Improving U.S. Housing Finance through Reform of Fannie Mae and Freddie Mac: Assessing the Options

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HOUSING POLICY

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

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For several decades, the government-sponsored enterprises (GSEs[1]), Fannie Mae and Freddie Mac, were the largest players in an American housing finance system that provided effective mortgage financing for many millions of Americans. Since early 2008, the firms' near-insolvency has called their future into question. This paper lays out criteria for evaluating proposals for reform of the two firms. We make no recommendations among the proposals, but we do attempt to assess the major advantages and disadvantages of their respective approaches.

In Part I, we provide an overview of the U.S. housing finance system, review the basic operations of Fannie Mae and Freddie Mac before conservatorship, and summarize the key arguments made about the strengths and weaknesses of their structures. We pay particular attention to the role that GSEs have played in the multifamily housing finance market. (While we review some basic features of the housing finance system, we assume familiarity with the historical development and current operation of the primary channels of U.S. housing finance and the details of the GSEs' current conservatorship. For readers who wish to explore these issues further, an extensive literature already exists.[2])

In Part II, we introduce the basic goals of a healthy secondary market for both the single- and multifamily market, and we offer a framework to help to describe and understand the different proposals for reform and how variants of Fannie and Freddie might fit into that picture. In Part III, we look in detail at some of the specific proposals now emerging for reform of the housing finance system.

I. Fannie Mae and Freddie Mac (Collectively the GSEs)

Fannie Mae and Freddie Mac are only two of many entities that bring capital to the housing market to help borrowers finance the purchase of single- and multifamily homes. Until the 1930s, most loans for the purchase of residential property came from banks that held the resulting mortgages in their portfolios and financed these holding through deposits. To supplement deposits as a source of funds to loan out, the Federal Home Loan banks provided

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[1] The Federal Home Loan Banks are also GSEs, but we use the term 'GSEs' to refer only to Fannie Mae and Freddie Mac.

[2] Thorough overviews of the federal government housing agencies and the role of the GSEs are provided by Bradford 1979 (on federal involvement in housing through this date), Frame and White 2004 (on the specific role of the GSEs in the mortgage market), Green and Schnare 2009, Jaffee and Quigley 2007 (on the role of federal guarantees in the housing market), Pennington-Cross 2002 (a comparison of FHA and subprime lending market shares), Quigley 2006 (on the federal role in the mortgage market and homeownership).

Coverage of the history of the mortgage market as well as discussions about the cause for the current housing crisis can be found in Chomsisengphet and Pennington-Cross 2006 (on subprime lending), Fishback et al. 2001 (on the origins of the modern mortgage market), Green and Wachter 2005 (for a history and comparison of U.S. to international mortgage markets), Listokin et al. 2001 (on mortgage innovations and homeownership), and Taylor 2007 (on the influence of interest rates on housing cycles). For a review of the history and evolution of bank portfolio lending, see Ambrose et al. 2005 (for an analysis of the choice to retain a loan portfolio), Blasko and Sinkey 2006 (on the restructuring of bank portfolios and real estate lending during the 1990s), Furlong 1992 (for an overview of bank regulatory changes), and Hancock et al. 2006 (examining the impact of Basel II capital regulations on the mortgage market).

Finally, for an outline of the role of the private sector in mortgage securitization, see Frankel 2006 (on housing market appreciation and mortgage-backed securities (MBS) valuations), Van Order 2007 (provides a review of securitization, including agency (GSE) and non-agency (non-GSE) MBS), and Lea 2006.

additional funding to their members through “advances,” which are loans secured by mortgages themselves.[3]

During the Depression, Fannie was created to allow banks to originate a greater number of mortgages. Fannie Mae would purchase FHA-insured loans from banks so that the banks could fund additional mortgages.[4] Until 1968, Fannie Mae was a government agency and so could borrow money in the private capital markets based on the financial strength of the federal government. Freddie Mac was established in 1970 as part of the Federal Home Loan bank system (a set of regional cooperatives owned by the banks) and so was able to raise capital based on the implicit backing of the federal government enjoyed by that system. Both used the money they raised to buy mortgages from banks and others who had originated them, thus allowing those originators to originate even more mortgages. As major buyers of mortgages, Fannie and Freddie helped to standardize the documents used to originate mortgages, and, perhaps more important, the products that were offered and the underwriting standards that the property and the borrower had to meet.

In 1968, Fannie Mae was privatized (at least partly to remove its liabilities from the federal budget) but a portion of its activity was maintained as part of the government and folded into a new agency called the Government National Mortgage Association (GNMA), or Ginnie Mae (Jaffee and Quigley 2010). As a government entity, GNMA remained explicitly backed by the full faith and credit of the federal government, and thus its securities traded with pricing close to that of the federal debt.[5] GNMA carried on the role of helping to ensure liquidity for mortgages made under such federal programs as the FHA (Federal Housing Administration) and the VA (Veterans Administration), which already provided loan-level guarantees on the loans originated under their programs. These programs set their own underwriting standards for the loans they backed and so did not require additional underwriting or oversight by GNMA. The new, private Fannie Mae, by contrast, provided liquidity for mortgages that did not have direct government backing.[6]

Starting in the 1970s, Fannie and Freddie moved from a buy-and-hold model to one in which they would buy mortgages, package them into so-called mortgage-backed securities (MBSs), and sell them. They gave these MBSs their corporate guarantee of timely payment of principal and interest. By selling these types of securities, the GSEs were able to pass on the interest rate risk (including the possibility that borrowers would prepay their mortgages) to the investors, although

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[3] In more recent years, some banks, as well as other mortgage companies, have been able to raise additional funds by issuing equity and debt obligations. (One proposal, discussed below, would make it easier for banks to borrow money through the use of covered bonds, which are backed by mortgages or other debt instruments as well as by the credit of the issuing bank.)

[4] Note that, given the demand for mortgages today and the level of bank deposits, it would be impossible for banks alone to provide the necessary funding. People have shifted their savings from banks into money markets, mutual funds, and other investments, and thus the share of U.S. financial assets held by banks has fallen. Meanwhile, the demand for home mortgages has grown faster than the economy as a whole. As of the end of 2009, total mortgage debt outstanding stood at $14.2 trillion dollars (Federal Reserve 2010), whereas total bank deposits within the United States totaled $7.5 trillion (Federal Deposit Insurance Commission 2009). As for the growth of mortgage debt relative to GDP, see http://money.cnn.com/2009/05/27/news/mortgage.overhang.fortune/index.htm.

[5] Also, GNMA has limited its backing to three types of investment vehicles, thus helping to ensure that the markets for these three types of securities will be both broad and deep.

[6] Fannie (and then Freddie) were still able to buy FHA and VA loans but did not do much of it.

they kept the credit risk.[7] The GSEs were able to structure their securities to allow investors to manage interest rate risk by allocating the streams of interest and principal payments into different tranches, each with their own expected payment and maturity schedules.

Although the U.S. government has refrained from explicitly guaranteeing GSE corporate obligations, investors have generally assumed that GSE obligations are backed by the federal government.[8] A combination of the firms' congressional charters, large size, and special regulatory treatment (such as exemption from both state and local taxes and some securities laws) has, over the years, signaled to investors that the government would not allow the firms to default on their obligations—hence the "implicit" guarantee.[9] The GSEs did not have to pay any fee for this implicit guarantee, though presumably the government expected the savings generated by their lower borrowing costs to be put toward public purposes.[10] With the implicit backing of the federal government, the two agencies were able to sell these securities to investors, including banks, which were willing to take the interest rate risk (the risk that interest rates on liabilities will increase above the rates on assets as well as the risk that falling interest rates will cause significant prepayments) but not the credit risk of the underlying mortgages.

In fact, with the implicit federal guarantee, the GSEs were able to price and market the securities even before the mortgages that backed them were created. This forward market, or TBA ("to be announced") market, in which the GSE MBSs are traded even before the underlying mortgage loans are specifically identified, helped borrowers to lock in rates in advance of closing their loans (see Davidson and Sanders 2009). The existence of the guarantee has been crucial to the TBA market, because investors are unlikely to be willing to buy securities with credit risk when the underlying loans are not specified.[11] The standardization of documents and procedures that lie behind the GSE MBSs has also helped to increase investor confidence in the TBA market. This confidence, together with the overall scale of the TBA markets, has helped to make these MBSs attractive investments.

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[7] The interest rate risk is discussed in Jaffee (2003). Rising interest rates made Fannie's net worth in the early 1980s negative (11), as the value of their portfolios fell below the values of their outstanding debt obligations (Frame and White 2005).

[8] The banks also receive a form of guarantee through the Federal Deposit Insurance Corporation but are charged a fee for that insurance. FDIC insurance protects deposits below a certain level, which facilitate bank portfolio lending.

[9] *See* Fannie Mae 1992 [hereinafter Fannie Mae Charter]. *See especially* § 304(e) (regarding exemptions from SEC requirements) and § 309(c)2 (regarding exemption from state and local taxation). In the case of Fannie Mae, five of its eighteen board members were appointed annually by the President of the United States. § 308(b).

[10] For more information on their regulatory advantages and implicit guarantee, see Frame and White 2005, Reiss 2008, Quigley 2006, Quigley and Jaffee 2007, and Ambrose and King 2002, among others.

[11] A TBA market is not possible in most debt markets, because debt investors typically are not willing to pay for debt when the credit risk is unknown. A TBA market is possible for GSE MBSs because investors are confident that the issuing agencies will eliminate credit risk for the as-yet-unspecified underlying loans, as a result of the implicit government guarantees and perhaps the quality of their underwriting of the individual loans. By removing credit risk in this way, the TBA market allows investors to focus only on interest rate risk. Some observers think the TBA market will collapse without government guarantees (implicit or explicit), because investors will not buy MBSs that require them to bear unknown credit risk. And without the TBA market, originators would face the risk that interest rates will rise in the window between when they write a loan and when they can re-sell it to the GSEs. While there are other ways to hedge most of this risk, they would probably result in higher cost to the borrower.

In the early years of the 21st century, the private-label securities (PLS) market blossomed, attracting even more funds and investors to the housing market.[12] These PLSs were generally backed by residential mortgages that neither Fannie nor Freddie was willing or able to buy—generally what are referred to as nonprime or subprime mortgages. But PLSs had no government backing, so they were structured to deal with credit risk. Typically a PLS is divided into tranches, each with different priorities for the pass-through of the interest and principal payments from borrowers/mortgagors. Those tranches that are first in the "waterfall" to receive payment were the highest-rated (often AAA); those last in the waterfall were often rated below investment grade and often had to be retained by the issuer in the absence of investor interest.

The PLS market was lightly regulated, and the riskiness of the securities (and their underlying mortgages) was underestimated by investors, as well as the ratings agencies they relied on.[13] The result was that demand from investors was high, and the originators of these non-agency mortgages were able to offer borrowers products with little scrutiny of their ability or willingness to pay. Many of these products had low introductory rates (or even options to allow borrowers to choose how much they wish to pay each month, with the remaining interest costs added to the principal—called negative amortization) and adjustable rates that exploded after the first two or three years.

As a result of this new and aggressive competition from the PLS market, the GSEs saw their market share erode.[14] In response, the GSEs loosened their underwriting guidelines to buy mortgages of borrowers with lower credit scores and lower documentation of income and assets (the latter are generally referred to as Alt-A mortgages). After the issuance of new private-label MBSs collapsed in the third quarter of 2007, the share of the market held by the GSEs rebounded to roughly 70 percent by 2009.

In addition to the guarantee business, Fannie and Freddie also generated profits over the years by holding direct investments in their portfolios. Specifically, by issuing more corporate debt, Fannie and Freddie were able to purchase whole loans, their own MBSs, as well as the AAA tranches of PLSs. Until recently, the GSEs were even permitted to invest in non-housing investments like tobacco company bonds.[15] Because the implied government backing allowed them to borrow at artificially low interest rates, the GSEs were able to earn especially high margins on their portfolio investments, encouraging them to maintain and grow their portfolios. Low capital requirements (2.5 percent) allowed the GSEs to leverage their capital at 40:1 and thereby transform these high profit margins into high rates of return on capital (Frame and White 2005, 170).[16]

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[12] While a PLS market had existed for years and had been backed mainly by well-performing prime jumbo mortgages, the growth came mainly from securities backed by much riskier subprime and Alt-A mortgages.
[13] Experience since 2007 has shown that even the highest-rated securities were much riskier than expected, and many of those issued in years 2005–2007 have been significantly downgraded. See Coval, Jurek, and Stafford (2008).
[14] Fannie and Freddie's combined market share in the mortgage market was at 55 percent in 2003; this sank dramatically to under 35 percent by 2006, as the PLS came to dominate the market (Lockhart 2009, 2).
[15] Freddie Mac briefly invested in tobacco company bonds in the late 1990s. The rationale for allowing non-housing portfolio investments was that it permitted the firms to diversify, which arguably improved their stability.
[16] For their guarantee business, the GSEs only needed a capital ratio of 0.45, allowing even greater leverage (Office of Federal Housing Enterprise Oversight 2003).

The standard critique of GSE portfolios is that they exposed the firms (and implicitly, taxpayers) to interest rate risk (unlike their MBS business, which sold interest rate risk to investors). In terms of credit risk, the firms' charters set the same underwriting standards for both MBS and portfolio investments: "[they] shall be confined, so far as practicable, to mortgages which are deemed by the corporation to be of such quality, type, and class as to meet, generally, the purchase standards imposed by private institutional mortgage investors."[17] However, while the written standard was the same for MBS and portfolio operations, they did not contain the same mix of underlying products (*i.e.*, only their portfolios were vulnerable to PLS subprime risk). It may simply be true that the GSE risk managers were not able to obtain as much information on the quality of the underlying mortgages backing the securities purchased for the portfolio, thereby increasing uncertainty and exacerbating risks.

Before 2003, GSE portfolios performed quite well. Until that year, their portfolios were comprised largely of conforming, prime loans that met "high" underwriting standards. Between 2003 and 2007, the GSEs started buying AAA-rated private-label tranches of subprime MBSs and whole Alt-A loans for their portfolios.[18] (The firms also guaranteed and securitized some Alt-A debt to investors as MBSs.) While it appears that the primary impetus for their movement into risky, non-prime investments was the higher interest rates that these investments paid, there is considerable debate about whether the GSEs were also motivated by their need to meet the affordability goals mandated by Congress (see Wallison and Calomiris 2009; Stein 2008). Established by the Federal Housing Enterprise Financial Safety and Soundness Act of 1992 and defined and enforced by HUD, the goals set targets for the share of loans purchased by the GSEs that should be made to low-income individuals and in low-income neighborhoods. Clearly, the goals made investments in securities backed by subprime loans that had been targeted to low income borrowers and neighborhoods easier to justify.

While the bulk of their operations have involved single-family mortgages, the GSEs have also been key investors and, at times, innovators in the multifamily mortgage market. Before entering conservatorship, the firms were the largest players in the market for purchasing and securitizing multifamily loans, responsible for almost one third of all outstanding multifamily debt (Joint Center for Housing Studies 2009, 7). Their involvement dates back to the 1970s, when Freddie Mac pioneered securitization of multifamily loans. Their participation in the market started to grow fairly steadily in the mid-1990s, perhaps in part as a result of the establishment of the affordable housing goals, which rewarded the GSEs for expanding their investments in multifamily housing. The expansion in the past decade has been particularly notable. Between 1999 and 2008, the GSEs' direct holdings and guarantees increased from 16.9 percent of the total

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[17] *See* Fannie Mae Charter; Freddie Mac (2009) [hereinafter Freddie Mac Charter].

[18] According to Geithner (2010), while in 2000, the GSEs held a negligible amount of private label securities backed by subprime or Alt A loans, by 2007, 23 percent of the GSEs portfolios was made up by PLS backed by subprime or Alt-A loans. *See also,* from Wallison and Calomiris (2009, 77): "There are few data available publicly on the dollar amount of junk loans held by the GSEs in 2004, but according to their own reports, GSE purchases of these mortgages and MBS increased substantially between 2005 and 2007. Subprime and Alt-A purchases during this period were a higher share of total purchases than in previous years. For example, Fannie reported that mortgages and MBS of all types originated in 2005–2007 comprised 49.8 percent of its overall book of single-family mortgages, which includes both mortgages and MBS retained in their portfolio as well as mortgages they securitized and guaranteed."

outstanding multifamily debt to almost one third (U.S. Department of Housing and Urban Development 2001, viii; Joint Center for Housing Studies 2009, 7).

These multifamily rental units have been an important source of affordable housing. The average renter has a significantly lower income than the average homeowner. One estimate suggests that 90 percent of the multifamily units financed by Fannie Mae and Freddie Mac over the past fifteen years have been affordable to families earning incomes below the median in their metropolitan area (Dewitt 2010).

Notably, the GSEs appear to have played an important counter-cyclical role in the multifamily market, providing some back-stop for the multifamily market during economic downturns. During both the 1989–1993 downturn, and between 2007–2008, the GSEs increased their purchases of multifamily mortgages, just as private investors withdrew (National Multifamily Council 2009; Joint Center for Housing Studies 2009). In the current market, the GSEs hold 35 percent of total outstanding multifamily mortgage debt and are providing nearly 90 percent of all mortgage capital to the market. The GSEs have managed to provide this capital while still ensuring high loan performance. Over the past two decades, defaults in their multifamily portfolio have been fairly minimal. Even at the end of 2009, the delinquency rate on GSE multifamily loans was roughly half of one percent, fourteen times lower than defaults in the CMBS market (Dewitt 2010). That said, their involvement has not always been consistent. Most notably, Freddie withdrew completely from the multifamily business for a period in the early 1990s (National Multifamily Council 2009).

While the GSEs are recognized for their work in creating and standardizing common multifamily loan documents (HUD 2001), they retain a majority of their multifamily loans in their portfolios. In the middle of 2008, just prior to conservatorship, 62 percent of the GSEs' multifamily loans were retained in their portfolios. By contrast, only 7 percent of their single-family loans were held in their portfolios (National Multifamily Council 2009). It is not clear whether the GSEs held a majority of their multifamily loans in portfolio because of the difficulty of securitizing the loans and/or finding investors, or because it was simply more profitable for them to retain them because of their higher yields and the common inclusion of pre-payment penalties or "yield maintenance agreements," which mitigated the interest-rate risk of prepayment.

Leadership in the development of products and underwriting standards has been very important in helping build a secondary market for multifamily housing (see, e.g., HUD 2009, viii; Green and Schnare 2009, 3, 16). However, the GSEs have resisted funding or purchasing multifamily loans of less than $5 million and did little to help stimulate this market. The economics of this part of the market is difficult because of the fixed costs of underwriting, which cannot easily be made up in fees. Without a nationally competitive primary or secondary market product to enable these projects to access fixed-rate financing, these small loans often have had to be structured as adjustable rate, balloon mortgages.

In addition to their role in purchasing multifamily mortgages, the GSEs have played an important role in providing equity capital for the Low Income Housing Tax Credit program. The GSEs invested in Low Income Housing Tax Credit (LIHTC) projects across the country, and as of 2007, the GSEs accounted for almost 40 percent of the LIHTC investment market. This

investment structure allowed the GSEs to invest in multifamily housing while reducing their tax exposure. Because the GSEs are no longer profitable, they do not need such a tax shelter. Indeed, given their large holdings, they are unlikely to need the level of tax shelter being provided by these investments for some time, even if they become profitable again (Timiraos 2009).

The GSEs have also been large purchasers of state housing finance bonds, which typically target first-time homebuyers.[19] They have also partnered with such non-profits as Self-Help and foundations like the Ford Foundation to expand the secondary market for loans to low- and moderate-income borrowers. The GSEs have also been involved in philanthropic activities. In 2007, the GSEs contributed $47 million to non-profits in Washington D.C., while the Fannie Mae Foundation (before it was dismantled and moved back into the corporation) supported financial education, housing research, and non-profits across the country. It is also worth noting that under conservatorship, the GSEs have been charged with overseeing the government-subsidized loan modifications in the wake of the foreclosure crisis (HAMP).

Taken as a whole, the pre-conservatorship structure of the two firms provided some significant benefits to both the single- and multifamily housing markets:

- The firms improved **liquidity** by creating a national secondary market for single-family mortgage credit that significantly reduced regional differences in credit access. Several factors contributed to the liquidity of the GSEs' MBSs, including the standardization of the MBS structure and documents, effective mortgage pooling procedures, the large size of GSE MBS issuances, decades of marketing and brand-building, the structure of the TBA MBS market, and the perception by investors that the firms' obligations were backed by the U.S. government.[20]

- The implied government backing of GSEs is often credited with preserving the **30-year fixed-rate**, self-amortizing, no-prepayment-penalty mortgage as an affordable standard within the United States.[21] With credit risk eliminated, investors have only needed to worry about interest rate and prepayment risk, both of which can now be hedged in myriad ways and which have been structured into tranches to appeal to a wide range of investor appetites for risk. The result has been that borrowers have available a product that is safer than others because of its constant payments, thus eliminating one of the causes of default, and also allows the borrower to refinance if interest rates should fall.

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[19] The GSEs play a major role in enhancing the credit of state Housing Finance Agency bonds. For instance, in 2008 in New York, the GSEs enhanced the credit of $4 billion in HFA bonds, out of $10 billion issued (see New York State Housing Finance Agency 2008; National Council of State Housing Agencies 2010).

[20] Liquidity of an asset is ease with which it can be converted into cash without a price discount. While this definition sounds simple, the concept is deceptively subtle, and the many factors that can affect liquidity are not intuitive. In choosing between two assets with identical risk profiles but different liquidity, investors are willing to pay a significant premium to buy the more liquid assets. One of the major factors in creating liquidity for debt products is simply the size of the market: larger markets are more liquid because there are more buyers and sellers.

[21] The rationale for this claim is that originators may refuse to write long-term, fixed-rate mortgages without the assurance that their potential losses are guaranteed. International comparisons suggest that while most other national governments do not provide guarantee in their mortgage finance systems, they also lack long-term, fixed-rate no-prepayment penalty mortgages.

- The development of **standard underwriting criteria** and mortgage products which allowed both large and small originators to sell loans to them and for borrowers across the country to have access to some basic products including the 30-year, fixed-rate product with its level payments. The GSEs have also helped to set **standards for servicing agreements**. Early in the subprime crisis when clarity was needed around how servicers should interpret pooling and servicing agreements, the GSEs established the requisite standard industry practice.

- Until 2007, as a result of the federal backing, the firms helped to provide **countercyclical stability** to the secondary market, preserving wide access to mortgage credit during recession in the early 1980s, the recession in the early 1990s, the Asian financial crisis and Long Term Capital Management collapse in the late 1990s, and the recession in 2001 (Quigley 2006; Peak and Wilcox 2006). (The firms are currently providing substantial liquidity to the mortgage market, but only because of the injection of hundreds of billions of dollars in government capital, and because the Federal Reserve was, until April 1, 2010, buying over 80 percent of the agencies' MBSs in a $1.25 trillion buying plan [Andrews 2009; see also Federal Reserve Bank 2009].)

- Their large size and the fact that there were only two made it easier to take them into **conservatorship.** Their charters also give federal policy makers more leverage to encourage modifications and refinancing of GSE loans during market downturns, and they have helped to oversee the HAMP program.

- The firms have played an important role in providing capital to the **multifamily mortgage market** through portfolio investments, and in developing new forms of Commercial Mortgage-Backed Securities (CMBS) that were more appealing to investors, who have traditionally seen multifamily mortgages as non-standardized and risky (DiPasquale and Cummings 1992; Segal and Szymanoski 1998).

- The GSEs' congressionally-mandated affordability goals may have encouraged lending in underserved markets, but the degree to which the goals have provided support for safe and sound products for low-income borrowers is debated.[22]

- They formed partnerships that allowed state housing finance agencies and such not-for-profit lenders as the Community Preservation Corporation in New York, Self-Help, and the Enterprise Community Investment division of Enterprise Community

[22] See, for example, Bostic and Gabriel (2006) (examining the impacts of GSE loan purchasing activities in targeted communities). See also An et al. (2007) (examining the impact of GSE as well as FHA activities in these communities). Some critics have pointed to the affordable housing goals as a main culprit in the GSEs' insolvency, particularly after 2004 when the GSEs were allowed to count risky private-label subprime MBSs held in their portfolios towards their affordable housing goals. But the evidence is not strong. A recent Federal Reserve paper found that while the affordable housing goals did little for the intended low-income beneficiaries, there was also no evidence that the goals led the GSEs to take greater risks (Bhutta 2009).

Partners to access cheaper financing and developed specialized loan products—both single- and multifamily—to provide financing for affordable housing.

The GSEs' pre-conservatorship structure also had disadvantages:

– The existence of the implicit federal guarantee made the GSEs susceptible to **moral hazard** by tempting their executives and shareholders to take on excessive risk and expand their portfolios beyond what was needed to provide a reliable secondary market and meet mission requirements. Besides threatening their solvency, the two firms' high-risk investments may have worsened the recent unsustainable rise in housing prices that occurred between 2003 and 2006.

– In addition, the pursuit of profits as a result of the firms' private ownership made it difficult not to respond to the inroads being made by the PLS market. The result was **a race to the bottom** as the firms tried to preserve their market share by lowering underwriting standards. (In the face of the same competitive pressure, FHA saw its market share fall from 19 percent to 6 percent from 1996 to 2005 [GAO 2007].)

– Their higher leverage, lower capital requirements, and lower cost of funds allowed the GSEs to attract investment dollars away from other sources of finance for housing (*e.g.*, the traditional thrift business) and from other sectors of the economy, resulting in the creation of a net bias toward investing in housing in the economy overall.

– The firms' political power and questionable congressional lobbying activities allowed them to exert some control over both Congress and their regulator and **evade proper oversight** (Wallison and Calomiris 2009; McKinley 1997). One key example is the firms' low capital requirements. Although the regulators had raised the requirements by 30 percent following the discovery of accounting and other deficiencies in the GSEs, they were in the process of lowering them back toward the statutory minimums just in advance of the GSEs being taken into conservatorship. The lack of sufficient capital played a major role in their near-insolvency and conservatorship.

– The two firms may have **suppressed competition** by exerting duopoly power and dominating the prime MBS market.[23] Lower price competition may have allowed the GSEs to retain more of the implicit subsidy resulting from lower borrowing costs and pass less of the benefits on in the form of lower interest rates for borrowers. Estimates vary, but it appears that only about half of the savings due were passed on to borrowers with a similar share retained by the GSEs themselves (Jaffee and Quigley 2007). Less competition may have also dampened the incentive to innovate.

[23] However, there may be economies of scale that make concentration in the MBS market desirable. In particular, the presence of a few dominant players in the secondary market makes it easier to set standards that provide clear information to investors (and lenders and borrowers). The presence of a few large players and a limited set of products may also encourage a high trading volume, which aids liquidity.

- The GSEs' large size served to concentrate systemic risks and arguably made them **too big to be allowed to fail**, because their insolvency could threaten the entire economy.[24]

In short, the pre-conservatorship structure of the GSEs had some significant strengths but also considerable weaknesses. While improvements to the structure of the GSEs can surely be justified, it would be a mistake to assume that simply reforming the GSEs, without reforms to the private-label market, would prevent another crisis. While the implicit government guarantee may have encouraged the growth of their portfolios beyond what was required for a healthy secondary market and pushed the GSEs to buy a much greater share of subprime MBS, the GSEs were not the primary cause of the bubble.[25] Subprime lending increased between 2003 and 2006, a time period when the GSEs lost almost half of their market share to private label firms. Moreover, while the amount of private-label subprime MBSs purchased by the GSEs between 2005 and 2007 was significant, it still only amounted to a small share of the total subprime securities purchased by the market. According to FHFA Director James Lockhart, the two firms owned $170 billion of subprime mortgages in AAA tranches of private label securities, representing about 11 percent of the total outstanding subprime debt (Lockhart 2007, 13). It was private-label MBS issuers that were driving the market for non-prime mortgage debt.

[24] Of course, many of the other private financial institutions, such as JPMorgan Chase and Bank of America, which would likely step in to play a more active role in the secondary market if the GSEs were dismantled, have arguably also become "too big to fail." In fact, even if the GSEs continue to operate with an implicit (or even explicit) government guarantee, they arguably do not have a unique competitive advantage, because private institutions are seen as having an "implicit" guarantee as well.

[25] The actual extent of the GSE contribution through non-prime investments to housing bubble inflation is debated. For example, Tatom (2008) notes: "As recently as 2007, Freddie and Fannie restricted their purchases of mortgages to about 15 percent of the market, as noted by Poole 2008, with no obvious effect on housing, mortgage or financial markets." Nevertheless, others note that their sheer size quite possibly contributed to some part of the current crisis. According to Jaffee et al. (2009b): "By 2007, over 15 percent of their own outstanding mortgage portfolio was invested in non-prime assets, an amount representing 10 percent of the entire market for these assets. While not the only institutional culprit here, it is reasonable to assume that the mere size of the GSEs created "froth" and "excess" liquidity in the market."

II. GOALS AND FRAMEWORK FOR REFORM

In considering options for reform of the GSEs, policy makers should start with the basic goals of the secondary market as part of the overall housing finance market. For the purposes of this analysis, we assume that the laws against discrimination and unfair and deceptive practices are being enforced and that the risks inherent in different mortgage products are transparent to borrowers and so-called toxic products are generally not available. The following broad principles seem essential:

- **Access to Liquid Credit Markets Nationwide.** The primary goal of a secondary market is to ensure a deep and broad market for mortgage-backed securities that provide financing for both single-family and multifamily borrowers across the country.[26] Higher debt liquidity helps ensure a reliable and consistent source of capital. It reduces variations across regions in rates and availability for the same mortgage products, and results in better pricing of securities and ultimately lower mortgage rates for borrowers.

- **Counter-Cyclical Stability.** The secondary market should help to ensure consistent access to credit throughout economic cycles. The secondary market should provide credit during downturns to help stabilize the housing finance market and should protect taxpayers from unnecessary bailouts. In addition, the secondary market should not encourage the over-supply/availability of credit or aggressive underwriting during periods of expansion. Finally, a well-functioning secondary market should not exacerbate the impact of an economic downturn by impeding the ability of servicers to modify loans or authorize short sales to help avoid unnecessary foreclosures.

- **Availability of Safe Products that are Well-Priced and Clearly Understood by Borrowers and Investors.** Some mortgage products are less prone to default than others. Given that these products minimize the risk of harm not only to borrowers but also to their children and neighborhoods, government has an interest in ensuring that they are available and widely used. An example might be the 30-year, self-amortizing, fixed-rate mortgage with the option to pre-pay. Monthly payments are both predictable and stable for the full life of the mortgage. Also, it is important to be able to pass on to borrowers the benefit of the more favorable rates obtainable in the secondary market because of the federal guarantee.

- **Provision of Credit for the Underserved.** The secondary market should help ensure that appropriate products and resources are available—both for single- and multifamily mortgages—in markets that would otherwise be underserved because of misconceptions about the degree of credit risk, thinly-traded markets, or because of higher origination costs or lower fees (*e.g.*, smaller loans that may not be any harder

[26] Offering financing across the country does not necessarily mean that mortgages should be priced identically across the country. The cost to borrowers also needs to reflect local variations in such factors as the foreclosure process and the ability of the mortgagee to collect personally on the debt. The costs of such variations in risk and servicing costs should be built into the price of a mortgage, or otherwise some borrowers will get somewhat of a free ride by being able to shift these incremental costs onto others.

to originate will generate less revenue from a given amount of upfront points or the same interest rate margin.)

FRAMEWORK FOR EVALUATING REFORMS

Before evaluating any particular proposals, it is useful to articulate a framework through which to compare and contrast them. We lay out nine characteristics that distinguish different models of the secondary market, indicating in each case how critical that feature is to meeting the goals laid out above.

A. *Credit Enhancement*

It would likely be impossible to meet all of the above goals without some form of government credit enhancement. Since the Great Depression, insurance and guarantees provided by the U.S. government have come to play a large role in the mortgage finance system—both for single- and multifamily properties. These guarantees encourage investment in housing by protecting investors against losses. Guarantees have come in many forms: insurance of individual mortgages through the FHA, FDIC-insurance of bank deposits that are used for mortgage lending, and implicit guarantees of the corporate obligations of the GSEs and of the Federal Home Loan banks.

The experience of Fannie and Freddie has shown that a government backing (albeit implicit) can help to ensure a deep, liquid market for their mortgage products and provide countercyclical stability.[27] Some observers credit government guarantees with the ongoing viability of both the 30-year, fixed-rate, no-prepayment-penalty mortgage and the TBA market. Certainly, such backing also helps ensure that the securities are well-priced and thereby can reduce the costs to borrowers of financing the purchase of a home (i.e., as affordable as possible short of the government providing a direct monetary subsidy).

As is the case with Ginnie Mae, a single guarantor has the ability to bring a degree of standardization of products and securities available in the marketplace and to limit both the types of mortgages and the types of securities eligible for its credit enhancement. [28] Such standards help to reduce information costs for investors and create more liquid markets. Standardization generally reduces an investor's uncertainty about precisely what s/he is buying, and thereby leads to higher MBS prices and lower mortgage rates. Further, standardization helps to aggregate markets that, with high trading volume, would tend to be more liquid because buyers are more confident that they can later sell their securities. Thus, in addition to reducing investors' exposure to credit and systemic risk, a program of government enhancement can provide liquidity and systemic stability to the secondary mortgage market, especially during downturns and times of crisis.

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[27] In retrospect, the temporary explosion of a highly-liquid market for non-agency securities was made possible by a failure to properly understand the risk inherent in the products backing those securities. The liquidity available in this market evaporated at the onset of the subprime bust and overall credit crunch.

[28] In contrast to the standardization that Ginnie Mae brought to the market for its MBSs (and the standardization of FHA and VA mortgage products which backed these MBSs), the government left it to Fannie Mae and Freddie Mac to drive the standardization of the market for their own securities and their own mortgage products.

Of course, like all forms of insurance, however, any guarantees in the secondary mortgage market carry the possibility of encouraging moral hazard. With a guarantee, neither the buyers of government-backed securities nor the aggregators of the loans will be as motivated to scrutinize the quality of the loans that collateralize the security unless the latter also have exposure to losses, either because they face a risk of losing capital or their ability to issue more securities in the future. Skeptics question whether any regulatory system can adequately prevent imprudent risk-taking in the presence of government guarantees.[29] Requiring lenders and securitizers to retain some degree of liability in the event of a loss could moderate the moral hazard. The liability could come in the form of having to take the first loss up to some percent of the loan amount. In addition, an additional layer of oversight might be helpful to monitor both the type and quality of the loans being securitized as well as counterparty risks (*e.g.*, making sure the providers of loan-level insurance have adequate capital and that the other players in the origination chain are performing their roles properly). Anything short of this level of oversight and monitoring could leave the taxpayers unnecessarily exposed. Policymakers should think carefully about whether the basic regulatory system overseeing the GSEs should take on this additional due diligence.

i. *Guaranteeing MBS vs. Corporate Debt*

While the implicit credit enhancement for Fannie and Freddie was assumed to apply to their corporate debt and perhaps to equity investors as well, a credit enhancement that applies only to MBSs would likely yield the same benefits for the mortgage market and much less of the risk. In fact, the success of Ginnie Mae demonstrates that providing a government "wrap" only for the securities themselves is sufficient.[30] Rather than guaranteeing the underlying mortgage debt, or the corporate obligations of the issuer, the government should merely guarantee MBS holders timely payment of principal and interest in the case of default. These guarantees would be provided only if underlying loans met pre-specified underwriting standards and the securitizers themselves are sufficiently at risk and sufficiently capitalized. Some research suggests that guarantees of MBS issues, as Ginnie Mae provides, can be even more effective in lowering interest rates than guarantees of individual mortgages.[31]

A key benefit of limiting the guarantee to the MBSs only is that it would reduce the incentive that Fannie and Freddie have had to continually increase the size of their portfolios in order to fuel their profits. Without a guarantee on corporate debt, they would not have benefited from artificially-low funding costs and high margins in their portfolio investments. (See discussion below of other possible uses for a portfolio).

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[29] The situation is somewhat different for Ginnie Mae since the mortgages in its securities are insured or guaranteed by other government agencies, which oversee the quality of those mortgages. While FHA insurance covers essentially all of the losses from a foreclosure, the VA's guaranty covers only 25–50 percent of the original loan amount (General Accounting Office 1997).

[30] It should be noted that the individual mortgages backing GNMA securities are in fact insured by through other federal programs such as FHA and VA.

[31] "Ginnie Mae securitizes already federally-insured mortgages made through FHA. The additional guarantee of timely payment of interest and principal from Ginnie Mae was a small extension of the federal backing. But the results were dramatic: the creation of Ginnie Mae lowered FHA borrowing rates by sixty to eighty basis points. With the real, long-term mortgage interest rates in the region of 4 to 5 percent, this was a large, not small, change. This seemingly small transformation of a federally-insured mortgage into a federally-insured liquid security made a big change in the cost of homeownership" (Woodward and Hall 2009).

ii. *Explicit vs. Implicit Guarantee*

Guarantees can be either made explicit or left implicit. Implicit guarantees are by definition ambiguous. This lack of clarity reduces the effectiveness of the guarantee because investors call the guarantee into question during precisely the times when it is most needed to preserve liquidity and reassure investors, and because any uncertainty adds to the rate spread over treasuries. Moving to an explicit guarantee would allow the securities to trade at prices more like the government's direct obligations and so help to make borrowing more affordable.

A commonly-voiced worry about explicit guarantees is their implications for the level of U.S. national debt.[32] One of the purposes for spinning off Fannie Mae as a private corporation in 1968 was to keep its liabilities off the federal balance sheet and its annual expenditures out of the federal budget (Congressional Budget Office 2010). But in fact, if an appropriate risk-adjusted fee is charged for each MBS that receives the government wrap, then the impact on the federal budget would be neutral.[33] In theory at least, these fees could be kept in a reserve that would be sufficient to cover any future government liabilities. However, making the GSE guarantees explicit with regard to the already existing obligations of the two agencies would initially lead to an increase in federal liabilities based on an assessment of their likely losses based on their current holdings (Congressional Budget Office 2010).

If policymakers decide on moving to an explicit guarantee, they also need to consider whether they should require insured parties to pay actuarially-sound fees in exchange for the guarantee. Charging for the government guarantee would raise all mortgage rates, estimated by some to be on the order of twenty-five to fifty basis points for single-family mortgages.[34] Charging such a fee for both single- and multifamily MBSs would eliminate any implicit subsidy resulting from the government guarantee, a subsidy that has favored housing over other sectors of the economy.

iii. *Which Types of Mortgages Should Be Included in Federally Credit-Enhanced MBSs?*

While some credit enhancement is critical to meet the objectives outlined above, guarantees do not need to be provided for every type of mortgage. Sufficient liquidity and systemic stability can probably be accomplished through a combination of credit enhancement for a small number of "favored" mortgage products and regulation of the PLS market (see discussion of regulation below). A side benefit of having such favored products is that they would gain a price advantage in the market due to their lower funding costs and so have the salutary effect of encouraging more borrowers to choose these safe products.[35]

Limiting the products eligible for enhancement also limits the government's exposure to credit risks and minimizes the areas where regulation is needed to combat moral hazard (see discussion below). Of course, support for the mortgage market can be easily expanded to a broader range of

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[32] Of course, implicit guarantees are not free either, even if they are not called upon. Studies suggest that the U.S. government pays higher interest rates on its own debt than it would if the GSEs were fully private, because investors consider the GSEs corporate debt as an implied obligation of the U.S. government.

[33] Fannie and Freddie did in fact charge those who sold mortgages to them a fee for the privilege of getting their guarantee.

[34] See Quigley (2006) for a summary of studies that provided estimates of the mortgage subsidy to homeowners, as well as the yield spreads for the GSEs.

[35] Any pricing advantage will be reduced to the extent that other large mortgage originators or MBS issuers are judged by the capital markets as being "too big to fail" and so also receive favorable pricing for their debt.

mortgage products during the bad times, if desired, by simply extending the range of mortgage products eligible for the government wrap (as was done during the current crisis by raising the cap on the size of loans that the GSEs can guarantee).

The decision on which mortgage products to guarantee might be based on some or all of the following criteria:

- Which products should the government make sure are always available at as low a spread as possible above Treasuries, making them more affordable?

- What products might not otherwise exist but have a broader social benefit because of their safe characteristics (e.g., the 30-year, fixed-rate mortgage with no prepayment penalty, or a low down payment loan that requires the borrower to complete a course on budgeting and homeownership)?

- Which market sectors will be well-served by the private market during normal times? What size and type of loans?[36]

- Which market sectors should be served by FHA, VA, and Ginnie Mae? Is there a need to have another source of mortgages for people with lower incomes (who presumably will borrow smaller amounts) and with a higher risk profile because of lower credit scores or higher loan-to-values resulting from smaller down payments?

- Which types of multifamily financing products or underwriting standards should be encouraged and supported?

The potential overlap or boundaries between markets to be served by government agencies, GSE successors and private firms needs to be carefully considered. The debate so far about the future of the GSEs has paid little attention to this topic.

iv. *Possible Roles of Government Guarantor*

As the ultimate source for funding losses, the government has an interest in the solvency, capital adequacy, and operational effectiveness of the aggregators and securitizers of the loans as well as an interest in the underwriting standards and the oversight of the originators of the loans. Therefore, it will be critical to ascertain whether the agency that is providing the guarantee will set the standards, monitor, and regulate each of these activities or whether other regulators or agencies will perform one or more of these functions. In the case of GNMA, it is the FHA and the VA that set the standards for the loans they guarantee and that monitor the operations of the entities that originate those loans.

B. *Regulation of All Players in the Mortgage Market*

The level and reach of regulation is also a critical to the proper functioning of the finance system. As we now understand, the GSEs lowered their underwriting standards and engaged in a race to

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[36] Consideration might also be given to varying the cap on loan size by region, depending on the median cost of a home.

the bottom as they tried to preserve their market share against competition from the PLS market, which was subject to much lighter regulation. Thus, a well-functioning housing system depends not only on effective regulation of the GSEs but also of other actors in the housing finance system.

The industry needs to be regulated as to its underwriting standards, the quality of the underwriting process, operational risk, the level of capital/reserves, and even the quality of its servicing of the mortgage loans and the rating of its securities.[37] The ability to regulate these entities effectively would be facilitated by requiring, for example, that all securitizers be licensed or chartered. Such a regulatory system/environment would help guard against the proliferation of toxic products, poor quality controls, and unfair and deceptive marketing practices, and **thereby prevent the kind of race to the bottom** that we have just witnessed, in which safer products are driven out of the market place.

That said, regulation can be excessive. In rethinking the regulatory environment, it will be critical to find the right balance between disciplined oversight and sufficient flexibility to allow for innovation of consumer products, investment vehicles, and operations/systems/technology/platforms.[38] One case in point may be automated underwriting, which the GSEs helped to develop and to then make widely available. Too much regulation can arguably reduce competition, inhibit innovation, increase costs, and otherwise interfere with the discipline of market forces. Too little regulation, or minimal enforcement of regulations, can undermine public purposes and effective oversight of systemic risk issues. Maintaining a proper regulatory balance over time is very difficult.

C. *Securitization of Non-Favored Products*

Another overarching question is whether to allow non-favored mortgage products to be securitized at all, even if they meet other regulatory restrictions on underwriting standards and transparency to borrowers. If such securitization is not permitted, then access to capital for these products will be artificially restricted , as portfolio lenders such as banks are constrained in how much of each mortgage product they can hold in their portfolios. Shortages in supply are likely to lead to higher prices paid by borrowers.

However, the decision to allow these products to be securitized means that these products will be able to compete more effectively with the favored products and so be able to capture a greater market share.[39] If this competition puts at risk the viability of the securitizers of the favored products, then the system may no longer be able to offer counter-cyclical stability and certainly reduce the ability of those securitizers to cross-subsidize the provision of other socially desirable activities.[40] Moreover, society may suffer if too few borrowers have mortgages that are as safe

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[37] The exemption of the GSEs from certain securities laws should also be examined.

[38] One possible option to build into a regulatory scheme to promote product innovation may be to explicitly allow for the testing of new products on a pilot basis to ascertain how they will perform over time. Those that perform well enough could then be approved for more general use.

[39] Differences in capital requirements can also tilt the playing field in one direction or the other as was shown by the competitive advantage of the high leverage allowed for the GSEs.

[40] A number of recent studies have found that foreclosed and abandoned properties also have a number of negative externalities including depressing the property values of surrounding properties and interfering with the education of the children in the families being displaced (Schuetz, Been, and Ellen 2009).

and sustainable as the favored products. In order to redress the balance, government may want to take further action to tip the scales back toward the favored products or at least to ensure that the regulatory system provides a more level playing field.

The next question posed by allowing non-favored products to be securitized is whether to allow the same entity to issue both types of securities, those backed by favored products (and so can be sold with government backing) and those backed by non-favored ones. If a securitizer can only offer one or the other, then the danger exists that the one offering the favored products will be forced out of business by competition from the non-favored products. If a securitizer of the favored products goes out of business, then it will not be there during the downturns to help provide countercyclical support to the housing market. To guard against this possibility, it may be necessary to ensure that the set of favored products is able to hold its own throughout the business cycle and regardless of the steepness of the yield curve. For example, 30- and 15-year fixed-rate products become less attractive compared to ARMs as the differential between long- and short-term rates widens (this situation where long-term rates are much higher than short-term rates is referred to as a steep yield curve). If a securitizer can only issue MBSs backed by these fixed-rate products, then it could go out of business when the yield curve steepens. Without the ability to compete successfully in all types of markets, the securitizer might also have trouble raising private capital.

On the other hand, if the same securitizers can issue both kinds of MBSs, then regulation becomes more complicated, especially if the government insurer sets higher standards for capital reserves and is unable to ensure that those reserves are walled off from any losses incurred on the non-favored MBSs. If the non-favored products start to perform poorly, thus depleting the capital of the securitizer, then the government insurer will become more exposed to loss on the credit-enhanced MBSs. A worse scenario might be for the problems on the non-favored side to lead to failure of the business as a whole. The only way to protect against this might be to require the securitizer to have separate legal entities handling the two types of MBSs with separate pools of capital.

D. *Market Concentration*

Market concentration refers to the degree to which the secondary market is dominated by a few large institutions. One question posed by the range of proposals for reform of the secondary mortgage market is the right level of concentration. Is the presence of two players too few, just right or too many? Going forward, the government can, if it wants, set a maximum number by requiring the firms to be licensed or chartered and limiting the number that it will authorize. Alternatively, government can hold down the number of players simply by increasing the barriers to entry by, for example, setting high minimum capital requirements.

There are a number of reasons for considering a limit on the number of firms. The strongest argument for concentration in any market is the existence of economies of scale. In some industries, the cost structure may make the optimal size of a firm quite large, and thus the optimal number of securitizers quite small. Another advantage of concentration is that it may make government interventions easier when markets collapse. For instance, the fact that only two firms controlled almost the entire prime mortgage market allowed the government to

efficiently/easily nationalize the secondary market system for prime mortgages during the financial crisis of September 2008.

Because standardization has arisen in the presence of only two GSEs, it is sometimes assumed that concentration is necessary for standardization. However, even in a world with multiple securitizers, a single government insurance entity could drive standardization by imposing a single set of rules and standards for the products it insures.

There are clearly some potential risks to industry concentration. For example, if the securitizers of non-favored products (or even banks that hold loans in portfolio) can raise money at lower costs because they are perceived as being "too big to fail," then the government's credit enhancement may do little to tip the scales toward the favored products. Especially in the wake of the government's recent bailout efforts, it will be very difficult or impossible to convince market participants that large financial institutions do not have some kind of implicit guarantee. A number of proposals have been put forth for dealing with this issue, but the only credible way to disavow an implicit guarantee may be to reduce market concentration, and make sure no firm is "too big to fail."

Another potential downside of market concentrations is the challenge of preventing large and powerful regulated entities from capturing their regulator. That said, in a low-concentration market with many participants it may be easier to evade monitoring and game the regulatory system. Moreover, the challenge of having to regulate a large number of entities may lead the regulators to develop even more extensive and detailed guidelines and standards which in turn can impede innovation. Thus, the ultimate impact of market concentration on regulatory effectiveness is unclear. In truth, effective regulation is difficult, regardless of the level of market concentration.

Separate from the impact of regulation, the rate of innovation can also vary based on market concentration. An environment with too few entities may not create the competitive pressures to develop new products and find ways to reduce costs. Multiple competitors are often thought to be more innovative although the innovation itself may be subject to high fixed costs and so may need to emanate from third party vendors who can capture the economies of scale. An example might be the development of software for new origination, production, or servicing platforms.

E. *A Duty to Serve: Serving the Underserved*

One critical aspect of a new housing finance system is the degree to which firms are expected to make loans in underserved communities. Markets can be underserved for a number of reasons—each of which may best be addressed with a different approach. If they are underserved because of discrimination, then the parties involved should be subject to enforcement of existing fair lending laws. If they are underserved because of misinformation or misperception of risk, then an appropriate remedy might a regulation similar to the Community Reinvestment Act, which encourages lenders to explore serving such markets.[41] However, if a market is underserved

[41] The Community Reinvestment Act places an affirmative obligation (sometimes also referred to as a duty to serve) on banks to help meet the credit needs of lower income communities consistent with safety and soundness (see Willis 2009).

because of higher risk or higher origination costs, then more direct government intervention and subsidies may be called for.[42]

Even if the market is underserved because of higher risk or costs, there are still questions about the appropriate intervention. In particular, the key question is whether the government should require private actors to serve these markets themselves or whether it should instead collect a fee from private actors and use it to support affordable housing through other means, such as was initially proposed for the National Housing Trust Fund. [43] On the one hand, many of the skills, expertise, and systems that the GSEs have are the same as those needed to serve these markets. And there have clearly been examples where the GSEs brought their resources to the table and created very productive partnerships with CDFIs and state housing finance agencies. On the other hand, imposing a social mission on a profit-making firm is fundamentally challenging (Willis 2009). Proposals for reforming the housing finance system need to be scrutinized for how they best balance these two approaches to serving the underserved.

F. *Financing Multifamily Rental*

Another critical consideration is the continued availability of credit for multifamily housing. The market for financing multifamily rental properties still remains a much more handcrafted business with each transaction having its own unique characteristics that are best understood and evaluated by specialized lenders.[44] As a result, there is no mass-production approach to underwrite these deals (particularly those that have city, state, or federal dollars to help write down the costs to make the units affordable to low- and moderate-income families). By underwriting and either buying or guaranteeing these types of mortgages, Fannie Mae and Freddie Mac have helped to bring a somewhat larger pool of capital for multifamily housing and reduced the price of credit in the process. [45]

As noted above, the GSEs have at times retained the majority of their multifamily loans in their portfolios rather than securitizing them. It is not clear whether the GSEs have held onto these loans because they find it advantageous due to the higher interest rates and thus higher margins of multifamily loans, or because they have found it difficult to securitize them, especially before multifamily buildings are fully rented and can demonstrate a consistent rental income. GSEs might also want to hold these loans in portfolio because it enables them to monitor and address the issues that inevitably arise with these more complicated deals, particularly for deals that have multiple participants. If the GSEs are holding onto these loans because investors are wary (or

[42] Higher risk can exist because the population is more vulnerable to loss of job during downturns and has fewer savings to bridge the time until they get reemployed. If the required mortgage product is one with low down payment, then there is the higher risk that that the collateral may fall below the amount of the loan and thus be insufficient to make the lender whole. (Interestingly, lower income borrowers seem to have a high willingness to pay, perhaps even more than a middle-income borrower might have, since the purchase of a home is often considered a crucial first step on the way to the American Dream.)

[43] In addition, there are a number of options for imposing a tax or fee. For example, it could be imposed on each MBS, on the securitizers of those MBSs, or on a broader set of plays in the market. It could be based on revenues, profits, or the unit or dollar volume of mortgages in the MBS.

[44] The loans vary, for example, as to type of collateral, amortization schedule, and subordinated financing layers. There is a lack of generally available information about the historical performance of similar loans (see Segal and Szymanoski 1997).

[45] By 2008, Fannie and Freddie accounted for almost one-third of outstanding multifamily debt (Joint Center for Housing Studies 2009).

because there are transactional costs that make holding loans in portfolio desirable), then restrictions on portfolio purchases going forward may significantly reduce the availability of credit for multifamily mortgages.

If instead, the GSEs have held onto the majority of multifamily loans simply because it is more profitable for them, then restrictions on the portfolio will have less impact.[46] Given the uncertainty and the importance of the rental market in serving lower and moderate income households, policymakers may want to consider making exceptions for holdings of multifamily loans if portfolios are more strictly limited in the future (which many of the current proposals recommend). While even complicated multifamily deals may be expected to be securitized once a property is fully rented and has a few years of a consistent income stream, these loans may need to be held in portfolio until they can reach that point of stabilization. Proposals might even consider a specific mandate to purchase loans for affordable multifamily rental properties in underserved communities, given that the multifamily market requires more loan-by-loan handcrafting.

It is worth noting that the GSEs have played a particularly important role in what has now become the largest subsidized housing production program, the Low Income Housing Tax Credit (LIHTC) program. Through creating a set of standard products that lenders can offer to tax credit developments, they have brought a more stable and less expensive supply of loan funds to multifamily projects that rely on the LIHTC for part of their funding (Apgar and Narsimhan 2006). They have also purchased tax credits themselves. Thus, in moving to a new model, policymakers should consider implications for the tax credit program.

G. *Allowing Direct Investments: the Ability to Hold Assets in a Portfolio*

Another issue is whether to allow the securitizers to maintain portfolios of mortgages, mortgage-backed securities, and other investments. For the GSEs, their portfolios were a major source of profit as well as providing a way to maintain liquidity for mortgages in the face of short-term bumps in the MBS market. With low capital requirements and low cost of funds, the opportunity to earn more profit appears to have encouraged them to both grow their portfolios and take on more risk. Other proposed changes, such as the elimination of any implicit (or explicit) government guarantee of corporate debt and the imposition of higher capital requirements that may be more in line with those of other financial institutions such as banks', will greatly reduce the profit potential and the ability to grow these portfolios and to take on more risk. It should be noted, however, that the loss of the outsized profits in a retained portfolios may limit the ability to cross-subsidize investments in affordable housing, and education and training for nonprofit providers.

Even given these factors, explicit limits on the size of the portfolio may still make sense to prevent firms from growing large enough to constitute a systemic risk. Limits on the *type* of investments can help to reduce risk by restricting firms to holding only low-risk investments. However, allowing firms more flexibility as to what they can hold in portfolios would further some important public policy objectives. For one thing, it seems important to allow for sufficient short-term capacity to bridge any short-term demand or supply discontinuities in the market, thus

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[46] Such restrictions may still impose substantial transition costs on the multifamily market in the near-term, as new investors have to move into the market.

making the secondary mortgage market more liquid by smoothing demand for mortgage debt during downturns. (Of course, major disruptions in the marketplace, as happened more recently, were too large to deal with through additions to the portfolio; they required joint action by the Treasury, and the Federal Reserve Bank directly intervened to purchase agency MBSs.)

For another, the portfolio might be used to focus on sectors of the market that draw fewer private investors and rely today heavily on the GSEs as a source of demand and liquidity.[47] The arguments might be strongest in the case of multifamily projects that draw relatively few private investors and are less likely than subprime investments to generate systemic risk. Other possible markets in which a portfolio capacity might be critical would be the underserved, which could include borrowers receiving federally-approved housing counseling or those with nontraditional forms of credit. Finally, having the ability to hold loans in portfolio might facilitate the testing of new products and programs.

If direct investments continue to be allowed, it is essential that there be full transparency with regard to the contents of the portfolio.

H. *Methods of Ownership*

Most of the discussion of the future of the GSEs has focused solely on the question of ownership. Ownership refers to the equity owners of an organization. The spectrum of ownership options runs from full nationalization to full private ownership. There are several alternatives between the extremes of public and private ownership. For example, public utilities are private companies that are granted exclusive rights to operate in a sector in return for accepting rate of return regulation. Another ownership alternative is co-operative (co-op) ownership, in which ownership of a property or organization is shared among those who operate and use it, which in the case of secondary housing finance markets would be banks and other mortgage originators.

As we have learned with the current structure of the GSEs, the form of ownership can have a critical impact on the way an entity behaves. Thus, this section considers different possible structures to see which are most compatible with the goals outlined above (liquidity, countercyclical stability, safe and well-priced products, serving the underserved). An additional criterion for entities that are expected to be privately owned is their ability to raise capital from non-government sources. The answer to this question depends upon competition for products that they securitize and the cost of the government enhancement compared to impact on cost of funds and cost of regulatory compliance.[48]

There are also hybrids of these options, including having public sector or public interest members of the boards of otherwise private entities.[49] For purposes of discussion, all of the organizational forms discussed below will presume the existence of a government wrap for MBSs with the exception of full privatization.

[47] Ambrose and Thibodeau (2004) show that targeted portfolio purchases of low- and moderate-income mortgages can help to increase the supply of low-income mortgage credit.

[48] None of the options with regard to ownership deal directly with the pro-cyclical dangers inherent in the current legal structure of the securities due to the difficulty of doing modifications and short sales—both of which can be critical for mitigating the number of foreclosures.

[49] Pre-conservatorship, five of the eighteen members of the Fannie Mae board were appointed by the President of the United States (Fannie Mae Charter, § 308(b)).

i. *Full Nationalization*

Few economists favor government ownership, though public ownership is sometimes justified for the provision of public goods that a private market would not provide, like some aspects of national defense, or merit goods that we believe should be provided universally, like public education. A key advantage of nationalization is eliminating the conflict between the GSEs' private interests and public purposes by eliminating the profit motive. The problem of regulatory capture would be eliminated, though it might be replaced by concerns about the corrupting influence of political pressure and the difficulties government has in regulating itself. Nationalization could also preserve the standardization and consumer protections built into current GSE securitization operations. Nationalization could also simplify, but not eliminate, the principal-agent problems inherent in the web of players now involved in originating and underwriting of mortgages and then distributing the MBSs to investors. Finally, because nationalization would involve relatively little change from the post-conservatorship status quo, it would not likely disrupt the mortgage market.

Nevertheless, most economists believe that public ownership would likely reduce incentives for innovation and potentially create inflexible and unresponsive systems of mortgage securitization. These disadvantages could eventually build significant inefficiencies and distortions into the mortgage system, raising mortgage rates and increasing systemic risk. Nationalization would wipe out existing GSE shareholders, and the GSEs would become a stand-alone government agency.[50] Nationalization would likely concentrate the prime MBS market in a single, guaranteed, publicly-owned federal agency, which might have a monopoly depending on the ability of other entities to compete in the marketplace for the same borrowers. The new agency's MBSs might receive a "wrap" guarantee similar to Ginnie Mae MBSs, backed by the full faith and credit of the U.S. government. Government officials would manage portfolio operations according to goals for mortgage liquidity, systemic stability, multifamily targets, and housing subsidies. Funding for any portfolio operations would come from selling bonds of the federal government and would add to the national debt.

Some have suggested that rather than creating a new agency, the government should fold current GSE operations into FHA and Ginnie Mae. FHA would extend its guarantee program to the prime market (or to a specific set of prime mortgages) in exchange for an actuarially-sound fee. Ginnie Mae could continue to wrap the securities created from pools of insured mortgages with a further guarantee.

However, there are at least three additional risks to nationalization. First, creating a new government agency would be difficult, and there are serious questions about whether FHA has the capacity to handle GSE operations. Second, moving the existing net liabilities of the GSEs on to the federal government's balance sheet will increase the nominal value of the national debt. Third, to state the obvious, once nationalized, the entities would not be expected to pay back the government for its bailout money.

ii. *Conservatorship*

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[50] There would have to be some mechanism for valuing common stock now held by private shareholders, possibly through some bankruptcy-type court.

Another structure short of nationalization is conservatorship—the current state of affairs for the GSEs. While no one thinks that this is a permanent solution, it has the advantage in the short run of being the least disruptive for the secondary market and for the administration's efforts to deal with loan modifications, foreclosures, REO, etc. Technically, the fact that the federal government owns less than 80 percent of the GSEs allows the administration to keep the operations of the GSEs off the books for purposes of the federal budget and debt. However, the CBO is already including the existing net liabilities and projected increase in potential losses from the issuance of guarantees in the future (Congressional Budget Office 2010).[51]

Conservatorship has two key problems. The first is the continued existence and rights of the private shareholders whose interests have not been wiped out, as they would with either receivership/bankruptcy or nationalization. The second is the uncertainty for the staff of the GSEs who are concerned about their futures. On this second issue, it might be helpful if this interim state were given a minimum time for it to continue so, for example, the staff could feel comfortable that the GSEs would continue to exist for at least another, say, three to five years.

iii. *Public Utility*

Adoption of a public utility model would allow for a high level of regulation not just with regard to the types of mortgages that can be bought and the capital requirements, but also the level of fees that can be charged, the overall level of profitability that can be achieved (presumably based on a return on capital, given the capital requirements, and even the organization structure, including the use of affiliates. The public utility model could have either purely private or a mix of public and private ownership and/or representation on board of directors.

A key challenge would be the setting of the prices and fees that would yield a spread that would provide the entity with the allowed rate of return. With the mortgage market as volatile as it is over the business cycle and with the market share of the utilities subject to some degree of competition, it will be hard to set pricing that will provide anything like a consistent rate of return on capital.

If the number of entities that were regulated as public utilities were limited in number, then the public utility model would also preserve some of the standardization and liquidity benefits of the GSEs. Also, the GSEs' functions in standardization, consumer protection, and housing affordability could be preserved. A strong regulator and fixed rate of return would be intended to reduce issues of moral hazard and regulatory capture, though it is not clear that these mechanisms would be completely successful.

The principal objection to the public utility model is that it might reduce innovation and efficiency to the point where the GSEs would no longer be competitive in the market. In order to introduce a new product, or a new borrowing or lending practice, the firms would have to receive regulatory approval from a public board. A public utility regulator has typically worked best in the case of natural monopolies, like utilities, but the mortgage finance market has always been subject to competition. A key issue will be what types of barriers to entry the government might impose to limit the competition. If the new entities are subject to competition and their market share slipped, then their benefits of standardization, consumer protection, and perhaps even their

ability to provide counter-cyclical support to the market could be lost as well. Under the best-known version of the model proposed by former Treasury Secretary Paulson (2007), the new utilities would still be subject to competition from private-label MBS issuers in all sectors of the market.

iv. *Cooperative Ownership*

Cooperatives (co-ops) are run on a non-profit basis, and each member is required to contribute equity in the new GSE proportional to, for example, the value of mortgage debt that it securitized. In other words, a co-op would be run so as to generate little or no surplus, and any surplus that it did generate would be paid back to member organizations in proportion to how much debt they securitized. Because co-op control would, most likely, also be distributed based on member securitization, the largest mortgage originators would exert the most control over the co-op, thus creating the danger that the largest members will capture control and adopt rules and regulations that may be at odds with the interest of the smaller members.[52]

The cooperative option would have several advantages. First, it would be likely to maintain high levels of standardization and mortgage debt liquidity. Although member institutions would still have incentives to create innovative, liquid MBS products to distribute their mortgage debt, their at-cost charter and open access to all market participants would prevent the co-op from collecting monopoly rents. The co-op's guarantee structure would encourage liquidity and likely facilitate the continuation of 30-year, fixed-rate, no-prepayment-penalty mortgages as standard. Moreover, the job of the government regulator may be made easier since the members of the co-op (who have capital at risk) may be more motivated to police themselves (Flannery and Frame 2006).[53] In fact, the danger may be that they will be too conservative, particularly in undertaking any mission-related activities.

The co-op option could have several disadvantages. First, the co-op(s) would be controlled by large private banks whose interests may not coincide with those of smaller originators (including small banks) or of consumer protection. Second, cooperative ownership does not solve the conflict between public and private purposes that currently characterizes the GSEs. Regulatory capture and moral hazard would still be significant risks. If the co-op can securitize riskier, higher-interest loans without increasing the insurance premiums paid to the government, its members and executives might be tempted to take advantage of the opportunity. Third, a secondary mortgage market that was highly concentrated in one or two huge co-ops could be very vulnerable to systemic risk if a co-op became insolvent, as may happen to some of the Federal Home Loan banks.

v. *Improved Pre-Conservatorship Status Quo*

Another approach would be to keep the GSE model but refine it to mitigate some of the problems that likely precipitated their insolvency. Many believe that the GSEs got into trouble primarily through purchasing and securitizing excessively risky loans and by maintaining insufficient capital levels. Thus, going forward, the government might require higher capital levels, create a stronger regulator (and also more heavily regulate their PLS competitors), limit

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[52] The federal home loan banks mitigate this potential problem by placing limits on the maximum voting rights of any individual member, regardless of its size (see Flannery and Frame 2006).

[53] The authors note that the structure of the FHLBs did not necessarily lead to less risk taking than for the GSEs.

their securitization of non-prime mortgage debt, restrict—or eliminate altogether—their retained mortgage portfolios, and make the government guarantee of GSE obligations explicit for an actuarially-sound fee. Under these reforms, the market for prime MBSs would remain highly concentrated, private investor ownership of GSE equity would hopefully be rejuvenated, and the ultimate credit risk for prime mortgage debt would be left with the government through a reformed guarantee.

This approach offers several advantages. First, the GSEs would retain most of the liquidity benefits of current GSE securitization operations, for both the single- and multifamily markets. Second, this option would preserve the existing standardization of consumer and investor products, including a 30-year, fixed-rate, no-prepayment-penalty mortgage and the existing TBA market. Third, it would not require a new entity to reinvent all the controls that the GSEs have put in place to control principal-agent problems, although the GSEs probably have more to do in this regard. Another advantage of trying to fix up the existing model is that it might make it possible for the government to recoup its bailout funds.

Preserving a variant of the status quo has several potential disadvantages too. First, by preserving a hybrid structure, the proposal would not resolve the conflict between the GSEs' private interests and public purposes. GSE insiders would arguably continue to have an interest in obtaining regulatory or legislative approval for imprudent risk-taking. Second, a prime MBS market with only two participants could suffer inefficiencies from lack of competition (though it is unclear where to strike the balance between competition and standardization). Third, by failing to address the issue of the GSEs' huge size and market dominance, it would leave the firms "too big to fail" and continue to generate systemic risk. One variant would be to increase the number of GSEs/charters to add to the number of entities allowed to issue the guaranteed MBSs. This could help to increase competition, and lessen the "too big to fail" problem.

vi. *Full Privatization (with no government backing)*

In a fully-privatized model, the government would cease to be involved in guaranteeing the market for prime MBSs, implicitly or explicitly, eliminating the interest rate subsidy that this guarantee provides. The potential advantages of privatization include the greater efficiency that might come from the increased competition in the mortgage market (assuming that there are more than two entities as exist now with the GSEs). With privatization, there would cease to be any conflict between the GSEs' private and public purposes. Without any government guarantees, firms would have to internalize the risks of their investments. Privatization might also lead to reduced market concentration and thus decrease systemic risk, by purging the market of "too big to fail" institutions. Of course, it is also possible that a few large private financial institutions would dominate the secondary market, even in the absence of government backing. If so, the dangers inherent in these firms too big to fail will now spill over into the secondary mortgage market as well.

However, privatization could have serious disadvantages too. As noted above, researchers have shown that GSE MBSs have helped to provide some countercyclicality to the market by providing credit even during times of market contraction (Quigley 2006; Peak and Wilcox 2006). The volume of private-label investment is more likely to contract during market downturns. Elimination of government guarantees could make long-term, fixed-rate, no-prepayment-penalty

mortgages and the TBA market unviable, and fully private firms might promote riskier mortgage products.[54] The new, fully-private firms may not choose to play such a large role in the multifamily sector, as private investors have generally been more reluctant to buy multifamily mortgages and related securities than single-family MBSs (see, for example, DiPasquale and Cummings 1992). Finally, opponents of privatization argue that the recent experience of private-label MBSs issuers demonstrates that a private market with minimal regulation is likely to generate significant systemic risk.

I. *Transition Issues*

A final consideration in evaluating any proposal is ease of transition. Any rapid and drastic alteration to the structure of the secondary mortgage market, and especially to GSE MBS operations, is likely to cause a costly and unpredictable disruption in the TBA market and the mortgage market more generally, potentially harming homebuyers, investors, and even taxpayers. Another transition issue is how to handle the GSEs' current preferred stock held by Treasury, and how to handle the hard-to-value "toxic" assets on the GSEs' current books. Depending on how these issues are resolved, private investors might be hesitant to invest in GSE successor institutions. Given that many of these proposals recommend a reduction in retained portfolios, a third issue is that the rapid sale of portfolio assets would be likely to seriously disrupt the secondary mortgage market. The simplest and least disruptive way to eliminate the retained portfolios would be simply to prohibit the GSEs from making more purchases, and allow their portfolios to mature and shrink over time. Finally, a long or uncertain transition period will accelerate the departure of top talent from the GSEs, which will undermine the capacity of any successor institution.

Each of the different models of ownership present their own transition challenges. Clearly continuing to keep the GSEs in conservatorship would represent the easiest transition. But it is possible that the continued uncertainty about the future might lead additional staff to leave. Most nationalization scenarios present a relatively straightforward transition too, given that the two entities are already under government control. The MBS operations would not have to be halted. Policy makers would be confronted with important questions about whether and how to continue GSE portfolio operations, which would be especially important for the multifamily market. The biggest transition risk posed by nationalization is probably the wholesale departure of many top GSE employees, although many have undoubtedly left already.

Moving to a variant of the pre-conservatorship model would be relatively easy too. Because these options would preserve many features of the current status quo, they would involve fairly minimal disruption to the secondary mortgage market. One potential challenge could be a lack of interest from private investors, who might be frightened by the GSEs' recent conservatorship, and/or worried about potential new restrictions on portfolio investments. To restore the firms to profitability before releasing them from conservatorship, the FHFA may have to relieve them of some of the toxic mortgage assets that they still hold as well as the 10 percent dividend they owe

[54] It is conceivable that, even without the government wrap, investors might be willing to buy securities backed by 30-year, fixed-rate mortgages with no prepayment penalty. However, such securities would require significant structuring into separate tranches with different credit and interest rate risks. The likely result is that the borrower would have to pay relatively high interest costs for such a mortgage, even compared to the case where a government wrap is provided and is fully priced for the risk.

the government on the preferred stock it owns. In practice, the viability of this option depends on whether the GSEs can quickly regain profitability and repurchase the preferred stock created by the government during conservatorship.

The transition to a co-op model would be far more challenging. A co-op model would require the government to wipe out current GSE shareholders, possibly re-allocate GSE operations into a single corporate structure, and then recapitalize that structure through mortgage originators. It may encounter resistance from mortgage originators that do not want to capitalize the new entity, and it might have trouble keeping GSEs' top talent from departing if, for example, it had a lower pay scale. A switch to a public utility model would also be likely to accelerate the departure of top talent from the GSEs.

Finally, fully privatizing Fannie and Freddie could seriously disrupt secondary market operations, and would require careful planning on a host of issues. GSE staff might be provided incentives to stay on during the chaos of the transition. Portfolio purchases would cease, and the government would have to devise a mechanism to take on the GSEs' toxic assets. Securitization could gradually transfer to private holding companies, for which regulatory and capitalization standards would have to be set. Capital for those firms would have to be raised through equity markets, but it may be difficult to attract shareholders if the successor firms were still liable for GSEs preferred stock obligations created during the bailout and now held by the conservator. Their mortgage databases could be turned over to a separate corporation cooperatively-owned and accessed by all secondary market participants.

i. *Additional Transition Concerns for Multifamily*

Another transition issue which has particular relevance for the multifamily sector is what to do with the LIHTC portfolio. The tax credits currently have no value to Fannie or Freddie given that they have no current tax liability. But if the two entities were to sell these credits off, they could significantly reduce the demand for new credits and so reduce their price making them a less useful tool for building affordable rental housing. In any case, the Treasury is unlikely to approve their sale, as buyers pay less than dollar-for-dollar for the credits, which reduce tax revenues dollar-for-dollar.

III. EVALUATING SPECIFIC PROPOSALS

As the debate about the future of the GSEs has intensified, a number of organizations have proposed new models for a housing finance system. The following considers four of these proposals, describes their key features (including the nature of the proposed credit enhancement, the nature of regulation, the number of competitors, the legal structures for ownership, and transition challenges), and examines the degree to which they are likely to meet the four goals we set out earlier in the paper with regard to both single- and multifamily mortgages:

- Access to liquid credit markets nationwide,
- Counter-cyclical stability,
- Availability of safe products that are well-priced and clearly understood by borrowers, and
- Provision of credit for the underserved.

The four main proposals we examine share a few key features. All four envision a set of privately-owned participants in the secondary market, and perhaps most notably, they all recommend an explicit federal government wrap, supported by a fee paid by insured parties, which would be available only to those MBSs that contain mortgages that meet specific criteria. This shared feature helps all the proposals address, at least to some degree, the first three of our four goals.

After reviewing the four proposals, we also describe an idea for the multifamily housing finance market and consider the possibility of developing a market for covered bonds

A. *Center for American Progress*

In December 2009, the Center for American Progress (CAP) issued a draft white paper on the future of the U.S. secondary market for residential mortgages titled "A Responsible Market for Housing Finance." The paper offers an initial model but acknowledges that many issues remain unresolved and questions unanswered.[55]

Key Features

The proposal recommends an explicit federal government guarantee for MBSs that contain single-family mortgages that are safe, sustainable, and transparent for borrowers, and are thus expected to be low risk. The proposal recommends that the guarantee also be used to back mortgages for multifamily, rental housing. Securitizers of these MBSs would be comprehensively regulated as would issuers of private-label securities. All issuers of MBSs would be subject to carry out a duty to serve underserved communities.

The basic structure involves creating a limited number of charter mortgage issuers (CMIs) to issue government-guaranteed, mortgage-backed securities (MBSs)—both single- and

[55] The proposal lays out three core principles that are highly consistent with the four goals laid out in this paper: broad and constant liquidity, systemic stability achieved through responsible risk oversight, and wide and fair availability of affordable mortgage credit.

multifamily. The CMIs would only be able to securitize single-family mortgages that are viewed as safe, sustainable, and transparent (e.g., 30-year, fixed-rate single-family mortgage with no prepayment penalty) with the intention that credit-worthy borrowers would be able to have access to these products at an affordable price throughout a business or credit cycle. The size of mortgages eligible for the guarantee would be capped. As for multifamily mortgages, the goal would be to ensure the availability of affordable rental housing.

All mortgage securitizers would be heavily regulated (as would banks) with regard to products, capital, and operational and credit risk. By providing a more level regulatory field, it is hoped that a race to the bottom would be prevented and the opportunity for regulatory arbitrage reduced. The CMIs would have an explicit duty to provide countercyclical stability to the mortgage market. It is contemplated that the current GSEs could be transitioned into CMIs with their bad assets transferred to a "bad" bank, which would have the task of handling the troubled mortgages.

The government guarantee would only apply if a CMI's capital was inadequate to meet its obligations to make timely payments of principal and interest on its MBSs. To guard against having to call on the government guarantee, capital and reserve requirements would be imposed in addition to the regulatory oversight of credit and operational risk. The government would be paid a "small" fee for every MBS issued by a CMI, although it is unclear if the fee would be considered, as a budgetary matter, sufficient to compensate the government for the risk it is undertaking. There would be no guarantee of the debts of the CMI and no government guarantee at all for MBSs issued by other mortgage issuers.

There is no discussion as to whether the number of CMIs should be limited, or whether to allow a larger number but force them to deliver their securities through a limited number of TBA markets (currently, two TBA markets exist as both Fannie Mae and Freddie Mac have created their own). The CMIs would be privately-owned (with the co-op model considered as a possibility) but subject to regulation of profit.

By eliminating the corporate guarantee (albeit implicit) and favorable capital requirements, the proposal removes the key factors that made direct investments especially profitable. Moreover, the proposal seeks to reduce the size of the portfolio by only allowing investments in pursuit of certain public purposes which would be defined by the CMIs' primary regulator and would include: supporting affordable multifamily housing—including mixed-income and mixed-use development and small multifamily, providing capacity for crises, and testing of new products.

To serve the underserved, the proposal contemplates a fee on each MBS issue to support an Affordable Housing Trust Fund (and Capital Magnet Fund) as well as a duty for both the CMIs and OMIs to serve all markets at all times in a fair and equitable manner. Beyond this obligation, CMIs would be required to undertake certain enhanced duties in return for receiving a government guarantee on their MBS, providing them with a cost advantage in the capital markets, and access to a market limited to other firms similarly situated with high barriers to entry. Affordable housing goals as they currently exist would be eliminated. The roles of FHA/VA/GNMA would continue.

As noted, the CAP proposal leaves open a number of issues, some intentionally. In particular, it looks to draw comments and suggestions on (1) how to make sure that CMIs can raise capital as well as to be able to cross-subsidize any activities to serve the underserved that incur higher costs or risk that cannot be recovered through fees, and (2) the number and specific legal structure of the CMIs. It does not spell out how it would coordinate the regulators to ensure a level playing field across all players in the mortgage market, although it does float the possibility of creating a Housing Markets Coordinating Council to create a platform for coordinating the efforts of all the regulators plus HUD and Treasury. It is silent on the issue of how to promote innovation, although it places no restrictions on banks that keep the loans in their portfolios (although bank regulators will have something to say about what can be in that portfolio). Lastly, it lacks any specifics of transitioning the GSEs to the new model, although it does recognize the importance of preserving as much as possible the extensive infrastructure, resources, and expertise of the two firms as well as minimizing disruption to the housing markets.

B. *Credit Suisse*

In October of 2009, Credit Suisse issued a Mortgage Market Comment titled "GSEs—Still the Best Answer for Housing Finance." As the title suggests, the focus of the proposal is to preserve the GSEs in order not to disrupt the existing housing finance market (and the TBA market in particular) and to take full advantage of the GSEs' existing technology, infrastructure, and intellectual capital.[56]

Key Features

The proposal provides for an explicit federal government guarantee for MBSs that contain basic mortgage products with well-understood risk characteristics. The reformed GSEs would be subject to strong regulatory oversight and higher capital requirements. There would be no affordable housing mandate for single-family, but the reformed GSEs would still be required to meet affordable housing goals for multifamily housing. The paper lays out in some detail an analysis of the likely range of impact of the incremental cost of fully-priced government guarantee, the increased capital costs (including those to ensure counter-cyclical stability), and the saving in borrowing cost from having an explicit government guarantee. Their conclusion is that borrowing costs would go up a net of 25–35bp above the pre-crisis guarantee cost of 15bp.

Each of the GSEs would be divided into a "good bank" that would retain healthy guarantee and portfolio assets and a "bad" bank, with the former conducting a well-capitalized, privately held mortgage guarantee business with a "full-faith-and-credit" government reinsurance wrap on the MBS in case of catastrophic loss. They would run a scaled-back portfolio business (expected to eventually fall to half its current size) that would be used to smooth out market distortions and maintain traditional role of the GSEs as the counter-cyclical buyer of mortgages. Little is said about the "bad bank," other than that it would work through the existing credit and portfolio book of problem loans/securities.

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[56] The article lays out five key objectives: preserving TBA market liquidity, minimizing disruption to the market and maximizing continuity, improving control and risk management, minimizing operational involvement by government, and continuing operations even in the event of a catastrophic credit.

As a way to prevent "mission creep," the Credit Suisse proposal would require both the FHFA and Congress to agree before any expansion of product mix would be allowed. By adding the Congressional review, it could inhibit innovation and would certainly add a political overlay to the process. The GSEs would also have a credit line with the Fed, which would be collateralized with the MBSs purchased with that credit. Given all these safeguards, it is expected that the GSE debt would trade close to treasuries.

To limit the risk, GSEs' participation would be restricted to basic mortgage products with well-understood risk characteristics including, it appears, the traditional set of conforming mortgages that follow specified underwriting standards. The GSEs would be prohibited from buying and securitizing Alt-A and subprime loans. The entities would also be subject to strong regulatory oversight to ensure compliance and effective risk management and would have their equity capital requirement doubled immediately and doubled again over the next decade or two. To reduce the cost to the borrower, the government could provide some of the equity and not require a return. (The proposal suggests converting the existing preferred equity to common stock with the GSEs' retaining the option to buy it back.)

With these capital and regulatory requirements on the GSEs, the government wrap is expected to be needed only in the event of credit meltdowns, which are estimated to occur every fifty to one hundred years. The wrap will be fully priced based on a loss every twenty to fifty years (priced at ten and two basis points, respectively), and these fees should make it deficit neutral with regards to the federal budget.

The proposal allows for more "primary mortgage guarantors" (PMGs) than just the two GSEs, as long as it would not jeopardize liquidity of TBA market. Given the priority on liquidity, there is no discussion of whether more players might have value as a way to increase competition, although the authors suggest that the number of PMGs could be increased further if they are all required to deliver their conventional Agency MBS into the Fannie or Freddie TBA markets. As for product innovation by the PMGs, the proposal actively discourages it, by requiring joint approval by the FHFA and Congress. The proposal also precludes any affordable housing mandate for single-family but does retain one for multifamily. Any so-called risky loans should be under the purview of FHA with the government providing explicit funding for policy mandates.

The Credit Suisse proposal fails to make any mention of the regulation of the PLS market. While the strong regulation of the GSEs would help reduce the threat of a race to the bottom, eliminating this threat would require regulation of the PLS market as well, which would prevent unregulated or lightly regulated entities from unfairly capturing market share (partly as a result of their mispricing of risk), and potentially leaving only a marginal share of the market to the securitizers of the guaranteed MBSs. There is also no discussion of what forces—market, regulatory or other—would serve to constrain the pricing by the successors to the GSEs by preventing them from garnering excess profits and ensure they pass on to the borrowers the benefits of the lower funding costs made possible by the government guarantee.

C. *Mortgage Bankers Association*

In August 2009, the Council on Ensuring Mortgage Liquidity of the Mortgage Bankers Association released "Recommendations for the Future Government Role in the Core Secondary Mortgage Market," based on their earlier release in March 2009 of "Principles for Ensuring Mortgage Liquidity." Underlying the proposal is the proposition that the role of the federal government should be to promote liquidity for investor purchases of mortgage-backed securities, while protecting taxpayers by bringing in private capital to absorb all of the risk, save for periods of extreme economic distress.

Key features

The proposal is built around the establishment of privately-owned, chartered mortgage credit-guarantor entities (MCGEs) that provide loan-level guarantees and issue MBSs that are wrapped with an explicit government guarantee. The MCGEs would be mono-line institutions focused solely on the mortgage credit guarantee and securitization business and would be subject to strong regulation. These entities would be subject to high capital requirements and limited as to the products they could guarantee, thus helping to ensure that under all but the most dire economic circumstances, they would be able to cover all mortgage-related credit losses. The federal insurance fund would then be called upon only in situations of extreme distress, and it would place a risk-based charge on every MBS issued to cover the cost of taking that credit risk. The entity providing the government guarantee could be conceptually similar to GNMA and would be responsible for standardization of mortgage products, indentures, and mortgage documentation for the core mortgage market. To help ensure that the MCGEs would securitize both single- and multifamily, the governance structure of the MCGEs would have representation from both the single- and multifamily markets.

None of the corporate debt or equity the MCGEs issue would be guaranteed, either explicitly or implicitly, by the federal government. The MCGEs would rely on their own capital base as well as risk-retention from originators, issuers, and other secondary market entities such as mortgage insurers. The MCGEs would be required to manage their credit risk by using risk-based pricing, purchasing private mortgage insurance (PMI) and adopting risk transfer mechanisms, including other risk-sharing arrangements, providing representations and warranties to the investors, and maintaining sufficient capital reserves to ensure that there is a strong capital buffer before the government guarantee and insurance fund would come into play.

Only securities issued by a MCGE would be eligible for the government guarantee, and these securities could contain only "core" mortgage products with well-understood, well-documented risk characteristics. Included in this category would be "conventional" single-family mortgage products traditionally supported by the GSEs, including those currently eligible for TBA funding, and multifamily mortgage products that fit the GSEs' published underwriting guidelines, including affordable multifamily rental housing mortgage products. To ensure countercyclical stability in times of extreme market distress, the Treasury and/or Federal Reserve could purchase government-guaranteed mortgage securities to provide liquidity.

The MCGEs' regulator should be strong, empowered, and adequately funded through the government guarantee insurance premiums. The regulation regime contemplated would be similar to that of a public utility, with the MCGEs earning a conservative return on equity. The

regulator should have the power to adequately oversee the MCGEs, specifically with regard to products, pricing, and capital adequacy. The corporate capital levels of the MCGEs must be actuarially sound, and the entities would have to report regularly to the satisfaction of the Treasury and the MCGEs' regulator.

As for the number of MCGEs that would be allowed, the proposal lays out a set of criteria without saying how each would be evaluated and weighed. The criteria cover the topics of a) competition, b) strong and effective regulatory oversight, c) efficiency and scale, d) standardization, e) security volume and liquidity, f) ensuring no one MCGE becomes "too big to fail," and g) the transition from the current government sponsored entity (GSE) framework. Initially, the number of MCGEs should be either two or three. The ownership of at least one of the MCGEs could be in a co-op form with mortgage lenders as shareholders. Other private institutions could also issue government guarantee securities if backed by a MCGE loan-level guarantee, meaning that a MCGE will have approved and insured the underlying collateral.

The proposal contemplates the revival of a PLS market that may include loans that are not be well-documented or well-understood. The issuance of these PLSs would rely entirely on private capital and management of risks. There is no discussion of government regulation and therefore no discussion of the possibility of their competing away the market share of the MCGs.

The MCGEs would be allowed to have only a *de minimus* portfolio of mortgage assets. The portfolios' purposes would be to support securitization by allowing the MCGEs to (a) aggregate allowable mortgages for securitization, (b) manage loss mitigation through foreclosure, modifications, and other activities, (c) incubate mortgages that may need seasoning prior to securitization, (d) develop new mortgage products through a strictly limited level of research and development prior to the development of a full-fledged securitization market, and (e) fund highly structured multifamily mortgages that are not conducive to securitization.

The proposal specifically rules out the addition of public or social policy goals and looks to the FHA, VA, RHS, GNMA, and other direct federal tax and spending programs to continue to play their key roles. However, it notes that, if CRA-related loans are included in the definition of core products, the MCGEs and government guarantee would provide a transparent and liquid market into which lenders can deliver them on a pricing and risk-adjusted basis.

While no specific transition plan is laid out, the proposal looks to use the infrastructure of the existing GSEs as a foundation for new MCGEs, with the technology, human capital, standard documents, and existing relationships that the GSEs have developed available to one or more MCGEs. Every effort would be made to transfer existing origination, servicing, and other industry relationships from the GSEs to the new MCGEs so as not to strand originators and servicers with ties to the existing GSEs. The proposal calls for decisions regarding the futures of the GSEs to be made expeditiously so as to reduce continued losses of talent at Fannie Mae and Freddie Mac. The good bank/bad bank resolution of the GSEs is designed to facilitate a more rapid transition, to maximize the usefulness of the existing infrastructure of the GSEs, and to allow the federal government to continue to use that infrastructure to address the current housing market challenges.

In general, the MBA proposal lacks specifics beyond laying out a model for a dual level of guarantees. As noted above, the proposal does not discuss the type and degree of regulation of the PLS market, thus leaving open the issue of how to prevent loss of market share through improperly priced competition. Product innovation seems to be discouraged, at least by the MCGEs, since the proposal specifically requires that new products by the MCGEs would require approval from the regulator.

D. *The Housing Policy Council of the Financial Services Roundtable*

Recently, the Housing Policy Council of the Financial Services Roundtable circulated a proposal for the secondary market. Like the other proposals, it calls for an explicit government guarantee for those MBSs that are backed by a select set of mortgage products, but unlike the other models, it calls for the creation of a new type of entity—an MBS Issuing Utility—and a single type of MBS to help ensure a broad market for the securities.

Key Features

The proposal creates a set of chartered entities, called MBS insurance companies (MSICs), to replace the GSEs. These entities would provide credit enhancement for both MBSs and for portfolios of residential and multifamily mortgages. They would be privately capitalized and subject to comprehensive safety and soundness regulation, including capital and liquidity standards. They would contract with the MBS Issuing Entity, which would provide basic securitization services such as packaging the mortgage loans and process of payment on the MBS, and which would charge them a fee. The MSICs will be limited in the type of mortgages that can be included in the MBSs they insure. The mortgages would have to meet underwriting and loan size standards set by FHFA.

The MSICs would have no federal backstop, although there was some concern that they may initially have some problems raising private capital, so they may need some temporary funding by the government. MSICs would not be subject to any profit or pricing regulation and so the marketplace will determine how many emerge, what legal form they take, and whether they specialize by the types of loans (single-family, multifamily, or sub-categories of each) that are in the MBSs they insure. The MSICs would be permitted to maintain portfolios that would be limited in size and usable only for liquidity or hedging purposes or to facilitate the development of new products, including loans for multifamily housing.

The MBSs insured by the MSICs would have a government guarantee with the ostensible purpose of reducing the cost of mortgage loans. Clearly, however, it will also help provide the mortgage market with some countercyclical stability. The guarantee would be fully priced for risk so that its existence will be revenue neutral with regard to the federal budget. The guarantee would be for payments of interest and principal and would be triggered only after the private capital of the MSICs is exhausted.

The proposal looks to address the underserved in two ways. First, built into the underwriting standards would be a requirement to support safe and sustainable mortgage products for all categories of borrowers, with the implication that that would include products for low- and moderate-income borrowers. Second, the MSICs would have to contribute a set percentage of

their annual revenues to an affordable housing fund, which would be allocated to state and local government housing finance agencies pursuant to a formula set by statute.

While the proposal focuses on defining and limiting the roles of these types of new entities, it does not provide much detail on anything else, at least as of yet. It is silent, for example, on the possible re-emergence of a PLS market (although nothing suggests that it will not re-emerge) or whether and how that market would be regulated. It also does not address transition issues, although it is ostensibly designed to minimize disruptions to housing finance.

E. *Creating State Mortgage Insurance Funds for Multifamily Loans*

Very few of the existing proposals explicitly address multifamily housing finance. We think one existing program is a potentially interesting model. In particular, it might be possible to induce the creation of mortgage insurance funds at the state or local level, such as the fund run by the State of New York Mortgage Agency (SONYMA).[57] SONYMA works with pre-approved lenders to develop loan programs tailored to local needs and government subsidies. Its insurance facilitates the sale of the loans to pension funds, which receive 100 percent credit insurance, thereby creating a ready and fairly-priced market for these loans. (Loans sold to private investors are eligible for up to 75 percent first-loss insurance.) Initially, the insurance provided by SONYMA covered only the permanent financing used as take-outs for construction loans that financed the renovation needs of deteriorating, but often still occupied multifamily housing. Today it covers a broader range of loans to help revitalize communities. With its own revenue stream from the mortgage transfer tax and limited losses, SONYMA has, over time, been able to achieve an AA rating.

Such success could potentially be expanded and replicated over a much wider geography with the availability of a government MBS wrap and the thoughtful establishment of criteria for the structuring of these insurance funds (*e.g.*, how much top loss insurance on individual transactions, what ratio of reserves to insured risk, what mechanism for claims payment, and the criteria for selecting originators). The explicit government guarantee would provide, from the beginning, an investment grade rating that could help create a secondary market for packages of these locally-underwritten and -tailored loans. With such a program, localities would be able to obtain sufficient capital for their unique housing needs and national investors could safely promote community development. The ongoing goal for the system would be to standardize both the origination of loans and their subsequent purchase by institutional investors.

F. *Covered Bonds: An Additional Source of Funds for Banks*

The ability of banks to serve the residential mortgage marketplace is limited by both the total amount of funds they have to loan and their appetite for mortgages as a percent of their assets. For banks, deposits represent the major source of funds to lend. However, banks may have sufficient capital to lend more but lack the funds. In this case, banks can raise additional money in the capital markets or, as in the case of members of Federal Home Loan banks, through "advances," which can be collateralized with home mortgages.[58]

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[57] For further elaboration on this idea, see Lappin (2001).

[58] A number of Federal Home Loan banks also participate in the Mortgage Partnership Finance Program, which provides their members with another vehicle to tap to the secondary market.

Covered bonds are another potential way to expand the funds available for a bank to lend out. Covered bonds are issued by depositary institutions and backed by an over-collateralized, actively managed "cover pool" of mortgage loans. Issuing banks make the coupon payments from their general cash flows, and in case of default the bondholders have exclusive recourse to the cover pool, and then to the bank's general assets (*i.e.*, the bank retains 100 percent of the risk). The total amount the bank can then lend out for home mortgages depends on the size of its capital base and the desired diversity of assets. Covered bonds allow a bank to take full advantage of its capital base in those cases in which it otherwise finds itself with insufficient deposits and other sources of funds.

New regulations and legislation have been proposed to facilitate the issuance of these types of instruments. To the extent, however, that the legislation gives preferred status to the collateral pledged for these bonds, the collateral available for the FDIC to access if the bank should go into receivership will be reduced, increasing the need to raise the fees on all banks for depository insurance and increasing the possibility that the taxpayer may eventually have to bailout the FDIC. In 2008, the U.S. Treasury issued best-practice recommendations for expanding the use of covered bonds. The FDIC (2008) also issued guidelines on how covered bonds would be treated in the event of a bank's insolvency, and a bill was introduced in Congress in 2008 to expand the use of covered bonds in the United States (Garrett 2008). Although not widely used in the United States, covered bonds are the main vehicle of housing finance in many European countries.[59]

There are two key differences between covered bonds and MBSs. First, in the case of covered bonds, the covered pool of mortgages remains on the bank's balance sheet. Second, regulations typically require that the pool of mortgages be worth more than the value of outstanding bonds, and if the value of the pool falls too low, then the bank must add more collateral to the pool. In that sense, the bonds are over-collateralized by the cover pool. I f the bank defaults on the bonds, investors first have an exclusive claim to the mortgage pool, and then have recourse to the general assets of the bank.

Covered bonds have three potential advantages over MBSs as a method of mortgage finance. First, they have the potential to reduce principal-agent problems, because the banks themselves would hold the loans underlying covered bonds, giving them an interest in originating better loans. Second, because the mortgage loans would simply remain on bank balance sheets and not be put into special trusts subject to the incentives of servicers, banks could modify failing loans far more easily than MBS trusts can. This could reduce foreclosures and maximize loan value. Third, depending on how they are implemented, covered bonds also hold the possibility of improving the options available to homebuyers who find themselves underwater. In Denmark, covered bonds operate according to the "balance principle." The balance principle requires a match between each mortgage written and every bond issued. It permits homebuyers two options for paying off their debt: they may either pay off their mortgage at par, or they may repurchase their lender's bonds on the open market, in an amount corresponding to the size of their mortgage, and return those bonds to the lender. Falling house prices will often depress the corresponding bond prices (though this may not always happen). When house and bond prices fall together, homeowners can sometimes refinance their homes at the new, lower house price, by buying back their bonds at the lower bond prices, and surrendering the bonds to the original

[59] The first covered bond in the U.S. was issued by Washington Mutual in 2006 (Lucas et al. 2008).

lender. This new option for refinancing could reduce foreclosures in the event of a widespread decline in housing prices.

There is uncertainty, however, in the extent to which covered bonds would deliver the same level of liquidity as GSE MBSs, because in a covered bond system, mortgage loans remain on bank balance sheets. Moreover, it may be difficult for covered bonds to achieve the minimum efficient scale to compete with government-backed GSE MBSs. As in Denmark, an effective covered bond market would require standardized bond forms, and a high-volume market that could demonstrate liquidity to potential buyers. If covered bonds were issued by hundreds of banks across the country, each with different underwriting standards and bond structures, the extensive market fragmentation would seriously reduce trading volume and liquidity for any particular covered bond issue. The Danish covered bond system is effective because the market is highly structured and homogenized, with only a few participating banks.[60]

There are also important questions about whether covered bonds could be cost-competitive with existing channels of finance, which benefit from economies of scale, government subsidies, and well-developed regulatory frameworks. Covered bonds might require a phase of incubation and experimentation before they reached a minimum efficient scale and were widely accepted by investors.

It seems unlikely that covered bonds would replace GSE MBSs or any other existing channel of housing finance. Rather, they could provide a new way to increase liquidity for market sectors—like jumbo loans, which the GSEs do not handle. It is also possible that they could directly compete with the GSEs in the prime mortgage market. In a more radical restructuring, the GSEs could be abolished and the entire system could switch to covered bonds, or the GSEs could be reformed into covered bond issuers. However, these more radical options likely would seriously disrupt the housing finance system.

There is little opposition to developing covered bonds as a source of funds for housing finance, and they may ultimately help to make the system more efficient and secure (Soros 2008). For these reasons, it may make sense to work at developing covered bonds, regardless of what other reforms are implemented in the housing finance system.

[60] "There are eight mortgage credit institutions active in the Danish mortgage market, some affiliated with commercial banks (DLR, LR, Nordea Kredit, RealKredit Danmark, FIH), others operating on a standalone basis, as foundations (BRFKredit, NykreditRealkredit)" (International Monetary Fund 2006, 4).

CONCLUSION

The secondary market has brought tremendous liquidity to the housing finance system in the United States, by drawing in capital from all over the world. The two GSEs, Fannie Mae and Freddie Mac, have been key players in this market. As federal government officials contemplate the future of these two entities, we hope that this paper offers a useful framework to evaluate the alternative proposals.

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