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*July 2011*

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*A Milken Institute White Paper*

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Milken Institute Senior Fellow  
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## Executive Summary

This paper proposes reforming the U.S. housing finance system by altering the future of Fannie Mae and Freddie Mac and refocusing the role of the U.S. government. The intention of this proposal is to ensure that mortgage loans are available on reasonable terms while protecting taxpayers from a repeat of the \$150 billion rescue of Fannie and Freddie.

The alternative to reform is for Fannie and Freddie to remain in conservatorship and for the government to play a dominant role in housing finance. This would be the worst outcome for the U.S. financial system, the overall economy, and future homeowners, who would not benefit from the innovation and competition that only the private sector can bring about. The longer the GSEs remain in conservatorship, the more likely it becomes that they remain there forever—and that taxpayers take on all the risks of housing finance. Now is the time to move forward with reform.

The key points in the paper are:

- A government backstop on mortgage-backed securities (MBS) is needed to ensure that Americans can obtain mortgages at reasonable rates under all market conditions, including the 30-year fixed-rate mortgages that dominate the U.S. housing system.
- Even if housing finance is supposedly private, policymakers will intervene in the next crisis to make sure that mortgages are available and to stabilize financial markets, of which housing-related securities are an important component.
- Since government support is latent, it would be better to make the government backstop explicit and place a value on it rather than give it away for free.
- Reform should bring in substantial private capital to take losses before the government does. Making the government backstop secondary will both protect taxpayers and give private market participants robust incentives for prudent behavior.
- Competition is vital for a better housing finance system. The secondary government guarantee will be sold to new firms that securitize conforming mortgages. Competition in securitization will push any subsidy from government underpricing of risk to homebuyers in the form of lower interest rates rather than having the subsidy kept by private shareholders and management as in the old GSE system.
- Without a secondary government backstop, interest rates could rise by hundreds of basis points and hundreds of thousands of homes would go undeveloped or unsold.

This outcome is not tenable, either socially or politically. Even so, mortgage interest rates will likely rise somewhat with reform, reflecting the protection afforded taxpayers by putting private capital ahead of them.

- The good parts of Fannie and Freddie should be sold back to the private sector. So-called “new firms” spun out of the two GSEs would focus on securitization and guaranty without the retained portfolios that gave rise to systemic risks in the old system. So-called “old firms” owned by the government would have the two firms’ existing assets and guarantees, which would be allowed to run off. This good bank/bad bank approach would make good on the existing obligations of the GSEs while the IPO proceeds for the two new firms would reduce the cost of the bailout to taxpayers.
- Regulators should specify strict parameters to have a common form for MBS. This will foster liquidity today by ensuring that these securities trade in a common pool and allow new firms to compete in securitization in the future. Regulators in a reformed housing finance system must further protect taxpayers by ensuring that conforming mortgage standards remain high.

This paper also assesses the reform options—particularly options two and three—in the U.S. Treasury Department’s February 2011 white paper “Reforming America’s Housing Finance Market.” In option two, the government insures only a small share of mortgages but scales up when necessary to stabilize the housing market. In option three, the government sells a secondary guarantee for all conforming MBS. A key insight is that these supposedly distinct policy options are in fact closely related—they are essentially the same proposal at different time horizons. The proposal in this paper closely resembles option three.

In all cases, GSE reform starts by standardizing MBS and bringing in private capital to allow the government backstop to recede. This could be encouraged by gradually increasing the price for government insurance or by auctioning off a smaller amount of government insurance capacity over time.

The biggest question is whether private capital will reorient to fund non-guaranteed mortgages at reasonable interest rates. If not, then the third Treasury option with a modest government guarantee is likely untenable (let alone the option of a fully private mortgage market).

## Introduction

This paper examines key issues involved with reforming the U.S. housing finance system, focusing on the role of the government and the future of Fannie Mae and Freddie Mac, the two government-sponsored enterprises (GSEs) that securitize and guarantee mortgages. The needed reforms will ensure that Americans have access to housing finance while protecting taxpayers from a repeat of the costly rescues made necessary by flaws in the GSE arrangement. This requires striking a balance between a government presence that stabilizes the mortgage market across all market conditions and an overly intrusive public-sector role that puts taxpayers at risk and distorts the allocation of capital between housing and other uses.

A central focus for housing finance reform is the appropriate role of the government, notably whether the government should continue to provide some form of guarantee on mortgages or mortgage-backed securities (MBS). This paper concludes that a secondary government backstop on mortgage-backed securities is needed for the foreseeable future to ensure that Americans have access to the full range of mortgage products at reasonable rates, including the 30-year fixed-rate mortgage that now dominates the U.S. housing system. At the same time, reform should place substantial private capital ahead of the government, both to absorb losses before taxpayers do and to ensure that private market participants have robust incentives for prudent behavior.

This balance between private capital and a secondary government backstop will protect taxpayers while ensuring the availability of mortgage financing for Americans. In a new housing finance system, government support must be clear, with taxpayers compensated for taking on risks. This paper provides additional support for the GSE reform proposal in Marron and Swagel (2010) and Swagel (2010).

Bringing private capital back into housing finance would mark a substantial improvement over the current situation. Since Fannie and Freddie were taken over by the government in September 2008, taxpayers have been on the hook for the \$150 billion cost so far of making good on Fannie and Freddie's pre-conservatorship obligations and the firms' post-conservatorship guarantees on nearly 70 of all mortgages originated since 2008.<sup>1</sup> Government support through the GSEs and the Federal Housing Administration (FHA) has guaranteed more than 90 percent of mortgages originated since 2008 and ensured that mortgages were available throughout the financial crisis. The near-total absence of private capital in housing finance, however, weakens the market incentives for resources to be efficiently allocated to the activities and institutions for best use. Private-sector incentives will be muted as long as the GSEs remain in conservatorship and private capital is present only through homeowners' down payments.

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<sup>1</sup> The cost to taxpayers is still \$130 billion when dividends paid to the government by the two firms are taken into account.

Reform is needed to provide a market-based system for housing finance. Delaying reform increases the likelihood that Fannie and Freddie become permanent wards of the state. With cautious business practices and high lending standards, the firms could provide a stream of future dividend payments to the government. But continued conservatorship of Fannie and Freddie means a delayed opportunity for the housing finance system to contribute to the dynamism and growth of the U.S. economy. Further, having Fannie and Freddie remain in government hands puts taxpayers at risk of losses from possible policy actions.

Reform must be undertaken with care because Fannie and Freddie are deeply woven into the fabric of the U.S. housing system. A key contribution of this paper is to examine the transition as housing reform proceeds and to provide a path to a housing finance system driven by private incentives for both innovation and prudent lending activity. An important consideration is the impact on mortgage market conditions as private capital returns to housing—as it must for the government to start stepping away from its dominant role of the past three years. Attracting increased private capital into housing finance requires a clear framework for government involvement and will also likely require higher rates of return than the government has demanded on the resources it has directed into housing. This will translate into higher interest rates on mortgages (that is, higher interest rate spreads over Treasury securities) than those of today's mainly government-run housing finance system. These higher rates reflect the cost of providing taxpayers with appropriate protection against financial risks.

This paper also assesses the reform options—particularly options two and three—in the U.S. Treasury Department's February 2011 white paper "Reforming America's Housing Finance Market." In option two, the government insures only a small share of mortgages but scales up when necessary to stabilize the housing market; in option three, the government sells a secondary guarantee for all conforming MBS. A key insight is that these supposedly distinct policy options are in fact closely related—they are essentially the same proposal at different time horizons.

Treasury's option three is the next step in housing finance reform, with a secondary government guarantee for all conforming mortgage origination. This then morphs into Treasury option two, as the share of mortgages with a secondary government guarantee is decreased over time by raising the price of the coverage or offering a smaller amount of re-insurance capacity. As a result, the Treasury white paper provides a framework for contemplating both near-term steps for housing finance reform and a process for broader changes over time. This paper adds considerable detail to the Treasury white paper, including discussion of steps that would be useful today such as fostering a standardized form for mortgage-backed securities to boost liquidity and ensuring that liquidity remains high as reform proceeds.

With the two firms in conservatorship and nearly all mortgages backed by the government with little private capital ahead of taxpayers, a move toward making the government guarantee secondary to private capital would be both incremental and appropriate. Government involvement would decline as the secondary government backstop covers a smaller share of the market over time. A key question is whether the United States as a society—and the U.S. political system in particular—will accept the higher interest rates and lesser availability of long-term fixed-rate mortgage products that will occur as the government backstop recedes.

Starting reform now will safeguard taxpayers better than conservatorship does, improve incentives for prudent lending and private-sector innovation, and provide a path for the nation to decide the appropriate role of the government in housing finance. The starting point is a system in which government involvement is explicit and taxpayers are compensated for insuring mortgages. Regardless of the preferred end point, GSE reform should start immediately with a move to bring in private capital.

## **Goals of Reform**

Decisions on the future of Fannie and Freddie and the role of the government will have significant impacts on the ability of Americans to purchase homes or refinance their mortgages, on the construction industry that is an important component of U.S. gross domestic product (GDP), and on financial markets—which know only too well the potential negative consequences of a housing finance system laden with poor incentives and implicit government guarantees. Without some government guarantee in the near term, however, borrowers could face substantially higher interest rates and have less access to 30-year fixed-rate mortgages. The choice about the scope of government involvement in housing finance is thus at the heart of the debate over GSE reform.

A reformed housing finance system should avoid the problems of the old model but continue playing the positive role expected in a society where homeownership is an aspirational value. With that in mind, the goals of housing finance reform include:

1. Ensuring that Americans have access to mortgages at reasonable interest rates. It should be noted that reforms that responsibly protect taxpayers are likely to lead to higher interest rates. By providing a secondary backstop to private market participants, however, the government will ensure that housing finance is available under all market conditions and that taxpayers are better protected than in the current or previous models.
2. Making private capital the dominant funding source for housing so that market discipline allocates resources and provides incentives for prudent lending practices.

3. Allowing for innovation and competition. Reform should open securitization of conforming loans to new firms and avoid a setup in which the government can dictate or freeze in place a particular housing finance system.
4. Protect taxpayers by ensuring transparency and accountability for government support of housing while preventing a return to the old model of private rewards and public risks. Private capital must take losses ahead of taxpayers, with government housing subsidies explicit, on budget, and subject to a vote of Congress.
5. Protecting the financial system and the economy against systemic risks. The previous system encouraged Fannie and Freddie to borrow and invest on a massive scale and in inappropriately risky assets while leaving taxpayers with the downside risk. This must change. Reform must lead to a system in which no firm is too big or too important to fail.
6. Providing for continued public support of affordable housing. Affordable-housing activities should be directed by governmental agencies rather than private firms with contradictory missions and incentives. The future housing finance system should foster homeownership but with a better balance of support between ownership and rental housing to meet the needs of Americans of all incomes.

To be clear, GSE reform will not eliminate all changes in mortgage interest rates, and the government will not guarantee a low interest for homebuyers. In fact, having more private capital in front of the government will likely lead to higher interest rates (or, more precisely, higher interest rate spreads over assets seen as risk-free such as Treasury securities).

To help offset these higher rates, increased competition in securitization should be encouraged to help ensure that the benefits of any government subsidies (for example, inadvertent underpricing of the secondary government guarantee on conforming MBS) go to homeowners in the form of lower interest rates rather than to private GSE shareholders and management as in the old system. This is the power of competition in the near term. Over time, competition and private-sector dynamism will bring further innovation that will benefit homeowners.

## **The Urgency of Reform**

The GSEs will remain in conservatorship until reform legislation is enacted. Even with the conforming loan limit returning in October 2011 to a somewhat lower level than today (a maximum of \$625,500 instead of the current maximum of \$729,750), nearly all new mortgage origination is likely to remain funded or guaranteed by U.S. taxpayers through Fannie and Freddie, the FHA, and other government agencies such as the Veterans Administration (VA). Under conservatorship, there is effectively no private

capital ahead of the government guarantee, with Treasury providing capital as needed to maintain the solvency of the GSEs. This puts taxpayers at greater risk of loss than with a secondary government guarantee, blunts market incentives for prudent behavior, and distorts the allocation of resources. Any government involvement including a secondary backstop will affect the market, but having no private capital under conservatorship exacerbates the problem. In addition, taxpayers are at risk of further costs from conservatorship beyond the possibility of credit losses from another housing downturn—particularly if the two enterprises are used as tools for public policy purposes. For example, Fannie and Freddie could be directed to intentionally take losses to support policies not authorized by Congress.

Delineating the role of the government and putting private capital ahead of taxpayers would be a vast improvement over the status quo of conservatorship. In contrast, arguing about reform for the next two years would leave the most housing funded or guaranteed by the government with virtually no private capital beyond homeowners' down payments. Moreover, the longer Fannie and Freddie remain in conservatorship, the more likely it becomes that they stay in government hands forever. This would be the worst outcome of all for taxpayers, the financial system, and the broader economy. It is vital to move forward with GSE reform.

## **Problems with the Old Model**

The problems of the old system for housing finance can be usefully considered as a benchmark against which to gauge reform.

One of the former system's biggest issues was that GSE shareholders and management enjoyed the benefits of GSE successes made possible in part by the implicit government guarantee, while taxpayers covered downside risks. This came about because the implicit guarantee allowed Fannie and Freddie to obtain financing at lower rates than other private market participants, giving the GSEs incentive to make massive purchases of their own MBS to leverage the difference between the rate of return on MBS and the cost of their own borrowing. The firms' retained portfolios, funded by debt that investors (accurately) viewed as government-guaranteed, gave GSE shareholders and management the upside of this arrangement. Taxpayers (implicitly) took on the downside risks for bondholders without compensation; the \$150 billion in capital injected into the GSEs represents the ex-post embodiment of these risks. Indeed, the existence of the GSE debt used to fund the portfolio purchases was a chief motivating factor for the costly taxpayer rescue of Fannie and Freddie. The pervasive holding of GSE debt by U.S. and global financial institutions meant that allowing the firms to default

would have led to widespread capital shortfalls and the need for costly government interventions throughout the banking sector.<sup>2</sup>

Americans did benefit from the GSEs' taxpayer-provided funding advantage in the form of lower mortgage interest rates, even if part of the implicit taxpayer subsidy was captured by firm shareholders and management. Studies vary on the total subsidy to the GSEs, but before the crisis roughly 25 basis points of the GSE funding advantage from the implicit guarantee went to lower interest rates.<sup>3</sup>

A further problem of the previous system arose from the GSEs' involvement in affordable-housing efforts—a laudable objective but one that distorted the firms' actions and contributed to the environment of risk-taking that led to the financial crisis as the GSEs became involved with some lower-quality mortgages. Moreover, the requirements on Fannie and Freddie were not a well-targeted means by which to support affordable housing because the government ended up with a subsidy on all conforming loans rather than focusing public resources on affordable-housing activities.

Housing finance reform should address these problems of the past while leaving the United States with a stable and sustainable system—one that anticipates the inevitability of future financial sector problems that will affect the availability of private capital for housing. The policy proposal discussed here and in Marron and Swagel (2010) puts substantial private capital ahead of government involvement, removes the systemic risk posed by the former GSE portfolios, better compensates taxpayers for taking on future risk, fosters competition to ensure that government subsidies benefit Americans rather than private shareholders and management, and removes the conditions under which the two GSEs were too big to allow to fail. The proposed housing reform provides for affordable-housing activities through normal government channels such as the Department of Housing and Urban Development (HUD), with dedicated funding from part of the insurance premiums for the government backstop.

The problems with the GSEs were long understood, but action was not possible politically until the crisis left the firms in government hands. Government support for the GSEs under conservatorship along with actions taken by the Federal Reserve to purchase agency debt and MBS meant that housing finance was available on reasonable terms throughout the crisis even while severe strains limited credit in other parts of the financial market. But these interventions were ad hoc reactions to problems arising from an unwise and unsustainable system. The aftermath of the crisis provides a natural opportunity to overhaul the housing finance system. A new system should address the problems of the old system, meet the goals listed above, and allow for future innovation

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<sup>2</sup> The design of Treasury's financial support for Fannie and Freddie left the pre-conservatorship preferred shares with no value. This created capital problems for some banks but on a much smaller scale than a default on GSE debt would have produced.

<sup>3</sup> See Congressional Budget Office (2010), p. 18.

and changes that permit the financial system to best meet the needs of Americans and the overall U.S. economy.

## **Is Government Involvement Needed in Housing Finance?**

Determining the role of the government is central to the future of housing finance. The absence of a government backstop or the particular form of a government presence will affect mortgage interest rates, the types of mortgage products available to borrowers, and the choice between buying and renting. As with any policy question, the benefits of government involvement in boosting homeownership or subsidizing affordable housing must be weighed against the costs, including the direct costs of subsidies and the longer-term implications of government actions that shape the economic sphere. The issue can be seen as a microcosm of the larger discussion about the role of government in U.S. society.

The long-standing government involvement in housing finance goes considerably beyond backing for Fannie and Freddie to include tax subsidies, programs offered by the FHA and VA, and the federal guarantee on borrowing by the Federal Home Loan Banks. Deposit insurance provided by the Federal Deposit Insurance Corporation (FDIC) matters for banks' access to stable deposit funding and thus also affects housing finance.

The U.S. tax system provides important subsidies to homeownership, including the mortgage interest deduction (up to \$1 million on a first or second home and up to \$100,000 on a home equity loan),<sup>4</sup> deductions for state and local taxes including property taxes, and the exclusion of capital gains from taxable income (up to \$500,000 from a home sale for joint filers). Less obvious but a subsidy for homeownership nonetheless is that income from a rental is taxed but the implicit rental income a homeowner receives from living in their own home is not taxed. So a homeowner who rents out their own home and uses the proceeds to lease a different house would pay more taxes than a homeowner who lives in their own home. Though the ownership situations are essentially identical, the tax system favors owner-occupied housing over rentals. While the costs and benefits of the tax treatment of housing are beyond the scope of this paper, it should be clear that government support for housing does not begin or end with Fannie Mae and Freddie Mac.

Maintaining government support for housing finance is not just appropriate for the foreseeable future, it is inevitable. In the next financial crisis, the government will intervene if mortgages become unavailable to a broad range of Americans; this is an

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<sup>4</sup> The Congressional Budget Office (CBO) estimates that gradually eliminating the mortgage interest deduction would increase federal revenue by \$215 billion over the 10 years from 2012 to 2021. Congressional Budget Office, "Reducing the Deficit: Spending and Revenue Options," March 2011. Available at <http://www.cbo.gov/ftpdocs/120xx/doc12085/03-10-ReducingTheDeficit.pdf>.

unavoidable lesson of the past several years. This intervention will come about both because it would be politically untenable for mortgages to be unavailable and because housing-related securities are such an important part of the U.S. financial system. At the end of 2010, mortgages represented nearly \$14 trillion (with \$10.5 trillion being home loans) of the almost \$53 trillion in total U.S. credit market debt at the end of 2010. Agency- and GSE-backed securities represented \$7.6 trillion of the \$53 trillion total.<sup>5</sup> There should be no doubt that the government would intervene if these large segments of the financial system locked up—especially considering that the Treasury and the Federal Reserve both intervened directly to stabilize money market mutual funds in fall 2008, when the funds were just under \$3.8 billion of the \$52.4 trillion in credit market debt.<sup>6</sup>

This suggests that government involvement in housing finance is latent and that market participants will act as if there is a public backstop even if government officials say otherwise. Housing finance reform must take this into account and avoid a policy framework that is sure to be discarded in a crisis.

Even before the next crisis, government support is appropriate to ensure that financing for housing is available under all market conditions and to avoid unacceptably large mortgage rate increases. Moreover, government support will continue during a transition to any future system. The government now provides nearly a complete backstop for housing finance—more than 90 percent of mortgages are funded or guaranteed by the GSEs, the FHA and the VA—and a move away from this will be gradual under any reform, even one that aims for a supposedly fully private system.

The key question is not whether there will be a government backstop—there is and will be for the foreseeable future—but rather how to improve incentives and boost innovation and growth while better protecting taxpayers. Putting private capital ahead of the government guarantee for conforming mortgages is a positive step in all of these dimensions: it will restore a buffer to take losses in front of taxpayers, improve incentives for prudent behavior by private market participants with capital at risk, and foster innovation by providing upside returns to private providers of capital. At the same time, a secondary government guarantee on mortgage-backed securities—the proposal described below—would be an incremental change from the current situation and unlikely to disrupt markets.

Homeowners will face higher interest rates as private capital comes back into housing finance even with a continued government backstop that is secondary to this private capital. This is not a problem in itself but instead a reflection of the increased protection for taxpayers in a reformed system compared to the previous free insurance provided

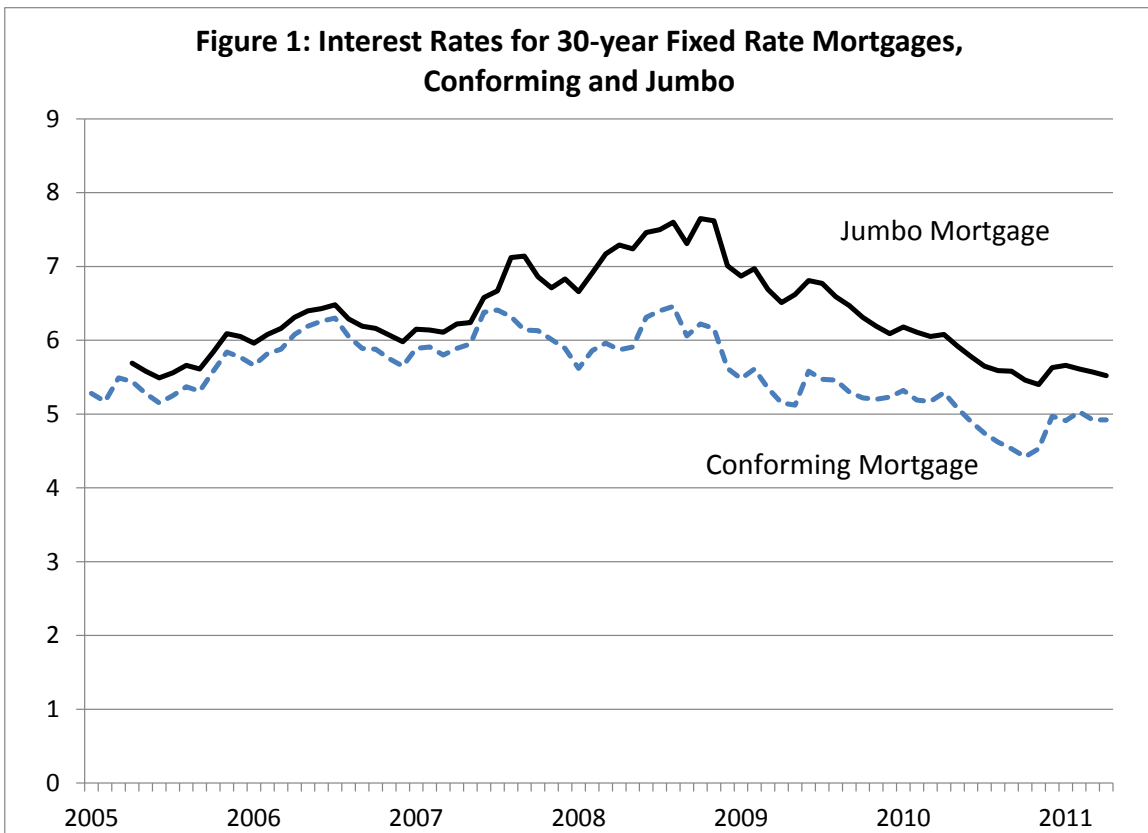
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<sup>5</sup> These figures are from the Flow of Funds statistics from the Federal Reserve Board.

<sup>6</sup> Money market mutual funds were \$2.75 trillion out of the \$53 trillion in credit market debt in the fourth quarter of 2010.

by the government. It is likely, however, that the amount by which interest rates rise will influence the evolution of government involvement. A steep increase will more likely engender a political reaction that restores the government backstop than would modest or gradual gains. Over time, the secondary backstop could recede as market participants become more willing to take on housing credit risk.

In the years just before the recent crisis, interest rates on jumbo loans not eligible for purchase by Fannie and Freddie were generally 20 to 30 basis points higher than conforming mortgages (Figure 1) and were adjustable rather than fixed. That this relatively modest spread was associated with a shift from fixed-rate conforming loans to floating-rate jumbo loans could reflect the fact that jumbo borrowers tend to have higher incomes and are less affected by the uncertainty inherent in an adjustable rate.



The pre-crisis spread between jumbo and conforming loans is unlikely to provide a reliable indication of the rates that borrowers would obtain without a government backstop in the future. But developments during the financial crisis do highlight the value that market participants placed on a government guarantee as the jumbo-conforming interest rate spread widened in fall 2007. The onset of the crisis fueled a flight to safety that favored GSE-backed securities over non-guaranteed securities. In

part, the increased spread could also reflect the Fed’s easing of monetary policy, since jumbo borrowers have a greater incentive to refinance for a lower rate than homeowners with smaller conforming loans, and suppliers of capital will expect to be compensated for the increased refinancing risk. But the breakdown of mortgage securitization outside the conforming market was likely especially important because lending for jumbo mortgages was largely confined to institutions willing to hold jumbo loans on their balance sheet. Passmore, Sherlund, and Burgess (2005) find that changes in liquidity risk matter for the spread between jumbo and conforming loans. The widened spread of jumbo rates over conforming took place when there was only modest demand for non-agency lending, suggesting that rates could go much higher in the case of a fully private market in which there is both less liquidity and lower investor willingness to hold non-guaranteed housing-related assets.

The impact of reform on future mortgage rates will reflect several factors: the return required by private suppliers of capital as compensation for expected housing-related credit losses and refinancing risks, a premium if the MBS market becomes less liquid (e.g. if the market becomes segmented without a government guarantee), and a possible systemic risk premium that compensates investors for taking on securities outside the fence of a government guarantee on the financial system writ large. Table 1 shows several estimates of the impacts of removing the government guarantee and moving to a fully private system.

**Table 1: Interest Rate Impacts of Mortgage Market Privatization**  
(Basis Points)

	Interest Rate Impacts				Economic Assumptions	
	Total	Credit Risk	Liquidity	Systemic Risk	House price decline, percent	Return on equity, percent
Zandi-deRitis (a)	141	106	10	25	40	25
Zandi-deRitis (b)	96	61	10	25	25	25
Zandi-deRitis (c)	75	40	10	25	40	15
Scharfstein-Sunderam			10-20	30		

Sources: Zandi and deRitis (2011) and Scharfstein and Sunderam (2011).

Zandi and deRitis calculate that mortgage rates could rise as much as 141 basis points with no government guarantee compared to a system with a full guarantee on

conforming mortgage-backed securities.<sup>7</sup> This total includes 35 basis points to compensate private investors for the decreased liquidity and increased exposure to systemic risk, and 106 basis points to achieve a 25 percent required rate of return in the face of a potential 40 percent future decline in housing prices. Assuming a smaller required rate of return or a more modest price decline has smaller but still notable impacts on mortgage interest rates (shown in cases b and c in Table 1). Scharfstein and Sunderam (2011) predict similar impacts in terms of higher yields as investors require compensation for decreased liquidity and increased exposure to systemic risk.

**Table 2: Monthly Payments on 30-year Fixed-Rate Mortgage**  
(\$300,000 and \$600,000 mortgages)

Interest Rate (percent)	\$300,000 Mortgage	\$600,000 Mortgage
5.00 percent (monthly payment)	\$1,610.46	\$3,220.93
5.75 percent (additional)	+140.26/month	+280.51/month
5.96 percent	+180.48	+360.96
6.41 percent	+268.02	+536.03
7.00 percent (monthly payment)	\$1,995.91	\$3,991.81
7.75 percent (additional)	+153.33	+306.66
7.96 percent	+197.02	+394.06
8.41 percent	+291.72	+583.46

Table 2 shows in dollars the translation of the interest rate impacts calculated by Zandi and deRitis on monthly mortgage payments for a 30-year fixed-rate loan. The results are for a \$300,000 mortgage and a \$600,000 mortgage, and for rates starting at 5 percent

<sup>7</sup> The 141-point increase in rates reflects the compensation that investors demand to supply capital under the assumption that market participants require a 25 percent return on equity in a system with no government backstop. This compares to the previous return on equity of 15 percent for housing-related risk and the 30 percent typical return on equity for unsecured credit card debts. The calculation further assumes that investors require compensation against credit losses in the face of a 40 percent future decline in home prices (which accounts for 106 basis points of the 141 total), for decreased future liquidity (10 basis points), and for taking on the systemic risk in the absence of a government guarantee (25 basis points). This latter assumption of a 25-point compensation for systemic risk is based on the typical spread between unsecured three-month loans to banks and the equivalent Treasury bill yield—the so-called TED spread. If investors believe the government will not intervene in the future to stabilize the financial system against a panic, the required compensation could be higher along with mortgage interest rates. On the other hand, if investors required just a 15 percent return on equity for housing investments, the total increase in mortgage rates would be 75 basis points rather than 141, and if investors demanded compensation only against a 25 percent housing price decline rather than 40 percent, the interest rate increase according to Zandi and deRitis would be 96 basis points.

and 7 percent. Payments increase by \$270 to \$290 per month for the smaller loan, and by \$500 to \$600 per month for the \$600,000 mortgage (a loan amount near the top of the conforming limit starting in October). Higher payments of around \$3,500 a year would be significant for a family with a median household income around \$50,000.

It is expected that mortgage interest rates will rise as private capital precedes the government guarantee, but higher interest rates are not in and of themselves a reason to avoid GSE reform. After all, interest rates on a 30-year mortgage declined by more than 140 basis points over the course of the financial crisis, and it would not be the end of the world (or the end of the housing market) if this were reversed. One further consideration is that interest rates could increase generally over the next several years regardless of GSE reform, as the Fed would be expected to normalize monetary policy if the economic recovery takes firmer hold. In this context, reform in which the government backstop recedes quickly could contribute to a disruptively large overall increase in mortgage rates combined with the impacts of the Fed rate hike. This would also be the case if it takes market participants some time to reorient to supply capital to housing finance and interest rates rise by more in the near term with reform than in a steady state after the markets are more comfortable taking on housing risk.

Barclays (2010) predicts that removing the government backstop on housing finance would lead to a multi-tiered mortgage market in which borrowers with relatively clean credit histories—roughly half of homebuyers—would see interest rates of 4.3 percent to 5 percent while buyers in the lower half of the distribution of credit quality would face much higher rates. Mortgage interest rates on the bottom 25 percent of borrowers, according to Barclays, could exceed 10 percent, especially for those looking to pay less than 10 percent for a down payment.

The potential impact of reform on interest rates can be seen in the shift by private investors, especially non-U.S. market participants, away from GSE securities in response to uncertainty about the strength of the government guarantee in the wake of the conservatorship. While the Bush and Obama administrations stated many times that the Treasury would ensure Fannie and Freddie had the financial wherewithal to make good on their guarantees and other obligations, this is not the same as a full-faith-and-credit commitment, which can be made only with new legislation. As a result, investors could reasonably have some uncertainty about the future reliability of the guarantee.

This uncertainty is reflected in the behavior of market participants, notably those outside the United States. Demand for GSE securities by foreign purchasers fell sharply as these investors switched to the safety of Treasury securities. Foreign holdings of GSE MBS peaked in 2008 at nearly \$800 billion but fell through 2010, as net sales by private market participants offset increased holdings by foreign official purchasers. Data from the Federal Reserve and the Treasury show that foreigners held 15.7 percent of agency and GSE-backed debt securities at the end of 2010 compared to a peak of over 20 percent in 2007, while foreigners held 46.9 percent of Treasury securities in the last

quarter of 2010 compared to 44.1 percent in the first quarter of 2007—a massive rise in dollar holdings in light of the huge increase in Treasury issuance. The fact that foreign purchasers switched from GSE securities to lower-yielding Treasuries suggests that foreigners saw the government guarantee on the GSEs as less firm in conservatorship than before the crisis even though the government role had been made explicit. This could reflect the fact that future legislation could change the firms' status in a way that impairs holders of securities issued before the reform.

These developments during the financial crisis suggest that reforms that leave uncertainty about the role of government—including action that ostensibly removes the government backstop but actually instills uncertainty about the circumstances in which an intervention would take place—would lead to a shift in demand away from housing-related securities. This means the pre-crisis spread of 20-30 basis points on interest rates for jumbo loans over conforming loans likely understates the interest rates differential that would take hold in the future with a supposedly fully private market.

Jumbo loans are available today that are not covered by a government guarantee through Fannie or Freddie, but the exercise of comparing posted interest rates for jumbo loans and conforming loans, and ascribing the difference to the value of the government backstop, likely understates the near-term consequences of removing the backstop. The amount of fully private jumbo origination remains modest: \$30 billion of \$426 billion in total mortgage origination in the last three months of 2010 was in the form of non-GSE-backed loans over \$417,000 (the standard conforming limit).<sup>8</sup> Just under \$30 billion of the total was GSE-backed origination over \$417,000. The interest rates that result from this modest amount of non-agency origination are likely quite different from the rates that would take hold if private markets were required to absorb \$430 billion of housing-related credit risk over three months of origination rather than just \$30 billion each quarter. It could take time for markets to absorb more non-guaranteed origination, especially if the securitization channel for non-agency MBS remains impaired and new lending is mainly done on balance sheet. The Zandi-deRitis estimates may hint at what rates would look like after markets have adjusted to privatization-minded reform. But still-higher interest rates would be expected if the transition away from a government backstop takes place more rapidly than the market adjustment.

Moving away from a government backstop on housing finance will also lead to less availability of the 30- and 15-year fixed-rate mortgages that today make up more than 90 percent of origination and accounted for 75 percent of origination before the housing bubble burst and the financial crisis began. Zandi and deRitis (2011) estimate that the share of fixed-rate mortgages would decline to 10 percent to 20 percent of the U.S. market in a system with no government support, based on the experience of other

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<sup>8</sup> This combines data from the industry publication *Inside Mortgage Finance* and the Mortgage Bankers Association.

countries. While some observers assert that it would be better for the United States to move away from the 30-year fixed-rate loan,<sup>9</sup> whether Americans are willing to do so, and at what change in interest rates, is an open question.<sup>10</sup> Asserting that the 30-year mortgage is a poor product is not especially useful when it is preferred by most homeowners. GSE reform is not likely to be viable if it means borrowers feel forced into adjustable-rate mortgages by sharply higher interest rates on fixed-rate products. Again, over time homebuyers could become more willing to accept adjustable rates, and suppliers of capital could become more willing to fund long-term fixed-rate loans. Interest rates would then reflect these changing preferences. For the foreseeable future, however, it is likely that removing the government backstop on housing finance would significantly change the nature of the U.S. housing finance system in a way that calls into question the viability of reform.

The experience of other countries may be indicative of the future of the U.S. housing system without a guarantee—but only up to a certain point. Many countries in Europe have high rates of homeownership without GSEs or a direct government backstop on MBS. Some analysts point to countries such as Denmark and Canada as evidence that a government backstop is not needed or that the lack of a backstop will have little impact on mortgage interest rates or homeownership.<sup>11</sup>

This is misleading. While countries in Europe do not have GSEs and the direct capital for housing finance comes from the banking system, there is considerable government support—a taxpayer backstop—for the banking system itself.<sup>12</sup> Denmark has a private mortgage system, for example, but the banks involved effectively have a government backstop. In fact, in October 2008 Denmark set up an explicit guarantee program for bank deposits and debt that were not already covered by the then-extant government backing. Government support for housing is likewise evident in Canada, where government agencies originate or insure over two-thirds of mortgages either directly through the Canadian Mortgage and Housing Corporation (25 percent of market share) or indirectly through guarantees on private mortgage insurers (45 percent market share).<sup>13</sup> There is nothing wrong with the Danish or Canadian systems of mortgage finance or with housing finance systems in other countries with high rates of homeownership, but these do not necessarily provide models or simple lessons for the United States.

One lesson from Denmark that is relevant to the United States is that government support for housing finance is latent, even if government officials say otherwise. In fall

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<sup>9</sup> See, for example, Pinto (2011).

<sup>10</sup> This applies as well to the possibility that Americans will be willing to give up the non-recourse nature of most mortgages on primary residences and the ability to pre-pay without a penalty.

<sup>11</sup> See, for example, Wallison (2011) and Wallison, Pollock, and Pinto (2011). Lea (2010) provides a comprehensive discussion of housing finance systems in other countries.

<sup>12</sup> See Min (2011).

<sup>13</sup> See Min (2010).

2008, during the financial crisis, Denmark's government stepped in to ensure that borrowers had access to mortgage financing at reasonable rates—as did the United States and other countries. Market participants understand this and will act as if there is a public backstop on housing regardless of the declarations of policymakers.

Government support for U.S. housing finance could come in a number of ways: the Federal Reserve could again buy mortgage-backed securities and thus provide liquidity for housing to keep mortgage interest rates low; the FDIC or Treasury could act under Dodd-Frank authorities to ensure financial system stability by providing a guarantee for broad classes of institutions; or the FHA could expand its market share again as it did in the recent crisis. The uncertainty will be not whether the government will intervene, but how and whether the government coverage will be extended retroactively to cover mortgages and MBS that were originated and securitized ostensibly without a government backstop.

Claiming that there is no government backstop is not credible. The government will be involved in any future crisis; the question is whether this support ahead of the next crisis will be explicit and priced or left implicit and taxpayers exposed to risk without compensation.

It is better to recognize that government support for housing is latent and make the government support explicit and charge for it in advance. This will ensure that taxpayers are compensated for the risks they are taking. While it is hard for the government to price risk—it typically charges too little for insurance (e.g. the national flood insurance program)—even the best attempt at pricing would be better than zero.

To the extent that government charges too little for its insurance, this gives rise to an implicit subsidy. Policies can be designed so that any subsidy, while unintended, reaches the desired targets. In the case of housing finance, allowing for competition between securitizing firms that purchase the secondary government guarantee will help ensure that any subsidy goes to homeowners rather than to shareholders and management of financial firms. This is a key question for the design of the government guarantee.

## **Design Considerations for a Government Backstop on Housing Finance**

Balancing the goals of housing finance reform to ensure the flow of capital while protecting taxpayers suggests a policy in which the government sells a secondary guarantee on MBS payments to private-sector firms that securitize and guarantee MBS of high-quality conforming loans. The government guarantee would be secondary to substantial private capital at risk ahead of taxpayers, and the government would insure MBS composed of conforming loans, but not guarantee any particular firm. A government regulator would focus on ensuring that conforming loans remain of high quality and that private market participants have considerable capital ahead of the

government in the form of shareholder capital, capital provided by other investors who take losses ahead of the government (such as by purchases of subordinate tranches of MBS), and down payments by borrowers. Shareholder capital and other private equity investors would be entirely wiped out before the government guarantee kicks in. This private capital would provide a buffer for taxpayers against losses and give investors appropriate incentives for prudent risk-taking. Bringing private capital back into housing finance is also vital for restoring incentives for innovation that are absent in a government-run system.

The regulator would focus on ensuring that low-quality origination is not allowed into conforming MBS covered by the guarantee, and that firms do not use financial engineering to extend the secondary backstop on conforming MBS to cover other parts of their balance sheets.

The future versions of Fannie and Freddie would focus on securitization rather than amassing large-scale retained portfolios of mortgage-backed securities. The firms would utilize their existing systems to buy loans and securitize them into MBS and purchase the secondary government guarantee.

New entrants into securitization would be allowed to purchase the government insurance on the same terms as Fannie and Freddie. New securitizing firms would thus provide competition that would help lower the cost of mortgages for homeowners by ensuring that the benefits of any subsidy from the government backstop reach Americans in the form of lower interest rates. Allowing for entry and competition would also help ensure that enough firms eventually undertake securitization that one could fail without concerns about it destabilizing the housing sector, as was the case with Fannie and Freddie in 2008.

Fannie and Freddie would eventually return to private-sector status under this model and focus on securitization and guaranty. For a considerable time going forward, the two firms would not be allowed (or need) to amass portfolios of retained assets with the concomitant borrowing that led to systemic risk in the old system. Fannie and Freddie would instead have modest portfolios of whole loans to accommodate the construction of MBS. If demand for housing-related assets were to flag in a future financial crisis, the Federal Reserve could purchase MBS as was done in the recent crisis. There is no longer a need for GSE portfolios to act as a public-minded buyer of last resort for housing-related assets.

As new competitors enter the market, Fannie and Freddie will become normal financial firms. It would not be surprising if the two firms eventually combined with originators such as banks to form a housing finance system of vertically integrated firms that both originate mortgages and securitize them. Again, the key is that the secondary federal guarantee would cover only conforming MBS and not other liabilities on these firms' balance sheets (though the FDIC would still insure deposits).

It would be reasonable to expect that the initial new entrants purchasing the secondary government insurance would be mortgage originators with enough production to securitize their own conforming MBS. This reform model thus appears to give more opportunities to large banks. But the purpose is to provide competition in securitization, where previously Fannie and Freddie became too large to be allowed to fail, and ensure that housing finance is available if an institution does fail.

The model with private capital ahead of a government guarantee ensures stability and access to housing finance even during a crisis, while providing transparency and delineating the roles of government and the private sector. The secondary government backstop would affect the cost of funding compared to a system that is notionally fully private, but the government would explicitly charge for the coverage.

### **Pricing and Scope of the Secondary Government Guarantee**

The pricing of the secondary insurance coverage and the amount of insurance capacity offered provide two related levers by which the government backstop could recede over time. As the price of the insurance increases, some conforming loans will be securitized into MBS without a government guarantee. Interest rates on these mortgages would then reflect a mix of factors: lower interest rates because of the absence of the government insurance premiums, but higher rates to compensate investors for taking on housing credit risk, and possibly a premium to compensate for lower liquidity in the secondary market for non-guaranteed MBS.

Similarly, the quantity of insurance coverage offered could be used to foster a market for non-guaranteed conforming MBS. The government could allocate a certain amount of insurance capacity by auctioning a secondary guarantee on MBS involving a certain share of mortgage origination. (Scharfstein and Sunderam, for example, envision a system in which the government offers insurance for securities that include 10 percent of conforming loans in normal times.) The government would set a minimum price for this insurance, and then hold an auction to allow the market to determine the insurance premium. Any origination beyond the insurance capacity offered would be without a government guarantee whether these loans are held directly on bank or investor balance sheets or securitized into non-guaranteed MBS. The limit on the amount of government insurance would allow for a market-based signal of the value of the secondary government guarantee. A so-called “safety valve” could be put in place as well for the price of the insurance, in which an unlimited amount of the secondary guarantee would be offered if the price for the insurance set in the auction goes above a specified maximum level. This would allow the government to in effect set minimum and maximum prices for the insurance, with market forces determining pricing between these two benchmarks.

The definition of a conforming mortgage provides another lever by which to change the scope of the secondary government guarantee on housing finance. The exposure of taxpayers could then depend on both pricing of the insurance and on the nature of mortgages that qualify for it. In principle, as long as the government sets appropriate insurance premiums, one could extend the secondary government backstop to all mortgages and do away with the distinction between conforming and non-conforming mortgages. There could also be pricing or other qualifications that differ by mortgage characteristics, such as premiums for the government backstop that rise considerably with the amount of mortgage. This would lead to a system in which smaller mortgages tend to fit into the government backstop in all circumstances and larger mortgages would not have the backstop in normal times, but the backstop would be available at a (relatively) steep price in times of stress.

A lesson of government insurance programs such as the federal flood insurance program is that the government typically sets prices too low to compensate taxpayers for the risks they are taking on. A maximum amount for a conforming loan would be a way in which to limit taxpayer exposure to housing risk. As noted above, even the decline in the conforming loan limit that will take place in October 2011 will leave most U.S. homes eligible for conforming mortgages. Since the housing market is intrinsically regional in nature, one could also imagine localized limits for conforming loans. Regardless of the future limit, a key challenge for regulators will be to ensure that the government insurance applies only to securities composed of high-quality mortgages.

For any conforming loan limit, this still leaves the challenge of devising the appropriate pricing structure for insurance premiums on the secondary government backstop. The regulator would look to set the price of the guarantee at a level that covers expected government losses over a mix of market conditions and that takes into account the amount of private capital in front of the secondary government backstop. The total impact on interest rates paid by homeowners would then reflect the combined cost of the government insurance and compensation for the private capital at risk ahead of the backstop. Zandi and deRitis (2011) calculate that total premiums for this coverage would equal 51 basis points, including 36 basis points for the private first-loss capital and 15 basis points for the secondary government coverage. This calculation assumes that the required amount of private capital is enough to cover the losses from a 25 percent decline in home prices before the government backstop pays off.<sup>14</sup>

Interest rates would be 87 basis points higher in a private system than with a secondary government backstop, according to Zandi and deRitis (as before, with enough private capital to withstand a 25 percent home price decline). They calculate that this 87-point increase in interest rates would correspond to a 375,000 annual decline in home sales, an 8 percent decline in home prices, and a one percentage point drop in the

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<sup>14</sup> Zandi and deRitis assumed that private providers of capital require a 25 percent return on equity while the government receives only a 4 percent return.

homeownership rate. While it is hard to know the precise outcome, these figures illustrate the potential impacts of housing finance reform. Again, it is expected that reform will lead to higher mortgage interest rates. The concern, however, is that an overly large or rapid increase in rates and consequent impacts on homeowners and economic activity would lead to a reaction that halts or even reverses reform.

Although any price for the government secondary coverage will be better than the charge of zero under the previous implicit guarantee, setting too low a price to cover future taxpayer costs would convey an implicit and broader subsidy to housing market participants. Implicit in the Zandi-deRitis calculations is the assumption that the insurance premiums would compensate taxpayers for potential credit losses even while the government guarantee eliminates the systemic risk component and ensures liquidity. As noted by Scharfstein and Sunderam, a guarantee pricing structure that completely compensates taxpayers for all risks would leave rates exactly equal to the rate charged by the private sector without government involvement—otherwise, there is an implicit subsidy. This highlights the importance of competition in securitization to push the benefits of any implicit subsidy to homeowners through lower interest rates.

Looking at the transition effects of housing finance reform provides a way to square the idea that the government guarantee could add value beyond the amount of fair compensation. This could be the case if there is a period of learning or confidence-building by market participants regarding investments in housing-related risks so that investors demand increased compensation in the near term compared to the long-run returns on housing once investors become comfortable with a new system. In this case, if the government charges premiums for its secondary insurance coverage that are appropriate over an extended period, this could lead to lower premiums and thus lower mortgage interest rates than in the situation with no guarantee. The appropriate insurance premium over the steady state would be lower than the premium that reflects the initial lack of demand for non-guaranteed MBS during the period of investor confidence-building or learning.

## **Challenges with the Secondary Government Guarantee**

The model described above meets the goals of providing increased protection for taxpayers while ensuring that mortgage financing is available at reasonable rates under all market conditions. This system, however, presents several challenges for the regulator beyond setting the price of secondary insurance coverage. These include deciding how much capital to require in front of the guarantee, ensuring that firms purchasing the insurance maintain both this amount of capital and high standards for conforming mortgages that qualify for the guarantee, and guarding against firms using financial engineering to extend the guarantee on conforming MBS to other parts of their balance sheet.

While these are all challenges, future regulators have the advantage of knowing in advance that these will be points of stress. The regulator will well understand that originators have an incentive to obtain government backing for mortgages at the low end of the definition of conforming loans. There is no way to eliminate moral hazard or other manifestations of asymmetric information in a system with a government guarantee, but at least the transparency of the proposed system would give the regulator guidance on where to shine a spotlight.

The key element of the housing finance reform model proposed here is for private capital to stand in front of the government secondary guarantee. While it is difficult to know how much capital should be ahead of the secondary backstop, it is clear that there was too little private capital in the old system and that reform will move in the right direction. Moreover, the proposal here would place at risk ahead of the government the entire capital stake of private shareholders of firms that securitize MBS receiving a guarantee. That is, the private capital of firms that purchase the secondary government insurance would have to be entirely wiped out before the government pays off on insured MBS. This is even though the guarantee covers only a portion of firms' balance sheets—the government covers only the part of firms' liabilities that are insured MBS. This asymmetry protects taxpayers and could be seen as appropriate in light of the extraordinary situation in which the government extends a guarantee to private-sector liabilities.<sup>15</sup> This could lead to new firms that compete with Fannie and Freddie as entities that specialize in securitization, rather than as components of financial-sector holding companies backed by the entire capital of a diversified parent. The challenge then for the regulator is to ensure that private capital in such firms is adequate to protect taxpayers against losses.

A further policy question is whether the government should accumulate a trust fund of insurance premiums that would be set aside (at least under government accounting rules) to pay for future government costs. An alternative would be to simply have any future costs borne by the Treasury directly. In both cases, it is important to recognize that the inflow of insurance premiums from the government backstop will count as new government revenue. This gives rise to the concern that revenue from the insurance premiums will be used to “pay for” unrelated new government spending. This would be a misleading use of government accounting principles because the influx of premiums is meant to offset costs from making good on the government guarantee over time—even if the period when these costs are borne falls beyond the budget window over which congressional scoring is done. A government trust fund might appear to safeguard insurance premiums, but this is not the case in economic terms because the trust fund assets would be Treasury bonds—that is, other government obligations. Since in the end, having a trust fund provides only the appearance of fiscal constraint, it is likely better to simply have premiums go into general revenues and then any costs of making

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<sup>15</sup> This situation is also analogous to the ability of the FDIC to seize all of the assets of a failed bank to cover the claims of insured deposits.

good on the government backstop come from the Treasury general fund. In addition, a structure similar to the FDIC's deposit insurance fund could be put in place so that any deficiency is made up through higher charges on future homebuyers, though this would (perhaps unfairly) penalize future borrowers for the poor origination made to earlier homebuyers. The best approach might be to recognize that the pricing mechanism for insured MBS must adjust over time so that adequate premiums are charged, and then focus on ensuring that sufficient private capital stands in front of taxpayers.

## **Policies to Support Affordable Housing**

The proposal above would not assign explicit affordable-housing goals to Fannie Mae, Freddie Mac, or other firms that purchase the secondary government insurance. One lesson of the recent financial crisis is that the mixing of public and private responsibilities embodied in affordable-housing goals distorted the activities of the GSEs in ways that increased the riskiness of their activities and contributed to the excesses underlying the crisis.

Overall support for affordable-housing activities could actually increase with housing finance reform even with the end of the GSE affordable-housing goals. This is because the goals were relatively inefficient ways to target government resources. In effect, the government subsidized homeownership for a broad range of income groups rather than focusing on low- and moderate-income families most likely to need government assistance to become homebuyers. The federal subsidy for homeownership was also non-transparent because the government put itself at risk without a vote of Congress or a corresponding entry on the federal budget.

The housing finance model described above provides a potential funding source for affordable-housing activities by using part of the insurance premiums for the government backstop. This set-aside portion could support a wide range of affordable-housing activities to promote both homeownership and rental housing. The key is that these activities should be funded explicitly, with spending on budget and undertaken with a vote of Congress.

With a dedicated funding source, policy discussions regarding affordable housing can then turn to specifics of how to best utilize taxpayer resources. This discussion would include determining the appropriate role of the FHA. With stricter standards for conforming mortgages, including increased requirements for down payments, lower-income borrowers who find it difficult to qualify for conforming loans will gravitate toward FHA-backed mortgage products. The market share of the FHA expanded considerably during the financial crisis as subprime origination dried up, but this has

potentially exposed taxpayers to considerable risk.<sup>16</sup> Future policies aimed at affordable housing should address the targeting of federal subsidies through the FHA and provide detailed proposals for government expenditures such as subsidies for rentals or homeownership. It would be reasonable to expect firms participating in the government guarantee to meet standards related to serving low- and moderate-income homebuyers in diverse regions, akin to the requirements of the Community Reinvestment Act (CRA). Finally, affordable-housing policies will have to consider the role of guarantees now provided by the GSEs for multi-family properties (rental apartments).

## Issues with Other Models

The model with the secondary backstop seeks to balance taxpayer protection with access to mortgage financing. Alternative approaches to housing finance reform strike a different balance and have alternative strengths and weaknesses. Some of the other approaches include:

A fully private model in which there is no government involvement. Wallison (2011) and Wallison, Pollock, and Pinto (2011) discuss this approach. As noted above, it is difficult to see this as realistic in the United States. Americans are not likely to be satisfied in the foreseeable future with the mortgage products that result from a fully private system, and in any case everyone will know that government will step in during a crisis, as was the case in other countries with ostensibly private housing finance systems. It is better to make the taxpayer exposure explicit and charge for it rather than allowing the government backstop to remain implicit and be given away for free.

Cooperative model. Dechario et al. (2010) describe a cooperative model in which participants in the housing finance system participate in a mutual loss pool with the government providing insurance that guarantees MBS payments in years with particularly large credit losses. This system has the virtue of bringing private capital and incentives back into the housing finance system, but in a way that likely creates an entity that is too important to fail because it would be difficult for the government to adequately penalize the cooperative if it becomes insolvent. It would be preferable to choose a model that is either more private with competition among multiple entities, or more fully centered on a government-run system with one or two utility-like, heavily-regulated insurance providers or even a fully nationalized housing finance system.

Regulated utility. This model would be an incremental change from the current status of Fannie and Freddie in conservatorship under which some private capital would return to the firms but with heavy regulation on insurance pricing and other firm activities, along the lines of a regulated utility. The government would presumably guarantee any

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<sup>16</sup> Barclays (2010) discusses potential taxpayer exposure through losses on FHA-backed mortgages, while Van Order and Yezer (2011) evaluate potential changes to FHA loan limits.

obligations such as insured MBS, ensuring a stable source of mortgage financing for future homeowners while relying on regulation to safeguard taxpayers. The downsides of this arrangement are that the regulated return would restrict the amount of private capital that could be attracted into the system, while the limited rates of return would reduce incentives for innovation that could benefit future homeowners.

Full nationalization with a government insurance provider. This would essentially continue the present conservatorship, with conforming MBS backstopped by the government and no private capital in front of taxpayers other than down payments. While this arrangement would ensure that mortgage financing is available, a secondary guarantee would accomplish the same thing and would better protect taxpayers by having private capital absorb losses before the government. A nationalized model would remove private incentives for both prudence and innovation while setting the stage for future pressure on the government to provide underpriced insurance or deal favorably with specific parties. The nationalization model provides certainty, but puts taxpayers most squarely at risk.

These considerations illustrate the difficult choices between access to mortgage financing, taxpayer protection, and dynamic issues such as competition and innovation. The appeal of the proposal with the secondary government guarantee is that it balances taxpayer protection through increased private capital and homeowner access to mortgage financing through the government backstop. Additionally, it is a desirable next step even if policymakers ultimately seek a housing finance system with little or no government involvement. Given that there is now no private capital in front of taxpayers with the GSEs in conservatorship, moving to the model with a secondary government backstop is an appropriate start to a process under which the government guarantee would recede gradually and give way to a private system.

## **Transition Issues**

Any housing finance reform is likely to be put into place gradually. As this occurs, a number of important related issues must be addressed.

Supporting TBA pools. As discussed by Vickery and Wright (2010), the convention under which GSE mortgage-backed securities trade on a “to be announced” (TBA) basis contributes to improved liquidity and lower borrowing costs, including making it easier for originators to provide borrowers with a reasonably lengthy period to lock in an interest rate before closing on a loan. Vickery and Wright explain that the homogeneity of MBS compared to other securities such as corporate bonds contributes to the liquidity benefits of the TBA market. The TBA structure is made possible by the GSEs’ current exemption from SEC registration requirements.

As part of reform, it would be useful for the SEC to allow a continued exemption of conforming MBS from registration requirements in order to facilitate the TBA market. In exchange, securitizers (including new entrants) could be required to provide additional disclosure about the characteristics of the pool or even finely-grained information on mortgages to enhance market transparency and better enable market participants to evaluate the risks involved with particular MBS.<sup>17</sup>

Standardization of a common MBS format. It would be useful as well for the regulator to ensure standardization of conforming MBS packaged by securitizing firms, including Fannie, Freddie, and new entrants. Standardization would include repayment terms and other conditions. This would avoid chopping up TBA pools as new entrants securitize MBS and would thus help maintain the benefits of liquidity now provided by the TBA structure. Fannie and Freddie MBS now have somewhat different characteristics and differential liquidity as a result (with Fannie securities having greater liquidity). Efforts to standardize conforming MBS would be aimed at maintaining overall liquidity of MBS trading even as new firms enter into securitization. Indeed, it would be useful to undertake this standardization immediately as an initial step in reform since it would both increase liquidity today and maintain it as the housing finance system evolves with reform.

The existing GSE portfolios of assets and guaranties. As noted above, Fannie and Freddie would no longer have retained portfolios of MBS in the new housing finance system (at least until there is sufficient entry so that the two firms are no longer too important to be allowed to fail). The firms instead would have only warehouse portfolios of whole loans in the process of securitization. This leaves the important transition question of the disposition of the existing GSE assets (MBS and whole loans) and liabilities (guarantees and debt), which as of early 2011 included roughly \$600 billion of agency MBS; \$650 billion of whole loans; and \$250 billion of non-agency MBS. The important principle to keep in mind is that the net of these existing assets and liabilities is already on the federal balance sheet—taxpayers are on the hook as the consequence of the decision by the federal government to backstop debt and guarantees when the firms were put into conservatorship. It is an accounting issue whether the gross assets and liabilities themselves actually move over to the federal balance sheet; as long as they are still guaranteed, the federal government will be responsible for the net cost.

Looking ahead to a future re-privatization of Fannie and Freddie through an initial public offering, this suggests that a model with a so-called good firm/bad firm structure would make sense. Fannie and Freddie would each be split in two, into a good firm and a bad firm. The two “good firms” would have clean balance sheets with the valuable assets of the companies’ computer systems and networks through which they acquire mortgages from originators throughout the United States. These would be sold back into private hands. The legacy MBS, guarantees, and debt would remain with the old firms (the “bad

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<sup>17</sup> Rosner (2011) discusses the benefits of such transparency.

firms”), which would have their net worth kept positive by the U.S. Treasury while their assets and liabilities run off. The 79.9 percent share of common stock and the \$150 billion of senior preferred shares held by the Treasury would likewise go into the so-called bad firms (discussed below). In turn, the old firms initially would own the new firms, allowing the new firms to be sold.

Returning Fannie and Freddie to the private sector. The separation of Fannie and Freddie into “good” and “bad” firms (new firms and old firms) would in effect leave the government providing a ring fence around the legacy assets and liabilities. The two new good firms could then be sold back to private investors as profitable companies with clean balance sheets and functioning business systems. The proceeds of these sales would go to the old firms, and thus to taxpayers. It is unlikely that the proceeds of the public offerings of these firms together with the dividends already paid to the government would recoup all \$150 billion that taxpayers put into Fannie and Freddie. The remaining net loss after the initial public offering, including any additional future capital needed to stabilize the old firms as they wind down, would constitute the overall cost of the GSE bailout.

One important issue with returning Fannie and Freddie to private hands is this: Because the government is not likely to recoup its investment in the firms, this implies that pre-conservatorship common and preferred stockholders will realize no value from their holdings. This is appropriate because the two firms were deeply insolvent when they were put into conservatorship.<sup>18</sup> This differs from the situation with AIG in that AIG was illiquid but not insolvent, so pre-crisis shareholders will come out with some value, even though this value for holders of common stock will be greatly diluted by the government stake acquired in the rescue of that company.

With pre-conservatorship shareholders receiving nothing, the proceeds of the two new firms’ IPOs would be used to satisfy the obligations of the old GSE companies—including the senior preferred shares held by the U.S. Treasury. Since the proceeds of the IPO probably wouldn’t be enough to fully redeem these senior securities, the pre-conservatorship common and preferred shares would have no value even though they would continue to exist until the assets and liabilities of the old GSE entirely run off.

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<sup>18</sup> The pre-conservatorship shareholders still own 20.1 percent of the two firms, but this is a consequence of government accounting rules under which the assets and liabilities of the companies would have come onto the U.S. government balance sheet had the Treasury taken over the entire company rather than stakes of 79.9 percent of common stock. The senior preferred shares of the Treasury along with the 10 percent dividend payments on those preferred shares should thus be seen as a mechanism to ensure that pre-conservatorship shareholders were entirely wiped out (as is appropriate for insolvent companies) but without consolidating the GSE assets onto the public-sector balance sheet. A reduction in the coupon rate on the Treasury senior preferred shares or other actions that create some value into the pre-conservatorship equity holdings would thus constitute a pure transfer from taxpayers to shareholders with no evident public policy purpose.

The future role of private mortgage insurance (PMI). Private mortgage insurers would have a role in a future housing finance system not only as a supplier of capital but also as extra surveillance on the particular mortgages being insured. The regulator of the future housing finance system would have to ensure that the incremental capital brought in by PMI firms was of high quality. PMI firms would have considerably less leverage than in the pre-crisis system. They would be treated equally with other providers of private capital.<sup>19</sup>

Covered bonds and reforms of the Federal Home Loan Banks (FHLBs). Even with reform of Fannie and Freddie, the FHLBs will remain government-sponsored enterprises that provide housing finance with the benefit of a government backstop. The issues with FHLBs are somewhat distinct from those of Fannie and Freddie and are beyond the scope of this paper.<sup>20</sup> It is worth noting, however, that the availability of financing for housing through FHLB advances largely crowds out the development of a covered bond market in the United States, since FHLB funding is generally lower-cost (reflecting in part the government backstop). As with reform of Fannie Mae and Freddie Mac, in general it is desirable to ensure that considerable private capital is ahead of taxpayer exposure through a government guarantee. A future task for housing finance reform will be to assess whether the FHLB system with a government guarantee is still needed, or whether the combination of a secondary government backstop on conforming MBS and the development of a covered bond market could substitute for the FHLBs.

The regulation of housing finance. For the foreseeable future as the housing finance system evolves with reform, the Federal Housing Finance Administration (FHFA) will continue to regulate the existing GSEs and oversee the securitization and guaranty activities of new entrants. At the same time, it would be useful for the FHFA to work closely with bank regulators on issues of mutual concern, including the quality of conforming loan origination, and the quantity and quality of capital held by banks that securitize conforming loans. Over time, it could be that Fannie and Freddie are acquired by or themselves acquire mortgage originators so that the industry vertically integrates. It might then be reasonable to combine FHFA with a federal banking regulator.

## **Relationship to Treasury-HUD White Paper on Housing Finance Reform**

The policy proposal of a secondary government backstop discussed in this paper is similar to the third of the three options in the February 2011 white paper on housing finance reform from the Department of the Treasury.<sup>21</sup> It turns out, however, that this proposal is also closely related to the second option put forward by the Treasury

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<sup>19</sup> The treatment of private mortgage insurance in the context of the risk retention rules in the Dodd-Frank legislation is beyond the scope of this paper.

<sup>20</sup> Papagianis (2010) discusses issues related to the FHLB system.

<sup>21</sup> See Department of the Treasury and Department of Housing and Urban Development (2011).

Department, in which the government insures only part of the conforming market in normal times. These two approaches can actually be seen as the same plan at different time horizons. Option one in the Treasury white paper is for a housing finance system with no government involvement in housing finance outside the FHA—a situation that even the Treasury itself seems to consider unrealistic.

Treasury option three with a secondary government backstop on conforming mortgage-backed securities is the natural next step in GSE reform. This proposal provides a guarantee for all conforming loans securitized into MBS as in the current system but brings private capital back into housing finance ahead of the government, thereby protecting taxpayers and improving incentives for prudent origination. The option in which the government insures only part of the conforming market in normal times (Treasury option two) represents a possible long-term evolution of the housing finance system in which the government involvement recedes over time but with the capacity to intervene to stabilize the housing market in a future crisis.

Options two and three are the same plan: Both include a government backstop with private capital in a first-loss position, but the government guarantee in the second Treasury option covers a smaller share of mortgage origination than in the third option. This could come about by either raising the price for the government insurance, thus reducing the demand for it, or by just offering a limited amount of insurance capacity rather than an open-ended offer. These would be evolutions of option three—the government would offer secondary insurance, but not for all conforming MBS.

A housing finance system with no government backstop except the FHA, as in the first Treasury option, might appear to be stable—until the next crisis when the government inevitably intervenes to stabilize the market. Similarly, Fannie Mae and Freddie Mac appeared to be stable—until they required a taxpayer rescue. The option of no government involvement is not desirable under any foreseeable circumstances because market participants will (accurately) expect the government to intervene in the next crisis and act accordingly, so the government would be providing implicit support for housing without compensation. In this case, a solution that appears to involve solely private markets would unintentionally replicate a primary flaw of the previous system. It would be better to acknowledge that taxpayers will be on the hook to stabilize the housing market and charge for this appropriately.

Realistic (and responsible) housing finance reform would focus on making clear the extent and structure of government involvement. The key question for policymakers is the impact of a potentially diminished government backstop in terms of higher mortgage interest rates, lower availability of popular mortgage products such as 30-year fixed-rate loans, and the consequent effects on homeownership and construction. These impacts in turn will determine the extent to which America's society and political system can abide by a particular reform. A future housing finance system must strike a balance between a government presence that ensures liquidity for housing finance

across all market conditions and an overly intrusive public-sector role that puts taxpayers at unnecessary risk and unduly distorts the allocation of capital between housing and other uses.

Options two and three in the Treasury white paper thus differ in their degree of government support for housing finance but share a common form of this support. Option two envisions the government providing insurance on only a modest share of future mortgages (bundled into mortgage-backed securities)—perhaps 10 percent of conforming loans plus another 10 percent to 15 percent market share for the FHA focused on lower-income borrowers. By providing some insurance during normal times, the government in this option would retain the ability to scale up to provide a guarantee for a portion of new origination or even all of it if needed in a crisis. In normal times, the government insurance capacity would be auctioned off, providing a market-based indication of the value of the government backstop. It would be desirable to require that private capital precede the government to protect taxpayers and to ensure that private market participants have appropriate incentives for prudent behavior.

Treasury option three would similarly have private capital ahead of a secondary government guarantee on mortgage-backed securities, but would provide this coverage to all conforming mortgages.<sup>22</sup> As in this paper's proposal, the secondary government guarantee would ensure that housing finance is available across all market conditions, put private capital ahead of the government, protect taxpayers, and improve incentives for prudent behavior.

This third Treasury plan in which the government sells a secondary backstop for conforming MBS is the natural next step for GSE reform. This is the case whether the goal is the secondary guarantee, a fully private market, or limited government insurance capacity. The government currently provides a guarantee for more than 90 percent of mortgage origination through the two GSEs, the FHA, and smaller government programs such as the Veterans Administration, but it does so without private capital to take losses ahead of the government (other than homebuyers' down payments). In other words, there is now an unlimited government guarantee for conforming mortgages. Treasury option three would improve on this situation by putting private capital ahead of the government. A move to a fully private system as in Treasury option one would involve having the government backstop recede and then disappear. But this process would start by bringing in more private capital and making the government guarantee secondary. Treasury option two is the stepping-stone to any reform, including a system that is meant to be fully private.

With the government offering insurance for all conforming mortgages as part of the initial step of reform, the price for the insurance will necessarily be the premium rate

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<sup>22</sup> The Treasury paper envisions a narrower scope for conforming loans, in which case the government would likely cover less of the housing market than today.

set by the government. As premiums are increased, at some point it will become more attractive for some MBS made up of conforming mortgages to go without the government guarantee, and the share of MBS with a government backstop will decline. Increases in insurance premiums thus provide a means to reduce the extent of the government backstop. The same is true for reducing the amount of government insurance capacity offered. Both are means by which a transition could be made to a housing finance system in which the government backstop does not cover all or substantially all of new mortgages.

This illustrates the potential transition from Treasury option three to Treasury option two or one. At present, the government offers to insure all conforming mortgages and sets the guarantee fee. Moving to Treasury option three with private capital in a first-loss position ahead of the secondary government guarantee would represent an important improvement and is a natural evolution from the current situation toward a better housing finance system. The wind-down of the existing GSEs would allow new firms to enter the securitization business, and the resulting increased competition would lower interest rates for borrowers by ensuring that any government underpricing of the secondary guarantee gets passed on to homebuyers instead of captured by shareholders and management as in the old GSE system. Having private capital ahead of the government safeguards taxpayers and provides better incentives for prudent behavior by private market participants.

The share of mortgages covered by the secondary government guarantee could be reduced over time. The government would offer insurance for less than the entire market, and the price for the government insurance would eventually lift off the floor set by the government and be set by private market forces.

In the second Treasury option, this process would end with the government selling coverage to guarantee perhaps 10 percent of mortgages, meaning that 90 percent of new origination would not be backed by a government guaranty. In the next crisis, however, the government would retain the capacity to expand its provision of insurance. The Financial Stability Oversight Council (FSOC) would determine whether the government could instead sell a guarantee for all new mortgages. Under this option, the 90 percent share of old mortgages without the guarantee would not receive retroactive backing. In this sense, the second Treasury option is really a long-run vision of the third option after a lengthy transition in which the share of mortgages guaranteed by the government declines over time.

An important concern is that when the next crisis occurs—when the FSOC decides to offer insurance coverage for all new mortgages—it is possible that political forces could lead this situation to last indefinitely, with all mortgages guaranteed. If this is the case, it might be better to stick with Treasury option three (and the proposal discussed in this paper) in which all conforming mortgages are eligible for a secondary government guarantee. This would provide for a stable housing finance system, and then policy

could focus on ensuring that a large amount of high-quality private capital takes losses in front of the government and on better regulation of mortgage origination and other housing-related activities. This would avoid the uncertainty inherent in a system such as Treasury's option two, in which market participants would seek to anticipate when the FSOC would declare a crisis, or in Treasury option one, with the looming uncertainty of an ad hoc government intervention.

## **Conclusion**

While there is not yet a consensus on the eventual degree of government involvement in housing finance, there is a remarkable degree of agreement regarding the way forward for reform. It is clear that the next step will be to bring back private capital ahead of the government guarantee. The government would then become a secondary backstop with private market participants paying insurance premiums for this explicit support. It would be useful as well to start reform by having Fannie and Freddie, and eventually all firms that securitize conforming mortgages, issue securities with common features that can then trade together in a single market with the greatest possible liquidity.

Staying in conservatorship is the worst of all outcomes, since there is no private capital ahead of the government. There are many important issues involved with the transition to new housing finance system, but the first step in all plans is the same—start by bringing in private capital and making the government guarantee secondary. The longer the GSEs remain in conservatorship, however, the more likely it becomes that they remain there forever—and that taxpayers take on all the risks of housing finance. Now is the time to move forward with reform.

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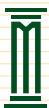
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## MILKEN INSTITUTE

1250 Fourth Street  
Santa Monica, CA 90401  
Phone: (310) 570-4600

*Washington office:*  
1101 New York Avenue NW, Suite 620  
Washington, DC 20005  
Phone: (202) 336-8930

E-mail: [info@milkeninstitute.org](mailto:info@milkeninstitute.org) • [www.milkeninstitute.org](http://www.milkeninstitute.org)