



Critical Housing Finance Challenges for Policymakers

Defining a Research Agenda

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April 2012

The *What Works Collaborative* is a foundation-supported research partnership that conducts timely research and analysis to help inform the implementation of an evidence-based housing and urban policy agenda. The collaborative consists of researchers from the Brookings Institution's Metropolitan Policy Program, Harvard University's Joint Center for Housing Studies, New York University's Furman Center for Real Estate and Urban Policy, and the Urban Institute's Center for Metropolitan Housing and Communities, as well as other experts from practice, policy, and academia. Support for the collaborative comes from the Annie E. Casey Foundation, Ford Foundation, John D. and Catherine T. MacArthur Foundation, Kresge Foundation, Rockefeller Foundation, Surdna Foundation, and the Open Society Institute.

The views expressed here are those of the authors and do not necessarily reflect the views of those funders listed above or of the organizations participating in the *What Works Collaborative*. All errors or omissions are the responsibility of the authors.

The authors would like to extend their thanks to Vicki Bean and Ingrid Gould Ellen for their valuable perspectives in developing the initial framing of the paper; to Ingrid Gould Ellen, Dan Immergluck, Alan Mallach, and Carolina Reid for detailed and insightful comments on earlier drafts of the paper; to Kim Vermeer and Lori Bamberger for sharing their views on the research needed to better inform financing programs for sustainable housing; and to Nicholas DuBroff for his assistance in developing the overview of existing programs for financing sustainable housing.

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Introduction

The overarching goal of the What Works Collaborative is to build knowledge and share solutions with policymakers at the U.S. Department of Housing and Urban Development (HUD) and other federal agencies. During the first phase of the Collaborative, more than two dozen independent research projects were completed on a wide range of current housing and urban development issues. The Collaborative has now turned its attention to fleshing out longer-term policy challenges and identifying research needed to formulate policy to address these challenges. This paper is one of five developed by the Collaborative on different aspects of housing and urban policy.¹ The goal of the paper is to surface critical unanswered questions for policy research and to conceptualize a research agenda to help guide new research initiatives that hold the most promise for moving both policy and practice forward. In 2012, the Collaborative will then tackle several small scale research initiatives that are deemed to be of high priority, can be addressed quickly, and would lay the groundwork for larger research projects.

A draft of this paper was used as the basis for a day-long convening in October 2011 with representatives of the What Works Collaborative, and other researchers, policymakers, and practitioners to help identify and prioritize unanswered questions related to the housing finance topics covered here. The feedback from these discussions helped guide revisions that have led to this final draft. A list of convening participants is provided in Appendix A.

This paper focuses on four critical policy challenges in the area of housing finance that were developed with input from the Collaborative during the spring of 2011. The four issues that are the focus of this paper are

1. mortgage lending to underserved groups;
2. mortgage financing for the evolving rental housing market;
3. mortgage lending in distressed neighborhoods; and
4. the role of mortgage finance in supporting investments in sustainable housing.

The remainder of this paper is divided into four separate sections devoted to each of these topics. For each policy challenge, the paper addresses the following questions:

- Why is this a critical issue for policymakers?
- What barriers and challenges may require public-sector involvement to address?
- What are key policy levers or private efforts that both research and future policy interventions may be built around?
- What are the key issues where research is needed to inform policymaking in this area, and what are examples of research projects on each issue?

¹ The papers are available at <http://www.urban.org/what-works-collaborative.cfm>.

Mortgage Lending to Underserved Groups

The tremendous wave of foreclosures and profound economic distress brought on by the collapse of the housing bubble has led to widespread questioning of efforts to support homeownership for Americans who have historically owned homes at lower rates, including households of modest means and racial and ethnic minorities. While the foreclosure crisis has all too clearly highlighted the damage caused to individuals and communities of failed homeownership, there is a real danger that changes in policies and lending practices will go too far in closing off opportunities for homeownership for families who—under the right conditions—have both the desire and the means to succeed at homeownership and to realize the financial and social benefits that homeownership can bring.

Families and individuals who would like to own a home confront a number of long-standing challenges, many of which have been exacerbated by the housing bust and severe recession. Housing affordability, while much improved by falling prices and record low interest rates, remains a significant barrier for many lower-income households struggling to gain a foothold in the continuing weak economy. Flexible and innovative mortgage finance options are one means of addressing these affordability challenges. But with foreclosures at record levels, mortgage underwriting standards have tightened substantially. While some tightening was clearly necessary from the lax standards that helped fuel the housing bubble, there are concerns that the pendulum has swung too far in the other direction, closing off access to financing for creditworthy borrowers and potentially unnecessarily raising its costs. There are also continuing concerns about consumers' ability to successfully navigate the complexities of choosing an appropriate mortgage product as well as the potential for minorities to experience disparate treatment or impact in the mortgage market.

Finally, the foreclosure crisis has also exposed the critical importance of developing means to mitigate the risks that arise after home purchase that threaten owners' ability to afford their homes. Of great importance are approaches to loan servicing and loss mitigation to better engage with financially distressed borrowers and to have resolutions available that can help motivated owners to retain their homes while also minimizing losses for lenders in these loans. The experience of recent years has made it clear that there is room for substantial improvements in loan servicing to support better outcomes for both homeowners and lenders.

The housing finance system is undergoing profound changes driven both by a fundamental revamping of the regulatory structures and rules governing the finance system, by a reconsideration of what form—if any—a government guarantee of mortgages should take, and by changes in the behaviors and attitudes of consumers and suppliers in response to their experiences during the housing market boom and bust. Policymakers are currently confronted with a wide range of decisions about both how and whether to intervene in the market to support homeownership for historically disadvantaged groups.

The focus of this topic area is to identify the research needed to understand key issues affecting the demand and supply of mortgage credit in the single-family markets going forward, with a particular emphasis on issues affecting the cost and availability of credit for lower-income and minority borrowers and communities. The section begins by outlining the key challenges and barriers for low-income and minority households seeking financing to purchase a home. We then briefly identify the primary existing

public and private efforts in this area before framing the broad questions that are of concern to policymakers. We conclude by identifying some specific research topics in each area.

Challenges and Barriers

Mortgage lending to underserved groups faces a range of challenges on both the demand and supply sides. Most of these are long-standing issues, but changes wrought by the housing crisis have in many cases compounded these existing challenges. Among the key challenges and barriers affecting efforts to extend financing for homeownership are

- homeownership affordability;
- risk assessment, mitigation, and pricing by lenders;
- consumer choice related to complex financial products;
- mitigating risks after purchase through loan servicing and loss mitigation approaches; and
- discrimination in mortgage markets.

Affordability

A fundamental barrier in lending to underserved groups is the high cost of owner-occupied housing relative to income and wealth among these households. A series of reports by the Census Bureau since the early 1990s has examined the share of renter households that could afford to buy housing at different price levels given their income, debt, and savings.² The last of these reports was published in 2009 analyzing data on renters as of 2004 (Savage 2009). Consistent with the findings from previous reports, this analysis finds that only a small share of current renters (8 percent) could afford to buy a modestly priced home, and even fewer African American or Hispanic renters (3 percent of each group).³ While insufficient income was a constraint for two-thirds of renters, a lack of cash for down payments, closing costs, or to pay down outstanding debts was a more common barrier, affecting nearly 90 percent of financially constrained renters. Affordability problems are generally more significant in high housing cost areas along the coasts, but can also be evident in areas where there is a significant gap between area incomes and even modest house prices.⁴

It is true that homeownership affordability has improved since 2004 as housing prices have fallen and mortgage rates have reached record lows. As of the second quarter of 2011, the National Association of Realtors affordability index for first-time homebuyers stood at 117—meaning that the typical first-time buyer had 117 percent of the income needed to qualify to purchase a modestly priced starter home. In

² The analysis assumes the use of a conventional 30-year fixed-rate mortgage and assumes that borrowers cannot have housing costs (including property taxes and insurance) that exceed 28 percent of income, total monthly debt that exceeds 36 percent of income, must have a 10 percent down payment, and must cover closing costs of approximately 5 percent of the house value.

³ A modestly price home is one that is assumed to be the 25th percentile of the home value distribution among owner-occupied homes in the market area.

⁴ The NAHB/Wells Fargo Housing Opportunity Index estimates affordability measures for all metro areas. Based on data compiled for this index, the ratio of median sales price to median household income is much higher in market areas in the Northeast (2.7) and West (3.0) compared to the Midwest (1.8) and, to a lesser extent, the South (2.4). Data retrieved from http://www.nahb.org/reference_list.aspx?sectionID=135 on December 6, 2011.

comparison, in 2004 the index stood at 78. But this index assumes that buyers are able to muster the assumed 10 percent down payment. As of 2007, when the last national survey on household finances was conducted, the median white renter was found to have a net worth of only \$7,200, of which only \$1,000 was in cash savings. Minorities were even less well positioned to buy a home, with a median net worth of \$2,700 and only \$300 in cash savings.

Further evidence of the barrier posed by the need for substantial savings to purchase a home is provided by an analysis by the Center for Responsible Lending (CRL) of the amount of time needed to accumulate savings to buy the median-priced home. Based on the average national savings rate of 5.2 percent annually, CRL showed that the median household in the United States would have to save for 10 years to accumulate the savings needed to cover a 10 percent down payment and 5 percent closing costs on the median priced home (CRL 2011). Meanwhile, given their lower incomes, the median Latino household was estimated to need 12 years to reach this savings goal, while the median African American household would need 15. These estimates also assume that all household savings is put toward buying a home, with nothing set aside for retirement, education, or other emergencies.

The CRL estimates highlight the challenge of saving such substantial amounts out of modest incomes. Renters have, however, been found to be able to accumulate savings rapidly in anticipating of buying a home. In an analysis of renters tracked by the National Longitudinal Survey of Youth (NLSY) over a six-year period from 1985 to 1990, Haurin, Hendershott, and Wachter (1996) find that the level of savings among renter households rises rapidly in the year before home purchase. Listokin and colleagues (2002) also find that among renters in the 1993 SIPP panel who purchased a home by the end of the panel in 1995, 93 percent purchased homes that had values that exceeded the amount that appeared to be affordable to those households in 1993. Further, a large majority of these households purchased housing that was valued at least 50 percent higher than the estimate of what they could afford.

While the rapid accumulation of cash by renters may indicate that binge savings is possible, it may also highlight the important role played by family resources in meeting the down payment constraint. Based on survey data collected by the Chicago Title & Trust Company, Mayer and Engelhardt (1996) examine the source of funds used for down payments and find that about one in five first-time buyers from 1988 and 1993 received gifts to help fund home purchase, with the gifts on average accounting for about half of the down payment. A survey by the National Association of Realtors in 2011 found that among first-time homebuyers the share reporting using gifts from family or friends for the down payment was 26 percent, up from 22 percent at the height of the housing boom in 2006 (NAR 2011). But this generational transmission of wealth is less of an option for minorities, who are less likely to have family that owned homes in the past and so less accumulated wealth.

These affordability constraints can be addressed through relaxed loan underwriting requirements related to debt-to-income levels or required loan-to-value (LTV) ratios. Of course, these changes may come at the expense of higher risks of default and greater loss severity for lenders as these borrowers will have less savings to withstand financial shocks and there is less home equity to cover the costs of foreclosure or absorb any fall in property values. These issues related to the assessment and pricing of risk will be discussed below.

But relaxing underwriting guidelines are also generally found to have relatively little impact on the overall share of renters than can qualify for a mortgage. Savage (2009) finds that even lowering interest rates by as much as 3 percentage points only increases the share of renters that can afford a modest

home by less than a single percentage point. Similarly, relaxing LTV requirements to 2.5 percent has about the same impact.

The limited impact of lower LTV requirements reflects the fact that renters need cash not just for the down payment, but also to pay closing costs and to reduce outstanding debts. As a result, Savage (2009) finds that cash grants are found to have a much larger effect on how many renters can afford to buy a home, with grants of \$5,000 increasing the share by more than 2 percentage points. Grants of \$10,000 have much larger impacts, increasing the share of all renters qualifying by more than 10 percentage points and the share of minority renters by about 8 percentage points. For this reason, it has long been recognized that programs that provide cash grants for down payment assistance have the greatest potential for increasing homeownership opportunities.

Of course, lower interest rates do provide an ongoing benefit for owners in lower housing costs, which can become substantial over the life of a mortgage. And lower LTV requirements do provide some relief from the amount of savings needed. It may also be the case that while the impact on the share of renters who can qualify is small, these changes may still increase the number of qualifying renters substantially. For example, while Savage finds that a decrease in the required LTV by 5 percent increases the share of African Americans and Latinos who would qualify for a loan by 0.6 percentage points, this still represents a nearly 20 percent increase in the number qualifying.

One other approach to addressing affordability concerns that has gained increased attention in recent years is shared equity. One approach to shared equity is to subsidize the purchase price of the home to a level that is affordable at a targeted low-income level and to then restrict the resale of the house to another qualified low-income buyer at a price that is capped by a predetermined annual appreciation rate. These restrictions can be put in place either through deed restrictions, a limited-equity cooperative housing structure, or community land trusts (Davis 2006; Caplin, et al., 2007; Jacobus and Lubell 2007). These approaches achieve several goals simultaneously: they bring the cost of the home down to a level that is affordable, they husband subsidies to benefit future homebuyers, and they reduce the financial risk of homeownership by providing greater assurance that some degree of price appreciation will be realized given that the starting gap between the market value of the home and the sales price can be substantial.

Shared appreciation mortgages are another variant of this idea, where a silent second mortgage makes up the difference between the price affordable to the buyer and the cost of the home. Upon sale, the borrower repays the second mortgage principal along with a share of the appreciation in the house value. The subsidy is recaptured through the principal repayment and the share of appreciation paid as interest allows the available subsidy funding to grow with house prices (Jacobus and Lubell 2007).

But there are also concerns about shared equity approaches, including how well they work in areas with limited growth in house prices, whether they allow owners to realize the full benefits of wealth creation from homeownership, and whether the inability to share fully in house price growth would reduce mobility among participants (Jacobus and Sheriff 2009). Growing experience with these approaches has provided more opportunities for evaluations to assess outcomes from these programs. Evaluations of two long-standing programs in Colorado and Vermont by Temkin, Theodos, and Price (2010a, 2010b) found that participants did participate in trade-up buying activity, realizing fairly significant returns on their investments in these homes. Further, foreclosure rates among participants were also very low (1 percent or less), particularly compared to foreclosure rates generally during this period. But beyond questions about whether shared equity approaches deliver a full complement of homeownership

benefits, there are also concerns about whether it will be possible to obtain the significant levels of public funding needed to support these efforts at a meaningful scale.

Risk assessment, mitigation and pricing by lenders

By several measures, underwriting standards have been substantially tightened in response to the collapse of the housing market. The clearest indicator is given by responses to the Federal Reserve Survey of Senior Loan Officers, which found that on net surveyed lenders tightened their residential mortgage standards each quarter from the end of 2006 through mid-2010. Since then, there have only been two quarters when lenders on net reported loosening credit standards, and even then those loosening credit only slightly exceeded those tightening credit.⁵

One indication of these tightening standards is the much higher share of borrowers through both the government-sponsored agencies (GSEs) and FHA that have high credit scores. For example, the share of loans guaranteed by Freddie Mac with credit scores above 740 rose from 42 percent in 2006 to 73 percent in 2010. Over this same period, among FHA loans the share of borrowers with FICO scores above 680 rose from 25 to 57 percent.⁶

Courchane and Zorn (2011) provide a more rigorous assessment of the risk profile of loans originated by 20 large lenders from 2004 through 2009 representing a cross-section of prime, FHA, and subprime loans. The expected cumulative default rate (CDR) for each loan is estimated using a proprietary Freddie Mac model to assess how the risk profile of loans originated shifted over time. Courchane and Zorn find that there was substantial tightening of credit between 2006 and 2009 as shown by significant declines in the distribution of CDRs for minority borrowers and minority and low-income communities. They attribute this tightening to several factors, including fewer risky borrowers applying for loans as well as replacement of subprime loans and their various risky features with less risky FHA loans and by general tightening of underwriting standards.

Tightening of underwriting standards was clearly warranted given the poor performance of loans originated during the middle of the decade. Perhaps the strongest evidence for the deteriorating credit quality of originated loans is provided by Demyanyk and Van Hemert (2008), who estimate the likelihood that subprime loans originated from 2001 through 2007 experienced a serious delinquency 12 months after origination. They find that even after controlling for loan, borrower, and market characteristics, the risk of early default rose every year from 2001 through 2007, which they attribute to weaker underwriting. Haughwout, Peach, and Tracy (2008) also decompose the rise in early defaults among loans originated in 2005 through 2006 into components related to changes in loan terms, deteriorating economic conditions, and an unexplained portion. They find that deteriorating economic conditions accounted for most of the rise in foreclosures that was explainable, while changes in loan terms and borrower characteristics explained a smaller share. However, they also find that a majority of the rise in early defaults was unexplained by their model. In essence, like Demyanyk and Van Hemert, Haughwout and colleagues find that most of the rise in early defaults was due to deterioration in loan quality that is not evident from observed characteristics and so may reflect the lack of care taken in underwriting these loans.

⁵ See <http://www.federalreserve.gov/boarddocs/snloansurvey/201108/fullreport.pdf>.

⁶ Freddie Mac credit score distribution from annual 10-K filings; FHA Actuarial Review Annual Reports to Congress.

But while a return to more prudent underwriting was necessary, there is a danger that the market will veer too far in the other direction and overly restrict access to credit and impose excessive risk premiums on loans to borrowers that cannot meet today's more conservative underwriting guidelines.⁷ Perhaps more troubling for borrower access is the tendency for originators to impose even tighter standards—referred to as lender “overlays”—than required by insurers or guarantors. These restrictions are motivated in part by the increased enforcement of repurchase agreements by guarantors, lenders and insurers in cases where loans default, forcing originators to buy back troubled loans. Originators who also service loans may also be reluctant to take on loans with a perceived high risk of default because of the high costs of servicing delinquent loans. For example, FHA lenders have imposed tighter credit constraints than mandated by FHA on loans it insures, apparently to reduce the higher servicing costs and greater risks of having insurance stripped from loans that become delinquent. While this tendency has been reported anecdotally, it is reflected by the fact that few FHA loans are being originated with low credit scores despite the fact that FHA only imposes a minimum credit score of 580 for certain classes of high LTV loans.

As the mortgage market evolves, the supply of credit will be determined by individual and collective decisions about how much risk to assume and how to price these risks by market participants throughout the supply chain—including originators, servicers, insurers, and lenders. Each of these links in the chain will exert influence over whether and at what price consumers will have access to mortgage financing.

Yet, there are numerous examples of how market estimates of risk have proven inaccurate. As the studies cited above demonstrate, the market clearly underestimated the default risk of many loans originated during the height of the housing boom. In part, this reflects the fact that the proliferation of new loan products and the layering of risky terms in a single loan had no historical precedence and so taxed the ability of statistical models to predict performance (Rossi 2010; An et al. 2009).

By the same token, lenders may overestimate the risks of lending to borrowers with lower incomes and weaker credit scores. An analysis by Ding and colleagues (2011) of the performance of CRA-motivated loans with subprime loans to borrowers with a similar profile finds that the CRA-motivated loans have default rates that are 70 percent lower, primarily because they lack the risky features of subprime loans and are not made through broker channels. Broker-originated loans are associated with a higher risk of default presumably because of a lack of financial interest in the longer-term performance of these loans. The findings of this study suggest that the channels through which loans are originated can make a substantial difference in the performance of loans to what are deemed to be riskier borrowers.

A continuing question is the extent to which education, counseling, and coaching of potential homebuyers housing counseling can help reduce the risks of default. Efforts to provide counseling and education to both potential and existing homebuyers have a long history of support by both the federal

⁷ Beginning in 2008 the GSEs began to assess additional delivery fees on mortgages based on indicators of default risk, including loan to value ratios, borrower credit scores, loan purpose, and other factors. These fees can be substantial. For example, on a loan for a borrower with a credit score of 680, an LTV of 85 percent, and seeking a cash out refinance Fannie Mae would assess an additional origination fee of 4.25 percent of the loan balance as of November 2011 (See <https://www.efanniemae.com/sf/refmaterials/llpa/pdf/llpamatrix.pdf>). These fees may also be rolled into the interest rate on the loan and captured by the originator by a premium earned on sale of the loan. As a rule of thumb, each 1 percent origination fee would require about a 0.25 increase in the interest rate on the loan (<http://www.mortgageloan.com/what-kind-interest-rate-can-you-expect>).

government and lenders (Herbert, Turnham, and Rodger 2008). But for various reasons related to the availability of data and challenges in creating a suitable comparison group, few studies have shed light on whether and under what circumstances these interventions reduce the risk of lending to higher risk borrowers. Collins and O'Rourke (2011) provide a useful survey of studies conducted to date, which generally—but not universally—provide support for the efficacy of housing counseling and education.

There are also questions about the extent to which variation in loan pricing reflects actual variation in risks or are more the result of a borrowers' knowledge of options and ability to negotiate. For example, Woodward (2003) found that consumers paid higher prices for more complex mortgage products with much of the difference going to mortgage brokers in higher fees. Another study by Woodward (2008) found that even among more standard FHA loans there was a wide dispersion in yield-spread premiums, likely reflecting differences in consumers' ability to negotiate. Based on a survey of mortgage borrowers, Courchane, Surette, and Zorn (2004) find that nonprime borrowers were less knowledgeable about the mortgage process, less likely to search for the best mortgage rates, and less likely to be offered a choice among alternative mortgage terms and instruments. Lax and colleagues (2004) examine the pricing of subprime loans and find that roughly half of the interest-rate premium on these loans cannot be explained by higher levels of risk associated with these loans.

New regulations affecting the amount of credit risk and legal liabilities that lenders will bear for different types of loans will play a strong hand in the availability and pricing of loans. But not all of the changes in mortgage supply will be due solely to changes in regulatory structures. Even absent regulatory action participants in the mortgage market will decide how much risk they are willing to bear and at what cost. In developing new regulatory approaches, policymakers need to have a clear understanding of how suppliers of credit assess and price risk to appropriately balance concerns about safety and soundness of the financial system with concerns about supporting access to fairly priced credit for a broad segment of society.

Consumer choice related to complex financial products

As the above discussion highlights, even before the foreclosure crisis began, there were concerns about consumers' ability to successfully navigate an increasingly complex mortgage market with both wider choices of loan products and wider variations in pricing (see Essene and Apgar 2007 for a review of this literature). While the stresses to the housing finance system exposed deep flaws and have altered consumers' understanding of and attitudes toward housing finance at least temporarily, underlying aspects of how consumers tend to make financing decisions may or may not have been permanently changed. These include focusing on initial monthly payments more than interest rates and loan terms, discounting the impact of potential payment reset risks, and looking past home price determinations to monthly payments. Credit decisions may well continue to be influenced by these biases in decisionmaking, but also will undoubtedly be shaped by changes in the information available to make these decisions that are being brought about by recent and impending regulations. How consumers will process this new information and how it will affect their decisions remains to be seen.

A key point in the process for public policy are consumer disclosures that occur both upon application for and closing of home loans. Even as the housing bubble was still inflating, there was a growing realization of the inadequacy of existing disclosures and a great deal of research to develop revised forms to provide consumers with information that is more transparent and actionable (see, for example, Lacko and Pappalardo 2007). The Consumer Financial Protection Bureau (CFPB) is continuing this process and is now actively engaged in soliciting feedback and testing new approaches to meet

mandates from the Dodd-Frank Act to update mortgage disclosures both upon application and at closing.⁸

While more effective disclosures should help borrowers improve their mortgage choices, this intervention takes place very late in the process of either purchasing or refinancing a home. Much less research has been done to fully understand how consumers go about making the choice to buy or refinance a home, acquire information about mortgage options, and process and ultimately act on this information. Gathering detailed information on the consumer decisionmaking process generally requires more qualitative data collection methodologies that are time consuming and expensive, which has limited the number of studies examining these issues. To inform revisions to consumer disclosure forms, Lacko and Pappalardo (2007) conducted in-depth interviews with 36 recent mortgage customers in the Washington, DC, area to examine how consumers chose their mortgage product and how well they understood its terms. The researchers found that borrowers initially expressed satisfaction with their mortgage choices and their lenders, but as the interviews progressed and borrowers learned more about the specifics of their loans their attitudes became more negative. The study's findings are of interest both in revealing the ways in which disclosure forms had failed to help consumers understand the terms of their mortgage, but also in exposing the difficulty of gathering a true understanding of consumers' experience using a simple structured survey.

Other studies that have delved in detail into the mortgage search process have identified how the approaches used by consumers can frame their choices in ways that lead to less than optimal choices. Reid (2010) conducted interviews with 80 borrowers in two lower-income communities in the San Francisco Bay area. Through interviews with homeowners about the process they used to decide whether to obtain a loan and how they searched for a loan, Reid identified how many consumers used their social networks as sources of information on loans and lenders. But since the social networks in these communities were quite insular, this method of gathering information produced limited information on loan options. Reid also found that borrowers treated mortgage brokers and real estate agents, who were often members of their own communities, as trusted advisors relying on their guidance in making loan choices and paying little attention to disclosure documents, with often significant consequences.

Pittman (2008) is another qualitative study of a small sample of 33 primarily African American borrowers in Atlanta to examine both how they decided whether to borrow and to then search for and select a loan. This study recruited borrowers through two means: partly based on a search of public records in areas where subprime loan shares were high and partly from referrals of clients from local housing counseling agencies. The study found that borrowers who were not assisted by the counseling agencies fell into two categories: those who did not seek advice from anyone about whether and how to borrow and those who sought advice from family, friends, or other social contacts. Pittman found that the first group generally identified a lender to approach, did not shop, and relied on the lender to frame their choices, with all but one of these borrowers obtaining a subprime loan. The second group relied on referrals from family and friends to identify lenders, but given the limitations of this network also resulted in most of these borrowers obtaining subprime loans. In comparison, the borrowers that sought the assistance of the housing counseling agency all obtained fixed-rate prime loans, even though this group was similar in its demographic profile. The study highlights how borrowers fall into market

⁸ See <http://www.consumerfinance.gov/knowbeforeyouowe/> for the process being used and prototypes for mortgage disclosure forms seeking comment.

channels matters a great deal, but does not shed much light on the determining factors in steering borrowers through housing counseling agencies and thus toward better mortgage products.

In the current market situation, consumers are facing relatively limited mortgage choices, as the market is heavily dominated by FHA and the GSEs. But as the market recovers, there will undoubtedly be a return to conditions where a wider range of mortgage options is available. New regulations, particularly those related to the qualified residential mortgage (QRM), will create distinct classes of loans that may be marked by sharp differences in pricing. A recent analysis finds that large shares of low-income and minority borrowers from recent years would not meet the proposed QRM definition, even though a large majority of the excluded borrowers had not defaulted during the housing market meltdown (Quercia, Ding, and Reid 2012). In that context, the process used by consumers in making mortgage decisions can have significant financial consequences. Policymakers need a much better understanding of consumer behavior to help develop policies and programs that will lead to better borrowing choices.

Mitigating risks after purchase through loan servicing and loss mitigation approaches

The foreclosure crisis has highlighted all too clearly the significant risk and the high cost of failed homeownership. Prudent underwriting and support for sound consumer choices at the time of purchase can help mitigate these risks. But borrowers will always face the possibility of financial shocks after they buy that will make it difficult to meet their mortgage obligations, such as the loss of a job, health problems, divorce, or unexpected housing repairs (Belsky, Case, and Smith 2008). When these issues arise, approaches to loan servicing and the loss mitigation options available can both make a significant difference in the likelihood that the delinquency will be cured. For example, Stegman and colleagues (2007) analyzed delinquent loan outcomes as a function of borrower and market characteristics as well as the specific servicer handling the loan. They found substantial differences in the probability that a loan would cure that was related to servicer-specific effects after controlling for other factors. This result is consistent with information from the Treasury Department on variations in outcomes in the HAMP program across servicers, which can be substantial.⁹ Outcomes across servicers would be expected to vary with the methods used to conduct outreach to borrowers; how collections and loss mitigation functions are coordinated; the capacity, training, and qualifications of staff in different functions; and the protocols for managing cases and offering options. However, the specific reasons for these variations are not well understood and so represent an area where further investigation is needed.

Levitin and Twomey (2011) have pointed to structural factors in how servicers are compensated that may provide incentives for these organizations to favor foreclosure resolutions to resolutions through loan modifications. These authors argue that because servicers are fully reimbursed for the substantial costs and fees incurred during the foreclosure period, and have priority in the payment of these costs out of foreclosure proceeds, they have an incentive to pursue a foreclosure. Since servicers must forward scheduled monthly payments to lenders while borrowers are delinquent and so bear the costs of financing these advances, delaying foreclosure is not optimal for servicers if there is little chance the loan will reinstate. Concerns about whether servicers are adequately compensated through regular servicing fees for delinquent loans as well as whether they face appropriate incentives to cure loans have led to provisions in Dodd-Frank to establish new loan servicing standards.

⁹ For quarterly reports on servicer performance in the HAMP program see <http://www.treasury.gov/initiatives/financial-stability/results/MHA-Reports/Pages/default.aspx>.

One factor that has been found to matter in improving outcomes is establishing early contact with borrowers. Cutts and Merrill (2008) find that lenders were unable to make contact with 53 percent of Freddie Mac borrowers that lost their homes to foreclosure. Further, this study also documents how the establishment of repayment plans at an early stage of delinquency increases the likelihood of cure. Cutts and Merrill report on a pilot effort by Freddie Mac from before the foreclosure crisis to partner with a nonprofit counseling agency to help establish contact with borrowers early in their delinquency to develop a response to their delinquency early in this process. The pilot study results showed promise that the use of a third-party counseling agency helped increase contact with borrowers early in this process to increase the likelihood that homeownership would be sustained.

Further support for the potential value of counseling for delinquent borrowers has been provided by ongoing evaluations of the National Foreclosure Mitigation Counseling program (NFMC), which began with significant federal support in 2008. Two recent studies of these efforts both found evidence that counseling has helped increase the likelihood that counseled borrowers receive a modification and is also associated with a greater likelihood that they remain current on the loan after a modification (Mayer et al. 2011; Collins and Schmeiser 2010).

As the foreclosure crisis has mounted, servicers and lenders have extended several options to borrowers to help resolve delinquencies—in some cases voluntarily and in others in response to federal mandates through the HAMP program. For the most part, the range of options offered, including temporary forbearance, repayment plans, modifications to loan amounts, terms, and interest rates, and reductions in the amount owed, are not new; all of these approaches were included in formal loss mitigation programs offered by the GSEs, FHA, and private mortgage insurers going back to the 1990s (Capone 1996; Herbert, Gruenstein, and Burnett 2000). But these options were not available to borrowers with loans that were not guaranteed or insured through these channels, which accounted for a substantial share of borrowers during the height of the boom. Going forward, there needs to be greater assurances that all borrowers have access to remedies that can help preserve homeownership while also enhancing returns to lenders in these loans.

In addition to remedies that can be extended through servicers, there is a heightened awareness of the need for financial support for some borrowers that are facing temporary losses of income or increased expenses from which they are likely to recover but not to the extent that the accumulated deficit in loan payments can be made up. In these cases financial support in the form of grants or deferred, interest free loans may be needed to maintain homeownership. A long-standing effort in Pennsylvania has offered borrowers this type of assistance (Orr et al. 2011). The federal government is also offering this type of assistance to borrowers through both the Treasury Hardest Hit Funds and HUD's Emergency Homeowners' Loan Program (EHLP). While both programs offer the potential to provide critical support to temporarily struggling homeowners, there have been various operational challenges in implementing these programs. These are also temporary programs and so will not be available to provide support for homeowners once they expire.

In short, the foreclosure crisis has highlighted the impact that different approaches to servicing, loss mitigation, and borrower education and counseling can have on the likelihood that borrowers will be able to retain their homes. With new servicing standards to be set under the Dodd-Frank legislation, there are opportunities to establish more effective systems going forward to support troubled homeowners. The experience of the last few years also offers fertile ground for research to uncover approaches that hold the most promise for mitigating the risks of failed homeownership.

Discrimination in mortgage markets

Policymakers also need to be concerned about the potential for minorities to experience discriminatory treatment or disparate impact in the mortgage market.¹⁰ Turner and Skidmore (1999) provide a clear summary of the forms that discrimination may take in the mortgage market and review the most compelling research at the time related to each stage. The key stages in the mortgage lending process include advertising and outreach, preapplication inquiries, loan selection and approval, and loan administration.¹¹ One of the challenges in assessing whether discrimination in lending occurs is that it may happen at any point in this process, which may involve different actors and require different analytic methodologies. Another challenge is that there are substantial differences in financial circumstances by race and ethnicity which correlate with the factors used by lenders in extending credit.

Racial and ethnic disparities in the use of subprime lending provides an example of these challenges. HMDA data provided substantial evidence that minorities, particularly African Americans, were much more likely to obtain high cost subprime mortgages than whites (see Bradford 2002 for one of the early studies of this type). However, HMDA lacks the full range of credit variables used by lenders in extending credit and so by itself could not be used to assess whether minorities were being treated differently by lenders. Researchers from the Center for Responsible Lending addressed this limitation by matching HMDA data with other loan information including relevant risk factors and demonstrate that racial and ethnic differences in high-cost lending remained even when these factors were controlled for (Bocian, Ernst, and Li 2006). Still, the mechanism by which these differential outcomes emerge was not clear, as differences in outreach and advertising, prequalification inquiries, as well as the application process itself could all contribute to this result.

A lack of similarly complete data has prevented much research on discriminatory outcomes in mortgage lending. The primary exception was a study by researchers at the Federal Reserve Bank of Boston in the early 1990s where local lenders provided complete underwriting information on mortgage applicants (Munnell et al. 1996). The study found evidence of higher mortgage rejection rates among African Americans after controlling for relevant measures of credit quality. While subject to a number of criticisms concerning the quality of the data and the methodology used, the fundamental conclusion of the study has generally been supported by subsequent analysis (Ross and Yinger 1999).

A common methodology for assessing discriminatory treatment is through the use of paired testing, where matched study participants of different races or ethnicities but with assigned financial characteristics that are roughly equivalent approach the same lender to inquire about a home loan. Paired-testing methods were used in a study by HUD of the prequalification stage and found evidence of disparate treatment of minorities by lenders (Smith and Cloud 1996). Another pilot study was developed by HUD in the early 2000s to explore discriminatory treatment in the preapplication stage (Turner et al. 2002). The scale of the pilot was small, but the results also suggested that minorities may be less likely to be provided with full information on loan products, to be coached about steps needed to qualify, and

¹⁰ Disparate treatment refers to situations where equally qualified borrowers are treated differently on the basis of their race or ethnicity. Disparate impacts arise in cases where policies or procedures that are not based on race or ethnicity nonetheless have a systematic effect on minorities and are not justifiable by business necessity—for example, if loan requirements relate to income or house values that exclude higher shares of minorities but do not have a valid business justification.

¹¹ Of course, discrimination in the process of searching for and negotiating the purchase of a house may also affect the process of obtaining financing for a home, but housing market discrimination is not treated in this paper.

to receive follow up contacts from lenders. However, examinations of discriminatory treatment in the mortgage application process itself have been limited by concerns about potential for allegations of fraud if a paired-testing methodology were used in filing actual mortgage applications as this approach relies on the use of fabricated household financial characteristics.¹²

As this brief review illustrates, concerns about discriminatory treatment and impacts in the mortgage market are certainly not new. But with significant changes taking place in the mortgage market and significant tightening of credit on the basis of factors that are highly correlated with race and ethnicity—including income, wealth and credit history—policymakers need to be sensitive to the potential for discrimination to become embedded in the new mortgage market.

Existing Public and Private Supports

Loan products

FHA-insured mortgages have long been a key source of financing for low-income, low-wealth, and credit-impaired borrowers. During the run up to the boom, FHA's market share fell into the low single digits as subprime lending grew and GSE lending to more disadvantaged borrowers expanded. At present, FHA has become the primary source of purchase mortgages for buyers with less than a 20 percent down payment. Fannie Mae and Freddie Mac had developed a range of affordable loan products since the early 1990s to meet their mandated affordable housing goals. Since the housing bust, the pricing advantage of FHA loans relative to privately insured loans has limited their lending to predominantly higher down payment purchase and refinance mortgages. Of course, there is considerable debate about what form government guarantees will take in the future.

State housing finance agencies play an important role in affordable single-family finance through their below-market loans financed with mortgage revenue bonds. Loans made with proceeds from these bonds face both income and house price limits. Due to the tax-exempt status of the interest earned on the bonds, borrowers obtain financing at below-market interest rates. Before the financial crisis, approximately 125,000 loans were made nationwide through state HFAs (Herbert et al. 2005).

The U.S. Department of Agriculture has been another source of below-market rate loans through the Section 502 program, which provides both direct lending as well as guarantees of loans made by private lenders. Earlier in the decade, the 502 program was mostly a direct loan program that provided below-market rate loans that were affordable to very low income households and helped about 15,000 homeowners a year (Herbert et al. 2005). The program received a substantial boost in funding in response to the housing crisis, although most of the additional funding has gone to guaranteed loans. In FY 2009 about 12,000 buyers were assisted through the direct loan program, while more than 130,000 borrowers were assisted through loan guarantees.¹³ Loan guarantees do not provide any interest rate subsidies; interest rates are set by lenders participating in the program. But the government guarantee against losses from default should result in lower interest rates and greater loan volumes than would exist absent the government guarantee.

¹² The pair-testing methodology sends matched pairs of white and minority applicants to the same agent to seek housing or potentially to apply for a mortgage with the qualifications of the testers assigned by the study to be roughly equivalent.

¹³ See <http://www.ruralhome.org/storage/rhs/09yearend/titlecontentssummary.pdf>.

Down payment assistance

The primary source of down payment assistance has been HUD's HOME program, which assisted between 20,000 and 30,000 homebuyers a year during the mid-2000s (Carr et al. 2008). Other sources of down payment assistance include HUD's CDBG program, the Federal Home Loan Banks Affordable Housing Program, and NeighborWorks America. As of the early 2000s, these programs were estimate to assist a total of about 30,000 homebuyers annually (Herbert et al. 2005). Other sources of funding for down payment assistance include individual development account programs, state and local governments, and banks, although estimates of the volume of assisted homebuyers through these efforts are hard to come by.

Community land trusts

Community land trusts have been growing in prevalence, but the total number of units developed through these efforts remains fairly small. According to the National Community Land Trust Network, there are about 200 of these organizations nationwide, providing a total of 5,000 affordable homeowner housing units.¹⁴

Housing counseling

Housing counseling is provided by a broad range of nonprofit organizations throughout the country (Herbert et al. 2008). HUD has played a key role in supporting the counseling industry through financial grants for service delivery and training of counseling staff. As of 2008 there were 1,800 counseling agencies approved by HUD, providing assistance for renters, homebuyers, and homeowners. Of these, 70 percent received funding from HUD. Overall, HUD and other federal resources accounted for about two-fifths of all funding for counseling, state and local governments an additional fifth, and private sources accounting for the remaining two-fifths.

The NFMC program, which channels federal funding for delinquency counseling through NeighborWorks America, greatly expanded support for delinquency counseling beginning in 2008 and helped fuel a huge surge in counseling volumes to 1.6 million in 2009. Congress has continued to support funding for the NFMC program, including a proposed \$80 million in FY 2012.

Since 2008, investors in mortgaged-backed securities and the GSEs also have provided substantial funding support through the Homeownership Preservation Foundation. However, there is no commitment to continue this funding beyond 2011 at this point.

In spring of this year, Congress cut all new appropriations for housing counseling through HUD for FY 2011, and initial proposals for the FY 2012 budget have also zeroed out funding for counseling. While the continued support for the NFMC funding will support delinquency counseling, the loss of HUD funding means there is no federal support for rental, prepurchase, homeless, or reverse mortgage counseling.

Key Questions for Policymakers

This section outlines general research topics in this area along with some ideas for specific research projects that could be good starting points. The research topics identified include basic research to

¹⁴ See <http://www.cltnetwork.org/index.php?fuseaction=Blog.dspBlogPost&postID=1396>.

better understand market dynamics, assessments of existing and previous efforts to support homeownership, and the development of new approaches to addressing the known barriers.

What are most effective ways to make homeownership more affordable while not exposing owners or lenders to unduly high risks of default?

Homeownership can be made somewhat more affordable through relaxed underwriting standards regarding loan-to-value ratios, thereby reducing the amount of savings required. But for many lower-income households, and particularly those in higher-cost markets, subsidies are needed to make homeownership more affordable. Public funding for subsidies have always been limited, but with pressure on government budgets at all levels there is an increasing need to be as efficient as possible with available resources.

As noted above, cash grants to cover down payments and closing costs have the greatest potential for expanding the pool of potential homebuyers. With minorities accounting for an increasing share of young households, and greater emphasis by regulators on lower loan-to-value ratios as a means of mitigate risks of loss, the need to address the down payment constraint will become more important in the years ahead. But there are concerns that loans that require little cash from the borrower or that provide down payments through grants come at the expense of higher risk of default by those assisted. High default rates among borrowers who benefited from seller-funded down payment assistance programs have fueled this view, with default and claims rates among these loans that are two to three times higher than other loans (U.S. Government Accountability Office 2005, 2007). But the high default rate among these loans appear to be driven in part by other factors associated with these programs as the GAO found that default rates among these loans also greatly exceeded the rates among loans with other forms of down payment assistance. In fact, other studies have found that foreclosure rates may actually be lower among borrowers receiving down payment assistance through subsidy programs. An analysis of foreclosure rates for homebuyers assisted through the HOME program found these rates to be lower than among FHA borrowers generally, despite having a similar income profile (Carr et al. 2008). And a study of foreclosure rates among participants in individual development account programs that match participant savings found foreclosure rates that were about a half to a third lower than a comparison group of similar homebuyers (Rademacher et al. 2010). The results of these studies suggest that the process by which recipients of down payment assistance are screened and prepared may make a substantial difference in their ability to sustain homeownership. Yet, research to date has shed little light on how the differences in the delivery of down payment assistance affect outcomes. There is also substantial experience with low down payment loans through FHA, VA, and state housing finance agencies that could be the subject of additional analysis to understand factors that may mitigate the risks of default and the severity of loss to lenders.

Interest-rate subsidies, which are most commonly delivered through state housing finance agencies using funding from mortgage revenue bonds, are found by studies examining renters' financial situation to have little effect on expanding the pool of eligible borrowers. Still, in practice this assistance may be important in expanding opportunities for ownership on the margin and provide an added financial cushion to make homeownership more sustainable. Further, over the life of a loan, reductions in interest rates can amount to substantial savings in the costs of homeownership. Yet, little research has been done to assess the extent to which interest rate subsidies make homeownership more attainable, improve its sustainability, or improve owners' financial situation. Moulton (2010) examines the default experience in loans made through the Indiana State Housing Finance Agency, but does not have a

comparison group of borrowers to assess difference in default risk associated with the roughly half a percentage point lower interest rates on these mortgages.

Finally, there is growing interest in shared-equity approaches as a means of making homeownership affordable, while both reducing risks for buyers and preserving the value of subsidies for future homebuyers. There is a growing body of experience and research related to these programs about the outcomes realized. Going forward there will be continued interest in examining program outcomes in different market contexts, particularly in the face of weak housing price growth. In addition, given the deep subsidies involved, there are also questions about whether and how these approaches could be brought to a meaningful scale.

What approaches are most effective at helping consumers to make good mortgage choices while not unduly stifling choices or imposing excessive costs?

The foreclosure crisis has brought heightened efforts to improve consumer disclosures in the mortgage market to address a number of now obvious deficiencies. The Dodd-Frank Act also consolidated responsibility for both the Truth in Lending disclosure form and the Good Faith estimate in the CFPB. Proposed revisions to these forms were put out for comment this past summer. Even after new forms are introduced, there will be a need for ongoing evaluations of how the forms and the context in which they are used affects consumer decisionmaking.

But disclosure forms only come into play after consumers have selected a lender and applied for a loan. There are a great deal of information processing and decisionmaking that take place before this stage, including whether to pursue homeownership, how to identify mortgage financing options, what lenders to contact, and what loan product to choose. Since the many choices made before getting to the point of a disclosure form of lender are important determinants of the type of financing obtained, a better understanding of consumer behavior at this earlier stage is needed to help to shape policies to improve consumers' ultimate mortgage choices.

Education, counseling, and coaching aimed specifically at the homeownership decision as well as at general financial matters have received a fair amount of support from policymakers as important tools in helping to better inform consumers and to guide their financing decisions. Relatively little research has been conducted on the efficacy of prepurchase counseling. And what has been done sheds little light on how differences in screening, content, and methods are related to outcomes. A number of studies of prepurchase counseling are currently under way through both government and private channels. While these studies will provide some insight into the effectiveness of prepurchase counseling, there is likely to be a continuing need for analysis to better understand the specific approaches that are most likely to be beneficial as well as how consumers can be attracted to take advantage of the services that are available. Given limited funding for these services, it will be particularly important to develop cost effective means of providing borrowers with information and guidance. The development of web-based systems and telephone-based approaches to prepurchase counseling may provide the best opportunity for expanding access to this assistance while also meeting consumers' need for more convenient access to these services. Studies to explore how best to adapt technology to achieve greater scale in delivering these services would be valuable.

How can we improve methods for assessing, mitigating and pricing mortgage lending risks? What impact on access to credit will tighter underwriting standards have on different segments of the population?

How the market assesses and prices risk is of great importance for both the availability and cost of credit. As the mortgage market evolves in response both to changing attitudes and appetites for risk by lenders as well as to emerging rules and regulatory structures, a whole series of questions need to be addressed to inform policymaking:

- What do we know about how loan products of different types offered to different types of borrowers under different underwriting circumstances and different local market conditions performed? Are lenders' decisions about product offerings and prices consistent with this historical performance?
- How have changes in perceptions of risk affected the types of products that lenders are offering, how widely available they are making them, how they are pricing them, and how they are underwriting them?
- How has heightened risk of forced repurchase of loans or indemnification of insured loans through strict enforcement of representations and warranties affected originators' approaches to underwriting and pricing loans?
- What are cost-effective methods for screening borrowers who fall into seemingly higher-risk market segments based on traditional underwriting criteria such as having lower savings or credit scores or higher levels of debt?
- How might various proposed rules regarding risk retention through the QRM definition, lender liabilities through the QM definition, and risk-adjusted capital standards through the Basel III Accord influence decisions about what loan products to offer, under what terms, and at what prices?
- How will rigid, prescriptive standards for defining loan categories through QRM and QM affect the use of mortgage scoring methodologies that have been widely adopted in the industry?
- How have market developments affected how debt investors are making decisions about what mortgage products to invest in? Have they fundamentally altered information processing techniques and the raw material used in this processing? How might various rules that have recently gone into effect or likely will be out for comment during the study period influence these decisions and information processing?

Both quantitative and qualitative studies would be useful for shedding light on these questions.

What improvements are needed in loan servicing and approaches to loss mitigation to better help delinquent borrowers maintain homeownership while also protecting lenders' financial interests?

The foreclosure crisis has put into stark relief a series of ways in which current methods, systems, and contracts were not adequate for fostering solutions to delinquencies that were in either the borrower's or the lender's best interest. Among the issues that have been raised are these six:

- What are the most effective outreach methods for making contact with borrowers and getting them to work with servicers toward a solution to their delinquency?

- What approaches to delinquency counseling are most effective at fostering a successful resolution of the delinquency?
- How should servicer agreements be structured to provide proper incentives and compensation for servicing delinquent loans?
- What are the most effective way to organize and manage the servicing function to handle borrower contacts, handle loss mitigation cases efficiently, and process loan modifications?
- What legal and contractual arrangements are needed for second liens to avoid allowing these liens to hold resolutions hostage?
- What are the most effective ways to use emergency loan funds to help tide borrowers over temporary loss of income?

One key issue for study in this area is how differences in servicing approaches affect outcomes. While studies of differences in borrower outcomes consistently find significant differences across servicers, little is known about the factors that contribute to these differences. Further study is needed of how the outreach, organizational structure, procedures, incentives, and staff capabilities across services affect the likelihood of helping borrowers retain their homes and lenders to protect their investments.

Among the specific topics for study that may be of particular interest for policymakers is the effectiveness of delinquency counseling. While there is evidence that delinquency counseling has helped produce better outcomes for delinquent borrowers, absent an experimental design these studies are not conclusive. More rigorous evaluations of the impact of counseling would help to make a more compelling case for public support for these services. But there is also little known about the effectiveness of different approaches to outreach to delinquent borrowers as well as the content and mode of providing assistance. Studies designed to explore the best approaches to providing borrowers with information and guidance are needed to better tailor these programs.

Finally, for borrowers facing temporary losses of income or high expenses, the availability of emergency loans funds may provide essential financial support until the owner is able to resume payments. The experience with the Hardest Hit Funds and the EHLF provide opportunities to examine the experience in structuring these programs and the outcomes realized.

To what extent do racial and ethnic minorities face discriminatory treatment or impacts in the mortgage market? If discrimination is occurring, what steps are remedies are needed?

One important mandate of the CFPB is to enhance HMDA reporting requirements that will potentially make it a much more powerful resource for examining differences in loan approval rates as well as mortgage terms. If loan identification numbers are also reported, this could facilitate matching with loan performance databases to allow for analysis of loan and servicing outcomes as well. The availability of comprehensive data that includes a robust set of household demographic and financial characteristics will give a tremendous boost to research into potentially discriminatory treatment or impact in the mortgage market.

Paired-testing approaches have been shown to be an effective means of assessing differential treatment and impact by race/ethnicity in the preapplication stage. But given the scale needed to provide

statistically significant estimates in different market areas and ideally across different categories of lenders, fairly significant federal resources need to be devoted to support these studies.

One aspect of the process for obtaining mortgage finance that is potentially quite important but presents greater research challenges is in the potential for discriminatory outreach and advertising. While many factors undoubtedly contributed to the high shares of minorities that ended up with subprime loans, differences in how these loans were marketed and how minorities obtained information and made decisions about sources of financing to pursue likely contributed significantly to the prevalence of these loans in minority communities. Innovative research designs will be needed to determine how outreach and advertising contribute to differences in access and pricing of mortgage products for minorities.

Table 1: Potential Research Projects

Research questions	Potential research projects
<p>What are the most effective ways to make homeownership more affordable while not exposing owners or lenders to unduly high risks of default?</p>	<ul style="list-style-type: none"> ● Evaluate alternative methods of addressing the down payment constraint, either through relaxed loan-to-value requirements, grants for down payment and closing costs, or below-market value sales prices, with attention to role of screening and counseling as well as form of assistance. ● Evaluate impacts of mortgage interest rate subsidies on ability to buy a home, to sustain homeownership, and to lower ongoing costs of owning. ● Examine outcomes of shared equity programs in different market contexts. ● Assess potential for increasing scale of shared equity programs. ● Review approaches used in other countries to provide down payment assistance or otherwise address affordability barriers.
<p>What approaches are most effective at helping consumers to make good mortgage choices while not unduly stifling choices or imposing excessive costs?</p>	<ul style="list-style-type: none"> ● Conduct exploratory field research using individual interviews and focus groups to explore aspects of the mortgage search process that are poorly understood, with an emphasis on identifying points of leverage for policymakers to influence this process. ● Conduct experimental study of the effectiveness of different approaches to prepurchase counseling, including web-based and telephone counseling that hold potential for expanding the scale of these efforts. ● Design and test a larger-scale survey to gather systematic information on the mortgage search process employed by minority and low-income households. ● Design a pilot program (potentially for adoption by FHA, state housing finance agencies, or community-based organizations) to test different approaches to engage with potential borrowers to influence mortgage search behavior. ● Assess impact of new consumer disclosure forms on mortgage choices. ● Evaluate effectiveness of different approaches to prepurchase education, counseling, and coaching.

How can we improve methods for assessing, mitigating, and pricing mortgage lending risks? What impact on access to credit will tighter underwriting standards have on different segments of the population?

- Synthesize findings from existing literature on loan outcomes for different types of loans and borrowers in different market contexts.
- Identify newly available loan-level data linking HMDA data (both new and historical) with additional information on loans, lenders, and borrower characteristics (including credit score and measures of credit history), as well as loan performance and develop research plans to examine address critical questions of loan performance for different borrower segments under different conditions.
- Interview different types of investors (pension funds, insurance companies, banks, hedge fund/private equity firms, mutual funds) to determine changes in their perceptions of risk, type of securities they are willing to purchase, and the type of information they now use.
- Assess impact of tighter underwriting standards on ability to qualify for mortgages by different segments of the population.
- Examine state housing finance agency lending programs to assess outcomes from their lending to higher-risk borrowers.
- Develop recommendations for pilot programs to help repair consumer credit in the wake of economic crisis.
- Assess risks and benefits of nontraditional mortgage products that may address needs of underserved borrowers.

What improvements are needed in loan servicing and approaches to loss mitigation to better help delinquent borrowers maintain homeownership while also protecting lenders' financial interests?

- Evaluate efforts to provide support and counseling to homeowners as a means of preventing default and supporting more positive outcomes from homeownership.
- Evaluate effectiveness of different approaches to delinquency counseling.
- Evaluate factors that contribute to significant differences in borrower outcomes across servicers.
- Evaluate both process and outcomes of experience with Hardest Hit Fund and EHLP programs.
- Assess impact of changes in servicing requirements and costs of servicing on availability and pricing of credit.

To what extent do racial and ethnic minorities face discriminatory treatment or impacts in the mortgage market? If discrimination is occurring, what steps are remedies are needed?

- Identify newly available loan-level data linking HMDA data (both new and historical) with additional information on loans, lenders, and borrower characteristics (including credit score and measures of credit history), as well as loan

performance and develop extensive research plans to examine differences in lending and loan performance by race and ethnicity.

- Develop a research plan to assess the role of outreach and advertising in producing disparate outcomes by race and ethnicity.
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Financing the Evolving Multifamily Rental Housing Market

Much of the attention paid by policymakers and the media to the boom and bust in the housing market has focused on impacts in the owner-occupied market. But the multifamily rental housing market has also been acutely affected by the dramatic housing market gyrations and by the profound changes that are occurring in the mortgage finance landscape. By several measures, the rise and fall in multifamily property values was as spectacular as in the single-family market, with prices rising by more than 70 percent during the boom in the first half of last decade before falling by at least 30 percent in the subsequent crash (Joint Center for Housing Studies [JCHS] 2011). The rise in multifamily defaults among loans held in commercial mortgage-backed securities (CMBS) has also rivaled those in the single-family market, while delinquency rates also rose sharply among loans held by banks and thrifts—although less than half as high as among CMBS loans. In contrast, loans owned or backed by the GSEs (Fannie Mae and Freddie Mac) or insured by FHA have continued to perform well during the downturn (JCHS 2011).

During the decade leading up to 2008, financing for multifamily housing largely came from three sources: the GSEs, which accounted for about two-fifths of net new funding; commercial banks, which accounted for roughly a quarter; and the CMBS market, which accounted for roughly another quarter (JCHS 2011). The remaining sources of new funding were scattered across savings banks, life insurance companies, and state and local governments.¹⁵ As in the single-family market, since the onset of the housing bust the vast majority of financing for rental housing is accounted for by the GSEs and FHA, as the CMBS market has largely dried up and banks and thrifts have made only marginal increases in outstanding loans. With continued high delinquency rates among loans held in CMBS and, to a lesser extent, in depositories' portfolios, government-backed lenders are likely to be needed to provide liquidity in this market for some time.

It remains to be seen how rental housing finance will evolve as the market recovers from the current crisis. A critical issue is what form a government guarantee—if any—will take in the multifamily mortgage market. More generally, a key question for policymakers is how changes in the availability and cost of rental finance may affect the market's ability to maintain a sufficient supply of good quality and affordable housing for an increasingly diverse population of renters. The market has long struggled to provide rental housing that is affordable for large segments of the population. There is likely to be strong demand for rental housing over the next decade as the homeownership rate continues its slide, more young people than ever reach adulthood, and the baby boom generation crosses the threshold into their senior years.

In this context, policymakers will need to consider what public action may be needed to support the market—including both market-rate and assisted housing. For assisted housing, there is arguably a role for the government to play in ensuring the availability of loans that meet the unique needs of this market segment, including long-term fixed-rate financing and enterprise-level lending. Another key set

¹⁵ This represented a significant change from the start of the 1990s when these later sources of funding accounted for a majority of multifamily loans and there were concerns that multifamily housing had been unable to benefit from greater access to secondary markets (DiPasquale and Cummings 1992; Segal and Szymanoski 1997; Schnare 2001).

of questions for assisted housing relate to the Low Income Housing Tax Credit (LIHTC), which is the main vehicle for supporting new construction and substantial rehabilitation of subsidized rental housing. In response to the significant fiscal pressure at the federal level, there have been several tax reform proposals that call for eliminating the delivery of these types of subsidies through the tax system. The threats to the future funding of the LIHTC highlight the need to ensure that public funding for assisted housing is used as efficiently as possible.

This section is concerned with mortgage financing for multifamily housing with five or more units. There is obviously some overlap with the sections of this report related to lending to support investments in energy efficiency as well as lending in distressed neighborhoods; those specific issues are dealt with in those sections. The section begins by outlining the key challenges and barriers related to rental housing finance. We then briefly identify the primary existing government efforts in this area and conclude by identifying the specific research topics that need to be addressed to better inform policy development in this area.

Challenges and Barriers

The rental housing market faces a number of new and emerging challenges on the demand side that will a well-functioning finance system is needed to address. There also several challenges related to the supply of financing for certain types of properties or loan types that may require public intervention to better support. Among the key challenges and barriers affecting rental housing finance are

- the growing and shifting demand for rental housing,
- continued challenge of rental affordability,
- availability and cost of financing for small multifamily properties,
- debt and equity financing for assisted housing, and
- lack of systematic information on property ownership and financing.

Growing and shifting demand for rental housing

While homeownership was expanding from the mid-1990s through the mid-2000s, there was essentially no growth in the number of renter households. But from 2005 through 2010 there has been a notable turnaround, with renter households increasing by an average of about 750,000 a year (JCHS 2011). This trend shows no signs of slowing as the Housing Vacancy Survey (HVS) for the third quarter of 2011 showed an increase of 1.1 million renters from a year earlier.

In the short run, the increase in rental housing demand is being fueled in no small part by the troubled owner-occupied market, which is both pushing former owners into the rental market and delaying the transition to owning among young adults. But longer-term demographic trends also point to an increase in renter households. The echo boom population, those born between 1985 and 2005, is even larger in number than their baby boomer parents at the same age. As this group reaches adulthood it should provide a boost to the rental market.

Another important demographic trend that will shape rental housing demand is the aging of baby boomers into their senior years. As this large demographic cohort crosses into their late 60s and early 70s over the next decade, the number of senior renters will increase by more than 2 million between

2010 and 2020. This increase will not be driven by declining homeownership rates, as there is no significant tendency to shift to renting as households age from their 60s into their 70s. Rather this increase will be fueled by the large number of baby boomers in the 55–64 age group who already rent. Still, the aging of this group will generate increased demand for assisted units set aside for elderly households as well as for conventional housing with adaptations for elderly residents.

While the existing housing stock will certainly be able to meet some of this increasing demand, with falling homeownership rates leading to tenure switches of existing homes, a number of markets will also see a need for additions to the stock. The availability and terms of financing for acquisition, development, and construction (ADC) and permanent financing will be important factors in the ability of the market to meet the need for additional housing without putting upward pressure on rents. The availability of financing will also be an important factor in expanding the supply of rented seniors housing, which could tilt toward smaller and more scattered properties offering different mixes of services according to some industry observers.

Continued challenge of rental affordability

While already quite high at the start of the decade, the share of renters facing severe housing cost burdens (devoting more than half their income for housing) increased sharply between 2000 and 2005, rising from 19.7 to 24.7 percent of all renters. After moderating slightly in the years just before the bust, the share then jumped sharply again as the recession took hold, reaching 26.1 percent by 2009. The rising incidence of severe cost burdens was not confined to just the lowest income renters. Among renters in the lower middle-income quartile, the share severely burdened more than doubled from 6.4 to 14.0 percent. Housing affordability problems are clearly moving up the income ladder.

With more households struggling to find housing within their means, the competition for affordable rental housing has increased sharply. The result is that very low income renters are having an even more difficult time securing housing that is within their means. In 2003, 16.3 million very low income renters competed for 12.0 million affordable and adequate rentals that were not occupied by higher-income households—a supply gap of 4.3 million units. By 2009, the number of these renters hit 18.0 million while the number of affordable, adequate, and available units dipped to 11.6 million, pushing the supply gap to 6.4 million units (JCHS 2011).

Given the costs of land, materials, and labor, providing new housing that is affordable for the lowest income households without subsidies is generally not feasible. Lower-income households may still benefit from additions to the housing supply for moderate- and upper-income households to the extent that increases in the overall supply of rental housing may lead to additional filtering of existing housing into a more affordable range. But ultimately if the cost of operating and maintaining housing for low-income tenants exceeds the rents they can afford the supply of housing at low rent levels will be short lived. Absent subsidies to close the gap between the cost of providing housing and what tenants can pay, there is a need to lower the costs of operating affordable rental housing. Lower costs of financing are one way to reduce these costs.

Availability and cost of financing for small multifamily properties

Smaller multifamily properties have attracted considerable attention from policymakers as they represent a sizeable share of unsubsidized, affordable rental housing but face a number of challenges in accessing capital through secondary markets (Schneider and Follain 1998; Herbert 2001; Schnare 2001). Definitions of what constitutes “small” vary. Most commonly, “small” has been defined as between 5 and 49 units, although in some cases the line has been drawn at less than 20. However, property size

may be more appropriately thought of in terms of loan balance as many barriers to serving this segment relate to the high costs of underwriting and servicing relative to the size of these loans. In terms of loan balance, small is commonly defined as less than \$3 million. But since most data on the housing stock include property size and not value, much of the available information relies on the number of units to define property categories.

The most recent data available on the characteristics of financing for rental housing are from the 2001 Residential Finance Survey. These data show that smaller multifamily properties are both less likely to be financed and, if financed, less likely to have a fixed-rate mortgage. Among multifamily properties with fewer than 20 units about 60 percent were found to have a mortgage, and of these a similar share had a fixed-rate mortgage. In contrast, among properties with 100 or more units more than 85 percent had a mortgage and nearly 80 percent of this had fixed-rate financing (Apgar and Narasimhan 2008). Small multifamily properties also face higher interest rates. While now quite dated, the last systematic information on mortgage interest rates is from the Property Owners and Managers Survey (POMS) in the mid-1990s, which found that properties with 5–19 units had average mortgage rates that were more than a full percentage point higher than properties with 100 or more units (Herbert 2001).

Among the factors that make it more difficult to lend to this segment of the market are these five:

- Underwriting costs are nearly as high for small loans as for larger properties, since the same level of due diligence is required regardless of how many units a property has, yet the fees generated are much lower, making these loans unprofitable for lenders.
- A large share of small properties are owned by individuals and are not professionally managed. As a result, these properties often do not have documentation of income and expenses that is as detailed and standardized as required by large national lenders.
- With fewer units, fairly low levels of vacancies can represent a significant share of income, increasing the risks of these loans.
- Given the nature of ownership and the higher financial risks, the creditworthiness of the property owner is often an important factor in underwriting, adding another layer of review.
- The loss rates upon default are higher for small-balance loans; an American Council of Life Insurers study released in June 2001, for example, reported loss rates of 17.3 percent on loans under \$2 million but 4.6 percent on loans over \$10 million (Belsky 2009).

The primary market for small multifamily loans is dominated by a large number of local and regional banks. A recent report by Fannie Mae (2011) noted that in 2009, 2,600 lenders were involved in this market segment, originating an average of six loans each. The Fannie Mae authors claim that such fragmentation makes it challenging to assess counterparty risk and to engage in the type of loss-sharing arrangements that are a key part of Fannie Mae's approach to multifamily lending.

Small properties are also common in smaller markets and rural areas where national lenders are less active due to lower transaction volumes and higher exposure to risks associated with weak local economies. These areas will also have fewer local banks as sources of loans.

There is little debate about the fact that the factors listed above make it more difficult to lend to the small multifamily segment. Still, it is possible that the market could be described as fairly well served by the small and regional banks that dominate this lending. Information from the RFS show that many of these properties operate in the red but continue to remain solvent by virtue of the sweat equity that

owners invest in these properties. The lower shares of mortgage properties may in part reflect this reality, where owners avoid debt to keep operating costs low. The higher costs of loans may also be needed to compensate lenders for higher underwriting costs and default risks.

Still, the small multifamily segment remains an important concern for policymakers given its important role in providing affordable rental housing. With little new construction in recent years in this size category, this segment of the housing stock is also getting much older, increasing the need for capital investment. Indeed, between 1999 and 2009 the loss rates among properties with 5–19 units was 50 percent higher than among properties with 20 or more units. Providing more efficient access to capital would help better preserve this important segment of the rental housing stock. The falloff in development of these smaller properties may also reflect economies of scale in the development process, including securing ADC and permanent financing, which favor larger properties. Since smaller properties are more appropriate in rural and suburban areas, the limited development of properties in this size class may contribute to a shortage of multifamily rental housing in these communities.

Debt and equity financing for assisted housing

An obvious area of public intervention is to support financing for assisted housing, and specifically for long-term fixed-rate financing (Handelman, Smith, and Trehubenko 2010). Locking in fixed costs of capital for a longer term provides valuable financial security for rental properties, shielding them from fluctuations in interest rates and the need to periodically refinance in what may be unfavorable market conditions. Long-term financing is particularly important for LIHTC properties that need financing terms that match required affordability periods and minimize additional financial risks in these tightly underwritten deals.

Aside from government-backed loans, private sources of capital generally do not offer long-term financing as terms are dictated by the appetite of different funding sources for interest rate risk over different periods. Handelman, Smith, and Trehubenko note that given these requirements, banks usually offer 3–5-year terms while life insurance companies are in the range of 5–10 years. CMBS lenders provided up to 10-year terms, but this source of capital is now limited. The multifamily market does have some advantages in addressing lender risks from long-term loans. For example, prepayment lockouts and yield maintenance agreements are readily accepted by borrowers, mitigating lender risks of prepayment. Still, government guarantees may be needed to support longer-term financing that would be a valuable option for many multifamily properties. In fact, Ellen, Tye, and Willis (2010) argue that the GSEs have played an important role in helping to develop the secondary market for multifamily loans through the development of products and underwriting standards. An important question for policymakers is whether a government guarantee is needed to support the availability of long-term, fixed-rate financing.

On the other side of the argument, White and Wilkins (2011) make the case that there is not a good justification for a continuing government guarantee in the multifamily market, arguing that there are ample sources of private capital. Perhaps more important, they also argue that there is little evidence that low-income renters benefit from the availability of lower-cost, long-term financing that the government guarantee can provide. Thus, a key of inquiry going forward is to assess the extent to which the terms of mortgage financing affect the rents paid by tenants.

Another form of financing that could be pivotal in supporting assisted housing is enterprise or portfolio lending to nonprofit housing organizations. Since the establishment of the LIHTC, nonprofit community developers have come to play an important role in the increasingly complex process of developing and

managing subsidized housing. Andrews (2001) describes how these organizations have significant needs for working capital to improve overall organizational capacity, provide capital for emerging projects, and smooth cash flows in managing portfolios of low-margin properties. Andrews argues for the need for equity-like debt financing for large, sophisticated community organizations that would provide a lower rate of financial return in exchange for supporting investments with high social returns. Finkenstaedt (2009) revisits the status of efforts to provide this type of capital, surveying sources of financing as of 2009 through community development financial institutions (CDFIs), national intermediaries, and foundations. While the availability of financing had expanded some over the course of the decade since Andrews first called attention to this issue, the options for this financing remain limited. Given the risks inherent in organizational lending and the need to take social returns into account in evaluating the return on investment, this type of lending would benefit from government involvement in helping to capitalize CDFIs and other intermediaries and to expand the reach of these national and regional organizations in geographic areas that lack lenders of these types.

Currently, the principal means of subsidizing new rental housing is not through low-cost loans, but rather through equity provided by the LIHTC. As noted above, several proposals to revise the federal tax code as a means of addressing the federal budget deficit have targeted the tax credit for elimination. As documented in a report by the Joint Center for Housing Studies (2010), while the LIHTC program is widely regarded as successful and resilient, there are also concerns that the tax credit is not the most efficient means of providing subsidized housing, including concerns about whether demand-side subsidies would be more efficient in many market contexts and whether there is a need to better target subsidies delivered through the program to make housing affordable for very low income households. Given mounting pressure on federal resources, the time may be ripe for an assessment of potential modifications to the program to more efficiently this subsidy.

Lack of systematic information on property ownership and financing

An overarching issue for rental housing is the general lack of information on the characteristics of property owners, their interests and objectives in owning rental property, their property management practices, and their demand for and uses of financing. The main source of information of this type has come from the Residential Finance Survey, which has been conducted as a follow-up survey to the decennial census since 1950, and so only available every 10 years. Due to budget constraints, a scaled-back version of the survey is planned for 2012. Compared to single-family mortgages, there is also more limited information on the performance of multifamily loans to assess the risks of different loan types or borrower classes. Given the significant deviation in the performance of multifamily loans through different market channels during the boom, analysis of factors that contribute to these variations in default would shed light on risk factors in multifamily lending.

Existing Public and Private Programs

FHA mortgage insurance

Through its multifamily mortgage insurance programs, the FHA is a critical source of long-term fixed-rate financing through the 221(d)(4) program for new construction/substantial rehabilitation and the 223(f) refinancing program. During the housing boom, FHA's multifamily lending volumes were a fairly small share of the overall market as long processing times amid other factors led borrowers to other sources of funding. Since the bust, however, FHA lending programs have seen significant growth in volume. In August, HUD announced that it had set a new record for multifamily endorsements of more than \$10 million with a month still to go in the fiscal year. More than 1,100 loans had been insured, which is three

times the volume of just three years ago.¹⁶ The sharp rise in FHA multifamily loan volumes clearly reflects the decline of other funding sources in the present market. FHA is also working to update and streamline its underwriting process to help keep pace with rising demand.

Fannie Mae and Freddie Mac

As noted in the introduction, aside from FHA, most new funding for multifamily lending since 2008 has come through the GSEs after having accounted for more than two-fifths of net additions to outstanding multifamily debt in the preceding decade. The GSEs acquired loans both through portfolio purchases and a flow basis from designated lenders. Their approach to working lenders differed somewhat in that Fannie Mae delegated underwriting to selected lenders but require risk sharing on these loans. Freddie Mac does not require risk-sharing and so takes a more active role in reviewing loan underwriting.

The GSEs offer a wide range of loan products, of varying maturities and terms. They have largely funded larger, high-quality multifamily properties but have had some involvement in funding tax credit properties and the small multifamily segment. For a period, the GSEs' affordable housing goals included a small multifamily subgoal, which was associated with a higher volume of purchases of small loan portfolios. Their involvement in this market declined after this goal lapsed, but Fannie Mae at least continues to purchase some smaller-balance loans, mostly on a flow basis. A recent report by Fannie Mae estimates that they accounted for 15 percent of the total volume of small multifamily loans in 2009, compared to a 40 percent share of the overall conventional multifamily market (Fannie Mae 2011).

State housing finance agencies

State housing finance agencies play an important role in providing financing for affordable multifamily housing developments through administration of the LIHTC program and multifamily loans financed through tax-exempt bonds that provide both a below-market interest rate and a 4 percent tax credit for developments where a portion of the units are set aside for low-income renters. HFAs have partnered with FHA and the GSEs in various risk-sharing arrangements to help expand their ability to provide affordable multifamily financing. These agencies also often administer other housing subsidy programs at the state level, such as HOME and Housing Choice Vouchers. Given their mission of providing financing for affordable housing, their experience in innovating new approaches to lending, and the resources they bring to bear, HFAs will continue to play an important role in the evolution of rental finance, particularly for affordable housing.

USDA, rural development

Through its Rural Development agency, the U.S. Department of Agriculture (USDA) supports the development and rehabilitation of rental housing in rural areas both through direct lending and guarantees for loans made by private lenders. Through the Section 515 program, USDA provides 1 percent, 30-year fixed-rate mortgages for both new construction and acquisition and rehabilitation of existing housing occupied by very low up to moderate-income tenants. Rents are limited to the greater of 30 percent of their income or a "basic rent" that covers the property owners costs. In FY 2009, the Section 515 program largely supported the repair and rehabilitation of existing housing, which

¹⁶ "FHA Multifamily Loan Volume Sets New Record," U.S. Department of Housing and Urban Development, press release, August 22, 2011.

http://portal.hud.gov/hudportal/HUD?src=/press/press_releases_media_advisories/2011/HUDNo.11-172.

accounted for two-thirds of the roughly \$60 million annual appropriation. A total of 743 units of new housing were financed that year.

The Section 538 program provides guarantees for long-term, fixed-rate loans made by private lenders. The interest rates cannot exceed maximums set by USDA. In 20 percent of cases, USDA subsidizes the interest rate to bring down to the maximum rate. Tenants can have incomes up to 115 percent of area median, and rents are set to be affordable at 30 percent of this income level. In FY 2009, the Section 538 program supported the development of more than 2,200 new rental units, or about three times the amount developed through the Section 515 direct loan program.

Key Questions for Policymakers

This section outlines general research topics in this area along with some ideas for specific research projects that could be good starting points. The research topics identified include basic research to better understand market dynamics, assessments of existing and previous efforts to support investments in these types of markets, and the development of new approaches to addressing the known barriers.

What has been the impact of the housing bust on the ownership of rental properties in different size classes as well as the incentives for managing and investing in these properties?

Some segments of the multifamily market have weathered the housing bust well, as evidenced by the relatively low default rate among GSE- and FHA-backed loans. Still, default rates have hit very high levels in the CMBS market and, to a lesser extent, among depositories. Since depositories' portfolios include most of the loans for small multifamily properties, property ownership in this segment of the market has likely been affected by the rising tide of foreclosures. But little is known about how the high level of distress in certain segments of the multifamily market has affected ownership of these properties. One study in the Chicago area found an elevated rate of foreclosures among both 2–6-unit and 7+ unit properties, raising concerns about the impact of foreclosures on the rental market (Shilling 2010). But this study did not drill down to assess how foreclosures were affecting the characteristics and motivations of property owners. And with limited information on foreclosures among multifamily properties, there are no other studies that we are aware of looking at trends in foreclosures in this property segment.

Policymakers would benefit from more complete information on how different segments of the multifamily market have been affected by high default rates among CMBS and depository portfolios. What are the characteristics of the properties affected in terms of size, location, and quality class? Who are the new owners of these properties, and how are they financing these acquisitions? What are the implications for housing affordability and quality of this change in ownership and the nature of financing being used?

Finally, it would also be helpful to have a deeper understanding of the factors that contributed to very different default experience between CMBS loans, loans made for bank portfolios, and those backed by the GSEs and FHA. Would enhanced regulatory oversight or disclosure requirements have reduced default risks in these market segments?

What are the sources of both permanent and ADC financing for rental properties in different size classes? How are these sources likely to change in coming years? What are the implications for housing quality and affordability? What types of loan products are missing from the market, and what types of action are needed to foster a market for these products?

At present, most new lending for multifamily housing is coming through the GSEs and FHA. While these channels may be able to serve most segments of the market well for the time being, other segments not well served by these sources may be struggling to obtain financing. In general, information on the sources and characteristics of credit for rental housing of different types is hard to come by, with the most comprehensive information from the Residential Finance Survey now 10 years old. While a new Rental Housing Finance Survey (RHFS) is in the planning stages, any information that will come from this effort will not materialize for several years. Meanwhile, efforts to gather better information on the sources of credit for different types of properties as well as perceptions of shortages in credit by property owners would help to paint a better picture of the current state of supply and demand for rental finance. Once data from the 2012 RHFS are available, they will provide an opportunity for analysis of sources and characteristics of mortgage financing by property size and owner type. But since these data will not be available for several years, in the meantime case studies across a range of market types (e.g., by size and growth rate) would shed light on issues that are likely evident in areas around the country. As described above, areas of particular concern that could be a focus of these studies are with regard to small multifamily properties, ACD financing, long-term fixed-rate financing, and portfolio or enterprise financing for nonprofit community development organizations.

What impact will changes in the nature or availability of government guarantees have on the cost and availability of credit for different classes of rental properties? How can existing subsidies be used more efficiently in response to greater pressure on the federal budget?

Reviews of the role of government guarantees in the mortgage market mostly focus on the impacts these changes will have on the owner-occupied market, yet, as several reviews have noted, the implications of these changes for multifamily housing are likely to be as significant (Handelman et al. 2010; Ellen et al. 2010). It is true that many properties financed by the GSEs are large, high-quality properties in prime locations and so would likely have other financing options available. But the GSEs provide a range of product types, including long-term loans, that may not be readily available from other sources. The GSEs also provide financing for other underserved market segments, including affordable housing and, to some degree, small properties. The GSEs' role as countercyclical lenders has clearly been of great importance in the current market. As policymakers assess options for government guarantees going forward, assessments of the impact of the GSEs involvement on the cost and availability of credit—and the impact of this financing on the ultimate affordability of rental housing—will help inform this policy debate.

More generally, there is a need to reassess the current forms of federal subsidies, such as through the LIHTC and HOME, to determine if there are opportunities to make more efficient use of these resources to address housing affordability challenges.

Table 2: Potential Research Projects

Research questions	Potential research projects
<p>What has been the impact of the housing bust on the ownership of rental properties in different size classes as well as the incentives for managing and investing in these properties?</p>	<ul style="list-style-type: none"> ● Field descriptive research on multifamily property turnover around foreclosures. Select study sites where a range of multifamily property types are likely to have been affected and identify who is buying distressed assets, the financial products and strategies they are using, their stated investment intentions, and to extent possible their investment track records. ● Using data from FHA and the GSEs coupled with data from CMBS pools, analyze the performance of multifamily loans to enhance understanding of risk factors by loan and property characteristics that contributed to divergence in default risks in these market segments.
<p>How are sources of both permanent and ADC financing for rental properties in different size classes changing? What are the implications for housing quality and affordability?</p>	<ul style="list-style-type: none"> ● Using available data from HMDA, industry surveys, and the Flow of Funds, analyze changes in the sources of financing for different multifamily segments in recent years. ● Field a limited survey in selected markets to property owners of different property classes to gather information of their sources and use of financing to augment the upcoming 2012 RFS. ● Review loan options in selected markets through national, regional, and local lenders and how these options have changed in recent years. ● Assess current conditions related to the supply and demand for portfolio and enterprise-level financing and the potential role for government in developing this market.
<p>What impact will changes in the nature or availability of government guarantees have on the cost and availability of credit for different classes of rental properties?</p>	<ul style="list-style-type: none"> ● Undertake a detailed review of the types of properties financed through the GSEs as well as the types of loan products offered compared to the broader market. ● Analyze the potential impact of the availability of lower-cost and longer-term financing on rents—how much of the benefit of reduced level and variability in financing costs is passed along in the form of lower rents? ● Assess opportunities for more efficient use of subsidies through LIHTC program.

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Mortgage Lending in Distressed Neighborhoods

Few areas of the country have been left untouched by the tidal wave of foreclosures that has swept across the country since 2007. Still, a fairly small number of neighborhoods have borne the full brunt of the crisis. Based on data from CoreLogic, nearly half of the 3.5 million foreclosures from 2008 to 2010 took place in 10 percent of the nation's 65,000 census tracts, the common definition of a neighborhood for statistical purposes (JCHS 2011). Many of the most heavily impacted neighborhoods are in the states where the housing boom and bust were most dramatic, including Arizona, California, Florida, Georgia, and Nevada. But Michigan, which did not experience a housing boom, is also among the six states with the highest overall foreclosure rates. And while neighborhood foreclosure rates were generally much higher in this small group of states, low-income, predominantly minority neighborhoods throughout the country had foreclosure rates that rivaled those in the most impacted states (JCHS 2011).

In short, the foreclosure crisis has both created a new class of distressed neighborhoods in markets that had been experiencing strong growth and exacerbated conditions in market areas that had already been struggling with long-term decline (Follain 2010; Williams and Weinheimer 2011). Of course, there are also metropolitan areas where the overall market has been growing, but there are still pockets of distress marked by high concentrations of empty homes and under-maintained housing. Foreclosures may impose significant costs on surrounding neighborhoods in the form of lower property values and higher crime rates (Schuetz, Been, and Ellen 2008; Immergluck and Smith 2006a, 2006b) and place strains on municipal budgets (Apgar and Duda 2005).

The public has a strong interest in how private capital is flowing into communities with distressed housing markets and in correcting market failures in these communities. A priority for policymakers over the next few years should be to craft policies that bring a flow of both public and private capital into these neighborhoods in ways that help stabilize them and put them on a path to recovery.

But lending and investing in these distressed areas poses unique challenges. Falling or at best stagnating prices makes lending in these areas a risky proposition. Financing may further be constrained by difficulties in appraising properties in areas where distressed sales dominate transactions. Yet, a lack of financing by itself can contribute to a neighborhood's downward spiral or at the least block the path to recovery. An analysis of HMDA data from 2010 by Avery and his colleagues (2011) finds that the volume of lending in census tracts with the highest rating of distress used in the Neighborhood Stabilization Program (NSP) have seen the steepest declines in lending volumes since the peak, down 72 percent since 2005 compared to 47 percent in the neighborhoods with the lowest distress rating.

But in some neighborhoods constraints on access to finance may also be less of a problem than a lack of demand for residential properties by occupants and investors with a long-term interest in these communities. In those cases, there are likely to be broader benefits to the surrounding community from investments in individual properties, providing justification for government subsidies to prop up demand as part of strategy to stabilize and revitalize the neighborhood. However, in many cases there may be limited demand to prop up, so strategies to reduce the size of the existing housing stock may be more appropriate. In other cases, there may be active demand by investors but primarily with short-term strategies that are not in the best longer-term interests of the surrounding community, requiring regulatory interventions to ensure that these owners do not contribute to further destabilization. Investors with longer-term horizons may also be stymied by a lack of access to traditional financing

channels that are often limited to owner-occupants. Finally, there are also many situations where public intervention is needed to help remove liens and clear up clouded titles, either as part of a process of rehabbing and returning properties to productive use or as a part of a land-banking strategy. But to craft effective approaches tailored to this range of market circumstances, policymakers need a clear understanding of market conditions and of lessons learned from past and existing approaches.

This section focuses on the challenges of bringing mortgage finance and other capital for residential properties located in distressed neighborhoods, with particular emphasis on the roles the public and nonprofit sectors should play both to harness and control activities by private investors and to address barriers that the private sector cannot. The focus in this section is distinct from the issue of extending credit to borrowers who have trouble meeting standard underwriting criteria related to the borrowers' income, debt, savings, or creditworthiness. Issues related to borrower-specific—as opposed to neighborhood-specific—barriers are addressed in the first section of this report.

The section begins by outlining the key challenges and barriers to lending and investing in housing in distressed neighborhoods. We then briefly identify the primary existing efforts to address these barriers and conclude by identifying the specific research topics that need to be addressed to better inform policy development in this area.

Challenges and Barriers

Various factors impede lending and investing in residential properties in distressed neighborhoods where a policy response is likely needed. An understanding of these barriers is a necessary first step toward designing policy interventions to help develop this market. We have identified five main factors that impede the flow of capital into these neighborhoods that are described in more detail below:

- high volumes of REO and abandoned properties;
- lack of demand for residential properties;
- falling or stagnating residential property values; and
- challenges in financing and managing one- to four-unit investor-owned properties; and
- difficulty of property appraisals in thin markets.

High volumes of REO and abandoned properties

As the foreclosure crisis mounted, the volume of properties taken back by lenders—real estate owned, or REO—has risen dramatically. REO properties are often in poor condition, and so exert a blighting influence on the surrounding neighborhood. REO sales also have a significant negative effect on surrounding property values as they are consistently found to sell at a discount relative to other properties, for reasons that include poor property conditions, greater motivation to sell by lenders seeking to minimize the costs of owning and managing vacant properties, and higher risks of purchasing properties coming out of a foreclosure process (Pennington-Cross 2006; Lee 2010; Immergluck 2012). REO properties may continue to have a negative impact on the surrounding neighborhood after sale if the new owners pursue strategies to earn profits that entail mothballing the property waiting for the market to recover or milking the property by renting it out after making little or no attempt to address deficiencies. To counter the potentially negative impact of these strategies, public or nonprofit entities may attempt to gain control of REO properties to improve their condition and assure their stable

occupancy. But a significant challenge facing these efforts is that the ownership of these properties is highly fragmented across a number of lenders, often with a lack of clear information about the servicer who actually controls the management and disposition of the property. These barriers make it difficult for these efforts to identify owners and negotiate purchases (Nickerson 2010).

Perhaps more challenging than REO properties owned by financial institutions are abandoned properties. While many REO properties may have sufficient value to attract owner-occupants or investors who will move quickly to reoccupy the properties, at the other end of the spectrum are properties with limited appeal either because of their poor condition, weak location, or clouded title. Abandoned properties may arise where owners have walked away from properties they owned free and clear as they have no further market value. This issue may be more likely to occur in the wake of the foreclosure crisis among very low-valued properties that were purchased by speculative investors. In a study of outcomes of REO sales in Cleveland, Coulton, Schramm, and Hirsh (2010) found that the lower the REO sale price, the higher the likelihood that the property would subsequently be vacant and delinquent on its property taxes. An analysis of foreclosed properties in Cleveland also found that these homes were much more likely to experience prolonged periods of vacancy for up to four years compared to nondistressed home sales, and that these elevated vacancy rates were much higher in high-poverty neighborhoods (Whitaker 2011).

Abandonment also occurs where lenders do not complete foreclosure proceedings in order to avoid taking ownership of the poor properties and their associated liabilities. Local communities can pursue various strategies to try to better manage these abandoned properties, including stricter building code enforcement, increased reporting requirements for property owners, and increased fees for regulatory actions (Mallach 2010).

From a financing point of view, among the key challenges with abandoned properties are obstacles that limit efforts to reposition these properties with new owners (Alexander 2011). For example, accumulated tax liens may exceed the property value, making the cost of acquisition prohibitive. The title to these properties may be clouded by a lack of proper documentation of previous transactions, including tax foreclosures and property inheritance. With these barriers to resale of these properties, abandoned properties continue to deteriorate and sit vacant, blighting the surrounding neighborhood. Public intervention is needed to help clear up these ownership issues and speed the process of gaining control of these properties, ideally to transfer to owners who will rehabilitate or redevelop these properties or at least to remove the dilapidated structures and hold the land for future use.

One response to the issue of high incoming volumes of REO is for public entities to intervene to acquire distressed loans in targeted areas to gain leverage over these properties before they are foreclosed and become abandoned. One example of this approach is the Community Asset Preservation Corporation (CAPC) in New Jersey (Simon 2010). Using funding from a number of nonprofits and mission-driven sources, CAPC purchased a portfolio of 47 distressed loans from a single lender, most of which were in Newark and bordering cities. A disposition strategy was developed for each home, including resale to owner-occupants, nonprofit developers that would rehab and manage the properties, or demolition. Another example is the Stabilizing Urban Neighborhoods (SUN) initiative of Boston Community Capital where foreclosed but still occupied properties are purchased as REO from lenders and then resold or leased to the existing occupants (Cherry and Hanratty 2010). Boston Community Capital provides the funding both for the initial acquisition and for the long-term permanent financing. The program takes advantage of the steep fall in housing prices in the target areas to be able to reposition the property as affordable for existing occupants. The program identifies target properties by first connecting with the

occupants and determining their ability to afford the repositioned property. A similar approach is being developed by Mercy Housing that seeks to buy distressed loans out of lenders portfolios at a discount reflecting current market values. Community-based organizations with then provide counseling to existing owners to position them to successfully manage deeply modified loans.¹⁷

With regard to both foreclosed and abandoned properties, a key part of the challenge facing communities is the difficulty of developing responses that can be scaled to match the magnitude of the problem. In part this reflects the difficulty of identifying and negotiating with a diffuse set of lenders and property owners. It also reflects the significant costs associated with acquisition and rehabilitation of a large volume of real estate. Responding to the crisis has also been hampered by limited organizational capacity on the part of both government and nonprofit organizations to take on the roles needed, although this capacity has been growing with the support of funding from both government and philanthropic channels.

Lack of demand for residential properties

Given that high levels of residential vacancy and abandonment are a defining characteristic of distressed neighborhoods, a fundamental challenge for these neighborhoods is a lack of sufficient demand to occupy the existing stock and to support adequate upkeep of these properties. However, the prospects for distressed neighborhoods will vary with the broader market dynamics at work in the metropolitan areas in which these neighborhoods are located (Mallach 2009).

Foreclosures have spiked in a number of market areas that have had generally strong housing demand up until the crash. In these areas there may be an expectation that demand will be restored over the next few years, attracting investors who are willing to wait several years for a payoff when the market recovers. In this case there may not be a total lack of demand, but rather a lack of demand specifically from households and property owners with a longer-term horizon who would be more likely to invest in these properties and provide stability to the neighborhood. Depending on market circumstances, investors may have incentive to maintain these properties, but are likely to only undertake the minimum amount needed to maintain marketability to renters and subsequent buyers.

But in other market areas, primarily in the Northeast and Midwest, the lack of demand may reflect a long-term trend of slow household growth in the broader market area and a hollowing out of older, urban neighborhoods. But even neighborhoods located in faster-growth markets may be cut off from broader housing demand by the quality of public services, being inaccessible to other parts of the market area offer employment opportunities, or having high shares of antiquated and poor quality housing. The poor long-term prospects for these areas may deter owner-occupants from purchasing in these areas. Investors may be drawn to buy properties if they are available at prices that are sufficiently low to provide a reasonable return from market rents over a fairly short time frame. But there will be little incentive to invest in these properties. In these markets there may be little hope of a recovery in demand absent a significant intervention to change the market dynamic at work in the neighborhood, which may entail public investments in transportation, infrastructure, and public services.

In the case of areas suffering from long-term distress, there will often be a need for the public sector to help stabilize the market through property acquisition, rehabilitation or demolition, and management of properties or land over time. In some cases the process may be focused on assembling contiguous

¹⁷ For a description of this effort, see “Innovative Solutions to Help Homeowners, Neighborhoods,” <https://www.mercyhousing.org/page.aspx?pid=714>.

parcels and strategically reducing the overall housing stock to ultimately support a long-term redevelopment strategy. Land banking is one approach for carrying out this process (Alexander 2011).

In cases where there is more demand for housing in these areas, but a gap between market prices and the cost of providing this housing, public funds may be used to provide subsidies to close this gap. In areas where there is investor demand for holding properties, the use of subsidies may be needed to give a competitive edge to owners with a long-term interest in the community. These subsidies may take the form of grants, forgivable loans or loans with below-market interest rates offered in targeted geographic areas. Public funds may also subsidize the acquisition and development process to make up the difference between the market value of the housing and the total cost of acquisition and rehabilitation or new construction. Another approach for delivering these subsidies could be tax credits along the lines of the low income housing tax credit or historic preservation credits, where the subsidy comes with obligations to meet long-term affordability provisions.

But in order to craft the most appropriate interventions, local governments need an honest appraisal of the prospects for revitalizing individual neighborhoods in the context of broader market conditions and trends. This requires a careful consideration of the neighborhoods' assets—both physical and social—and the likelihood that given these attributes there is the potential for renewed demand for homes in this area with appropriate investment of public funds. One of the common failings of interventions developed through NSP is paying insufficient attention to the strength of demand for homes supported through these efforts, with few takers for homes ready for occupancy. This may reflect poor conditions in the neighborhood, or outdated forms of housing that no longer hold appeal for homebuyers unless substantially reconfigured. There are also concerns about whether it is appropriate to lure low-income homes into severely distressed neighborhoods through the use of significant per unit subsidies, both because of the negative impacts on these households from living in these areas and because the high level of subsidies may be an inefficient use of this scarce resource. In areas of relatively strong demand there may also be a tendency for the public sector to be in competition with private investors for the properties best positioned for rehabilitation. In these markets, the public sector may want to develop approaches that both harness and complement the activities of these private investors, rather than compete with them. In short, the development of neighborhood typologies based on market conditions as they relate to the prospects for revitalization both with and without public intervention could help local governments to determine when to employ different strategies.

Falling or stagnating residential property values

In some situations there may be at least modest demand for housing in distressed areas, but this demand may be chilled by the expectation that house prices may continue to fall or at least have little hope of rising. Buyers will be reluctant to purchase or to invest in homes out of fear that they will be unable to recoup their investments or make a modest return. Similarly, lenders will be reluctant to make loans in these areas due to the higher risk of default and significant loss severities. By dampening investments in these areas, these expectations of falling or stagnating prices can become self-fulfilling.

To some extent, demand subsidies may address this issue by providing a financial incentive for buyers to move to these areas and providing some hedge against possible financial losses. A more direct response to the problem of self-fulfilling expectations of price declines is home equity insurance, where owners are provided a guarantee against neighborhood specific declines in prices. The advent of home price indexes available at lower levels of geography provide the basis for such insurance approaches. One well-known example was a pilot project in Syracuse, New York, begun in the late 1990s (Caplin et al.

2003). While it was only a small-scale pilot, there may be valuable lessons to be distilled from this experience.

Shared-equity or shared-appreciation homeownership programs are another way to provide buyers with insurance against declines in property values (Carr and Mulcahy 2010). One variation of these approaches is to offer buyers low-interest rate loans or soft second loans that are repaid in part by sharing any property appreciation upon sale. If the home does not appreciate, the owner has no obligation to make up the difference in the interest rate or pay any interest on the second mortgage. Another variant is subsidy-retention programs, which may take the form of community land trust, limited equity cooperatives, or deed restrictions. In this approach, buyers pay a below-market price for the home but are limited to resale prices that provides a predetermined maximum annual return. The larger the difference between the market value and the sales prices, the greater the likelihood that the buyer will realize the agreed-upon annual return. Of course, in areas with depressed values and a likelihood of little future growth, homebuyers may be shielded from a loss of equity but will also face limited opportunities for increases in value. For this reason, shared-equity approaches would probably make more sense in areas that are not in market areas experiencing a long-term decline.

On the other hand, to address the risks faced by lenders from a potential fall in home prices, loan guarantees or mortgage insurance may be employed. However, to the extent that the risks of default from falling home prices—or other factors associated with the neighborhood—are elevated, the break-even fees associated with these guarantees may be prohibitively high. This type of risk assurance will make sense, however, in cases where market perceptions of risk overstate the true risks—particularly if financing is available to support demand and halt a downward slide in property values.

Challenges in financing and managing one- to four-unit investor-owned properties

In areas hard hit by the foreclosure crisis, much of the housing stock is in two- to four-unit properties. While much of this stock has always been non-owner occupied, the foreclosure crisis has increased the share of these units owned by investors. Single-family homes have also increasingly shifted into the rental housing stock. Between 2007 and 2009 alone, 1.4 million single-family homes switched from owner to renter occupied (JCHS 2011).

The financial position of these small rental properties even before the financial crisis was precarious as the challenges facing these properties are substantial. They generally garner low rents, have high turnover, and are older housing with high maintenance needs. A recent study using the 2001 Residential Finance Survey found that only 5 percent of one- to four-unit rental properties were financially profitable (Garboden and Newman 2011), while at the other end of the spectrum 30 percent of these properties could not cover debt service and maintenance even when fully rented. In between were 65 percent of properties that were not generating a positive cash flow at present but had the potential to do so, primarily if vacancies were reduced.

Given the financial challenges facing these properties, it is no wonder that they pose particular challenges for lenders. In cases where the properties are not owner occupied, there is the added risk that investor-owners may not be as motivated to maintain these properties and be more likely to walk away if the property begins to generate losses. Property owners, on the other hand, face limited borrowing options, particularly since the FHA does not insure one- to four-unit properties that are not owner occupied. The housing bust has further exacerbated access to lending in these areas as much of the lending in these neighborhoods had come through mortgage brokers—a market channel that has substantially declined. To the extent that financing is available, it is likely to come with higher interest

rates, making it more difficult for the property to break even financially. In addition to difficulty in accessing financing, these owners are often ineligible for grant and low-cost loan programs that are limited to owner-occupants.

There may be good reason to revisit these restrictions on both FHA lending and other grant and low-cost loan programs given the importance of investors in many neighborhoods and the fact that these housing units are an important part of the affordable rental stock. Three-quarters of unassisted housing units renting for less than \$400 in 2009 were in one- to four-unit properties, as were 58 percent of units renting for \$400–599 (JCHS 2011). As Mallach (2009) points out, investor-owners *can* be good stewards of these properties—as long as necessary regulatory and financial incentives are in place. In fact, a recent study of default among loans originated in New York City during the height of the boom found that loans flagged in HMDA as non-owner occupied actually were associated with a lower risk of default (Chan et al. 2011). While this result may reflect a unique set of market conditions, it does suggest that lending to investors may not be associated with higher risk of default—and certainly worthy of further investigation.

One reason that these small properties face financial challenges is that the typical “mom and pop” owners of these properties neither have access to the capital needed to maintain these properties nor benefit from economies of scale in property management, including leasing (Garboden and Newman 2011). On the other hand, the properties may benefit from “sweat equity” of owners in maintaining the property, which helps support low rents (Mallach 2009).

The widespread rental of single-unit properties may also be a transitory phase that is needed both to restore potential homebuyers’ confidence in these areas and to allow household finances to recover to the point where purchasing a home is feasible. Rent-to-own arrangements may be a useful means of managing the excess supply of single-family homes during this period. However, these arrangements require an entity to own and manage the property during the rental phase and a mechanism for transferring ownership upon successful completion of the renting phase. Innovations in financing rent-to-own arrangements to achieve greater scale in these efforts may be needed.

A number of papers have suggested creating a portfolio of small properties to help achieve economies in accessing capital and managing these properties (Garboden and Newman 2011; Belsky 2010; Apgar and Narasimhan 2008; Newman 2005). This notion is also part of the motivation behind the Obama administration’s efforts in mid-2011 to gather information on the potential for selling REO properties held by the GSEs and the FHA to investor-owners for management as scattered-site rental housing. One proposal that has been made public outlines an approach that could be used by a national network of nonprofits to achieve economies of scale in terms of both management and financing of a portfolio of properties; it draws upon experiences in the United Kingdom, Canada, and Australia (Housing Policy Network and RECAP Real Estate Advisors 2011). The proposal also includes a substantial rent-to-own component for housing that is well suited to transition back to owning over time, while other units will be managed over the longer term as workforce rental housing. The proposal makes a strong case that such economies of scale in management are possible—if the challenge of securing a large portfolio of properties at a reasonable price is addressed.

Difficulty of property appraisals in thin markets

In areas where there is little demand for residential properties, lending may also be limited by the difficulty in appraising properties due to a lack of arm’s-length transactions to be used as comparable sales. But while the potential for a comparable sales appraisal methodology to drag down prices has

been the subject of many articles in the popular press, it does not appear to have been the subject of any recent research (Frame 2010). Difficulty appraising properties will impede private lending, but it is also an issue for transactions involving public or nonprofit entities where a reasonable market value needs to be established. In areas where comparable sales are lacking, there may be a need to develop alternative approaches to appraisals, for example based on assumptions regarding rental income and expenses. In general, a better understanding is needed of the extent to which appraisals present challenges to lending in these areas as well as options of alternative approaches to estimating values. Toward these ends, better availability of data on property characteristics and sales transactions would help support analysis of these issues.

Public and Private Programs

Below are a few of the most important existing policies and programs that address the issues outlined above and so may provide opportunities for research or the development of pilot efforts.

The Neighborhood Stabilization Program (NSP)

A special component of the long-established Community Development Block Grant program, NSP was first established by the Housing and Economic Recovery Act of 2008. This initial program (NSP1) provided funding through a formula to states and localities to stabilize communities heavily impacted by the foreclosure crisis through the purchase and redevelopment of foreclosed and abandoned homes and residential properties. There were two subsequent rounds of funding with somewhat different methods for distributing the funds and rules governing the use of funds. The American Recovery and Reinvestment Act of 2009 funded competitive grants (NSP2) that were also open to nonprofit organizations, and the Dodd-Frank Act of 2010 (NSP3) channeled additional funds to states and localities through a formula grant approach.

NSP provided grantees with a fair amount of latitude in how funding would be used, including for acquisition and redevelopment of abandoned and foreclosed properties, establishing financing mechanisms for the purchase and redevelopment of these properties, establishing land banks for foreclosed homes, and demolishing blighted structures. While not without significant constraints on grantees activities, the program nonetheless provides funding for a wide variety of approaches to address the barriers discussed above. While NSP is a temporary program designed to address the problems brought on by the foreclosure crisis, the experiences of grantees across the country pursuing a range of strategies in varied market conditions provides the opportunity to learn about the potential for different approaches to promote neighborhood stabilization.

Land banks and nonprofit development corporations

Land banks are an increasingly common tool that local governments are employing as a means of addressing the problem of vacant and abandoned property. Alexander (2011) provides a thorough review of the history of land banks in the United States, identifies emerging uses of this approach, and identifies additional tools and incentives that can be combined with land banking to stabilize communities. As Alexander succinctly puts it:

Land banks are governmental entities that specialize in the conversion of vacant, abandoned and foreclosed properties into productive use. The primary thrust of all land banks and land banking initiatives is to acquire and maintain properties that have been rejected by the open market and left as growing liabilities for neighborhoods and

communities. The first task is the acquisition of title to such properties; the second task is the elimination of the liabilities; the third task is the transfer of the properties to new owners in a manner most supportive of local needs and priorities. (Alexander 2011, 10)

From a handful of efforts in 2005, this study counts 79 such programs across the country as of 2011. A key issue for land banks is to establish a source of financing for their activities. Local governments may commit funding from general revenues, but this is unlikely to be a stable source of annual revenue. Funds from federal programs may be used to fund land bank operations, such as NSP. Land banks may also be able to profit from some share of its property sales, which can be used to fund ongoing operations. Other options include capture of tax liens along with interest and penalties on these delinquent payments or the capture incremental increases in property taxes on these properties over time. The wide variety of efforts in a range of market circumstances provides a rich source of information on how this tool can be used to address the problems of high vacancy and abandonment.

Nonprofit organizations can also play a similar role in acquiring, redeveloping, and either managing or selling resulting properties as affordable housing. These organizations may receive funding through NSP, national intermediaries, community development financial institutions (CDFIs), and private sources of capital. For example, the National Community Stabilization Trust (NCST) operates an REO capital fund that provides funding for acquisition and rehabilitation of properties as well as bridge financing to support transactions where time is of the essence but the ultimate sources of financing are not yet in place. The NCST has provided financing to five nonprofit organizations around the country to acquire and reposition foreclosed or abandoned properties.¹⁸ The experience of these efforts may also be useful targets of study to understand the potential and limits of these approaches.

FHA insurance programs

FHA's 203(b) standard insurance for one- to four-unit properties represents an important source of financing in areas where lenders would otherwise be reluctant to loans, while 203(k) rehabilitation mortgage insurance also allows buyers to finance up to an additional \$35,000 for renovations prior to move in. However, there may be ways in which the guidelines and administration of these programs could be improved to enhance their use in distressed areas. For example, one reviewer has pointed to stringent property quality standards that may make it difficult for properties that are in poor condition to qualify for FHA loans, with the result that these properties may then be channeled to investor-owners (Theologides 2010). The 203(k) program has seen an increase in use in recent years, doubling volume in 2009 and again in 2010, reaching more than 22,000 loans. A review of the program by the Office of the Comptroller of the Currency (OCC) noted that barriers to greater use of the program include strict repair guidelines, a lack of capacity by lenders to handle the construction oversight required, and the length of time required to close these loans (OCC 2009). Another concern with these loans is that they bear interest rates that are 1–3 percentage points higher than standard FHA loans, raising costs for what are likely to be low-income buyers (Treuhaft, Rose, and Black 2010). In addition, as noted earlier, the usefulness of both programs is hampered by the requirement that only owner-occupants are eligible for these loan products. Both programs offer opportunities to evaluate both the usefulness of these programs as well as loan performance in different market contexts.

¹⁸ For details, see "Projects Financed," http://www.stabilizationtrust.com/programs_services/reo_capital_fund/projects_financed/.

Shared-equity and lease-to-own programs

Various shared-equity programs have been developed to address homeownership affordability issues that may be adapted to the circumstances in distressed areas. While a number of these efforts have been the subject of evaluations, additional research may be needed to assess how well these tools could be applied in distressed areas. Similarly, existing lease-to-own programs could be the subject of additional research to address whether these efforts could be expanded and brought to scale. Carr and Mulcahy (2010) identify several programs, both new and long-standing, that could be examined, including a fairly large-scale new effort developed by Self Help and Fannie Mae; a smaller program in Waco, Texas, supported by NeighborWorks; and a long-standing program in Cleveland.

Key Questions for Policymakers

This section outlines general research topics in this area along with some ideas for specific research projects that could be good starting points. The research topics identified include basic research to better understand market dynamics, assessments of existing and previous efforts to support investments in these types of markets, and the development of new approaches to addressing the known barriers.

What do we know about market conditions, the nature of demand, and sources of financing in distressed neighborhoods? How do conditions vary across different typologies of distressed neighborhoods? What do these findings imply about the most effective role for public and nonprofit actors in these markets?

One challenge in crafting policies to help distressed neighborhoods is that there is often a dearth of information on fundamental market conditions, including the following:

- What is the inventory of vacant housing in distressed areas, and what is the legal status of these properties (i.e., in the foreclosure process, owned by a financial institution, owned by an investor, or of clouded ownership status)?
- How is property ownership in these areas changing? Who is buying properties, and what is their motivation and strategy for making these investments? To what extent do investors consist of “mom and pop” owners purchasing a small number of properties versus larger-scale investors? How does the mix of investors vary across market areas?
- What are the sources and terms of capital being used to finance purchases? How is the nature of the capital being used likely to affect the property management strategies employed by owners?
- If there are few active buyers, to what extent is a lack of access to capital an impediment? Who are potential investors, and what are key impediments to their involvement in the market?
- How do incentives and approaches used by real estate agents affect the sale of distressed and REO properties?

These questions could be addressed through both quantitative and qualitative research approaches. Data on property transactions may provide some information on property sales, including the type of buyer and whether any liens for financing are recorded. One strand of research would be to catalogue efforts to assemble and analyze these data and to identify opportunities to expand on existing efforts. Qualitative information is also needed to more fully understand the nature of transactions taking place, involving case studies of neighborhoods facing different supply and demand dynamics. Mallach (2009)

provides an example of research contrasting the market dynamics in a previously fast-growing market area (Phoenix) with one facing longer-term distress (New Haven). The information gathered could then be used to better tailor public interventions to control and harness private investment activity and to design public interventions to complement private actions.

What interventions hold the most promise for encouraging investment or otherwise stabilizing distressed neighborhoods?

One broad class of public intervention is to take steps to foster greater demand in distressed areas. These efforts can take several forms, including subsidies to close the gap between development costs and market values, down payment assistance, interest rate subsidies, or rent-to-own programs. Among the challenges for these efforts are determining the level of demand for repositioned properties and determining the appropriate amount of subsidy per property that is most efficient. NSP has provided states and localities with an opportunity to experiment with different approaches which may shed light on how well different approaches work in different market contexts. Spatially targeted lending programs through state housing finance agencies might also provide opportunities for study. Demand-side subsidies could also be offered through tax credits similar to the LIHTC or historic rehabilitation credits. Proposals for a pilot program could be developed that analyzes financial information on the costs to acquire and rehab foreclosed properties compared to the market value or rental income potential of these homes as affordable housing to help structure a tax credit that could close this gap. Finally, previous efforts to provide home equity insurance also offer opportunities for study. A review of experience with these programs (when used in neighborhoods exhibiting elevated vacancies and foreclosure) could shed light on the potential use of tax credits to spur investment in existing or new properties in targeted areas.

Another broad class of public intervention relates to repositioning properties that, for various reasons, the private sector will not invest in. These include properties that are seriously dilapidated, have clouded titles, or are saddled with liens that exceed their value. The owners of these properties may have abandoned them or they may be owned by banks that are anxious to hand them over. The arsenal of tools that can be employed in these situations include land banks and other means of removing liens and clearing titles, code enforcement, property registration systems, and the imposition of regulatory fees. Again, the broad range of responses that have been developed across the country to address these issues provides fertile ground for research to identify the most promising approaches in different market contexts.

Finally, there have been several emerging efforts to maintain occupancy of properties at risk of foreclosure to prevent these homes from becoming vacant and contribute to neighborhood instability. These approaches all entail negotiating with lenders to either acquire loans before foreclosure is completed or to purchase REO properties immediately upon foreclosure. Assessments of these efforts, including both their efficacy in avoiding vacancies and the potential for bringing them to scale, would provide valuable information for other areas considering similar approaches.

What do we know about magnitude of risks of different loan products in distressed areas? What types of guarantees may be needed to support lending?

In general, lending in distressed neighborhoods and to specific classes of properties and owners is viewed as increasing the risk of losses on these loans, chilling supply of these products. However, there may be little systematic information on actual loan performance to inform lending decisions. In this case, a lack of lending may not be an accurate reflecting of higher risk, but a market failure due to lack of sufficient information to accurately assess risks. A starting point for investigating this issue would be to

review what is known about the default risks and loss severity rates of loans to investors in small properties, lease-purchase programs, rehab loan programs, and lending generally in distressed neighborhoods. Gaps in existing information could be filled in through analysis of data from private sources as well as relevant FHA and GSE lending programs. The results of this analysis could then inform the development of new lending approaches by FHA or the GSEs.

What can we learn from past and current efforts to stabilize neighborhoods?

There have been a wide range of historical and recent efforts to channel financing to distressed properties and neighborhoods, ranging from the Depression-era Home Owner Loan Corporation (HOLC) to the ongoing Neighborhood Stabilization Program. These programs offer a great opportunity to distill lessons to refine existing programs and to devise new approaches. Seidman and Jakobovics (2009) provide a brief review of lessons learned from HOLC, the Resolution Trust, and HUD's Asset Control Area program. Of these, HUD's Asset Control Area program may offer the richest opportunities for study, as it is an ongoing program operating in varied market contexts. Efforts by the National Community Stabilization Trust and other national intermediaries offer other opportunities for research. A review of existing evaluations of these efforts would help identify areas where additional research is warranted.

Some specific issues that may be particularly valuable to assess are these three:

- What is the potential for scaling up efforts to purchase loans or still-occupied REO properties to reposition occupants as owners of substantially modified loans?
- What has been learned about what financing and other steps are most critical for jump-starting land banks to take possession of REO properties with limited market value due to physical condition, poor location, or clouded titles?
- What is the potential for expanding lease-to-own programs based on experiences with pilot programs?

What role are appraisal challenges playing in markets at present? Are there new approaches to appraisals that may be more appropriate in distressed areas?

While appraisal challenges are often identified as an impediment, there is little systematic information on actual experience with appraisals. Reviews of existing work in this area are needed to document what is already known. Cases studies of selected market areas would shed further light on this issue and identify issues that may need to be addressed through innovative approaches.

Would the aggregation of small property ownership create economies of management and finance that would better support both higher quality and affordability of this housing? What public supports would be needed to encourage this aggregation?

As noted earlier, there have been a number of papers that have promoted the aggregation of small properties into property pools to achieve greater economies of scale. Are there examples of scattered-site property management that could be the subject of cases studies to provide information on the extent to which these economies can be realized? For example, does experience with HUD's Asset Control Area program shed any light on these issues? Most recently, the Obama administration has solicited input on approaches that could be used to transfer bundles of REO properties held by FHA and the GSEs to investors. Responses to this request may identify examples of such aggregation that could also be the subject of study.

Table 3: Potential Research Projects

Research questions	Potential research projects
<p>What do we know about market conditions, the nature of demand, and sources of financing in distressed areas? How do conditions vary across different typologies of distressed neighborhoods? What do these findings imply about most effective role for public and nonprofit actors in these markets?</p>	<ul style="list-style-type: none"> ● Field descriptive research, including review of available data and targeted interviews, to better understand who is investing in areas of high foreclosures. Select study sites to include range of market conditions and examine who is buying up distressed assets, the financial products and strategies they are using, their stated investment intentions, and their track records as property owners (How quickly are properties reoccupied? How often are they sold versus rented? How long until they are resold?) ● Create typology of neighborhoods that could be used to guide policy approaches under different circumstances. ● Review existing efforts to assemble data on vacant and abandoned properties and property transactions in distressed areas .
<p>What interventions hold the most promise for encouraging investment or otherwise stabilizing distressed neighborhoods?</p>	<ul style="list-style-type: none"> ● Review experience with homeownership programs in distressed neighborhoods—how effective have they been at stimulating demand? Have homebuyers had positive financial and social outcomes? ● Evaluate approaches adopted by NSP grantees—how cost effective have approaches been? Has there been demand for housing provided through NSP? ● Evaluate HUD pilot on small-value rehabilitation loans. ● Evaluate experience with previous home equity insurance programs with goal of making recommendations for a pilot program. ● Assess potential for tax credits to serve this purpose drawing on based on experience with LIHTC and historic preservation credits—What degree of subsidy would be required under different assumptions? What types of restrictions on use should be required for what period of time (e.g., quality of housing, affordability, income restrictions)? ● Assess efforts to keep delinquent owners in homes either through refinance or transition into rental situation—such as efforts by Mercy Housing and CAPC. ● Pilot survey to assess factors contributing to lack of demand by owner-occupants and identify approaches to remedy these

	<p>deficiencies (e.g., outdated housing types needing modification, inadequacy of schools or transportation infrastructure, neighborhood reputation, etc.).</p>
<p>What are key obstacles to using mainstream financing in distressed areas? What do we know about magnitude of risks of different loan products? What types of guarantees may be needed to support lending? What additional sources of capital might be tapped for lending in these areas?</p>	<ul style="list-style-type: none"> ● Conduct case studies in several market areas to identify barriers to using available financing (such as CLTV limits, nature of subsidies, non-owner occupied status, lack of depository presence in neighborhood, etc.). Assess the potential for FHA or GSEs to provide financing for purchase of REO properties under specific conditions. ● Review existing studies of default risks and loss severity rates of loans to investors in small properties, lease-purchase programs, rehab loan programs, and lending generally in distressed neighborhoods. Synthesize findings and identify gaps in research. ● Analyze available loan-level data (from private sources, FHA, GSEs, or state HFAs) to fill in gaps in research on loan performance of above loan categories.
<p>What can we learn from past and current efforts to stabilize neighborhoods?</p>	<ul style="list-style-type: none"> ● Review of existing evaluations of past and ongoing stabilization programs. ● Conduct evaluations of identified aspects of NSP, NCST, or HUD Asset Control Area programs. ● Assess efforts to purchase distressed loans or still-occupied REOs to maintain current owners in place. ● Assess lease-to-own programs. ● Assess obstacles to jump-starting land banks to handle most distressed abandoned and foreclosed properties.
<p>To what extent do challenges in appraising properties represent a barrier to lending in these areas? What innovations in the appraisal process might remedy these issues?</p>	<ul style="list-style-type: none"> ● Review the existing literature assessing how a comparative sales approach to property appraisal may exacerbate both downward and upward trends in house prices. ● Conduct case studies of the appraisal process in selected market areas reflecting a range of neighborhood market conditions. ● Identify and review available information on alternative approaches to appraisals that would address shortcomings of current approaches. ● Develop recommendations for pilot efforts to implement alternative appraisal approaches.
<p>Would the aggregation of small property ownership create economies of management and finance that would better support both higher quality and affordability of this housing? What public supports</p>	<ul style="list-style-type: none"> ● Case studies of examples of pooled ownership, perhaps from the Asset Control Area program or efforts identified in responses to the Obama

would be needed to encourage this aggregation?

administration's request for information.

- Review experience in other countries of scattered-site property management.
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The Role of Mortgage Finance in Supporting Investments in Sustainable Housing

There is significant scientific evidence that increases in greenhouse gases in the atmosphere have contributed to global climate change, with serious consequences for the global ecosystem. As a result, efforts to reduce greenhouse gases have become an important policy concern. Since residential dwellings account for 22 percent of carbon dioxide emissions in the United States, reductions in energy uses in America's homes offer an opportunity for substantial reductions in the national output of these gases (U.S. Environmental Protection Agency [EPA] 2011). In fact, new housing already has a much lower carbon footprint than older units, and technological advances in building materials, insulation, heating and cooling systems, and appliances could reduce the footprint even further. The federal government estimates that energy-efficient retrofits to existing homes could lower energy use by up to 40 percent per unit, cutting annual greenhouse gas emissions by as much as 160 million metric tons by 2020. And even if pre-2000 homes are brought up only to the same efficiency level per square foot as post-2000 homes in their regions, overall residential energy consumption would fall by 22.5 percent (Council on Environmental Quality 2009).

Reducing energy use in homes may also be an important means of addressing concerns about housing affordability. Energy costs have come to account for a significant portion of total housing costs, particularly for low-income households. Utility costs for renter households in the bottom income quintile (earning up to \$19,300) amount to more than a quarter of total housing costs in 2009, or nearly a fifth of household income (JCHS 2011). The share of households spending more than half their income worsened substantially over the past decade, and rising utility costs were an important contributor to this trend, rising 28 percent between 2002 and 2008 even as renter incomes fell. Clearly, efforts to improve the energy efficiency of housing need to be a part of policies aimed at improving housing affordability.

In many cases, investments to increase the energy efficiency of new and existing housing have been found to generate sufficient savings over time to support these investments (GAO 2008). Yet, only a small share of existing or new housing have benefited from these energy saving investments (Gold and Nadel 2011). For instance, between 1995 and 2011 some 24 million new homes were built in the United States, yet only approximately 1 million incorporated sufficient energy-reducing components to qualify as Energy Star-rated homes.¹⁹

In addition to the characteristics of the housing structure and its systems and appliances, the location of housing affects energy use through associated transportation use. In many areas of the country, high housing prices have led to a "drive till you qualify" approach for homebuyers, where more distant residential locations are chosen to meet mortgage underwriting guidelines but at the expense of much higher transportation costs—and energy use (Lipman 2005; Center for Neighborhood Technology 2010).

Several barriers to greater efforts to improve residential energy efficiency may be addressed through greater public support for financing of these investments. Locationally efficient housing can also be supported through financing approaches that allow households to take on more mortgage debt than traditional underwriting if they choose homes that minimize their transportation costs. The market for

¹⁹ See [energystar.gov](http://www.energystar.gov); <http://www.census.gov/const/www/C40/table1.html>.

these investments in energy efficiency has developed substantially in recent years, but it is in many respects still an infant industry that could benefit from public intervention to help catalyze its maturation. Since the return on these investments is clouded by uncertainty, public action may be needed to provide subsidies or guarantees to address these uncertainties and provide an opportunity to gain valuable market experience. These public investments may also be needed to spur innovation in financial products and approaches that better match the timing of costs and benefits from these investments and to address equity concerns by allowing lower-income households to benefit from what would otherwise be prohibitively expensive improvements.

In this section we present an overview of the key barriers to increasing investments in the energy efficiency of residential housing with an eye toward the challenges that are particularly pertinent to the extension of financing for this purpose. The discussion encompasses both owner-occupied and rental housing. While there are some significant differences between these market segments, there is also a fair amount of overlap in both challenges and solutions. Where there are important differences these will be noted.

The purpose of the review is to identify specific roles that the government can play in helping increase the flow of financing for investments in residential energy efficiency, with the goal of identifying specific research needed to better inform policymaking. We do not focus on the issues specifically associated with subsidized housing, which present their own unique challenges, but rather on promoting investments in market-rate housing. The review also pays particular attention to HUD's role in this area, but the findings may be of relevance to other federal and state agencies and other stakeholders.

The first subsection below outlines the main barriers and challenges to greater investments to reduce residential energy consumption. Next, we examine the principal approaches that have been developed to extend financial support for improved energy efficiency. The section then concludes with a review of the questions that need to be addressed to inform policymaking in this area and identifies specific examples of research topics that may be most needed and appropriate for HUD to tackle.

Challenges and Barriers

Various factors may impede what otherwise might be greater efforts to both upgrade the existing housing stock and to improve the efficiency of new housing units. An understanding of these barriers is a necessary first step toward designing policy interventions to help develop this market. In some areas there is already a fair amount of understanding of the issues, while others are more ripe for further investigation. In some cases there are significant differences between the owner and rental markets in this regard. We have identified seven barriers that affect investment activity:

- a lack of strong empirical evidence on the costs and financial returns on investments;
- mismatch between timing of costs and benefits from investments;
- the “split incentives” problem, related to who bears the costs of the investments and who reaps the benefits;
- informational barriers and insufficient demand;
- high transactional costs and other market frictions;
- repayment risks for lenders; and

- need for subsidies and incentives.

Empirical information on costs and financial returns from investments

The starting point for making the case to both property owners and lenders about the financial justification for these investments is strong empirical evidence on actual energy pre- and post-investment. Most estimates of the savings associated with these investments are just that—estimates based on energy ratings of the existing home and the anticipated upgrades. However, there are a number of reasons actual experience may differ from these estimates. Energy ratings may vary in their ability to gauge actual energy use. Reductions in the effective cost of energy may also spur consumers to increase their energy use. Finally, there may be interactions among changes made to buildings that affect the return from any individual investment.

To substantiate the returns from energy savings investments, detailed information on energy use before and after improvements are made—including detailed information on the specific improvements—is needed across a range of property types and in a range of market circumstances. There are actually a number of initiatives aimed at developing this type of information, although mostly for multifamily housing. For example, systems have been developed by Bright Power, Inc., in partnership with Stewards for Affordable Housing for the Future (SAHF); the EPA has developed Energy Star Portfolio Manager; and a project begun in 2010 is funded by the Deutsche Bank Foundation in cooperation with Living Cities to develop a public database of several hundred retrofitted buildings in New York City. On the single-family side, one significant effort is led by a private firm Opower, which works with utility companies to gather energy use by residential customers and provide enhanced information to consumers to help them better manage their usage. If linked to information on energy savings investments and household characteristics, these data could provide a host of valuable insights on owner-occupied housing.

An accurate energy efficiency rating of homes is also a necessary step for the value of these benefits to be capitalized into home values, since absent this information buyers cannot factor these savings into their offers. The extent to which the values of these investments are capitalized into property values will be an important factor for owners and lenders alike in deciding whether to pursue these options. Energy ratings are likely to be most advanced for new single-family homes, which may provide an opportunity to assess the impact of these ratings on values.

But while a variety of information is collected, the challenge is to harness this information to develop reliable estimates of reduced energy use from upgrades to existing properties or additional features built into new housing. To achieve this, the information collected has to be standardized to include key metrics and has to be combined with information on housing and household characteristics to be useful for analytic purposes. A key challenge in making all these estimates is that individual household consumption of energy is to some degree idiosyncratic since households vary in the temperatures they aim to cool or heat their house to during different seasons and portions of weekdays and weekends. Thus, the most useful tools would allow users to input this information in a system that uses both average-degree days in their area and actual performance data on design, materials, and systems in a particular home, to calculate the energy costs of that particular home. This would allow them to comparison shop with knowledge of energy cost differences they would likely encounter among homes they are choosing among. Even then, though, future costs of energy are uncertain so savings depend on future prices that are impossible to predict with accuracy.

The government can play an important role in helping create standards for data collection, develop regulations that require utilities to both gather the data and to make it publicly available, and fund efforts to create databases that can support broader analysis on actual experience with both newly constructed and retrofitted properties.

Mismatch between the timing of costs and benefits from investments

As with many capital investments, one barrier to greater efforts to make housing more energy efficient is that high initial costs are only recouped over a long payback period. The cost savings from many energy-efficiency improvements will generally cover initial costs over 3 to 10 years, while “whole house” improvements are estimated to need 5 to 12 years to recoup the upfront investment.²⁰ As a result, the availability of longer-term financing that matches payments to the realization of the savings is often needed to support these investments. This is particularly true for lower-income homeowners and owners of low-cost rental housing who are less likely to have the savings to cover the significant upfront costs. In some cases, property owners may lack sufficient wealth to fund the investment but may have sufficient income to cover debt payments over time. But in cases where the owner or rental property’s income cannot support the financing needed to make these additional investments, loan products that expand standard debt-to-income or loan-to-value ratios may be essential.

Split incentives problem

Another barrier is the problem of split incentives, where the costs of investments are made by property owners but the benefits accrue to others—in the case of rental housing, the costs are borne by the property owner while the benefits may mostly accrue to tenants, while in the case of owner-occupied housing, the long-run benefits of these investments may be captured by subsequent owners of the property. The split incentive problem will be most evident for owner-occupied housing if the value of the investments are hard to assess and so not capitalized into the house value. Financing approaches that better align the distribution of the costs and benefits of energy improving investments can play an important role in fostering these activities. In the case of rental housing, this generally entails approaches that tie the repayment of the up-front costs to the utility costs for individual units. For owner-occupied housing, the approaches used can include either a surcharge on utility payments or property tax assessments.

Informational barriers and insufficient demand

One of the most significant barriers to the adoption of energy savings investments is a lack of demand by property owners. In part this reflects informational barriers—specifically a lack of awareness of both the potential financial and other gains from these investments and of the financing options available to support these investments (Fuller 2009). Indeed, a 2008 policy brief by the Federation of American Scientists examining use of FHA’s Energy Efficient Mortgage (EEM) program cited a lack of program awareness as the most prominent obstacle to greater program success (Gerarden 2008). But as documented by an extensive study by Lawrence Berkeley National Labs (LBNL), informational barriers may only be one of a host of factors that together limits demand for these investments by property owners (Fuller et al. 2010). Information is needed on the available energy-savings investments, the savings that would be expected from these investments, available financial assistance to support these investments, and qualified contractors and raters that need to be engaged to conduct this work.

²⁰ See <http://www.housingpolicy.org/toolbox/strategy/policies/financing.html>.

The LBNL study highlighted the fact that providing information alone to make owners aware of these options is not enough to prompt action. Undertaking investments to upgrade a home's systems can take considerable time and effort by the owner, and the potential financial savings may not be large enough to warrant the work required. Instead, owners need to be sold on reasons for addressing high energy consumption that go beyond financial savings they may realize, with potentially compelling reasons including health, comfort, energy security, and societal benefits.

The study finds that important steps in fostering demand include focusing outreach to owners most likely to undertake these investments, tailoring the message to speak to the factors most likely to motivate these owners to take action, and engaging with local community organizations and contractors to execute this plan.

While the LBNL study focused on homeowners, similar factors are likely cause multifamily owners to forgo energy improvements. The split incentive problem may limit demand for investments in these properties. But there may be other considerations that should motivate these owners to undertake these investments, such as providing a marketing advantage for these rental units. Information on the marketing value of these improvements might help persuade more multifamily owners to make energy improvements, but this of course is conditioned also on their ability to demonstrate energy savings to prospective tenants.

In short, the mere creation of a financial product will not by itself be enough to spur demand. Making property owners aware of these products is an obvious first step, but when it comes to actually spurring action, awareness by itself will not be sufficient. Understanding the needs and interests of both owner-occupied and rental property owners and tailoring both a financial product and a marketing effort to appeal to these interests is needed. It is important for policymakers to bear in mind the need to develop and support effective marketing efforts in addition to crafting the financial products themselves.

Default risks

The need for financial products aimed specifically at supporting energy-efficient investments in properties mostly arises in cases where the owner's income or the property's cash flow is not sufficient to support debt needed both to acquire and to upgrade the property within standard underwriting criteria. In these cases, lenders need to relax criteria related to both debt-to-income ratios (or debt service coverage ratios in the case of rental housing) and/or loan-to-value limits. Loans that are at the upper end of underwriting criteria will obviously face higher default risk. In the case of loans supporting energy savings investments, the additional leeway on standard criteria may increase the already higher default risk on these loans. The relaxed underwriting is generally predicated on anticipated savings on energy costs that will support the higher debt payments. But there are real risks that these savings will not materialize either because of overestimates of the benefits of the improvements, because energy consumption increases with reduced costs, or because energy prices rise above levels used at the time of underwriting. Given the higher risks of these loans, lenders may be reluctant to offer these products, or may only do so with risk premiums that make these investments less attractive.

There is an obvious role for government to play in insuring against these risks as means of developing experience with these loans. There are various ways to mitigate risks, including insurance, guarantees, loan-tiering (where the government assumes a first loss position on a junior lien), and other risk-sharing mechanisms. Steps to gather better empirical evidence on the actual changes in energy use and associated impacts on property values will also help lenders assess these risks. So will models that test

sensitivity to forward energy costs on energy outlays and, hence, loan performance. But actual experience with lending programs is also of great value in documenting borrower behavior.

Transaction costs and other frictions

Transaction costs can pose additional financial barriers as many loan programs require home energy audits to document the improvements that are likely to result from the planned investments. These audits may also be used by owners to develop a rating that can be used in marketing their home. But the cost of comprehensive audits may themselves be a barrier. Residential Energy Services Network (RESNET) has developed the most widely used rating system, the Home Energy Rating System (HERS). RESNET has estimated that the average cost for rating a home using this system was \$492 in 2009, and HUD estimates that the cost of a HERS report ranges from \$300 to \$800.²¹ While in many cases programs that require ratings will help cover these costs, this is not always the case.

There are also costs associated with originating the loans themselves, which may be prohibitively high if loans lack sufficient volume to warrant developing staff expertise on these products. In the multifamily context, particularly for affordable housing, adding additional financing to a property will add an additional layer of complexity to what is already an intricate transaction.

One way to help the industry develop to the point where greater scale economies may emerge is through the use of government subsidies to help cover transaction costs. Or initial efforts could focus on the high end of the market, which has greater ability to cover these costs, with the lower-end segment of the market developed later as scale economies emerge.

Beyond the costs of the transaction, several other frictions can impede the development of this infant industry. A common concern is the lack of qualified auditors for assessing the home as well as remodelers qualified to conduct the work. Other stakeholders in the process, most notably real estate agents, may also have disincentives to support participation in these programs because of the added complexity of the transaction (Fasey 2000). To the extent that the steps entailed in applying for and meeting the requirements of financing programs slows the transaction and raises the risk that the deal will fall through, real estate agents might be expected to steer buyers away from these programs. On the other hand, if awareness of the benefits of energy efficiency become widespread enough, then homebuyers' demands to see a home's energy rating may become a selling point rather than a hindrance.

In designing financing programs, it is important to take into account the way these transaction costs and other frictions may limit program participation. In some cases, these issues may be addressed through careful tailoring of program requirements to reduce these frictions. In other cases there may be a need for targeted use of subsidies to offset costs or provide incentives for stakeholders to promote the program.

Need for subsidies and incentives

For various reasons, financial subsidies are often needed to support energy-saving investments. Subsidies are commonly justified out of equity concerns, allowing low-income owners or low-cost rental housing to undertake investments that will make housing more affordable (Fuller 2009). Subsidies may be particularly important for rental property owners who may not capture much of the benefits

²¹ Found at http://ca.resnet.us/hotnews/Report_on_Cost_of_Ratings.pdf and http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/sfh/eem/eemhog96.

associated with lower utility costs for tenants in cases where they bear these costs. Subsidies may also be needed to cover transaction costs that reduce the financial return to owners or to help mitigate risks for both owners and lenders of unrealized savings. Finally, subsidies may be needed because the financial gains from these investments are simply too small to warrant the effort required by owners to upgrade their properties. Subsidies may be delivered in the form of incentives, such as tax credits that may be claimed over a specified time to reduce the cost of these investments and to give a spur to action. The incentives can be targeted to lower-income groups and can be justified by the social benefits that accrue from reduced energy consumption.

One of the principal findings from the LBNL (2011) study of lessons learned from efforts over the past 30 years to prompt owner investments to reduce energy consumption is the value of rebates and incentives in achieving high participation rates. While the study notes that deep subsidies cannot be counted on—and may not even be necessary given an effective marketing approach—at least in the short run, some form of subsidy and lower-cost financing may be needed to foster demand.

One of the principal forms of incentives in recent years have been tax credits for investments in energy improvements. As part of efforts to stimulate the economy in 2009, the rules for the federal energy-efficient improvement tax credit and the tax credit for home power production equipment were significantly expanded. The first credit is used to improve existing primary residences by installing energy-efficient windows, doors, roofing, and some home property like water heaters, while the second is claimed for solar panels, geothermal heat pumps, small wind turbines, and fuel cells. These credits appear to have provided a fairly substantial boost to these investments, with \$5.9 billion claimed in 2009.²²

Given the fiscal constraints evident at federal and state levels, it is important to make the most efficient use of available funding for subsidies. Integrating subsidies with financing products may help leverage this funding to reach more owners. However, as funding from temporary stimulus programs end and with mounting pressure on the federal government, federal subsidies are likely to decline in coming years, putting an increased premium on the efficient use of available funding.

Public and Private Programs

A wide variety of financial approaches and incentives have been developed to support investments in reducing residential energy use. The efforts provide an important starting point for developing a research agenda to inform future policy both by providing opportunities for learning from experiences to date and by cataloguing the available resources that could be used as building blocks for new or revised efforts going forward.

Existing efforts can be grouped into three broad categories: loan products to support improvements in energy efficiency, alternative financing approaches that do not rely on owners obtaining a loan (sometimes referred to as off-balance sheet arrangements), and subsidy programs that provide either lower-cost financing or direct grants for these investments. A brief summary of existing efforts in each of these areas is presented below.

²² See <http://nahbenews.com/nahbrenew/issues/2011-09-23/3.html>.

Loan programs

For owner-occupants, several energy-efficient mortgage options are available through FHA and Fannie Mae. The primary feature of these loans are that they relax underwriting criteria to allow owners to take on more debt than would normally be allowed in order to either undertake energy savings remodeling projects or to acquire an energy-efficient home that would otherwise be out of financial reach. Energy improvements in a home translate to lower utility bills, thus enabling homeowners to pay higher mortgages to cover the costs of energy improvements in addition to their approved mortgage. The primary products are these four:

- **FHA Energy-Efficient Mortgage (EEM):** These mortgage loans are insured by FHA and make mortgage credit available to purchase or refinance a residence by including the cost of energy improvements into the mortgage. Although the increased cost of energy-efficient improvements is not incorporated into the loan qualification calculations or the down payment calculation, the anticipated energy savings may be added to the borrower's income in order to qualify him or her for a larger loan. To be eligible, the energy-efficient improvements must be cost effective: the total present value of anticipated energy savings from the improvements must be greater than the total cost of the improvements. Eligible expenses are the lesser of 5 percent of (a) the property's value, (b) 115 percent of the median area price of a single-family unit, or (c) 150 percent of the conforming Freddie Mac limit. Additionally, the residence must be audited with a HERS report that estimates the cost of improvements and expected energy savings, the cost of which may be financed.²³
- **FHA 203(k) Rehab Mortgage:** These loans are not uniquely designed to facilitate energy efficiency improvements because they broadly address the rehabilitation, repair or modernization of a residence that a person wishes to purchase or refinance. Nonetheless, by integrating financing for energy-efficient improvements into the loan, the FHA 203(k) Rehab Mortgage simplifies financing and reduces overall improvement costs. All persons who can make mortgage payments are eligible. Loan qualification calculations include the costs of energy efficiency improvements, and the costs of the improvements are included in the down payment calculation. Eligible expenses must be at least \$5,000 and cannot exceed \$35,000. Additionally, homes must be inspected by a HUD-approved consultant to insure that the improvements have been completed.²⁴
- **FHA PowerSaver:** These loans allow qualifying homeowners to borrow up to \$25,000 to make FHA- and DOE-approved energy efficiency improvements to their homes. These improvements span duct sealing to installation of a geothermal system, and the terms for the loan can be up to 20 years. Eligible borrowers include homeowners with credit scores of at least 660 and total debt-to-income ratios that do not exceed 45 percent. The combined loan-to-value ratio for Powersaver loans cannot exceed 100 percent. According to HUD, these loans may be of particular interest to homeowners with equity or homeowners who have paid off their mortgage and want to lower their energy bills by installing energy efficiency improvements.²⁵

²³ See <http://www.housingpolicy.org/toolbox/strategy/policies/financing.html?tierid=113350> and http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/sfh/eem/energy-r.

²⁴ See http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/sfh/203k/203k--df and <http://www.housingpolicy.org/toolbox/strategy/policies/financing.html?tierid=113350>.

²⁵ See <http://portal.hud.gov/hudportal/documents/huddoc?id=FHAPowerSaverFactSheet.pdf> and <http://fhapowersaver.org/>.

- **Fannie Mae EEM:** Akin to the FHA EEM loans, the Fannie Mae EEM adds the anticipated monthly energy savings to a borrower's income so he or she qualifies for larger loans for purchasing or refinancing a house. The value of energy efficiency improvements is incorporated into the appraised value of the residence, and adjustments to the appraised value are capped at 5 percent for new construction and 15 percent for retrofits in existing structures. The loan also necessitates a HERS report to identify viable and cost-effective upgrades. After improvements have been made, a second HERS rating is undertaken. Finally, the additional loan amount for improvements is not included in the down payment calculation.²⁶

On the multifamily side, there are also different loans offered through FHA and the GSEs to support energy savings retrofits. The main examples are below:

Loans for affordable housing

- **HUD Mark-to-Market Green Initiative:** The Green Initiative builds on HUD's Mark-to-Market program, which is implemented by the Office of Affordable Housing and Preservation and is designed to preserve affordable housing for renters while lowering the long-run costs of federal rental assistance. The Green Initiative augments this program by providing incentives to owners and purchasers to rehabilitate their rental properties using energy-efficient improvements. To achieve this, the program uses existing market mechanisms instead of outside capital investments. For instance, the program allows owners to slightly raise rents. All owners and purchasers who are already part of the M2M program and who have not implemented a Restructuring Commitment are eligible. To qualify, owners must undertake a Physical Condition Assessment (PCA) that identifies opportunities for energy efficiency improvements.²⁷
- **Green Finance Plus:** Building off the Fannie Mae/FHA Risk-Share program, this initiative provides financing for multifamily affordable housing properties that are 10 years or older and are in need of repairs or energy-efficient improvements. The program uses Fannie Mae's Delegated Underwriting Service (DUS) requirements. The program requires a Green Property Needs Assessment (Green PNA) that identifies the property's deferred capital needs and opportunities for improving energy and water usage. Additionally, a minimum of 5 percent of the refinance loan must be used for energy efficiency improvements, and all energy efficiency improvements must increase the property's value and improve the property's operations.²⁸

Loans for owners of market-rate multifamily homes

- **Freddie Mac/Community Preservation Corporation (CPC):** The CPC, in conjunction with Freddie Mac, initiated a loan program for energy efficiency improvements and retrofits targeted at affordable multifamily buildings as well as low- and medium-income multifamily buildings. Financial backing comes from city and state government agencies in New York, as well as Deutsche Bank, Freddie Mac, HSBC, and Morgan Stanley. To qualify, borrowers need to conduct an energy audit that lists opportunities to enhance energy efficiency; these recommendations must be incorporated into the upgrading plans for the building. To keep the loans affordable,

²⁶ See <http://www.housingpolicy.org/toolbox/strategy/policies/financing.html?tierid=113350> and http://www.energystar.gov/index.cfm?c=mortgages.energy_efficient_mortgages.

²⁷ See Bamberger (2010); <http://portal.hud.gov/hudportal/HUD?src=/hudprograms/mtmp>; <http://www.hud.gov/offices/hsg/omhar/paes/green/greenini.pdf>; and <http://www.hud.gov/offices/hsg/omhar/paes/green/greenini.pdf>.

²⁸ See <http://portal.hud.gov/hudportal/documents/huddoc?id=GreenRefiPlusFactSheet.pdf>

several subsidies are also employed in concert with the loan, including: real estate tax abatement and exemptions, government grants, and low-cost secondary loans.²⁹

Alternative financing arrangements

Various financing approaches have been developed to tap sources of funding other than direct loans to property owners and often deal with the issue of split incentives by tying the repayment for the investment to the property or individual rental unit and so ensuring that the beneficiary of the investment also bears the costs.

- **PACE:** Property Assessed Clean Energy (PACE) financing programs are implemented by municipal governments by creating special tax assessment districts and issuing bonds to fund energy efficiency improvements in residential areas. Homeowners interested in energy-efficient improvements can opt into this municipal tax arrangement, in which case they are able to repay the cost of energy-efficient improvements through an increased property tax. PACE programs are designed to overcome two hurdles to retrofitting homes with energy-efficient improvements. First, they reduce upfront costs and solve credit accessibility issues that could prevent a homeowner from installing energy efficiency improvements; second, they attach repayment for the energy efficiency improvements to the property itself; repayment for the cost of the improvements is added to the property's tax bill and repaid over the course of 15–20 years. This plays the important role of attaching the costs of improvement to the property and not the owner. At the time of sale, the PACE lien is transferred to the new homeowner, thereby circumventing the difficult task of calculating the added value of energy improvements in overall home value. Despite its straightforward application, PACE programs are somewhat controversial. Property tax liens take precedence over mortgage liens, which means that in the instance of default, PACE liens must be repaid before mortgage liens. For this reason, PACE programs can increase risk for mortgage lenders. On May 5, 2010, Fannie Mae and Freddie Mac stated that PACE programs violate their mortgage regulations, thus complicating their widespread adoption.³⁰
- **ESCOs:** Energy Savings Companies (ESCOs) primarily work with large clients to install energy-efficient improvements to large government and commercial buildings. ESCOs also work with some multifamily buildings and public housing agencies, which make up approximately 5 percent of their market. ESCOs themselves pay for the upfront costs of capital improvements and energy audits, and recoup these costs over the course of 7 to 20 years through one of two financial arrangements with their client: guaranteed savings contracts or shared savings agreements. In a guaranteed savings contract, the client agrees to repay the costs of the improvements through a fixed-payment schedule based on the estimated energy savings from the improvements. The energy savings should be greater than or equal to the fixed payments; oftentimes ESCOs will pay the difference if the retrofits do not provide the anticipated energy savings. A shared savings agreement divides the savings from retrofits between the ESCO and the contracting organization. The ESCO therefore has a

²⁹ See Bamberger (2010); http://www.communityp.com/sites/default/files/uploads/misc/webinar_3-3-10.pdf; <http://www.nytimes.com/2011/09/20/business/energy-environment/tax-plan-to-turn-old-buildings-green-finds-favor.html?scp=1&sq=retrofit&st=cse>; and [http://www.communityp.com/press-releases/cpc-launches-\\$1-billion-lending-program-to-retrofit-existing-buildings](http://www.communityp.com/press-releases/cpc-launches-$1-billion-lending-program-to-retrofit-existing-buildings).

³⁰ See <http://www.housingpolicy.org/toolbox/strategy/policies/financing.html?tierid=113357>; <http://www.fhfa.gov/webfiles/15884/PACESTMT7610.pdf>; <http://www.slideshare.net/NHCandCenter/peter-adamczyk-vermont-energy-investment-corporation>; and <http://ase.org/efficiencynews/fannie-and-freddie-drop-pace>.

strong incentive to ensure that the retrofits engender cost savings. Once the cost of improvements has been paid off in either contract, the client organization enjoys the full savings of the energy efficiency improvements.³¹

Subsidy programs

Several Department of Energy programs make funding available to states and localities specifically to support energy-saving investments in residential property. There may be opportunities to coordinate the resources of these programs with financial tools, such as by combining grants with loans to tackle larger projects or by providing funding for marketing or training. A brief overview of the primary federal funding sources for supporting energy saving investments in homes follows.

- **Energy Efficiency and Conservation Block Grant (EECBG):** In 2007, the EECBGs were funded with \$3.2 billion from ARRA; \$2.7 billion has been distributed to states and eligible communities using an allocation formula, and \$454 million will be distributed through the Retrofit Ramp-Up program for neighborhood energy retrofits and the General Innovation Fund, which funds smaller projects similarly targeted at innovative energy initiatives for communities. The grant functions like HUD's Community Development Block Grants: cities and communities apply for and administer grants to undertake energy efficiency projects that reduce energy consumption and greenhouse gas emissions. Many projects can qualify for an EECBG, but projects targeted at low- and middle-income households may be prioritized.³²
- **Weatherization Assistance Program (WAP):** The WAP subsidizes energy efficiency improvements in low income households in single-family and some multifamily residences. The Department of Energy, via the Office of Energy Efficiency and Renewable Energy, distributes funds to state agencies that determine local eligibility requirements, conduct energy audits, and contract local businesses to weatherize homes. In the past 33 years, 6.4 million households have been weatherized under the WAP, and annual energy bills in these homes have been reduced by an average of \$437. Recently, the ARRA expanded the program by allocating \$5 billion for weatherization services, broadening program eligibility to include households at or below 200 percent of the poverty level (previously 150 percent), and increasing average household assistance from \$2,500 to a maximum of \$6,500.³³
- **State Energy Program (SEP):** A program administered by the Office of Energy Efficiency and Renewable Energy at the Department of Energy, the SEP allocates grants to states for energy-efficient and renewable energy projects with the stipulation that states match the grants with 20 percent of their own funds. State agencies distribute and administer the projects, but recent ARRA funding administered by the DOE directs states to develop and employ residential building energy codes and carry out "shovel-ready projects," which often include residential energy efficiency improvement programs.³⁴

³¹ See <http://www.housingpolicy.org/briefs/0706.pdf>; and <http://www.energyprograms.org/briefs/0706.pdf>.

³² See <http://www1.eere.energy.gov/wip/eeecbg.html>; and http://www.housingpolicy.org/toolbox/strategy/policies/energy_overview.html?tierid=113378#3.

³³ See <http://www1.eere.energy.gov/wip/wap.html>; and http://www.housingpolicy.org/toolbox/strategy/policies/energy_overview.html?tierid=113378#1.

³⁴ See http://www.housingpolicy.org/toolbox/strategy/policies/energy_overview.html?tierid=113378#5; <http://www1.eere.energy.gov/wip/sep.html>.

- **Community Development Block Grants (CDBG)/Home Program:** Both these programs are administered by HUD and implemented by the Office of Community Planning and Development; neither is exclusively for energy efficiency improvements. CDBGs allocate federal funds to states and communities to undertake a range of development projects spanning neighborhood revitalization to residential energy efficiency improvements. The Home program provides approximately \$2 billion annually in federal block grants to states and communities specifically for affordable housing and low-income households. States are eligible for up to \$3 million in funds and local jurisdictions qualify for up to \$500,000. In both the CDBG and Home programs, funding can be applied to a range of projects, including energy-efficient improvements and retrofits for single- and multifamily homes. HUD cannot require that homes be built to Energy Star standards through this funding arrangement, but in 2007 a Home report posted that 4,260—roughly 17 percent of all Home-funded units—were Energy Star certified.³⁵

Key Questions for Policymakers

The research needed to inform policies aimed at supporting financing for energy savings investments in residential housing largely revolves around the key barriers and challenges outlined above. This section outlines general research topics in this area along with some ideas for specific research projects that could be good starting points. Many of these topics have actually been the subject of intensive study by a wide range of research and advocacy organizations seeking ways to reduce the nation’s energy consumption and production of greenhouse gases. As a result, for a number of these issues a good starting point would be to conduct a literature review to collect and synthesize the findings that have relevance for HUD and other organizations with a housing finance perspective.

What do we know about the actual degree of savings from investments of different types?

There is a fair amount of information and tools available to assess the potential savings from new and upgraded residential systems and appliances. A scan of available resources and assessments of these resources may be a useful starting point.

Solid information on the extent of actual energy savings from different types of investments is also needed to inform property owners about real opportunities for savings, to provide a foundation for determining the level of up-front financing that can be supported by savings, and to identify the degree of subsidization that may be needed to provide owners with appropriate financial incentive to make these investments. While there are established methodologies for estimating potential savings based on energy ratings of existing homes and new systems, there is a general lack of systematic information on energy use and housing characteristics representing a cross section of the housing stock. There are a number of ongoing initiatives to gather information on large portfolios of multifamily housing, but less on owner-occupied housing or market-rate rentals. With additional data collected by various nonprofit organizations on multifamily housing, there will be opportunities going forward to analyze these data—if they can be obtained. One particularly rich area for study would be the fairly substantial experience of some public housing authorities with ESCOs, if these data could be obtained.

³⁵ See http://www.housingpolicy.org/toolbox/strategy/policies/energy_overview.html?tierid=113378#3; <http://www.hud.gov/offices/cpd/affordablehousing/programs/home/>; and http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs.

A related line of study is an examination of the delinquency and default performance of EEMs over time. These loans allow for relaxed underwriting on the assumption that future savings will offset these higher costs. A comparison of the actual performance of these loans over time compared to otherwise similar borrowers would indicate whether these loans do pose increased risks.

What is the impact of enhanced energy efficiency on property values and rents?

The impact of greater energy efficiency improvements on property values is also an important consideration for both owners and lenders in deciding whether to make these investments. In practical terms, the question generally boils down to what impact energy ratings have on property values since there needs to be some measure of the energy efficiency of a home in order for prospective buyers to factor this into their price. The estimated impact of these ratings will obviously depend on the usefulness of the rating as well as the understanding of the rating by buyers. To date there have been few systematic studies of this issue in the United States context, with only a handful of recent studies examining energy the impact of energy ratings on house values (Griffin and Kaufman 2009; Carliner, Bowles, and Nebbia 2008). Earlier studies examined the association between lower utility costs and house values, but these suffered from various methodological issues that make it difficult to draw conclusions (see Laquatra et al. 2002 for a review of these earlier studies). Additional studies of property value impacts are needed, potentially including additional studies on the degree to which potential buyers are aware of and know how to interpret available energy ratings.

While energy ratings are one means of encouraging a market valuation of energy efficiency, there may also be changes that could be implemented into property appraisal process to take energy efficiency into account in estimating values. An exploratory study could investigate how this might be accomplished with regard to both owner and rental property valuations.

What have been the principal impediments to greater demand for energy efficiency upgrades by property owners?

One of the barriers that has been identified to greater uptake of opportunities for upgrading homes energy efficiency is a lack of awareness by property owners of the savings that could be generated and/or the financing products or subsidies available to support these investments. Other studies suggest that a lack of awareness may not be as important as a lack of sufficient motivation on the part of owners to pursue these activities—that is, factors other than cost savings, such as health or social benefits, may be needed to tip the scales in favor of the owner taking action. Lessons from behavioral economics may provide a valuable frame for reviewing ways to encourage greater action by property owners. For example, better framing of these choices may be needed to overcome inertia in owners taking action.³⁶ There has been a variety of research on this topic, but there is likely more that could be done, specifically with regard to demand for specific financial products. A literature review on what is known about demand for energy efficiency upgrades might be a necessary starting point.

Research in this area could also include an evaluation of available tools that help consumers understand the benefits of homes that are energy efficient and how effective they are at addressing factors that motivate owners to upgrade their homes or choose a new home that is more energy efficient. An obvious area to test these interventions is through existing programs that provide education and advice

³⁶ See for example “List of Behavioral Economics Principles that can Inform Energy Policy,” compiled by Annika Todd and Sebastien Houde from the Precourt Energy Efficiency Center and available here: http://www.stanford.edu/~annitodd/List_of_Behavioral_Economics_for_Energy_Programs.pdf.

to first-time homebuyers. Existing curriculum and counseling methods could be adapted to include information on the importance of considering the energy efficiency of homes during the search process, and how to gather the information needed to evaluate homes on these criteria.

What can be learned from existing programs about approaches that hold the most promise for addressing the principal barriers to greater investment in improved residential energy efficiency? What can we learn from experiences in other countries?

FHA and Fannie Mae have offered various loan programs to support the upgrading or purchase of energy-efficient housing. There are also a wide variety of efforts by state governments and utilities to help finance energy-efficient housing. For example, as of late 2011 the Database for State Incentives for Renewables & Efficiencies (www.dsireusa.org) listed 227 different state-level loan programs to support energy-efficient housing. These programs offer a rich set of experiences that can be studied to identify lessons learned about approaches that have succeeded or failed in supporting these investments. For example, how successful have incentives used in the past been in the number and impact of energy improvements made? How widely used have loan programs been, how have they performed, and what do industry and advocacy organizations say is impeding their use? What lessons can we learn from this experience that can be used to improve these programs or identify possible new program needs?

A starting point would be to review existing studies to document what has been learned and what programs and issues have not been subject to much study. Fuller (2009) provides this type of review of 18 programs from the United States and Canada, but clearly more could be done to mine existing experience with these programs. Given that financing products and approaches are still being developed, at this stage there is likely to be a need for both process and outcome studies that assess experience in implementing these programs and documenting the outcomes realized. In some cases, there may be sufficient experience to conduct rigorous quantitative analysis of outcomes, but there is also likely a need for qualitative research as well.

One particular area of study might be on the experience with locationally efficient mortgages (LEM). Fannie Mae offered this product for a time but no longer does. What were the obstacles to acceptance of this product? Was it limited demand? Or were the problems related to the fact that employment locations are not fixed and so there is no guarantee that the home will remain locationally efficient for the borrower?

Are there opportunities to leverage existing subsidies to spur greater investment activity through financing programs?

A variety of grant programs provide funding for residential investments or complimentary activities. Financing programs could be designed to either leverage or compliment these funding sources. For example, EECBG funding can be used for technical assistance and the development of conservation strategies, which could be tapped to develop marketing and supportive services for financing programs. Or a lending program could be designed to complement the DOE's weatherization program, which provides grants of up to \$6,500 for eligible low-income households. Financing programs could offer a shallower subsidy to households ineligible for the weatherization grants. Opportunities for coordinating activities under different programs—and to identify gaps in coverage across existing programs—might be identified through case studies of state and local programs.

Table 4: Specific Research Ideas

Research questions	Potential research projects
<p>What do we know about actual degree of savings from investments of different types?</p>	<ul style="list-style-type: none"> ● Review of assessments of return on investments in improved energy efficiency and available consumer tools. ● Gather more systematic data on owner-occupied homes through FHA programs. ● Review available energy assessment tools including DOE Residential Retrofit Standards and methods for formulating and implementing residential building codes. ● Gather and analyze data on returns to ESCO investments in public housing authorities.
<p>What is impact of enhanced energy efficiency on property values?</p>	<ul style="list-style-type: none"> ● Analysis of impact of different means of assessing energy efficiency in different market contexts.
<p>What have been the principal impediments to greater demand for energy efficiency upgrades by property owners?</p>	<ul style="list-style-type: none"> ● Literature review of research on consumer demand for energy-efficient housing investments for both owners and renters. ● Design and test survey to fill in gaps on consumer preferences and shopping behaviors. ● Evaluate available tools that help consumers understand the benefits of homes that are energy efficient. ● Assess potential for behavioral economic approaches to inducing consumer investments in energy savings. ● Develop and pilot additions to housing counseling curriculum to encourage consideration of energy efficiency issues in choosing a home.
<p>What can be learned from existing programs about approaches that hold the most promise for addressing principal barriers?</p>	<ul style="list-style-type: none"> ● Conduct a meta review of existing studies assessing experience with loan programs and financial incentives for investing in energy-efficient housing. ● Targeted assessment of experience with existing programs with a particular emphasis on what have been obstacles to greater demand. ● Review experience in other countries with efforts to promote residential energy efficiency
<p>Are there opportunities to leverage existing subsidies to spur greater investment activity through financing programs?</p>	<ul style="list-style-type: none"> ● Case studies of state and local programs combining assistance programs

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Appendix A: Convening Participants

The individuals listed below participated in a convening held at the Urban Institute on October 12, 2011 that provided critical feedback and commentary on an initial draft of this paper and was of great value in developing the final version of this paper.

Konrad Alt - Promontory Financial Group
Vicki Been – Furman Center, New York University

Jennifer Biess – The Urban Institute
Pamela Blumenthal - HUD
Janis Bowdler - National Council of La Raza
Mark Calabria - Cato Institute
John Comeau - HUD

Garrick Davis – National Urban League
Lisa Davis - Ford Foundation
Ingrid Gould Ellen - Furman Center, New York University
Allen Fishbein - Federal Reserve Board
Eileen Fitzgerald - NeighborWorks America
Solomon Greene - Open Society Foundations
Mike Hollar – HUD
Ianna Kachoris - The MacArthur Foundation
Tracy Kartye - Annie E. Casey Foundation
Bill Kelly - Stewards of Affordable Housing
Benjy Kennedy - The Kresge Foundation
Alan Mallach - Center for Community Progress
John Maneval - MD Dept. Housing & Comm. Devel.
Patricia McCoy - Consumer Financial Protection Bureau
Graham McDonald – The Urban Institute

Marina Myhre – HUD
Chris Narducci – The Urban Institute
Craig Nickerson – Nat. Community Stabilization Trust
Joe Parilla – The Urban Institute
Danilo Pelletiere – HUD
Erika Poethig – HUD
Padma Raman – HUD
Janneke Ratcliffe - Center for Community Capital, UNC
Carolina Reid - Center for Responsible Lending

Marietta Rodriguez – NeighborWorks America
Claudia Sharygin – The Urban Institute
Jeanie Shattuck – Enterprise Community Partners
Mark Shelburne - NC Housing Finance Agency
Nathan Shultz – HUD
Kristin Siglin - Housing Partnership Network
Ed Szymanoski – HUD
Kurt Usowski – HUD
Sarah Wartell - Center for American Progress
Mark Willis - Furman Center, New York University
Ben Winter – HUD

Jamie Woodwell - Mortgage Bankers Association
Claire Yerke – HUD