

Ben S Bernanke: The future of mortgage finance in the United States

Speech by Mr Ben S Bernanke, Chairman of the Board of Governors of the US Federal Reserve System, at the UC Berkeley/UCLA Symposium: "The Mortgage Meltdown, the Economy, and Public Policy", Berkeley, California, 31 October 2008.

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I appreciate the opportunity to speak at this symposium. My remarks will focus on the mortgage securitization process, how it has been affected by the financial crisis, and how it may evolve in response to this crisis. In the United States, as you know, mortgage securitization has been dominated by two government-sponsored enterprises (GSEs), Fannie Mae and Freddie Mac, as well as by the combination of the Federal Housing Administration (FHA) and Ginnie Mae. By contrast, private-label securitization became a significant presence in mortgage securitization only during the past decade, motivated in part by developments in financial engineering.

The financial crisis has upset the linkage between mortgage borrowers and capital markets and has revealed a number of important problems in our system of mortgage finance, including weaknesses in the structure and oversight of the GSEs and perhaps in the originate-to-distribute model of credit provision itself. Private-label securitization has largely stopped, and Fannie and Freddie were placed into conservatorship by their regulator after they were judged to be operating in an unsafe and unsound manner. Our task now is to begin thinking about how to best reestablish a link between homebuyers and capital markets in a way that addresses the weaknesses of the old system. In light of the central role that the GSEs played, and still play, any such analysis must pay particular attention to how those institutions should evolve.

The mortgage market and mortgage securitization in the financial crisis

The financial crisis that began in August 2007 has entered its second year. Its proximate cause was the end of the U.S. housing boom, which revealed serious deficiencies in the underwriting and credit rating of some mortgages, particularly subprime mortgages with adjustable interest rates. As subsequent events demonstrated, however, the boom in subprime mortgage lending was only a part of a much broader credit boom characterized by an underpricing of risk, excessive leverage, and the creation of complex and opaque financial instruments that proved fragile under stress. The unwinding of these developments is the source of the severe financial strain and tight credit that now damp economic growth.

Although problems with mortgage origination were not the only cause of the crisis, mortgage markets have been deeply affected. Banks and thrifts are still making new mortgage loans, but they have tightened terms considerably, essentially closing the private market to borrowers with weaker credit histories. Importantly, with the securitization market for private-label mortgage-backed securities shut down, Fannie Mae, Freddie Mac, and Ginnie Mae currently are the only conduits through which mortgages can be securitized and sold to investors. By contrast, in 2005, these three entities represented only about 50 percent of the securitization market.

The ability of Fannie, Freddie, and Ginnie to continue to securitize mortgages has largely depended on the confidence of investors that the government stands behind these organizations. As such, it was very significant when signs emerged in midsummer that investors were beginning to lose confidence in Fannie and Freddie. As investors became increasingly concerned about the capital positions of these companies, the risk increased that they would not be able to roll over their debt as needed to finance their portfolios and purchase new loans. Eroding investor confidence in the GSEs endangered not only the U.S.

mortgage market but the financial system more generally, given the enormous quantities of the companies' debt outstanding in private and public portfolios around the world.

At the recommendation of the Administration, the Congress subsequently passed a bill that, among other things, created a new and stronger regulator for the GSEs, the Federal Housing Finance Agency (FHFA), and provided the Treasury with powers to purchase GSE debt and equity. The Federal Reserve worked closely with the FHFA, the Treasury, and the Office of the Comptroller of the Currency (OCC) to assess the financial condition of Fannie and Freddie, including assessing the capacity of the firms to absorb potential losses stemming from the rapid deterioration evident in single-family mortgages and mortgage-related private-label securities. The observations of Federal Reserve and OCC staff supported the view of the director of the FHFA that both firms were operating in an unsafe and unsound condition. In light of these findings, the director of the FHFA placed Fannie and Freddie into conservatorship on September 7. At the same time, the Treasury committed to making significant capital and liquidity support available to the GSEs to ensure the continued safety of their senior and subordinated debt and their mortgage-backed securities. The Federal Reserve endorsed those actions as consistent with maintaining financial stability, supporting the housing market, and protecting the taxpayer.

The initial market reactions were positive. Funding costs for the GSEs declined sharply, as did spreads related to mortgage pricing. Moreover, the process of securitizing conforming mortgages remained robust, and the tens of thousands of investors in GSE debt and mortgage-backed securities have been reassured that their investments are safe. More recently, however, markets for GSE debt and mortgages have again come under some stress because of the widespread dislocations in financial markets generally.

Looking beyond the immediate concerns, I agree with Secretary Paulson that the conservatorships of Fannie Mae and Freddie Mac can usefully be viewed as a "time out" – one that will give everyone involved, especially the Congress, the opportunity to reconsider the appropriate roles of Fannie and Freddie in the U.S. mortgage market. Key objectives of that reconsideration include both minimizing systemic risk and putting in place the most efficient mechanism possible for providing the mortgage credit necessary to sustain homeownership and a healthy housing sector. To address these issues, we must consider both the part played by securitization in the mortgage market and the role of the government and government-sponsored entities in facilitating securitization.

The ability of financial intermediaries to sell the mortgages they originate into the broader capital market by means of the securitization process serves two important purposes: First, it provides originators much wider sources of funding than they could obtain through conventional sources, such as retail deposits; second, it substantially reduces the originator's exposure to interest rate, credit, prepayment, and other risks associated with holding mortgages to maturity, thereby reducing the overall costs of providing mortgage credit.

Developing an effective securitization model is not easy – according to one economic historian, mortgage securitization schemes were tried and abandoned at least six times between 1870 and 1940.¹ Eventually, experience provided three principles for successful mortgage securitization. First, for the ultimate investors to be willing to acquire and trade mortgage-backed securities, they must be persuaded that the credit quality of the underlying mortgages is high and that the origination-to-distribution process is managed so that originators, such as mortgage brokers and bankers, have an incentive to undertake careful underwriting. Second, because the pools of assets underlying mortgage-backed securities have highly correlated risks, including interest rate, prepayment, and credit risks, the

¹ See Kenneth Snowden (1995), "Mortgage Securitization in the United States: Twentieth Century Developments in Historical Perspective," in Michael D. Bordo and Richard Sylla, eds., *Anglo-American Financial Systems: Institutions and Markets in the Twentieth Century* (New York: McGraw-Hill).

institutions and other investors that hold these securities must have the capacity to manage their risks carefully. Finally, because mortgage-backed securities are complex amalgamations of underlying mortgages that may themselves be complex to price, transparency about both the underlying assets and the mortgage-backed security itself is essential.

During the early phases of the development of the subprime mortgage market, most lenders and investors followed these principles. Investors readily understood the simple senior/subordinated structure, and substantial useful information was provided about the subprime pools. However, during the credit boom period in the United States, worldwide demand for assets of perceived high quality became intense. Incentives to properly underwrite and evaluate new mortgage credit weakened, and many investors became over-reliant on credit ratings. To meet investor demand for customized products, the securities became increasingly complex. Although highly sophisticated methods for sharing risk were developed, not enough attention was paid to the risk that housing markets might turn down sharply across a range of geographical areas. The rapid rise in early payment defaults in the fall of 2006 signaled that something had gone wrong. As investors lost confidence, significant flaws in the securitization process, including inadequate risk management and disclosure as well as excessive complexity, became apparent.

Perhaps the recent mortgage cycle will be remembered as just another failed episode of financial innovation. But one feature that makes it different from previous episodes was the relative success of government-sponsored securitization. Fannie Mae and Freddie Mac continued to produce and sell significant quantities of mortgage-backed securities to secondary-market investors throughout the period of turmoil. Their ability to continue to securitize when private firms could not did not appear to result from superior business models or management. Instead, investors remained willing to accept GSE mortgage-backed securities because they continued to believe that the government stood behind them. That experience suggests that, at least under the most stressed conditions, some form of government backstop may be necessary to ensure continued securitization of mortgages. However, as I will discuss, that government support can take many forms.

The future of the GSEs: improving upon the existing model?

How can we ensure that, in the future, mortgage securitization will be feasible even during highly stressed financial conditions? In the remainder of my remarks, I will consider some alternative approaches that focus largely, but not exclusively, on the potential role of the GSEs.

One approach would be to try to return Fannie and Freddie to their pre-conservatorship status. In considering this possibility, we should remind ourselves of the problems that have surfaced with the traditional GSE structure. First, the existing GSE model involves an inherent conflict between the objectives of the companies' private shareholders and the objectives of public policy. For example, the GSEs were reluctant earlier this year to raise capital and to expand their operations, even though this would have helped financial and macroeconomic stability at a time of much-reduced mortgage availability. The GSEs' disinclination to support the mortgage market was motivated by the fact that raising additional capital would have diluted the values of the holdings of the existing private shareholders. Second, during the past 15 years or so, the GSEs have operated with high leverage compared with other large financial institutions. This relative lack of capital ultimately proved their downfall. Of course, to the extent that the debt of the GSEs is perceived to be guaranteed by the government, it is in the shareholders' interest for the companies to increase leverage whenever possible. Third, it is also in the shareholders' interest for the GSEs to maximize the size of their portfolios to take advantage of the differential between the returns to mortgage-backed securities and the low GSE funding

costs arising from the perceived guarantee. However, as the Federal Reserve has argued for many years, the enormous GSE portfolios pose risks to financial stability.

As a result of the concerns I just outlined, the Federal Reserve Board in the past has advocated a three-part approach to GSE oversight: a strong regulator, capital standards adequate for the risks the GSEs assume, and an explicit and measurable public purpose for the GSEs' portfolios.² Progress has been made in meeting some of these conditions. The Housing and Economic Recovery Act of 2008 established a strong regulator with the power to establish more-robust capital standards and with some authority over the size of GSE portfolios. In particular, the law directs the new regulator to establish criteria to ensure that the portfolios are consistent with the mission and safe and sound operations of the enterprises. However, the public purpose of the GSE portfolios, at least during times when financial conditions are relatively normal, has not been fully clarified, and systemic risks will remain as long as the portfolios remain large. Moreover, the recent legislation does not fully resolve the fundamental conflict between private shareholders and public purpose that is the source of many concerns about the GSEs. Considering some alternative forms for the GSEs (or for mortgage securitization generally) during this "time out" thus seems worthwhile. Needless to say, however, even if alternative organizational structures are considered for the future, the U.S. government's strong and effective guarantee of the obligations issued under the current GSE structure must be maintained.

Linking the mortgage market and the capital markets: some alternative approaches

How might the GSEs be reorganized in the future to address the problems that have been revealed with their traditional structure? Are there approaches that do not rely on GSEs to create a robust mortgage securitization market that will function in bad times as well as good?

Privatization. One option that has been discussed is to privatize the GSEs and let them compete in the market as private mortgage insurers and securitizers. To eliminate the presumption of government support and to stimulate competition, some proposals advocating privatization call for breaking up the companies into smaller units before privatizing them.

Privatization would solve several problems associated with the current GSE model. It would eliminate the conflict between private shareholders and public policy and likely diminish the systemic risks as well. Other benefits are that private entities presumably would be more innovative and efficient than a government agency, and that they could operate with less interference from political interests.

However, whether the GSE model is viable without at least implicit government support is an open question. From a public policy perspective, a greater concern with fully privatized GSEs is whether mortgage securitization would continue under highly stressed financial conditions. As I have noted, almost no mortgage securitization is occurring today in the absence of a government guarantee. So, if the GSEs were privatized, it would seem advisable to retain some means of providing government support to the mortgage securitization process during times of turmoil. One possible approach, suggested by Federal Reserve Board economists Diana Hancock and Wayne Passmore, is to create a government bond insurer, analogous to the Federal Deposit Insurance Corporation (FDIC).³ This new agency would offer, for a

² See Ben S. Bernanke (2007), "[GSE Portfolios, Systemic Risk, and Affordable Housing](#)," speech delivered at the Independent Community Bankers of America's Annual Convention and Techworld (via satellite), Honolulu, Hawaii, March 6.

³ See Diana Hancock and Wayne Passmore (2008), "[Three Mortgage Innovations for Enhancing the American Mortgage Market and Promoting Financial Stability](#)," preliminary draft presented at the UC Berkeley-UCLA symposium The Mortgage Meltdown, the Economy, and Public Policy, Berkeley, Calif., October 31.

premium, government-backed insurance for any form of bond financing used to provide funding to mortgage markets. For example, debt and mortgage-backed securities issued by the (privatized) GSEs as well as mortgage-backed bonds issued by banks would be eligible for the guarantee. That approach would clearly limit the government's exposure while making the benefits of explicit government support available to the market.

Covered bonds. GSE-type organizations are not essential to successful mortgage financing; indeed, many other industrial countries without GSEs have achieved homeownership rates comparable to that of the United States. One device that has been widely used is covered bonds. Covered bonds are debt obligations issued by financial institutions and secured by a pool of high-quality mortgages or other assets. Today, covered bonds are the primary source of mortgage funding for European banks, with about \$3 trillion outstanding. These instruments are subject to extensive statutory and supervisory regulation designed to protect the interests of covered bond investors from the risks of insolvency of the issuing bank. Legislation typically specifies the types of collateral permitted in the cover pool, defines a minimum over-collateralization level, provides certainty of principal and interest payments to investors in the case of insolvency, and requires disclosures to regulators or investors or both. In addition, the government generally provides strong assurances to investors by having bank supervisors ensure that the cover pool assets that back the bonds are of high quality and that the cover pool is well managed.

Issuance of covered bonds in Europe has not been unaffected by the financial turmoil, and at times the interest rate spreads relative to government debt have risen. But generally speaking, European banks have been able to find buyers for these bonds. For example, issuance of covered bonds totaled more than \$16 billion in September 2008, although this amount represents a decline of 45 percent from a year earlier. Moreover, interest rate spreads on covered bonds have typically been much narrower than the comparable spreads on senior unsecured debt and mortgage-backed securities. This relationship has continued to hold throughout the market turmoil, perhaps because of the comprehensive regulatory and statutory frameworks associated with covered bonds in most European countries.

To date, not many covered bonds have been issued in the United States, for several reasons. First, the Federal Home Loan Banks (FHLB) can tap capital markets and provide cost-effective funding for mortgage assets. In addition, as a source of financing, covered bond issuance today is not generally competitive with FHLB advances. Second, Fannie Mae and Freddie Mac have traditionally securitized U.S. prime mortgage assets. The GSEs' implicit government backing and their scale of securitization operations have made it difficult for banks to use covered bonds to finance their own prime mortgages. Third, the United States does not have the extensive statutory and supervisory regulation designed to protect the interests of covered bond investors that exists in European countries. To this end, the recent introduction of the FDIC policy statement on covered bonds and the Treasury covered bond framework were constructive steps. Finally, the cost disadvantage of covered bonds relative to securitization through Fannie and Freddie is increased by the greater capital requirements associated with covered bond issuance.

Covered bonds do help to resolve some of the difficulties associated with the originate-to-distribute model. The on-balance-sheet nature of covered bonds means that the issuing banks are exposed to the credit quality of the underlying assets, a feature that better aligns the incentives of investors and mortgage lenders than does the originate-to-distribute model of mortgage securitization. The cover pool assets are typically actively managed – non-performing assets are replaced with similar, but performing assets – ensuring that high-quality assets are in the cover pool at all times and providing a mechanism for loan modifications and workouts. The structure used for such bonds tends to be fairly simple and transparent. These features, together with the demonstrated success of covered bonds in other countries, make this approach attractive. That said, given longstanding features of the U.S. system such as the prominent role of the Federal Home Loan Banks, covered bonds may remain an unattractive option to U.S. banks.

Even closer ties to the government, with or without shareholders. A third approach, besides privatization and covered bonds, is to tie the government-sponsored enterprises even more closely to the government. In doing so, the choice must be made whether to continue to allow an element of private ownership in these organizations.

A public utility model offers one possibility for incorporating private ownership. In such a model, the GSE remains a corporation with shareholders but is overseen by a public board. Beyond simply monitoring safety and soundness, the regulator would also establish pricing and other rules consistent with a promised rate of return to shareholders. Public utility regulation itself, of course, has numerous challenges and drawbacks, such as reduced incentives to control costs. Nor does this model completely eliminate the private-public conflict of the current GSE structure. But a public utility model might allow the enterprise to retain some of the flexibility and innovation associated with private-sector enterprises in which management is accountable to its shareholders. And, although I have noted the problems associated with private-public conflict, that conflict is not always counterproductive; an entity with private shareholders may be better able to resist political influences, which, under some circumstances, may lead to better market outcomes.

If private shareholders are excluded, several possibilities worth exploring remain. One approach would be to structure a quasi-public corporation without shareholders that would engage in the provision of mortgage insurance generally. Here, perhaps, one might envision the consolidation of the GSEs and the FHA, with all securitization undertaken by a Ginnie Mae-type organization. Private mortgage insurers could still participate in this framework, though the role of the government in supporting mortgage insurance and securitization would become more explicit than it is today. Finally, one might consider cooperative ownership structures, where the originators of mortgages must hold the capital in the government-sponsored enterprises, analogous to the current structure of the Federal Home Loan Banks.

Conclusion

Regardless of the organizational form, we must strive to design a housing financing system that ensures the successful funding and securitization of mortgages during times of financial stress but that does not create institutions that pose systemic risks to our financial markets and the economy. Government likely has a role to play in supporting mortgage securitization, at least during periods of high financial stress. But once government guarantees are involved, the problems of systemic risks and contingent taxpayer involvement must be dealt with clearly and credibly. Achieving the appropriate balance among these design challenges will be difficult, but it nevertheless must be high on the policy agenda for financial reform.