicing were widespread and a tremendous obstacle to the implementation of policies aimed at avoiding foreclosures. We knew servicers were ill-equipped to handle the foreclosure crisis, but we underestimated how badly they would perform, effectively preventing hundreds of thousands of borrowers from obtaining relief to avoid foreclosure. This was later revealed in spades, as the robo-signing scandals and subsequent lawsuits showed just how badly the mortgage servicers performed.

Fourth, policy coordination within the administration, across states, and with independent agencies, including the Federal Housing Finance Agency (the newly created regulator of the GSEs, known as FHFA, which effectively controlled Fannie and Freddie in conservatorship), was difficult. No one entity had full authority to act, and several key agencies were independent.

Fifth, compliance and administration costs were large, creating frictions that reduced the effectiveness of our programs. Congress; the Special Inspector General for the TARP (SIGTARP), the internal auditor responsible for monitoring the program; Treasury; FHFA; and others were focused on preventing fraud and ensuring appropriate use of taxpayer dollars—laudable goals—but this instilled a caution and paperwork burden that made it much harder to scale up a program in the midst of the crisis.

Last, there were trade-offs between using the limited funds available for homeowner assistance or for broader financial stability initiatives.

As policymakers we understood the interplay between macrolevel and microlevel policy. The impacts ran in both directions. Mortgage modification and refinancing programs could help stabilize financial markets and improve the broader economy, while policies that brought an improved economy and fi-

6. Agarwal et al., "Policy Intervention in Debt Renegotiation."

nancial sector would help stabilize housing markets and assist individual families. While recognizing the intensity of the political opposition to mortgage modifications (many saw them as unfair to responsible homeowners who paid their mortgages and had not overextended themselves), we viewed reducing the negative externalities from foreclosure as the right thing to do as a matter of economic policy. It was also morally fair to the many troubled borrowers who had been taken advantage of in the mortgage process. Even so, we took care to ensure that public subsidies were targeted to homeowners rather than to investors, and we focused on homeowners who had the financial wherewithal to stay in their homes with a reasonable amount of assistance. We recognized that not every foreclosure could (or should) be avoided, although families and communities affected would need further help.

Homeowners with securitized subprime and Alt-A loans suffered disproportionately from foreclosures early in the housing bust, although the problems spread throughout the housing sector as job losses spiked and the Great Recession set in. In principle, securitizations could replicate the incentive structure built into old-fashioned bank lending, but in practice, misaligned incentives, lack of transparency, misrepresentation, and fraud, as well as credit rating agency abuses, caused widespread harms. In addition, as one can see from Figure 12.2, consumer bankruptcy filings plummeted after the 2005 legislation that restricted access to bankruptcy court, perhaps providing consumers with less flexibility in coping with their consumer debts and contributing to pressures on mortgage payments and increasing delinquencies.[7] Moreover, even those homeowners who managed to file for protection could not modify their mortgages in bankruptcy. All of this limited the power of homeowners in negotiating mortgage restructuring. Political constraints in getting Congress to change the law were significant—and there is still a vigorous debate about whether a change is desirable.

Despite all these challenges, the policy responses helped millions of borrowers, lessened the severity of the financial crisis, and contributed to the stabilization of the housing sector and to the macroeconomic recovery. The choice to reduce monthly mortgage payments rather than to write down mortgage principal turned out to be much more cost-effective for a given amount of

7. Michelle White, Wenli Li, and Ning Zhu, "Did Bankruptcy Reform Cause Mortgage Defaults to Rise?," *American Economic Journal: Economic Policy* 3 (2011): 123–47, http://econweb.ucsd.edu/~miwhite/AEJ_Policy_Li_White.pdf.

taxpayer dollars.[8] At the time, we wanted to experiment more with principal reduction, but we were worried initially about blowing through available resources and were blocked later by FHFA objections to letting the GSEs engage in principal reduction. Even so, although the focus on payments was the right approach from the perspective of the efficiency of taxpayer resources, it is possible that the overhang of negative equity affected consumer spending and slowed the economic recovery.[9]

POLICY RESPONSE: DESIGN AND IMPLEMENTATION

During the Bush administration, we organized and led private-sector initiatives (that is, not involving taxpayer funds) that sought to make it easier for homeowners and servicers to modify private-sector mortgages, and acted to promote refinancing into FHA-backed mortgages. We introduced a national hotline in 2007 to make beginning a modification easier, as well as a private-sector-led program, HOPE NOW, which helped homeowners obtain modifications that, among other things, allowed some to delay or limit interest rate resets. In the fall of 2007, we worked with Congress to enact bipartisan tax legislation that allowed homeowners who benefited from the reduction of principal on their mortgage debt as part of a restructuring to avoid paying the capital gains tax on the debt extinguishment. This legislation helped all later programs that addressed negative equity.

Housing-related policies ramped up significantly starting in the summer of 2008, as the number of foreclosures continued to increase.[10] The most visible

8. Among those supporting this view are Therese C. Sharlemann and Stephen H. Shore, "The Effect of Negative Equity on Mortgage Default: Evidence from HAMP's Principal Reduction Alternative," *Review of Financial Studies* 29, no. 10 (2016): 2850–83, https://academic.oup.com/rfs/article/29/10/2850/2223370; Janice Eberly and Arvind Krishnamurthy, "Efficient Credit Policies in a Housing Debt Crisis," Brookings Papers on Economic Activity, Fall 2014, https://www.brookings.edu/wp-content/uploads/2016/07/Fall2014BPEA_Eberly_Krishnamurthy.pdf; and Peter Ganong and Pascal Noel, "Liquidity vs. Wealth in Household Debt Obligations: Evidence from Housing Policy in the Great Recession" (NBER Working Paper, 2018), http://www.nber.org/papers/w24964.
9. Atif Mian and Amir Sufi, *House of Debt: How They (and You) Caused the Great Recession, and How We Can Prevent It from Happening Again* (Chicago: University of Chicago Press, 2014).
10. Ben S. Bernanke, "The Crisis and the Policy Response" (speech at the Stamp Lecture, London School of Economics, London, England, Jan. 13, 2009), https://www.federalreserve.gov/newsevents/speech/bernanke20090113a.htm.

policy response was the enactment of HERA, which established the FHFA (taking over for the GSEs' previous regulator), increased supervisory authority over Fannie and Freddie, and gave the agency the power to put each GSE into conservatorship or receivership. HERA also authorized Treasury to provide support for Fannie and Freddie.[11] Backing the GSEs was essential to stabilize these institutions, which had $5.4 trillion in securities outstanding, and was critical to maintaining a vital source of mortgage financing during the crisis. The administration's view at the time, later summarized by Treasury secretary Henry M. Paulson, Jr., was that the GSEs "more than anyone else were the engine we needed to get through the [housing markets] problem."[12]

In early September, both Fannie and Freddie were taken into conservatorship by their independent regulator, and the Treasury committed $200 billion to ensure the continued operation of the GSEs as their capital positions deteriorated.[13] (The Obama administration later doubled that amount, to a total of $400 billion in February 2009, and let it float up further at the end of that year; by the end of 2012, Treasury's backstop of Fannie and Freddie totaled $445.5 billion.)[14] Fannie and Freddie were essential to housing markets and the economy; it was crucial to have these firms operating both to ensure the continued flow of mortgage credit and to serve as vital participants in mortgage modification programs.

HERA also authorized a new program called Hope for Homeowners, which sought to help up to 400,000 homeowners through FHA refinancings and lender write-downs of mortgage principal. The actual impact, however, was minuscule, largely because the program was hobbled by design flaws in the legislation that overly restricted borrower eligibility and made it more expensive for lenders to participate than to take other modification actions or to foreclose.

11. Housing and Economic Recovery Act, 12 U.S.C. § 4501.
12. Interview with former Treasury secretary Henry M. Paulson, Jr., Financial Crisis Inquiry Commission, April 2, 2010, http://fcic-static.law.stanford.edu/cdn_media/fcic-docs/2010-04-02%20FCIC%20memo%20of%20staff%20interview%20with%20Henry%20Paulson,%20U.S.%20Treasury.pdf.
13. Statement by Secretary Henry M. Paulson, Jr., on Treasury and Federal Housing Finance Agency Action to Protect Financial Markets and Taxpayers, Sept. 7, 2008, https://www.treasury.gov/press-center/press-releases/Pages/hp1129.aspx.
14. Michael S. Barr, Howell E. Jackson, and Margaret E. Tahyar, *Financial Regulation: Law and Policy,* 2nd ed. (St. Paul, MN: Foundation Press, 2018), 1289.

In October 2008, after the failure of Lehman Brothers and the rescue of American International Group (AIG), Congress passed the Emergency Economic Stabilization Act (EESA), authorizing the deployment of up to $700 billion in several tranches and giving "the Treasury Secretary broad and flexible authority to purchase and insure mortgages and other troubled assets."[15] EESA authorized TARP, which, in addition to being used for financial stability initiatives, eventually was used to implement a range of mortgage- and housing-related programs. The priority of TARP under the Bush administration was to prevent the collapse of the financial system, which is why the first $350 billion made available to the Treasury was used to inject capital into banks and other financial institutions (and then later to provide bridge financing to General Motors and Chrysler to prevent the collapse of the two automakers). Democrats in Congress made clear that they expected TARP funding to support a program for homeowner relief. Incoming Obama administration officials started to study the issue, conferring with Bush Treasury staff, consumer and community groups, think tanks, and academic experts, and many others during the transition about various options.

There was no existing infrastructure in place for the Treasury to price and purchase individual mortgages or subprime MBS. Efforts to build out the programs were put on the shelf by the Bush administration as it became clear that capital injections into financial institutions could be implemented more quickly. Among the options analyzed by Treasury staff in the Bush administration to support the housing market and prevent foreclosures was for Treasury to buy MBS at a price that would result in a low interest rate (say, 4 percent) for borrowers. The combination of the GSE conservatorship and the Fed's QE actions to purchase Treasuries and agency MBS ultimately reached that goal, helping millions of homeowners, but it was too late for many homeowners early in the crisis.

President Obama took office in January 2009 determined to address the worsening housing crisis and deep recession. Fannie and Freddie were quickly using up their initial capital backstops, and in February 2009 the Treasury doubled its commitment to each GSE to $200 billion (and even then we did not know whether that would be sufficient to stave off collapse). That month the

15. Neel Kashkari, "Remarks before the Institute of International Bankers," Oct. 13, 2008, https://www.treasury.gov/press-center/press-releases/Pages/hp1199.aspx.

administration also announced two new initiatives, together referred to as the Making Home Affordable Program.

The first, HARP, encouraged refinancing of underwater and high loan-to-value (LTV) mortgages owned by the GSEs, those with LTVs between 80 and 125 percent. Broad refinancing would reinforce the effects of the Fed's policies to lower mortgage interest rates. Lower payments would also support consumer spending and thereby the overall economy—in this way expansionary monetary policy combined with housing-related efforts. It was clear, however, that many homeowners were not initially able to refinance their mortgages, because they were underwater, had high LTVs, or had impaired credit, and thus could not qualify for a GSE refinance to benefit from the lower interest rates. Addressing this challenge through HARP and other means was the focus of ongoing efforts that were ultimately fruitful.

The second program, HAMP, involved government subsidies to induce mortgage servicers to carry out more modifications for loans originated before 2009 that were either more than 60 days delinquent or at risk of imminent default. HAMP modifications began with a trial period (typically three months) that allowed homeowners to demonstrate the ability to make timely mortgage payments and document their eligibility, after which the mortgage servicer could execute a permanent modification. We offered up-front and continuing payments to servicers, mortgage holders, and borrowers on successfully restructured loans. These continuing "pay for success" payments were designed to provide ongoing incentives to avoid default and foreclosure. We required modifications to reduce monthly payments enough so that they accounted for at most 31 percent of a borrower's income (a debt-to-income ratio, or DTI, of 31 percent). We also initially limited the availability of HAMP modifications to owner-occupied property, not allowing investor-owned properties to receive government subsidies. We began a process to coordinate modifications across first and second liens, although this proved difficult and time-consuming, delaying implementation of second lien modifications. To assist unemployed borrowers, unemployment insurance would count as available income to make modified mortgage payments under a forbearance plan, prior to consideration for a permanent HAMP modification.[16]

16. Supplemental Directive 10-04, Home Affordable Unemployment Program, May 11, 2010.

HARP and HAMP were designed to limit foreclosures. Both also provided broader macroeconomic benefits since the prevention of foreclosures would raise home values above the levels that otherwise would have prevailed, and a reduction in mortgage expenses would increase the amount of household income for other spending. The payments to borrowers under the "pay for success" program were also structured to reduce, albeit modestly, the mortgage principal owed, helping borrowers make progress on reducing the extent of being underwater.

The idea to offer mortgage servicers financial incentives to modify mortgages had been discussed but not undertaken at the Treasury in 2007 and 2008.[17] FDIC chairman Sheila Bair was an early advocate of such efforts (even while criticizing the precise program eventually undertaken). She argued that a modification program would have important positive spillover effects for the economy. The FDIC had introduced a loan modification program for distressed IndyMac mortgages after taking over that institution in August 2008.[18] We expected lenders, investors, and servicers largely to support these efforts, as they were structured to make financial sense to modify a mortgage rather than foreclose. The government would not require servicers to modify loans, but instead would use taxpayer money to change the economics in favor of modifications. That proved much more challenging than we had anticipated.

Uncertain about what would work best, we introduced a range of other policies beyond HAMP and HARP in the spirit of trying many ideas to stem foreclosures and to support and rebuild communities (see Table 12.2). For example, we expanded modifications and other foreclosure mitigation alternatives available through the FHA. We developed a new initiative under HERA that provided $23.5 billion in financing through the GSEs to state and local Housing Finance Agencies (HFAs) to help them restructure their balance sheets and to continue lending during the crisis; this proved effective in continuing housing support for low-income households. We disbursed TARP funds in three new initiatives: one to state and local HFAs for homeowners in

17. The various options to reduce foreclosures are discussed in Phillip Swagel, "The Financial Crisis: An Inside View," Brookings Papers on Economic Activity, April 2009.

18. "FDIC Implements Loan Modification Program for Distressed IndyMac Mortgage Loans," press release, FDIC, Aug. 20, 2008, https://www.fdic.gov/news/news/press/2008/pr08067.html. See also Sheila C. Bair, "Fix Rates to Save Loans," *New York Times,* Oct. 19, 2007, https://www.nytimes.com/2007/10/19/opinion/19bair.html.

Table 12.2 **Program Evolution**

October 2007: HOPE NOW established to help distressed homeowners

December 2007: Mortgage Forgiveness Debt Relief Act passed, exempting homeowners from a capital gains tax on forgiven principal balances

July 2008: HERA passed, establishing FHFA and homeowner assistance programs (refinances, principal write-downs) through FHA

February 2009: HARP and HAMP announced; implementation begins in March

July 2009: LTV ceiling raised, allowing borrowers more deeply underwater to refinance through HARP

August 2009: Second Lien Program (2MP) launched, expanding HAMP to second lien mortgages for those who qualified for a first lien modification

February 2010: Hardest Hit Fund launched, providing aid to Housing Finance Agencies in states with the highest rates of unemployment and foreclosure

March 2010: HAMP revised to encourage some principal write-downs to address negative equity, allowing unemployed homeowners to take up to six-month deferments of mortgage payments; made FHA-issued mortgages eligible for servicer modification incentives

April 2010: Home Affordable Foreclosure Alternatives launched, providing alternatives such as short sales or deeds-in-lieu of foreclosure

September 2010: State and Local Housing Finance Agency initiative launched

July 2011: Aid provided to unemployed borrowers by extending mortgage payment deferments to 12 months for HAMP and FHA programs

January 2012: HARP 2.0 introduced, easing representation and warranty requirements to increase pool of eligible borrowers and increase servicer participation; HAMP Tier 2 established, facilitating modifications for non-GSE borrowers

July 2015: Streamline HAMP launched, allowing modifications for seriously delinquent borrowers with limited hardship documentation and limited or no income documentation

April 2016: Principal Reduction Modification program launched for seriously delinquent and underwater borrowers

Incremental changes during the lifetime of HARP and HAMP: Streamlined administrative processes; increased incentives payable to servicers; provided more flexibility on debt-to-income determinations; included some investor-owned properties

Sources: Financial Stability Report, 4Q2017, https://www.treasury.gov/initiatives/financial-stability/reports/Documents/4Q17%20MHA%20Report%20Final.pdf; HUD press release, "Obama Administration Announces $1 Billion in Additional Help for Struggling Homeowners in 32 States and Puerto Rico," Oct. 2010, https://archives.hud.gov/news/2010/pr10-225.cfm; "Written Testimony of Chief of Homeownership Preservation Office Phyllis Caldwell Before the House Financial Services Subcommittee on Housing and Community Opportunity," Nov. 2010, https://www.treasury.gov/press-center/press-releases/Pages/tg960.aspx; HUD press release, "Obama Administration Offers Additional Mortgage Relief to Unemployed Borrowers," July 2011, https://archives.hud.gov/news/2011/pr11-139.cfm the "hardest hit" areas, another to combat blight from abandoned homes, and a third to support CDFIs serving low-income households.

Over the next several years, we continually modified HAMP and HARP in response to operational problems, a lack of servicer capacity, and our experience overcoming borrower mistrust. As we were designing and implementing this mix of mortgage and housing programs, fiscal stimulus and the Fed's monetary policy programs were also supporting housing markets. On paper, QE could have been the biggest crisis-era mortgage refinancing program, but newly stringent underwriting standards by mortgage lenders meant that many families, especially those with negative equity, could not refinance and paid higher rates than those for new loans.[19] We sought to counteract this barrier by encouraging mortgage refinancing through programs with broader eligibility criteria, including an expanded HARP to refinance more underwater loans insured by the GSEs, and through a new FHA "Short Refi" program that permitted FHA refinancing of a privately issued or held mortgage after lender write-downs for underwater and high LTV loans. Still, those who most needed help often had the hardest time refinancing or getting modifications, given the difficulties of navigating servicers and program participation.

HARP and HAMP were our most well-known policy responses, and both programs highlight a trade-off we faced. We sought to design both programs to be broad enough to improve housing markets, but at the same time to target assistance to avoid wasting taxpayer funds. We did not know what level of incentive to borrowers, creditors, and servicers would be effective, and we were worried we would quickly exhaust available funds while helping fewer homeowners than we could. (The latter concern turned out to have been misplaced, since the funds set aside for housing were not fully utilized, but this was hard to know at the time.) As a result, we initially designed HARP and HAMP with a relatively narrow aperture to define eligibility, although the extent of the narrowness of the program only became clear with time as we encountered problems with documentation, trials, and servicer friction. We sought to prevent foreclosures for homeowners who could remain current if their monthly mortgage payments were reduced to a sustainable level—the 31 percent debt-to-income ratio—and borrowers who could not document their income were

19. Karen Dynan, "Want a Stronger Economic Recovery? Encourage More Home Refinancing," Brookings, Feb. 20, 2013, https://www.brookings.edu/opinions/want-a-stronger-economic-recovery-encourage-more-home-refinancing/.

excluded from permanent modifications. We did not want to overpay creditors or servicers, so we initially set payments at levels that may have been too low to induce full participation. And we did not want to help investors, speculators, home flippers, or others whom Congress, SIGTARP, or taxpayers would view as undeserving, even though the spillover effects from foreclosures in those circumstances could harm communities. Individually, these choices each may have made sense, but together they limited the initial impact of the programs.

Throughout 2009 and 2010, we made dozens of adjustments to both programs to encourage more modifications and refinancings, even while largely maintaining the initial narrow aperture in terms of the borrowers who could qualify. (Although our ability to modify HAMP was legally constrained after September 2010, we were able to make a few additional adjustments thereafter.) In July 2009, we raised the HARP loan-to-value ceiling to allow borrowers who were more deeply underwater (beyond 125 percent LTV) to refinance. In August and again in October, we sought to streamline administrative processes in HAMP. In March 2010, we revised HAMP to encourage some principal write-downs to address negative equity, as well as to offer additional incentives to both servicers and borrowers.[20] We also made FHA-insured mortgages eligible for servicer modification incentives. We allowed homeowners to take six-month (and later 12-month) deferments of their mortgage payments to help families with unemployed breadwinners stay in their homes. We also provided for modifications of second liens consistent with the first lien modification, provided more flexibility on debt-to-income determinations, and included some investor-owned rental properties as well. These were largely incremental steps, taken while servicers slowly built capacity from 2008 onward. Figure 12.4 maps these iterations, along with foreclosure completions, which begin to decline in 2010.

Mortgage servicers were the key institutions that borrowers had to deal with; unfortunately, servicers struggled to implement even simple and (from their perspective) profitable programs in which they were effectively paid to modify loans. The modifications called for in the crisis were far more comprehensive

20. Department of the Treasury, "Written Testimony of Chief of Homeownership Preservation Office Phyllis Caldwell Before the House Financial Services Subcommittee on Housing and Community Opportunity," Nov. 2010, https://www.treasury.gov/press-center/press-releases/Pages/tg960.aspx.

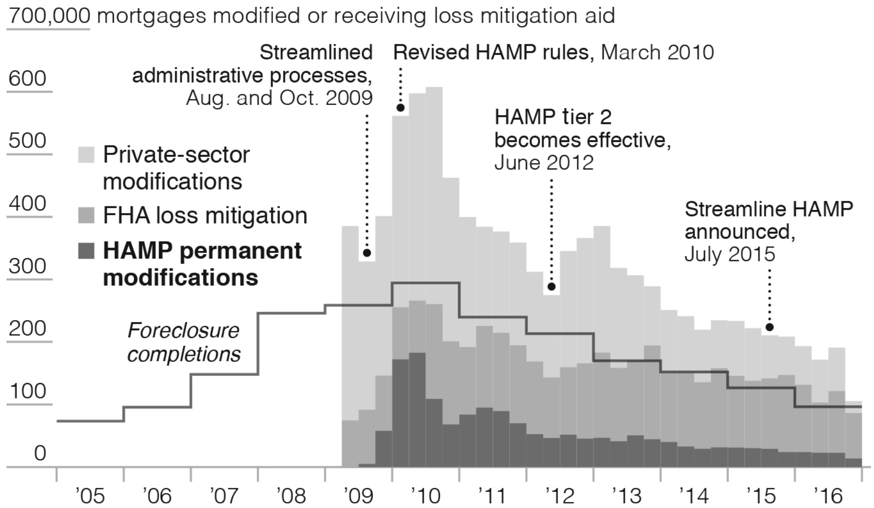

Figure 12.4 **Housing Programs and Foreclosure Completions**

Notes: (1) Private-sector modifications through November 2016; other program results through 2016. Foreclosure completions are annual figures distributed evenly across four quarters. (2) Acronyms used in this figure are defined in the list of abbreviations at the front of this book.

Sources: FHA loss mitigation: U.S. Dept. of Housing and Urban Development; HAMP modifications: U.S. Treasury; private-sector modifications: HOPE NOW; foreclosure completions: CoreLogic

than typical precrisis modifications, which usually had been limited to forbearance on a few missed payments. Servicers needed to make fundamental changes to each mortgage, such as adjusting the expected monthly payment, the fixed versus floating nature of the rate, amortization schedules, or, in some cases, the principal owed. Years of low delinquency rates before the crisis had allowed servicers to cut operational costs and capacity, meaning that they lacked data and even basic calculation tools needed to evaluate potential modifications. Economics also played a role: The cost of servicing mortgages increased greatly during the crisis, while the revenue model was largely unchanged. Servicers were inexperienced in connecting with delinquent borrowers to offer a modification, and they had limited capacity to engage repeatedly with delinquent borrowers. By contrast, they had a great deal of experience in foreclosing on delinquent loans, so that simple inertia, along with legal, financial, and regulatory incentives, servicer culture, and other factors tilted their decisions in that direction, limiting the initial impact of HARP and HAMP.

In October 2011, the Treasury announced HARP 2.0, aimed at helping more homeowners refinance into lower-rate mortgages.[21] These adjustments sought to broaden the pool of eligible borrowers and to increase servicer participation. In retrospect, it would have been better if the broader parameters of HARP 2.0 had been in place from the start, but this was difficult to know in real time. A major change that made HARP 2.0 more effective was easing representation and warranty requirements on refinanced loans. We did not realize until several years into HARP the extent to which lenders hesitated to refinance loans out of concern over their legal exposure, or "putback risk," from the GSEs if a refinanced mortgage were to default early. This especially was preventing banks from refinancing mortgages that had been originated by another firm, driven by a concern that they might face liability if there had been defects in the original mortgage decision. After extensive discussions with Treasury, the FHFA worked with the GSEs to provide lenders with greater certainty about putbacks. Participation in the refinancing program increased significantly. Yet even if we had implemented HARP 2.0 in early 2009 instead of nearly three years later, deficiencies among the servicers and still-declining home prices most likely would have still significantly reduced the benefits of a broader program. Figure 12.5 illustrates the positive impact of HARP 2.0 on the number of loans refinanced.

We created our programs in a political context that reflected conflicting sentiments, with substantial support for government efforts to help reduce the risk of foreclosures existing alongside substantial aversion to bailing out "irresponsible" homeowners. We wanted to help soften the blow of the recession by mitigating the number of foreclosures without spending large amounts of money on "undeserving" borrowers, servicers, or investors.[22] Just months into President Barack Obama's first term, even Democratic senators were questioning whether the government should be bailing out irresponsible homeowners. When Senator Evan Bayh (D-IN) asked this question of Fed chairman Ben S.

21. "FHFA, Fannie Mae and Freddie Mac Announce HARP Changes to Reach More Borrowers," Federal Housing Finance Agency, Oct. 24, 2011, https://www.fhfa.gov/Media/PublicAffairs/Pages/FHFA-Fannie-Mae-and-Freddie-Mac-Announce-HARP-Changesto-Reach-More-Borrowers.aspx.

22. "Mortgage Tightrope," *Los Angeles Times*, Sept. 6, 2007, http://www.latimes.com/opinion/la-ed-mortgage6sep06-story.html.

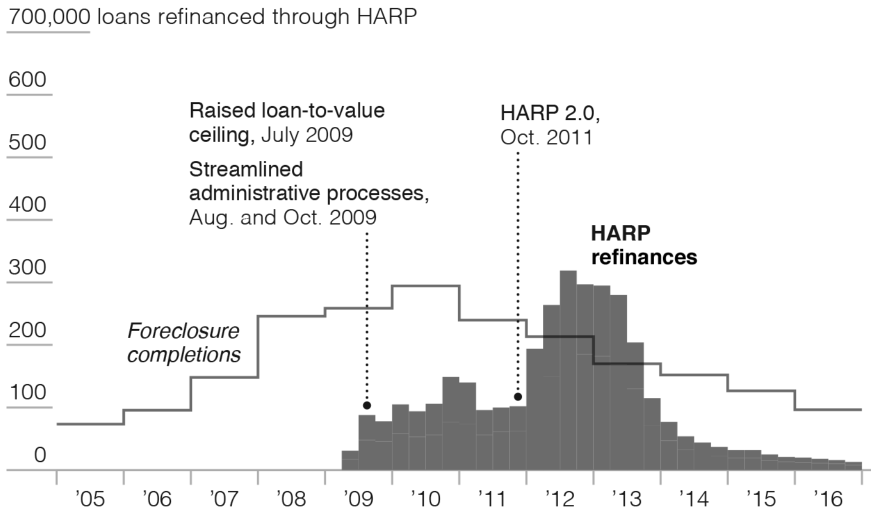

Figure 12.5 **HARP Refinances and Foreclosure Completions**

Notes: (1) Foreclosure completions are annual figures distributed evenly across four quarters. (2) HARP is the Home Affordable Refinance Program.

Sources: Federal Housing Finance Agency; CoreLogic

Bernanke in a 2009 hearing, Bernanke responded with an analogy to a person who sees his neighbor's house on fire and knows that the neighbor tends to act irresponsibly by smoking in bed. Bernanke explained that while it might be tempting to let the irresponsible neighbor suffer to teach him a lesson, it was better to call the local fire department, since among the potential consequences is that "your entire neighborhood would have burned down."[23] Many Americans, however, disagreed with this logic.

ALTERNATIVE PATHS

During the crisis we considered four primary alternatives to the path we chose. The first alternative was to provide for wide eligibility for HAMP and HARP

23. Catherine Rampell and Jack Healy, "Fed Chairman Says Recession Will Extend through the Year," *New York Times,* Feb. 24, 2009, https://www.nytimes.com/2009/02/25/business/economy/25econ.html.

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right away and to devote more taxpayer resources to borrowers with negative equity. This would have increased the support to homeowners and provided faster relief to hard-hit communities; however, one risk of a big negative equity program is that it might have blown through available resources and helped fewer homeowners than would otherwise have been helped with payment reductions (since principal reduction is a more expensive way to prevent foreclosures than reducing monthly payments through interest rate reductions). Such a program might have also increased moral hazard, probably adding to the number of defaults, and it would have funneled more taxpayer resources to investors and speculators.

An aspect of broader eligibility could have included "no doc" or "low doc" modifications. We had insisted on exacting loan documentation for permanent modifications, both to protect taxpayer resources (amplified by concerns about SIGTARP and congressional criticism of the program) and to avoid lawsuits from mortgage holders if we did not document borrower qualification for modifications. This was a consequential choice: Many hundreds of thousands of borrowers were denied permanent modifications because of a lack of documentation, the result of both servicer dysfunction (for example, repeatedly losing documents submitted by borrowers) and borrower inability to take advantage of the programs (because of fear of servicers, lack of knowledge and resources, or unwillingness to confront a difficult fact). Treasury later instituted a streamlined HAMP without up-front documentation requirements.

The second alternative considered was bulk refinancing, in which the government would have purchased pools of mortgages from banks and securitization trusts, modified the problematic mortgages, and then created new securitizations to be resold to banks and investors. The idea was widely discussed, including at the Treasury in 2007 and 2008. Some described this as bailing out the financial system "from the bottom up."[24] At the time, the idea was often compared to our government's response during the Great Depression, when the Home Owners' Loan Corporation (HOLC) bought and modified defaulted

24. See generally Swagel, "The Financial Crisis"; and Michael S. Barr, "Strengthening Our Economy: Foreclosure Prevention and Neighborhood Preservation," Testimony before the United States Senate Committee on Banking, Housing, and Urban Affairs, Jan. 31, 2008, https://www.americanprogress.org/issues/economy/news/2008/01/31/3858/strengthening-our-economy-foreclosure-prevention-and-neighborhood-preservation/.

mortgages from banks.[25] By 2008, many housing experts felt that bulk refinancing, at least in theory, would be an effective policy option.

Many in both administrations pursued this option, in fact, but bulk refinancing faced numerous practical, legal, and political challenges. To begin with, it would be difficult to devise a practical pricing mechanism (an effective auction in a dysfunctional market) to minimize the risk that the government would overpay for mortgages. This was especially a concern given the heterogeneity in mortgages, the problem of adverse selection (willing sellers would sell the worst loans), and asymmetric information (sellers would know more about the loans than the government buyer). The second barrier was legal. Securitization trusts owned many of the country's mortgages, and in many instances they lacked the legal authority to sell the bad mortgages from their securitized loan pools to the government.[26] We made some progress in 2009 in changing the rules under the Real Estate Mortgage Investment Conduit (REMIC) statute to permit sales, but the underlying problems with many trust and pooling and servicing agreements remained. The third barrier was operational. There was no existing capacity to run such a program, and the government would have had to launch it from scratch. Fannie and Freddie could have been enlisted—as they were for HAMP and HARP—but it would have taken a great deal of time to build such a program, even with the GSEs as the platform. And it would have exposed taxpayers to additional losses by transferring the risk of further defaults from the private owners of non-GSE loans, including subprime and Alt-A mortgages, to the government.

That said, bulk refinancing may have been a missed opportunity. This is especially the case since the idea may have been more politically viable than other alternatives. In the fall of 2008, for example, Senator John McCain, the Republican presidential candidate, proposed buying and refinancing $300 billion worth of subprime mortgages.[27] The public mood in 2008 and 2009 may

25. Alex J. Pollack, "A 1930s Loan Rescue Lesson," *Washington Post,* March 14, 2008, http://www.washingtonpost.com/wp-dyn/content/article/2008/03/13/AR2008031303174.html.
26. Michael S. Barr and James A. Feldman, "Issue Brief: Overcoming Legal Barriers to the Bulk Sale of At-Risk Mortgages," Center for American Progress, April 2008, https://repository.law.umich.edu/cgi/viewcontent.cgi?referer=https://scholar.google.es/&httpsredir=1&article=1018&context=other.
27. Edmund L. Andrews, Shan Carter, Jonathan Ellis, Farhana Hossain, and Alan McLean, "On the Issues: Housing," *New York Times,* accessed Jan. 18, 2019, https://www.nytimes.com/elections/2008/president/issues/housing.html.

have been opposed to homeowner assistance, but McCain's stance suggests that it might have been possible to generate bipartisan support for moving beyond the complaint that it was unfair for undeserving borrowers to get assistance while responsible people paid their mortgages.

The third policy alternative was to change bankruptcy laws to permit judges to discharge the unsecured portions of mortgages as home prices fell during the crisis. This option, typically referred to as "cramdown," could have been another policy tool to encourage servicers to modify mortgages because borrowers could have sought bankruptcy relief to reduce mortgage payments, and to provide borrowers with an additional avenue of relief through the bankruptcy courts, at a time when other mechanisms had problems. Cramdown would have required an act of Congress, and several attempts failed, although critics charged that the Obama administration did not push hard enough. In April 2009, the Obama administration supported cramdown legislation but prioritized the stimulus focused on job creation, and support for including cramdown lacked even a simple majority in the Senate—let alone the 60 votes needed to overcome a filibuster and proceed to a vote for enactment.[28]

Some economists have since argued that we should have done more to reduce household debt,[29] but experts remain divided on the merits of cramdown (as do the authors of this chapter).[30] Cramdown would have retroactively changed the rules for mortgages, and opponents feared that change would have further depressed the collateral value of homes, driving down home sale prices and increasing mortgage rates, as creditors responded to higher loss risk by raising borrowing costs. Moreover, by raising questions about the value of collateral, cramdown might have affected credit conditions in collateralized lending outside of housing. Still, policymakers may wish to consider prospectively changing home mortgage bankruptcy rules in normal economic times to avoid crisis-induced legal changes and to provide further channels for mortgage relief at a time of crisis.

A fourth alternative was to use eminent domain to purchase mortgages directly from securitization pools. This approach would have been similar to

28. S.896 - Helping Families Save Their Homes Act of 2009, 111th Congress (2009–2010), https://www.congress.gov/bill/111th-congress/senate-bill/896.
29. Notably, Mian and Sufi, *House of Debt.*
30. See generally Lawrence Summers, "House of Debt," *Financial Times,* June 6, 2014.

cramdown in that it would help borrowers reduce their outstanding principal while forcing losses on investors. It would also have shared its drawbacks. Opponents from the banking and real estate sector argued that using eminent domain would increase borrowing costs overall. Some cities used eminent domain to purchase underwater mortgages and then wrote down the debt and allowed those homeowners to refinance; these efforts faced litigation as well as regulatory barriers and were not implemented on any large scale.[31]

In addition to these four main alternatives, many other policy options were proposed or considered, but most would have required difficult-to-pass new legislation. For example, some called for legislation to "require a call option on potentially risky mortgages that would allow for easy government restructuring in the event of another major downturn in real estate prices in the future."[32] Others suggested a foreclosure moratorium, government guarantees, and policies to prevent interest rate resets.[33]

PROGRAMMATIC RESULTS AND POLICY ASSESSMENT

For all the flaws in the policy responses we adopted, key metrics and several academic studies make clear that these efforts helped millions of homeowners and eased housing market conditions. We evaluate these policies in terms of the numbers of households assisted, the quality of mortgage modifications, and the effects on communities. There are a number of ways of assessing effectiveness. We discuss several measures and then summarize our findings in Table 12.3.

It may help to get a sense of the scale and scope of the programs by first looking at individual results and then rolling those up together, as we do in Table 12.3. For example, according to one measure (narrower than that used

31. Barr, Jackson, and Tahyar, *Financial Regulation,* 1253.
32. Barr, Jackson, and Tahyar, *Financial Regulation,* 1254. See also John Campbell, Andreas Fuster, David Lucca, Stijn Van Nieuwerburgh, and James Vickery, "Rethinking Mortgage Design," Liberty Street Economics, Federal Reserve Bank of New York, Aug. 24, 2015, https://libertystreeteconomics.newyorkfed.org/2015/08/rethinking-mortgage-design.html.
33. See generally Swagel, "The Financial Crisis." See also John Geanakoplos and Susan Koniak, "Mortgage Justice Is Blind," *New York Times,* Oct. 29, 2008, for a proposal for a form of eminent domain in which government-appointed trustees would take over administration of securitization trusts to determine mortgage modifications.

in Table 12.3), in the Department of Housing and Urban Development's Housing Scorecard, "nearly 11.1 million mortgage modifications and other forms of mortgage assistance arrangements were completed between April 2009 and the end of November 2016."[34] Looking at the individual measures and using these to derive totals in Table 12.3, HAMP provided more than 2.5 million temporary modifications and 1.7 million permanent modifications (although approximately 650,000 of these later re-defaulted or were otherwise disqualified), reduced principal by approximately $24.5 billion, and saved borrowers approximately $55 billion in mortgage payments.[35] A further 3.4 million households were helped through the FHA's loss mitigation programs, including 450,000 modifications by 2012.[36] Fannie and Freddie made 1.5 million modifications in addition to HAMP and refinanced 26 million loans from April 2009 to 2017, including 3.4 million refinancings of high loan-to-value mortgages under HARP and 4 million streamlined refinancings outside of HARP.[37] The GSEs engaged in other initiatives to avoid foreclosures, including nearly 700,000 charge-offs-in-lieu, short sales, and deeds-in-lieu.[38] Treasury also supported state and local Housing Finance Agencies with $15.3 billion in a New Issue Bond Program and an $8.2 billion Temporary Credit

34. U.S. Department of Housing and Urban Development (HUD), "The Obama Administration's Efforts to Stabilize the Housing Market and Help American Homeowners," Dec. 2016 Scorecard.
35. U.S. Department of the Treasury, *Making Home Affordable Program Performance Report,* through the Fourth Quarter of 2017, https://www.treasury.gov/initiatives/financial-stability/reports/Documents/4Q17%20MHA%20Report%20Final.pdf. See generally Barr, Jackson, and Tahyar, *Financial Regulation,* 1251; Office of the Comptroller of the Currency, *OCC Mortgage Metrics Report,* Fourth Quarter 2017, https://www.occ.gov/publications/publications-by-type/other-publications-reports/mortgage-metrics/mortgage-metrics-q4-2017.pdf.
36. Data available disaggregated through 2012 only; included in the "FHA Loss Mitigation Interventions" total through 2017. Source (used April 1, 2009, forward to match HUD Housing Scorecard data): "Monthly Report to the FHA Commissioner," Department of Housing and Urban Development, April 2009 through Dec. 2012, accessed Jan. 18, 2019,**In the review, publication information was added but then deleted. OK to add back? Also, changed access date to Jan. 18, 2019 (per note re: access dates).** https://www.hud.gov/program_offices/housing/rmra/oe/rpts/com/commenu.
37. FHFA, *Refinance Report,* Oct. 2017, 3, https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/Refi_Oct2017.pdf.
38. FHFA, *Foreclosure Prevention Report,* Oct. 2017, 4, accessed Jan. 18, 2019, https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/FPR_OCT2017.pdf.

and Liquidity Program, financed under HERA authorities.[39] The programs prevented the collapse of state and local HFAs, and the New Issue Bond Program alone enabled HFAs to finance more than 100,000 single-family homes in just two years.[40]

Outside of HAMP, GSEs and the private sector made 6.6 million mortgage modifications from 2007 to 2017, most of which conformed to HAMP's debt-to-income and other modification requirements (see Table 12.3). Our policy response changed many mortgage industry practices (for example, establishing a standard approach to providing mortgage assistance) and improved the quality of modifications.[41] These changes remain and will be a long-lasting achievement of the policy response.

Numerous studies have used the various policy responses as natural experiments. Agarwal et al. estimate that through 2012, HAMP induced an additional 1 million permanent modifications that would not have otherwise taken place and reduced the number of completed foreclosures by 600,000. They find that HAMP had the largest effect in the first two years and among already delinquent loans, and that it did not have a meaningful "crowd-out" effect on private behavior in the sense of leading to fewer modifications without government assistance.[42] Several other studies estimate that refinancing under HARP roughly halved the probability of default.[43]

39. "Administration Completes Implementation of Initiative to Support State and Local Housing Finance Agencies," U.S. Treasury, Jan. 13, 2010, https://www.treasury.gov/press-center/press-releases/Pages/20101131429486865.aspx. See also National Association of Local Housing Finance Agencies, in collaboration with Freddie Mac, *Local Housing Finance Agency Participation in the Treasury/Government Sponsored Enterprises New Issue Bond Purchase Program (NIBP): A Tremendous Story of Success,* Nov. 2011, http://www.munibondsforamerica.org/cms/wp-content/uploads/2012/11/Final-Report-on-NIBP-12-1-11.pdf.
40. Jordan Eizenga, "A House America Bond for State Housing Finance Agencies," Center for American Progress, March 1, 2012, https://www.americanprogress.org/issues/economy/reports/2012/03/01/11176/a-house-america-bond-for-state-housing-finance-agencies/.
41. Sumit Agarwal, Gene Amromin, Souphala Chomsisengphet, Tomasz Piskorski, Amit Seru, and Vincent Yao, "Mortgage Refinancing, Consumer Spending, and Competition: Evidence from the Home Affordable Refinancing Program" (Kreisman Working Papers Series in Housing Law and Policy, no. 27, 2015), https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1044&context=housing_law_and_policy.
42. Agarwal et al., "Policy Intervention in Debt Renegotiation," 658.
43. Kadiri Karamon, Douglas A. McManus, and Jun Zhu, "Refinance and Mortgage Default: A Regression Discontinuity Analysis of HARP's Impact on Default Rates,"

Table 12.3 shows that the cumulative impact of these programs was large: More than 8.2 million mortgage modifications, 9.5 million refinancings, and 5.3 million other foreclosure prevention actions were completed as a direct result of these programs.

These results can be compared to those of the Home Owners' Loan Corporation (HOLC) during the Great Depression. At the time, mortgages commonly had short maturities and large balloon payments. HOLC, created in 1933, had by 1936 modified and refinanced about 1 million loans, or 20 percent of homes with mortgages, worth a total of \$3.1 billion (or \$49 billion in 2008 dollars).[44] HOLC, however, had serious problems; it was wasteful, as a result of systematic overappraisal and asset sales.[45] Moreover, implementation was easier in the 1930s: With a bank-based financial system, modifications were easier to execute because banks held whole loans on their balance sheets. And paradoxically, Depression-era programs—designed in part to move risk off the balance sheets of banks to reduce systemic risk—ultimately grew into Fannie, Freddie, FHA, and the private-label securitization markets that contributed to the dispersed ownership of loans that was such a challenge during the Great Recession.[46]

Journal of Real Estate Finance and Economics 55, no. 4 (2017): 457–75, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2793661. See also Gabriel Ehrlich and Jeffrey Perry, "Do Large-Scale Refinancing Programs Reduce Mortgage Defaults? Evidence from a Regression Discontinuity Design," *Journal of Real Estate Finance and Economics* 55, no. 2 (2015), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2678425; and Joshua Abel and Andreas Fuster, "How Do Mortgage Refinances Affect Debt, Default, and Spending? Evidence from HARP," Federal Reserve Bank of New York Staff Reports #841, 2018, https://www.newyorkfed.org/research/staff_reports/sr841.html.

44. Daniel Immergluck, "Private Risk, Public Risk: Public Policy, Market Development, and the Mortgage Crisis," *Fordham Urban Law Journal* 36, no. 3 (2009): 447–88. For 2008 dollar terms of HOLC loan book, see Price V. Fishback et al., "The Influence of the Home Owner's Loan Corporation on Housing Markets during the 1930s" (NBER Working Paper, no. 15824, 2010), 7. See generally Barr, Jackson, Tahyar, *Financial Regulation: Law and Policy.*

45. C. Lowell Harriss, "History and Policies of the Home Owners' Loan Corporation," National Bureau of Economic Research 1–2, 1951, http://www.nber.org/chapters/c3205.pdf; and Fishback et al., "The Influence of the Home Owner's Loan Corporation," 7.

46. See David C. Wheelock, "The Federal Response to Home Mortgage Distress: Lessons from the Great Depression," Federal Reserve Bank of St. Louis, May/June 2008.

Table 12.3 **Cumulative Impact of Crisis-Era Housing Policies**

Program	Through 2012	Through 2017
HAMP permanent modifications (less disqualified)[A]	851,135	1,087,104
HAMP trial modifications (all)[B]	1,975,649	2,537,629
HAMP permanent modifications (all)[C]	1,136,482	1,735,141
HOPE NOW "Proprietary Modifications"[D]	4,079,023	5,176,329
GSE standard and streamlined modifications[E]	859,184	1,490,580
FHA modifications[F]	450,194	450,194
HARP completed refinances[G]	2,165,021	3,484,025
FHFA streamline refinances[H]	2,517,960	4,010,098
FHA streamline refinances[I]	N/A	2,013,000
FHFA HomeSaver Advance[J]	70,178	70,178
FHFA repayment plans	665,796	904,843
FHFA forbearance plans	147,602	216,828
FHFA foreclosure alternatives[K]	455,313	697,463
FHA loss mitigation interventions[L]	1,145,806	2,979,806
Hardest Hit Funds—borrowers assisted[M]	94,056	347,417
State and Local Housing Finance Agency Initiative—mortgages and units financed[N]	100,000 single-family mortgages; 24,000 multifamily units	
Total modifications[O]	**6,239,536**	**8,204,207**
Total special refinancing[P]	**4,682,981**	**9,507,123**
Total other borrower assistance[Q]	**2,702,752**	**5,340,535**

[A] Sources: Making Home Affordable, Program Performance Report through Fourth Quarter 2017, published March 16, 2018, https://www.treasury.gov/initiatives/financial-stability/reports/Documents/4Q17%20MHA%20Report%20Final.pdf; Making Home Affordable, Program Performance Report through Dec. 2012, published Feb. 8, 2013, https://www.treasury.gov/initiatives/financial-stability/reports/Documents/December%202012%20MHA%20Report%20Final.pdf.

[B] This shows HAMP's reach, or intent to treat; disqualified trial modifications are not removed. Sources: Making Home Affordable, Program performance reports.

[C] All permanent modifications less disqualified permanent modifications is one measure of HAMP's success; it does not account for crowd-out (discussed in depth by Agarwal et al., "Policy Intervention in Debt Renegotiation"). Sources: Making Home Affordable, Program performance reports.

[D] "Proprietary Modifications" reported by HOPE NOW exclude HAMP modifications and non-HAMP GSE modifications. Source: HOPE NOW, December 2017 Full Report, accessed Jan. 18, 2019, http://www.hopenow.com/industry-data/HopeNow.FullReport.Updated(December).pdf.

[E] Using permanent modifications started; total FHFA loan modifications less HAMP permanent modifications through GSEs. FHFA loan modifications sourced from FHFA, Foreclosure Prevention Report of Fourth Quarter 2017, published March 22, 2018, https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/4Q2017_FPR.pdf; and FHFA, Foreclosure Prevention Report of Fourth Quarter 2012, published March 19, 2013, https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/20124Q_FPR_N508.pdf. HAMP permanent modifications through GSEs sourced through the Making Home Affordable Program performance reports.

[F] Data available disaggregated through 2012 only; included in the "FHA Loss Mitigation Interventions" total through 2017. Sourced from the Monthly Reports to the FHA Commissioner, Department of Housing and Urban Development, April 2009 through Dec. 2012, accessed Jan. 18, 2018 (used April 1, 2009, forward to match HUD Housing Scorecard data), https://www.hud.gov/program_offices/housing/rmra/oe/rpts/com/commenu.

[G] The FHFA does not report the number of attempted refinances (instances where a borrower starts the process of HARP refinancing). Consequently, we don't have a measure of HARP's reach, just an estimate of success. Sources: FHFA, Refinance Report of Fourth Quarter 2017, published Feb. 14, 2018, https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/4Q17-Refi-Report.pdf; FHFA, Refinance Report of December 2012, published March 13, 2013, https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/201212_RefiReport_508.pdf.

[H] Sources: FHFA refinance reports.

[I] 2012 and 2017 data not available; September 2015 and December 2016 used, respectively. Data sourced from HUD, Housing Scorecard of September 2015, accessed Jan. 18, 2019, https://archives.hud.gov/initiatives/housing_scorecard/scorecard2015_09_508c.pdf; and HUD Housing Scorecard of December 2012, accessed Jan. 18, 2019, https://www.hud.gov/sites/documents/SCORECARD_2016_12_508C.PDF.

[J] HomeSaver Advance program ended in 2010. For this and following FHFA actions, data sourced from the FHFA, Foreclosure Prevention Reports.

[K] Includes charge-offs-in-lieu, short sales, and deeds-in-lieu.

[L] 2017 data not available; December 2016 used. Loss mitigation interventions include forbearance, modifications, partial claims, preforeclosure sales, and short sales. Modifications through 2012 subtracted from totals; remaining data included in total other borrower assistance totals, as modification data were not available disaggregated. Data sourced from the HUD Housing Scorecards.

[M] Data sourced from the Housing Finance Agency, Quarterly Report of Fourth Quarter 2012, accessed Jan. 18, 2019, https://www.treasury.gov/initiatives/financial-stability/reports/Documents/HFA%20Quarterly%20Report.Q42012.pdf; and HFA, Final Report of Fourth Quarter 2017, accessed Jan. 18, 2019, https://www.treasury.gov/initiatives/financial-stability/reports/Documents/HFA%20Aggregate%20Q42017%20Report%20Final.pdf.

[N] Program ended in 2012; no 2017 data available. Source: Jordan Eizenga, "A House America Bond for State Housing Finance Agencies," Center for American Progress, 2012, https://cdn.americanprogress.org/wp-content/uploads/issues/2012/02/pdf/house_america_bonds.pdf.

[O] Totals HAMP permanent modifications (less disqualified), HOPE NOW "Proprietary Modifications," and GSE standard and streamlined modifications.

[P] Totals HARP completed refinances, FHFA streamline refinances, and FHA streamline refinances.

[Q] Totals FHFA Home Saver Advance; FHFA repayment plans, forbearance plans, and foreclosure alternatives; FHA loss mitigation interventions; Hardest Hit Funds; and state and local HFA initiative mortgages and units financed.

Successful HAMP modifications totaled just over 1 million through the end of 2017, representing just under 4 percent of homes with mortgages.[47] More broadly, however, the breadth of our programs beyond HAMP were large, producing 8.2 million mortgage modifications, representing 29 percent of all mortgages. Our efforts also led to 9.5 million refinances, representing 33 percent of mortgages, and 5.2 million other borrower assistance and loss mitigation actions, representing 19 percent of total mortgages. These results compare favorably with HOLC's 20 percent.

The quality of modifications also improved considerably over the course of the policy response, providing borrowers with more payment relief. As shown in Table 12.4, before HAMP, 54 percent of GSE and 32 percent of industry loan modifications in 2008 actually resulted in an increased monthly payment, which could happen, for example, if past missed payments were added back into future mortgage payments. By contrast, the share of loan modifications that decreased monthly payments climbed as the programs went into effect. The effects lasted well after the crisis was over: By 2017, the vast majority of mortgage modifications resulted in lower payments.

A further important indicator of improved quality of loan modifications was the decline over time in borrowers who received modifications but then subsequently defaulted on their mortgage, a phenomenon known as a re-default. Re-default rates of borrowers with loans modified under HAMP were considerably lower by 2012 than was the case in 2009.[48]

Re-default rates similarly declined for both GSE and private loans within and outside HAMP as modification quality improved. As shown in Table 12.5, loans modified in 2008 exceeded 60 percent re-default rates in the months and

47. Immergluck, "Private Risk, Public Risk." See also Charles Courtemanche and Kenneth Snowden, "Repairing a Mortgage Crisis: HOLC Lending and Its Impact on Local Housing Markets," *Journal of Economic History* 71, no. 2 (2011), https://www.cambridge.org/core/journals/journal-of-economic-history/article/div-classtitlerepairing-a-mortgage-crisis-holc-lending-and-its-impact-on-local-housing-marketsdiv/AAAEDA3641C19BB9090522C7461D087C. HAMP targeted roughly 3 million–4 million heavily indebted households (see Agarwal et al., "Policy Intervention in Debt Renegotiation"; HAMP helped a smaller fraction of all borrowers than HOLC. Data on total mortgages provided by the Federal Reserve Board, using estimates from the Consumer Expenditure Survey).
48. U.S. Department of the Treasury, *Making Home Affordable Program Performance Report,* through the Third Quarter of 2017, 6, https://www.treasury.gov/initiatives/financial-stability/reports/Documents/3Q17%20MHA%20Report%20Final.pdf.

Table 12.4 **Loan Modification Quality Measures**

Quality measures—loan modifications	2008 average	2012 average	2017 average
Percentage of GSE modifications that decreased monthly mortgage payments[A]	45	96	82
Percentage of GSE modifications that decreased monthly mortgage payments *by 20 percent or more*	*20*	*69*	*44*
Percentage of industry modifications that decreased monthly mortgage payments[B]	42	90	83
Percentage of industry modifications that decreased monthly mortgage payments *by 10 percent or more*[C]	*29*	*77*	*65*
Percentage of GSE modifications that increased monthly mortgage payments	54	4	6
Percentage of industry modifications that increased monthly mortgage payments	32	6	15
Percentage of HOPE NOW "Proprietary Modifications" that reduced principal and interest by 10 percent or more[D]	—	75	53

[A] Source for all GSE modification data is the FHFA Foreclosure Prevention Report of First Quarter 2018, published June 21, 2018, https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/FPR_1Q2018.pdf.

[B] Source for all industry modification data is the Office of the Comptroller of the Currency's Monthly Metrics Report, which tracks first-lien residential mortgages serviced by the seven largest banks, covering a majority of all mortgages outstanding: Fourth Quarter 2008, published April 2009, https://www.occ.gov/publications/publications-by-type/other-publications-reports/mortgage-metrics/mortgage-metrics-q4-2008-pdf; Fourth Quarter 2012, published March 2013, https://www.occ.gov/publications/publications-by-type/other-publications-reports/mortgage-metrics/mortgage-metrics-q4-2012.pdf; First Quarter 2017, published July 2017, https://www.occ.gov/publications/publications-by-type/other-publications-reports/mortgage-metrics/mortgage-metrics-q1-2017.pdf; 2Q2017, published Sept. 2018, https://www.occ.gov/publications/publications-by-type/other-publications-reports/mortgage-metrics/mortgage-metrics-q2-2017.pdf; Third Quarter 2017, published Dec. 2017, https://www.occ.gov/publications/publications-by-type/other-publications-reports/mortgage-metrics/mortgage-metrics-q3-2017.pdf; and Fourth Quarter 2017, published March 2018, https://www.occ.gov/publications/publications-by-type/other-publications-reports/mortgage-metrics/mortgage-metrics-q4-2017.pdf.

[C] Data not available for payment reductions of 20 percent or more in 2008; 10 percent used for continuity across years.

[D] Data not available for 2008. Sourced from the HOPE NOW Dec. 2017 Full Report, accessed Jan. 18, 2019, http://www.hopenow.com/industry-data/HopeNow.FullReport.Updated(December).pdf; and the HOPE NOW Dec. 2012 Full Report, published Feb. 7, 2013, http://www.hopenow.com/press_release/files/HN-2012-Full-Data-FINAL.pdf.

Table 12.5 **Modified Loan Re-default Rates, by Vintage of Modification and Investor**

Months after modification	2008		2010		2013	
	GSE	Private	GSE	Private	GSE	Private
	(percent)					
6	45	49	13	20	11	11
12	59	61	19	28	16	14
18	64	67	22	33	18	15
24	63	68	23	34	16	14
36	57	68	22	29	—	—

Source: Data unavailable after Q3 2015; data for all metrics in table sourced from the Office of the Comptroller of the Currency, Mortgage Metrics Report, published Dec. 2015, https://www.occ.gov/publications/publications-by-type/other-publications-reports/mortgage-metrics/mortgage-metrics-q3-2015.pdf.

years following a modification; by 2013, re-default rates remained less than 20 percent in the same time frame.

Apart from loan modification programs, interest rate declines beginning in 2009 helped millions of borrowers, with especially steep declines for nonprime borrowers with adjustable mortgages. Figure 12.6 shows the average interest rate paid for different groups of borrowers (excluding junior liens). The mean interest rate paid by all borrowers fell steeply beginning in 2009. Many of the loans at the center of the foreclosure crisis had adjustable rates—for example, pay-option adjustable-rate mortgages and 2/28s.[49] The dark gray line shows the average rate paid on adjustable-rate loans to nonprime borrowers. As shown, rates on these loans rose in the lead-up to the crisis as teaser rates expired; however, by 2009, as risk-free rates fell, so did rates on these loans. This was a powerful source of support for struggling borrowers. But the benefits from lower rates were not distributed equally. The black line shows that rates paid by mortgage holders facing the highest borrowing costs before 2009 fell less steeply. Because negative equity was widespread and many mortgage

49. A 2/28 is a type of 30-year mortgage with a fixed rate for 2 years and a variable rate for the 28 years thereafter.

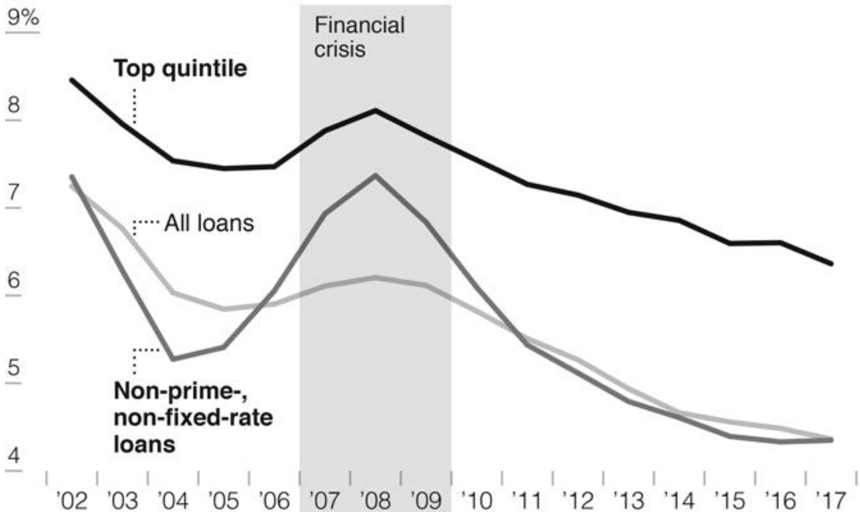

Figure 12.6 Average Mortgage Interest Rate, 2002–2017, by Selected Loan Categories

Source: Black Knight McDash data

originators were imposing tougher underwriting standards, many borrowers found it difficult to take advantage of lower mortgage rates. Many of the borrowers who most needed help tended to get less of it, in many cases because of missing or incorrect documentation (made worse by the lack of digitization) and inadequacies on the part of servicers. Nonetheless, lower rates provided powerful help to many borrowers.

Beyond modifications and re-default rates, the housing boom and bust left a long-standing imprint on Americans' choices and opportunities. During the 1990s and early 2000s, the homeownership rate climbed steadily, to a record high in 2005 of 69 percent, but it fell during the crisis to levels last seen in the late 1960s. Homeownership has since risen from those lows but remains at levels from the early 1990s at 64 percent. The greatest impact was on families in the lower half of the income distribution, who have clearly fallen behind what seemed the typical lifecycle trajectory for homeownership. Minority households fared far worse in the financial crisis than white households and have recovered from the crisis much more slowly. Leading up to the crisis, minority borrowers were more likely to have subprime loans than white borrowers with similar risk profiles.[50] Minority households held a larger share of their household wealth in home equity and experienced larger and longer declines in wealth.[51] In low- and moderate-income communities already in difficult economic circumstances, the crisis was devastating. In Detroit, for example, mean home values in low- and moderate-income neighborhoods fell by $44,006, and the number of underwater homes increased by 62 percentage points.[52] For all the positive results cited in this chapter, we see these outcomes as an especially troubling legacy of the crisis that illustrates the degree to which the policy response fell short.

LESSONS LEARNED

While the design of our policy response was affected by uncertainty in the midst of the crisis, limited resources, politics, and legal authority, at a higher level it was directed by our answers to more philosophical questions: What is the proper role of government to stabilize housing markets and to help individual homeowners? And when should the government intervene?

In evaluating the housing policy response put in place during the Bush administration, it is fair to say that we were always "late" (or "later") to respond, in part because of the belief that intervening in housing markets had efficiency costs and that it was better to support the overall economy while an inevitable adjustment in the housing sector proceeded. One might reasonably take the view that helping overstretched homeowners will always be politically difficult and that supporting the broader economy is fairer and more transparent.

50. Henock Louis, "Minority Borrowers and the Subprime Foreclosure Crisis: Unintended Consequences of Regulations vs. Unfair Lending," Sept. 12, 2013, https://ssrn.com/abstract=2128313.
51. Sarah Burd-Sharps and Rebecca Rasch, *Impact of the U.S. Housing Crisis on the Racial Wealth Gap across Generations,* Social Science Research Council, June 2015, https://www.aclu.org/files/field_document/discrimlend_final.pdf. See also Rakesh Kochhar and Anthony Cilluffo, "How Wealth Inequality Has Changed in the U.S. Since the Great Recession, by Race, Ethnicity and Income," Pew Research Center FacTank, Nov. 1, 2017, http://www.pewresearch.org/fact-tank/2017/11/01/how-wealth-inequality-has-changed-in-the-u-s-since-the-great-recession-by-race-ethnicity-and-income/.
52. Michael S. Barr and Daniel Schaffa, "Nothing Left to Lose? Changes Experienced by Detroit Low- and Moderate-Income Households during the Great Recession" (Washington Center for Equitable Growth Working Paper, 2016), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2836589.

As a practical matter, Congress did not make sizable funds available for subsidizing foreclosure reduction until the enactment of the TARP in October 2008; the earlier Hope for Homeowners program in July 2008 had legislative restrictions that made it ineffective because lenders were better off using other FHA programs that provided less relief for borrowers. The initial housing-related policy efforts largely focused on improving the private-sector response, complemented by some increased refinancing through the FHA. During the Bush administration, the most powerful housing program was the government conservatorship and capital backstop for the GSEs, which ensured that Fannie and Freddie remained the primary source of mortgage finance during the crisis. Without the conservatorship, the mortgage market would have collapsed, housing prices would likely have been far lower, and foreclosure rates would have been much higher.

The Obama administration came in committed to using government resources to reduce foreclosures. We acted quickly and aggressively to launch mortgage modification and refinancing programs. We bolstered the government backstops of the GSEs, launched innovative programs with state and local Housing Finance Agencies, and repeatedly experimented with new initiatives to improve and expand our programs. Yet our policy response in early 2009 was inadequate. Households would have been better off had we acted earlier and more aggressively during both administrations, such as by implementing the broader parameters of HARP 2.0 from the start to allow more people to refinance.

Our experience offers several lessons for future policymakers.

Lesson 1: Do not overweight the potential for waste and moral hazard in helping "undeserving" borrowers.

Continuing with Chairman Bernanke's analogy, firefighters routinely waste a tremendous amount of water in putting out a five-alarm fire, and that is okay. Prudence and the desire to minimize waste may lead to underwhelming results—or even allow the problem to get worse. Our approach was judged ex post more cost-effective than calls for broad principal write-downs, but ex ante we could have engaged in more aggressive additional experimentation with principal write-downs given the uncertainty about relevant policy trade-offs in helping more households. Research since the crisis also suggests that policymakers might want to focus more on the extent of payment reduction rather than the goal of a debt-to-income level.[53]

Uncertainty about the course of the housing crisis and about the correct policy responses, substantive concerns about the fragility of financial markets, and judgments about the political acceptability of directly helping homeowners led both administrations to take more moderate approaches than in retrospect we believe were warranted.

Lesson 2: Be ready to act forcefully in the face of uncertainty.

It is difficult, early on in a crisis, to distinguish a five-alarm fire from a more isolated one. Initially there was no consensus on the nature of the problem, with many arguing that modifications would merely prolong the necessary adjustment in the housing market. Foreclosure prevention events in 2007 and 2008 attracted thousands of distressed borrowers, and by the spring of 2008 we knew mortgage segments and geographic regions had real problems. But it was not clear whether these problems were simply bad for the subprime market or for overstretched places like Florida, or instead foreshadowed a cataclysm for the broader economy. Another reason we were too cautious was that we focused too much on the modal path and outcome. We were surprised by the extreme dysfunction of markets, servicers, and originators when confronted by an unprecedented foreclosure wave. Given the enormous uncertainty involved, policymakers should consider forceful policies to hedge against the bad tail outcomes. Policymakers need to act quickly to get interest rates down, reduce barriers to refinancing, and pursue payment reduction modifications. A challenge for future policymakers will be that forceful actions could be politically difficult when they appear to be helping undeserving borrowers.

Lesson 3: Put the proper regulatory and supervisory framework in place before a crisis unfolds.

Before the crisis, regulators did not use their supervisory authorities to crack down on risky practices. Federal banking regulators (which at the time in-

53. Ganong and Noel, "Liquidity vs. Wealth in Household Debt Obligations."

cluded the now-defunct Office of Thrift Supervision) had ample authority to limit underwriting practices that allowed for no-doc loans and practically nonexistent down payments made by regulated depository institutions. Regulators, including those at the Federal Reserve, failed to use their authority in a timely and sufficiently strong manner. One can debate the trade-offs between the added safety in the financial system and economic costs in terms of lost activity and less innovation, but regulators need to ensure that rules on consumer protection, and on banking safety and soundness, are effective and enforced. Although legislation since the crisis has addressed many of these issues, there is a serious risk of backsliding. Regulators should also take further steps as well to ensure clear accountability across all the relevant agencies for crisis fighting.

Lesson 4: Implementing responses to housing market turmoil will be more difficult than future policymakers expect.

We knew that the operational and other frictions would be severe, but they were much worse than we thought. Policy experimentation around the margins of HAMP and HARP resolved some of these constraints, but we should have pursued bolder responses. The active involvement of the GSEs was crucial because of their operational experience, scale, and relationships with servicers. Indeed, because the mortgage servicing industry was, at best, simply paralyzed or, at worst, actively resisting the implementation of modifications, we should have considered more seriously policy options that we perceived as infeasible.

Future policymakers should seek to understand the sources of, and reasons for, friction when designing policy. Normal competitive dynamics could easily leave the private sector lacking the organizational capacity or will to enact far-reaching and dramatic policies; our experience suggests this is especially true in housing markets, and that to overcome this, the government may have to overpay servicers to implement policy. One road not taken—a policy we have since given much thought to—would have been to address the lack of capacity and deep inertia in the mortgage servicing industry by creating a twenty-first-century Home Owners' Loan Corporation—that is, a new agency to collect and distribute mortgage payments, contact and negotiate with borrowers, and, when necessary, foreclose on properties. This is something policymakers should consider in deciding what role the GSE, the FHA, and the broader government should play in the housing finance system.

Lesson 5: Have a more powerful mix of carrots and sticks to induce servicers and investors to resolve problems.

Even though we offered incentives to servicers, many failed to modify or refinance mortgages (even when it made financial sense to do so). We should have used stronger sticks—looking for ways to force servicers to act—together with larger carrots (say, financial incentives). Bank capital injections were based on the idea of using overwhelming force to stabilize the financial sector, but our housing programs were much more modest in scale. One such stick, if it had been in place in advance, could have been bankruptcy reform permitting judicial restructuring of mortgages. More research would be useful to quantify the balance of pros and cons to this change.

CONCLUSION

Ultimately, our policy response helped millions of families at a modest cost to taxpayers and contributed to the recovery in the broader economy. But the policy response was not adequate to the challenge, and millions of families lost their homes—many of them needlessly. In retrospect, we acted too "prudently" and should have instead acted more forcefully from the start.