



HOUSE OF CARDS:
Reforming America's
Housing Finance System

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REFORMING THE U.S. MORTGAGE MARKET THROUGH PRIVATE MARKET INCENTIVES

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1 INTRODUCTION

FOR ALMOST 40 years, Fannie Mae and Freddie Mac dominated the U.S. mortgage market based on their status as government-sponsored enterprises (GSEs). By 2008, however, the U.S. mortgage and housing markets had crashed, and the two GSEs survived only as the result of a government bailout and conservatorship.¹ At year-end 2009, the GSEs' total debt and mortgage-backed securities (MBS) obligations had reached \$5.5 trillion, and the cost to taxpayers of the GSE bailout could reach \$400 billion.²

Although the subprime crash devastated the GSEs, their dominance of the U.S. mortgage market actually expanded: During 2009 and 2010 as much as 70 percent of mortgage-market activity was carried out through the GSEs, and another 25 percent was guaranteed through the Federal Housing Administration (FHA) and U.S. Department of Veterans Affairs (VA).³ This expanded government role reflects

the intense use of the GSEs and of the FHA and Government National Mortgage Association (GNMA) as policy instruments to revive the mortgage market.⁴ Some commentators suggest that a private market for U.S. mortgages is no longer possible. More accurately, however, most private mortgage-market activity has simply been crowded out by the now heavily subsidized government programs.

The goal of this paper is to look beyond the current crisis and analyze proposals for long-term reform of the U.S. mortgage market. Following the structure of this volume, it is assumed the GSEs are abolished and play no further role within the U.S. mortgage market.⁵ This chapter lays out a specific proposal to reform the U.S. mortgage market by applying purely private-market incentives for mortgage originators, securitizers, and investors while retaining the FHA and U.S. Department of Housing and Urban Development (HUD) programs in support of lower-income, first-time, and other special classes of home buyers.⁶ The analysis develops the case that private

* I thank the three anonymous reviewers of this chapter for their useful and constructive comments.

1. Dwight M. Jaffee, "The Role of the GSEs and Housing Policy in the Subprime Crisis" (testimony before the Financial Crisis Inquiry Commission, February 26, 2010), http://fcic-static.law.stanford.edu/cdn_media/fcic-testimony/2010-0227-Jaffee.pdf.
2. Government Accountability Office (GAO), "Fannie Mae and Freddie Mac: Analysis of Options for Revising the Housing Enterprises' Long-Term Structures," GAO Report 09-782, September 10, 2009, <http://www.gao.gov/products/GAO-09-782>.
3. "Mortgage Originations Surge in Third Quarter as Record Low Interest Rates Spur Refinancing," *Inside Mortgage Finance* 27, no. 41, October 28, 2010.
4. The FHA and GNMA reside within the U.S. Department of Housing and Urban Development (HUD) and provide direct support for the mortgage market. There are also many indirect mortgage and housing policies, the quantitatively most important of which is the federal tax deductibility of household mortgage interest payments. For surveys of the full range of government programs in support of the U.S. housing and mortgage markets, see Dwight M. Jaffee and John M. Quigley, "Housing Subsidies and Homeowners: What Role for Government-Sponsored Enterprises?" (Brookings-Wharton Papers on Urban Economics, 2007), 103–30; and Dwight M. Jaffee and John M. Quigley, "Housing Policy, Mortgage Policy, and the Federal Housing Administration," *Measuring and Managing Federal Financial Risk*, ed. Deborah Lucas (Chicago: University of Chicago Press, National Bureau of Economic Research, 2010), 97–125.
5. Fannie Mae and Freddie Mac would not be the first GSEs to lose that status. Sallie Mae, the GSE supporting the student loan market, was successfully privatized in 1996; see Michael J. Lea, "Privatizing a Government Sponsored Enterprise: Lessons from the Sallie Mae Experience" (Policy Brief 2006-PB-09, Networks Financial Institute, Indiana State University, April 2006), http://www.networksfinancialinstitute.org/Lists/Publication%20Library/Attachments/29/2006-PB-09_Lea.pdf. Although this chapter does not focus on the Federal Home Loan Bank System (FHLBS), there is merit in the recent white paper proposal by the Treasury and HUD that argues the FHLBS should be allowed to continue to provide support for the mortgage market activities of small and medium-sized U.S. banks. See U.S. Treasury and HUD, "Reforming America's Housing Finance Market: A Report to Congress," February 2011.
6. These special classes include a variety of programs in support of multifamily housing for which the GSEs played a leading role. For more details on these programs, see Ingrid Gould Ellen, John Napier Tye, and Mark A. Willis, "Improving U.S. Housing Finance through Reform of Fannie Mae and Freddie Mac: Assessing the Options," Furman Center for Real Estate and Urban Policy, New York University, May 2010.

incentives and institutions are sufficient to create a functional and efficient mortgage market, while eliminating the need for taxpayer subsidies and bailouts. The discussion marshals the evidence that stable housing and mortgage activity can be sustained with minimal governmental intervention, including data demonstrating the success in western European housing and mortgage markets. The discussion concludes with an evaluation of alternative proposals to reform the U.S. mortgage market.

2

REFORMING THE U.S. MORTGAGE MARKET WITHOUT GSEs

REFORMING THE U.S. mortgage market continues to be a critical policy issue. While the Dodd-Frank 2010 Financial Reform Act took no significant action in this regard, the U.S. Department of the Treasury and HUD recently released a new white paper that provides a framework for mortgage-market reform.⁷ The proposal evaluated in this section fits within the Treasury/HUD white paper framework as the “private-market” solution to reorganizing the U.S. mortgage market, with private-market incentives and institutions taking the place of the GSEs. Success will be achieved if the private markets create stable and accessible mortgage credit for U.S. borrowers without requiring taxpayer subsidies or bailouts.

A Proposal to Reform the U.S. Mortgage Market along Private-Market Principles⁸

THE PROPOSAL ADVOCATED here would be implemented with just two actions:

1. Reduce the conforming loan limit—the maximum loan the GSEs may acquire or guarantee—each year until the limit reaches zero and

GSE activity disappears. If the conforming loan limit is reduced by \$100,000 per year, it will reach zero in approximately seven years. This also approximates the average duration of a U.S. mortgage, so most of the mortgage portfolios currently on GSE balance sheets would be off by that time as well. Steadily reducing the conforming limit has three further advantages:

- It provides an orderly and smooth transition. In particular, private-market lenders and investors will know the GSE domain is shrinking and should be ready to substitute for it.
 - The substitution of private-market activity for the GSEs would be observable. If it were failing to occur, alternative actions could be taken.
 - The GSE subsidy is removed first from the largest mortgages, thereby maintaining the GSE benefit longest for lower-income borrowers.
2. The existing FHA and HUD programs supporting lower-income households continue under this proposal. These programs will provide a safety net should the private-market system fail to satisfy borrower needs as the GSEs retrench. These programs would also be available should a future financial crisis require new, temporary government support of the mortgage market.

GSE activity could also be reduced by requiring the GSEs to steadily raise their guarantee fees until they are priced out of the market.⁹ This device could substitute for, or expand upon, the proposal to reduce the conforming loan limits. The discussion here focuses on the proposal to reduce the conforming loan size because it is simple and readily verifiable.

7. U.S. Treasury and HUD, “Reforming America’s Housing Finance Market.”

8. Dwight M. Jaffee, “How to Privatize the Mortgage Market,” *Wall Street Journal*, October 25, 2010.

9. Edward L. Glaeser and Dwight M. Jaffee, “What to Do about Fannie and Freddie?” *Economists’ Voice* 3, no. 7, September 2006, <http://www.bepress.com/ev/vol3/iss7/art5>; Edward L. Glaeser, “When Privatization Increases Public Spending,” (*Economix Blog*) *New York Times*, November 9, 2010, <http://economix.blogs.nytimes.com/2010/11/09/when-privatization-increases-public-spending/>; and Dwight M. Jaffee, “The Future Role of Fannie Mae and Freddie Mac in the U.S. Mortgage Market” (paper, AEA/AREUEA meetings, Atlanta, GA, January 3, 2010), <http://faculty.haas.berkeley.edu/jaffee/Papers/JaffeeGSEAtlanta.pdf>.

The Functional Structure of the U.S. Mortgage Market

TO CREATE ACCESSIBLE credit, a mortgage market must coordinate three basic functions:

1. originating new mortgages,
2. designing mortgage contracts and setting underwriting standards, and
3. placing the originated mortgages with long-term investors.

This section addresses how these activities are currently carried out and provides introductory comments on how they might change under a private mortgage market.

Origination of New Mortgages

THE ORIGINATION OF new mortgages in the United States has always been carried out entirely by private firms, even in the presence of the GSEs and the government's FHA and VA programs. In fact, the GSEs' charters prohibit them from originating mortgages, and the FHA and VA programs only insure mortgages that are originated to their specifications by private-market firms. Terminating the GSEs will, thus, have no direct impact on which firms will originate U.S. mortgages.

Mortgage Design and Underwriting Standards

THE GSEs HAVE always set the contract design and underwriting standards for the loans they acquired.¹⁰ In the reformed system, the contract design and standards will be set by the private market alone. Since mortgages will be originated only if there are willing final investors, these investors will ultimately set the designs and standards. Given that a significant share of all U.S. mortgage originations has always been placed *outside* the GSEs, the change is

more of a degree than of a kind. Specifically, as the private market replaces the GSEs, mortgage choice will expand and overall underwriting standards for U.S. mortgages are likely to rise significantly, that is, mortgages will generally be safer.

The Mortgage Investment Function

THE THIRD FUNDAMENTAL mortgage-market function is to place the originated mortgages with long-term investors. Figure 1 shows the percentage of all U.S. home mortgages and related securities held by the three primary investor categories—depository institutions, market investors, and the GSEs—at the end of each decade as available over the last 60 years. The year 2010 represents the most recently available year-end data. Figure 1 is unique in that it integrates the holdings of whole mortgages and MBS and then computes the respective market shares as a percentage of total home-mortgages outstanding.

Between 1950 and 1980, the depository institutions—commercial banks, thrift institutions, and credit unions—held the vast majority of home mortgages, almost entirely as whole mortgages. The depository institutions were also the primary originators of home mortgages.¹¹ The depository institutions thus combined the activities of origination and investing. This “make them and hold them” model completely dominated the U.S. mortgage market through 1970.

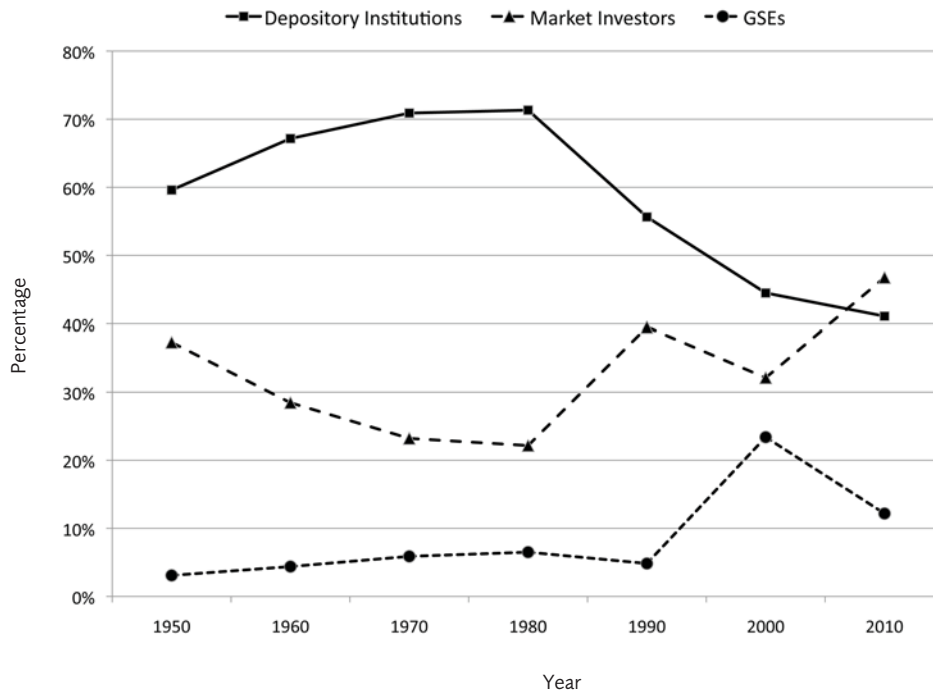
Several major events occurred in the U.S. mortgage markets around 1970:

1. In 1968, GNMA was created within HUD to issue the first modern MBS. GNMA only securitizes FHA and VA mortgages.
2. Also in 1968, Fannie Mae was transformed from a government office within HUD to a public-private hybrid; it became a GSE.

10. Over time, this standard became automated as part of computer software maintained by both GSEs—*LoanProspector* by Freddie Mac and *Desktop Originator and Underwriter* by Fannie Mae. Using this software, a mortgage originator would know if a GSE would accept a specific pool of mortgages.

11. Life insurers were also significant and expanding home-mortgage lenders in the United States until 1970, with a market share about equal to that of commercial banks. Thrift institutions were the single largest lender group through 1970.

FIGURE 1: SHARE OF TOTAL WHOLE MORTGAGES AND MBS, BY HOLDER CLASS



Sources: Federal Reserve, Flow of Funds Accounts of the United States (2010), <http://www.federalreserve.gov/RELEASES/z1/Current/data.htm>; Federal Housing Finance Agency, Report to Congress (2009); Fannie Mae, Annual Report (2010); and Freddie Mac Annual Report (2010).

- In 1970, Freddie Mac was created as a second GSE.¹²

These three events initiated the mortgage securitization that has dominated the U.S. mortgage markets ever since. Following the prototype created by GNMA, Freddie Mac quickly added its own brand of MBS, called PC, and by the early 1980s Fannie Mae was also issuing its own MBS. Only the GNMA MBS had an official government guarantee against losses from borrower default, but the GSEs' MBS traded as if there were a strong, albeit implicit, government guarantee. Indeed, the three sets of MBS became

collectively known as “agency” MBS. As the last step, by the mid-1980s, private-market firms were creating their own MBS brands, known as Private Label Securities (PLS). Because these securities had no government guarantee of any form, they applied the innovation of structured finance, whereby the default risk was allocated differentially across the various tranches, with the senior tranche protected by the subordinated junior tranche. The most knowledgeable and risk-tolerant investors purchased the junior tranche—thus taking on the first-loss position—and were compensated with an appropriately higher interest rate.

12. The banks in the FHLBS are also GSEs, but in this paper “GSE” refers only to Fannie Mae and Freddie Mac. As noted earlier, while the FHLBS banks are not the focus of this chapter, there is merit in allowing this system to continue to provide support for the mortgage-market activities of small and medium U.S. banks.

The key fact of Figure 1 is the dominance by 2010 of market investors and commercial banks as holders of nearly all U.S. whole mortgages and MBS—a combined 88 percent market share—while the retained mortgage portfolios of Fannie Mae and Freddie Mac represent only 12 percent of the total. The mortgage investments of the “market investors” in Figure 1 are computed as the residual category. Their growth begins in 1980 and is almost entirely represented by MBS positions, both agency MBS and PLS MBS.

This investor category includes mutual funds, real estate investment trusts, property and life insurers, pension and retirement funds, and foreign investors. The list demonstrates how mortgage-backed securitization achieved the benefit of expanding the class of investors far beyond the depositories who, otherwise, had to hold all the whole-home mortgages they originated directly. By 2010, these market investors were holding 47 percent of all U.S. home mortgages.

The implication is that gradually running off the GSE mortgage portfolios—over the approximately seven-year period proposed here—should be accomplished without any major stress in the flow of funds for U.S. mortgages. It should not be a serious problem for either the market investors or the commercial banks to replace the 12 percentage point market share left by terminating the GSEs.¹³ For example, in the European mortgage market, commercial banks hold the majority of home mortgages, funded either with deposits or, to a significant degree, by covered bonds issued to capital-market investors. Covered bonds provide an alternative instrument to securitization for funding bank-originated mortgages with financial-market resources.

In this context, it is important to recognize that private-label securitization was highly successful from its origins in the mid-1980s until the subprime mortgage crash. Through 2006, if PLS MBS credit ratings changed at all, the changes were generally

upgrades, not downgrades. The same is true for the loan securitizations that expanded into auto loans, credit card loans, and commercial MBS. The losses suffered on subprime MBS actually represent the first time large losses had hit any major class of U.S. securitizations. The subprime crash does not signify a problem with securitization per se, but with the poor quality of the underlying subprime mortgages; indeed, large losses occurred on subprime mortgages whether the loans were securitized or not. As a result, securitization continues to be an effective instrument for transferring mortgages from originators to third-party investors, and securitized mortgage-pool performance is likely to return to its historically positive record as soon as the quality of the underlying mortgages does the same.

In summary, all mortgage investments start in the capital markets—whether through bank depositors, covered bonds, the GSE-retained portfolios, or direct MBS investments—and a restriction in one channel is generally and easily offset by growth in the other channels. For this reason, elimination of the GSEs’ on-balance-sheet portfolios is a minor concern.

The Performance of the U.S. Mortgage Market without GSEs

WHILE ABOLISHING THE GSEs creates no significant flow-of-funds issues, the quality of the mortgage and MBS assets that will be available in the market remains in question. At year-end 2010, home mortgage MBS outstanding totaled \$6.6 trillion, of which \$4.3 trillion or 65 percent, had been issued by the two GSEs. Most investors in these GSE MBS relied on the associated implicit Treasury guarantee, so they ignored the default risk embedded in the underlying mortgages. Following the GSE Conservatorships in September 2008, the implicit guarantees became effective, essentially making these investors home free. Under the proposal here, however, these assets

13. In particular, as the GSE-retained mortgage portfolios run off, so will the debt that funded these portfolios. The investors in this debt are one example of a set of investors that could replace the GSEs as mortgage holders.

will mature and new MBS will be issued by private firms without any form of government guarantee. What will happen then? The answer comes in two parts.

The first part assumes that the quality of U.S. mortgages remains unchanged. In this case, investors must directly face the default risk embedded in these mortgages and, therefore, will purchase them only with a higher yield. As a result, U.S. mortgage interest rates will rise. Most empirical studies indicate that the mortgage interest rates on GSE-conforming mortgages were approximately 25 basis points (bps) below the interest rates on equivalent mortgages that could not be acquired or guaranteed by the GSEs. Some studies suggest an even lower differential between GSE and private mortgages.¹⁴ Even using the 25 bps spread, however, the amount seems quite minor given that mortgage interest rates commonly fluctuate by full percentage points as the result of macroeconomic shifts in the financial markets. Furthermore, the GSE subsidy came at a huge cost to U.S. taxpayers: current estimates suggest that the final GSE losses may cost U.S. taxpayers upwards of \$400 billion. Thus, a 25 bps cost seems a low price to pay to avoid the taxpayer subsidies and costs of maintaining the GSEs.

The second part of the answer is even more optimistic. It reflects the fact that private-market lenders and investors will pay much more attention to the quality of new mortgage loans than they did under the GSE-dominated market. The GSEs discouraged risk-based pricing in the mortgage market: they either accepted or rejected the mortgage loans they evaluated. It was basically a pass-fail system. As

most professors can attest, this leads to lower overall performance compared to a system in which superior performance is properly rewarded. A private-market system will charge lower mortgage rates on safer mortgages and higher mortgage rates on riskier mortgages. The outcome will be a market with overall safer mortgages, which implies lower overall mortgage interest rates.

Of course, the question of whether the shift to safer mortgages will actually dominate the loss of the 25 bps subsidy provided by the GSEs to conforming mortgage borrowers is an empirical one. Fortunately, there is a large and long-standing marketplace that can provide useful insights into the likely answer: most of the countries of western Europe have mortgage markets that have operated for many years with minimal government intervention—and certainly without government intervention at the level of the U.S. GSEs. The mortgage interest rates in these countries are generally lower than those created by the GSE-dominated system in the United States. In fact, the performance of the western European mortgage and housing markets is superior to that of the United States on basically all relevant measures.

3 WESTERN EUROPEAN MORTGAGE AND HOUSING MARKETS¹⁵

IT HAS BEEN more than 30 years since the U.S. mortgage markets operated without a significant presence of GSEs, so an immediate question is whether a private market can adequately provide the mortgage

14. Brent W. Ambrose, Michael LaCour-Little, and Anthony B. Sanders, "The Effect of Conforming Loan Status on Mortgage Yield Spreads: A Loan Level Analysis," *Real Estate Economics* 32, no. 4 (2004): 541–69. Some recent press reports suggest mortgage rates could rise as much as a full percentage point, but I know of no studies that document an increase of anywhere near this amount.

15. A parallel paper by Michael Lea uses a different data set to provide a comparable survey of mortgage markets for developed countries around the world. The results garnered from the two data sets are virtually in complete concordance. See Michael Lea, "International Comparison of Mortgage Product Offerings," Research Institute for Housing America and Mortgage Bankers Association, September 2010, http://www.housingamerica.org/RIHA/RIHA/Publications/74023_10122_Research_RIHA_Lea_Report.pdf.

origination and investment services required by a large and dynamic housing market. Fortunately, the mortgage markets of western Europe have operated for decades with limited government intervention and, thus, provide a ready-made laboratory to observe the efficiency and effectiveness of essentially private housing and mortgage markets.¹⁶

The Performance of Western European Housing and Mortgage Markets¹⁷

TABLE 1 COMPARES the U.S. and western European mortgage markets for a range of quantitative attributes from 1998 to 2010 based on a comprehensive database of housing and mortgage data for 15 European countries from the European Mortgage Federation.¹⁸

Column 1 compares the 2009 owner-occupancy rates for the United States and European countries. The U.S. value is 67.2 percent, which is just below its peak subprime boom value. It is frequently suggested that the high rate of homeownership results from the large U.S. government support of the mortgage market, including the GSEs. It is revealing that the U.S. rate is just at the median—eighth out of the 16 developed countries—and equals the average value for the European countries precisely. Further, the lower owner-occupancy rates in some of the countries, Germany for example, appear to be the result of cultural preferences rather than government inaction. A full analysis of the determinants of owner-occupancy rates across countries should also control for the age distribution of the population, since younger households and possibly the oldest households may have lower ownership rates in all countries. Chirui

and Jappelli provide a start in this direction, showing that lower down-payment rates are a significant factor encouraging owner occupancy after controlling for the population age structure in a sample of 14 Organisation for Economic Co-operation and Development (OECD) countries.¹⁹ The United States has also generally benefitted from very low down-payment rates, but it still has an average ownership rate, reinforcing the conclusion that government interventions largely have been ineffective in raising the U.S. homeownership rate relative to its peers.

Column 2 measures the volatility of housing construction activity from 1998 to 2009 based on the coefficient of variation of housing starts as a measure of relative volatility. U.S. relative volatility is the fifth highest of the 16 countries, implying that government interventions have failed to reduce U.S. housing cycles relative to those in western Europe.

Column 3 measures the volatility of changes in house prices based on the standard deviation of the annual house-price appreciation from 1998 through 2009. Here the United States stands fourth, meaning the country has a relatively high rate of house-price volatility. This negative result is all the more significant because the United States is much larger than any of the individual western European countries and, thus, regional diversification should have lowered observed U.S. house-price volatility.

Column 4 compares the level of mortgage interest rates in western Europe and the United States using “representative variable mortgage rates” for western Europe and the Freddie Mac one-year adjustable-rate mortgage (ARM) commitment rate for the United

16. It may seem surprising that the “socialized” countries of western Europe have limited government interventions in their housing and mortgage markets. One explanation is that such interventions would likely violate the European Union prohibitions against countries using subsidies to provide unfair advantages to local agents and firms.

17. For an extensive review of housing finance in the European Union countries, see European Central Bank, “Housing Finance in the Euro Area” (Occasional Paper Series no. 101, March 2009).

18. European Mortgage Federation, *Hypostat*, 2009, European Mortgage Federation website, <http://hypo.org/Content/default.asp?PageID=524>.

19. Maria Conceeta Chirui and Tullio Jappelli, “Financial Market Imperfections and Home Ownership: A Comparative Study,” *European Economic Review* 47 (2003): 857–75.

TABLE 1: THE PERFORMANCE OF EUROPEAN MORTGAGE MARKETS IN COMPARISON WITH THE U.S., 1998 TO 2010¹

Country	Rate of Owner occupancy Latest Year (%)	Coefficient of Covariation Housing Starts (%) ⁽²⁾	Standard Deviation of House-price Inflation (%)	Mortgage Interest Rate Average Level (%)	Mortgage Interest Rate Average Spread (%) ⁽³⁾	Outstanding Mortgage-to-GDP Ratio 2010 (%)
Western Europe						
Austria	57.5	7.2	2.7	4.83	1.79	28.0
Belgium	78.0	15.2	7.4	5.61	2.58	46.3
Denmark	53.6	56.1	8.5	5.80	2.58	101.4
Finland	59.0	11.9	3.8	4.13	1.09	42.3
France	57.8	17.4	6.2	4.83	1.80	41.2
Germany	43.2	29.0	1.7	5.07	2.05	46.5
Ireland	74.5	99.2	14.2	4.32	1.15	87.1
Italy	80.0	25.7	3.4	4.70	1.56	22.7
Luxembourg	70.4	17.9	4.7	4.08	1.05	44.7
Netherlands	55.5	14.5	6.5	5.08	2.06	107.1
Norway	85.0	24.6	5.0	6.11	1.44	70.3
Portugal	74.6	35.5	2.9	4.43	1.35	66.3
Spain	85.0	93.0	8.1	4.16	1.08	64.0
Sweden	66.0	45.5	2.9	3.75	0.91	81.8
United Kingdom	66.4	25.0	6.8	5.12	0.93	85.0
European Average	67.1	34.5	5.6	4.80	1.56	62.3
United States	66.9	45.5	7.3	5.07	2.26	76.5
U.S. rank	8th of 16	3rd of 16	5th of 16	6th of 16	3rd of 16	6th of 16

NOTES:

(1) Unless noted otherwise, the data are all from European Mortgage Federation (2009), an annual fact book that contains comprehensive mortgage and housing market data for the years 1998 to 2009 for 15 Western European countries and the United States.

(2) Computation based on housing starts where available; all other countries use housing permits.

(3) The mortgage interest rate spread equals the mortgage interest rate (column 4) relative to the each country's 3-month Treasury Bill rate; Source OECD Economic Outlook Database.

States.²⁰ The column shows that the United States had the sixth highest average mortgage interest rate from 1998 to 2010. Since overall interest rates also vary across countries, column 5 shows the average spread between the mortgage rate and the Treasury-bill rate for each country. The United States ranks third highest based on the spread and exceeds the western European average by 70 bps. Of course, mortgage-contract terms, such as down-payment requirements, also vary by country, and the resulting variations in mortgage risk will be reflected in mortgage rates.²¹ Below, the paper returns to the question of underwriting standards in a reformed U.S. mortgage market. For now, the primary conclusion is that U.S. government mortgage-market interventions have failed to improve access to homeownership through the channel of lower mortgage rates.²²

Finally, column 6 shows the 2010 ratio of home mortgages outstanding to each country's annual GDP, a standard measure of the depth of a country's mortgage market. The U.S. ratio is 76.5 percent, putting it sixth within this group of 16 developed economies. A relatively high U.S. result is not surprising given the large mortgage subsidies provided through the GSEs and other channels. It is noteworthy that five western European countries achieved even higher ratios without substantial government interventions in their mortgage markets.²³

Mortgage defaults are a remaining—and important—mortgage-market attribute to consider when comparing western European and U.S. mortgage markets. Table 2 tabulates the available recent data on mortgages in arrears, impaired, or in foreclosure for available western European countries and the United States. The most dramatic difference between western Europe and the United States is in the foreclosure rate. The U.S. foreclosure rate at year-end 2009 was 4.58 percent for all mortgages and 3.31 percent for prime mortgages—not to mention 15.58 percent for subprime mortgages. In contrast, Spain and the United Kingdom are two of the most distressed countries, but their foreclosure rates are 0.24 percent and 0.19 percent, respectively. Ireland is the other western European country currently facing serious mortgage distress as shown by its high rate of mortgage arrears in Table 2. Ginsberg and Turner report, however, that actual foreclosure rates in Ireland remain very low.²⁴ More generally, the European Central Bank states, “borrowers in euro area countries do not generally have major incentives to default on a mortgage, since they remain personally liable for any difference between the value of the property and the amount of the loan.”²⁵

The clear conclusion is that European mortgage default activity is benign compared with the United States. To be clear, countries such as Iceland, Ireland,

20. Variable mortgage rates are the only data systematically available for Europe over the required time span and for all countries; see European Mortgage Federation, *Hypostat*, for detailed definitions. The Freddie Mac one-year ARM rate was chosen as the closest equivalent for the United States.

21. Peter Neuteboom, “A Comparative Analysis of the Net Cost of a Mortgage for Homeowners in Europe,” *Journal for Housing and the Built Environment* 19, no. 2 (2004): 169–86. Neuteboom has computed the net interest rate—the nominal interest rate adjusted for contractual, cost, and subsidy factors—for a range of European countries. Austria, Ireland, and Spain are the only countries for which the net interest rate is significantly higher than the nominal rate—about 100 bps in each country. It is unclear how U.S. mortgage rates would fare under the net interest rate criterion.

22. For confirmation of the conclusion that U.S. mortgage interest rates are generally higher than those in western Europe, see European Central Bank, “Housing Finance in the Euro Area,” 71.

23. Studies have noted that significant depth for a country's mortgage market requires a sound legal and accounting infrastructure. The countries in Table 1 all have such an infrastructure, but establishing this infrastructure is of fundamental importance for developing countries if they are also to create significant mortgage markets. See Veronica Cacadac Warnock and Francis E. Warnock, “Markets and Housing Finance,” *Journal of Housing Economics* 17 (2008):239–51; and Bertrand Renaud, “Mortgage Finance in Emerging Markets: Constraints on Feasible Development Paths,” *Mortgage Markets Worldwide*, Danny Ben-Sharar ed. (Hoboken, NJ: Wiley, 2009), 253–88.

24. Jodie Ginsberg and Lorraine Turner, “Analysis: Irish Mortgage Arrears Manageable—for Now,” Reuters, November 11, 2010, <http://www.reuters.com/article/idU5TRE6AA4NJ20101111>.

25. European Central Bank, “Housing Finance in the Euro Area,” 73.

TABLE 2: TROUBLED MORTGAGES IN WESTERN EUROPE AND THE UNITED STATES

Country	≥ 3-Month Arrears (%)	Impaired or Doubtful (%)	Foreclosures (%)	Year
Belgium	0.46			2009
Denmark	0.53			2009
France		0.93		2008
Ireland	3.32			2009
Italy		3.00		2008
Portugal	1.17			2009
Spain		3.04	0.24	2009
Sweden		1.00		2009
United Kingdom	2.44		0.19	2009
U.S. All Loans	9.47		4.58	2009
U.S. Prime	6.73		3.31	2009
U.S. Subprime	25.26		15.58	2009

Source: European Mortgage Federation, "Methodological Note and Survey on Non-performing Loans in the EU," EMF Study, March 2010; Mortgage Bankers of America, "National Delinquency Survey," <http://www.mortgagebankers.org/ResearchandForecasts/ProductsandSurveys/NationalDelinquencySurvey.htm>.

Greece, Portugal, and Spain are facing major banking crises. However, domestic mortgage defaults are not a primary source of their bank difficulties: if the bank losses are at all related to real estate, they primarily arise from construction loans or commercial mortgages, not residential mortgages.

Western European residential mortgage and housing markets have outperformed the U.S. markets over the full range of available measures. Although data are not provided here, a similar conclusion would hold for the Australian, Canadian, and New Zealand mortgage markets. The next section considers the

factors that created the superior performance in European and other countries.

The Unique Features of Western European Mortgage Markets²⁶

WHAT FEATURES OF western European mortgages or mortgage markets have created this outstanding performance? This section considers a range of possible answers: government intervention, MBS versus covered bond systems, and mortgage-contract terms and conditions.

26. Few studies have provided quantified and institutional comparisons of mortgage systems among developed countries. For an early, unique, and book-length description of housing-finance systems in developed and developing countries around the world, see Mark Boleat, *National Housing Finance Systems: A Comparative Study* (London: Croom Helm, 1985). For country studies and a statistical comparison of the efficiency of alternative mortgage-market systems, see D. B. Diamond Jr. and Michael Lea, "Housing Finance in Developed Countries: An International Comparison of Efficiency," *Journal of Housing Research* 3 (1992), whole issue. The consulting firm Mercer Oliver Wyman has participated in two studies of the European mortgage markets; see Mercer Oliver Wyman and European Mortgage Federation, "Study on the Financial Integration of European Mortgage Markets," October 2003, <http://www.hypo.org/Content/Default.asp?PageID=203>; and Mercer Oliver Wyman and Mortgage Insurance Trade Association, "Risk and Funding in European Residential Mortgages: Responding to Changes in Mortgage Demand," April 15, 2011. For a recent overview of OECD housing and mortgage markets, see Cristophe André, "A Bird's Eye View of OECD Housing Markets" (OECD Economics Department Working Papers no. 746, January 28, 2010), http://www.iut.nu/Literature/2010/HousingMarket_inOECDregion_2010.pdf.

*Government Intervention*²⁷

GIVEN THE MULTIDIMENSIONAL structure of government interventions in mortgage markets, no single metric can provide a complete comparison of the western European countries with the United States. It is possible, however, to distinguish at least three separate channels for government intervention and make comparisons one channel at a time. The channels are:

1. Government support for low-income mortgage borrowers,
2. Direct purchases/guarantees of middle-market mortgages by GSEs, and
3. Indirect government support for the mortgage market.

We shall see that the level of U.S. government support generally exceeds the European average and the

extent of the U.S. government interventions often exceeds that of all of the European countries (see Table 3). The superior European performance has been achieved with very modest government support.

- **Support for low-income borrowers.** The U.S. mortgage reform proposal this paper recommends would continue the existing FHA and HUD programs that provide mortgage and housing-market support for lower-income families. Furthermore, it appears that the United States and western European countries carry out a similar range of programs in support of lower-income households. The conclusion is that government programs in support of lower-income borrowers are not a differentiating factor with regard to the performance of the European mortgage markets.

TABLE 3: GOVERNMENT MORTGAGE PROGRAMS

COUNTRY	GOVERNMENT MORTGAGE INSURER	GOVERNMENT SECURITY GUARANTEES	GOVERNMENT-SPONSORED ENTERPRISES
Denmark	No	No	No
Germany	No	No	No
Ireland	No	No	No
Netherlands	NHG	No	No
Spain	No	No	No
United Kingdom	No	No	No
Australia	No	No	No
Canada	CMHC	CMHC	No
Japan	No	JHF	Possible
Korea	No	No	Korean Housing Finance Corp.
Switzerland	No	No	No
United States	FHA	GNMA	Fannie Mae, Freddie Mac, FHLBs

Source: Michael Lea, "International Comparison of Mortgage Product Offerings," Research Institute for Housing America and Mortgage Bankers Association, September 2010, http://www.housingamerica.org/RIHA/RIHA/Publications/74023_10122_Research_RIHA_Lea_Report.pdf.

27. For good overviews of European government interventions in the mortgage markets—including subsidies, taxation, and regulation—see Lea, "International Comparison of Mortgage Product Offerings"; Mercer Oliver Wyman and European Mortgage Federation, "Study on the Financial Integration of European Residential Mortgages"; and Mercer Oliver Wyman and Mortgage Insurance trade Association, "Risk and Funding in European Residential Mortgages."

- **GSE activity.** No European government entity's role approaches the dominance of the GSEs in the U.S. mortgage market. In the absence of GSEs, almost all western European mortgage lending is carried out privately by banks and funded by bank deposits and covered bonds.²⁸
- **Indirect government support.** Governments may support their mortgage markets through indirect tax and subsidy instruments. While countries vary widely in such support, U.S. government programs are among the most extensive. The most significant program is the opportunity for U.S. taxpayers to deduct mortgage interest from their personal income taxes. The United States appears to allow the most complete deductions, while the United Kingdom—as a primary example—allows no deduction at all.²⁹ Other unique U.S. tax benefits include special capital-gain rules and the tax deductibility of state property taxes.

As a summary of the comparison between the role of GSEs in Europe and the United States, it is useful to consider the conclusion Coles and Hardt reached in a study published while Hardt was secretary general of the European Mortgage Federation:

There is no national or European government agency to help lenders fund their loans. Mortgage loans have to be funded on the basis of the financial strength of banks or the intrinsic quality of the securities. EU Law (Article 87 and 88 of the EC treaty) outlaws state aid in the form of guarantees as there may be an element of competitive distortion.³⁰

It is clear that the strong performance of western European housing and mortgage markets has been achieved with decidedly less government intervention than in the United States. This analysis continues by looking at two other factors that may be responsible for success in western European housing and mortgage-market performance.

Covered Bonds versus Mortgage-Backed Securitization

EUROPEAN MORTGAGE MARKETS use relatively little mortgage-backed securitization, but covered bonds are a significant factor and serve a similar function of linking bank lenders with capital-market investors. Table 4 shows the ratios of covered bonds to residential mortgages outstanding for the same set of western European countries covered in Table 1. While most of the countries use covered bonds to fund 10–20 percent of their mortgages, covered bonds dominate in three countries: Denmark (100 percent), Sweden (57 percent), and Spain (50 percent). Tests for statistical correlations indicate no significant relationships between the covered-bond use in Table 4 and the mortgage-market performance in Table 1.³¹

28. Lea, "International Comparison of Mortgage Product Offerings."

29. For a detailed description of the income tax benefits afforded mortgage finance in a large number of European Union countries, see European Central Bank, "Housing Finance in the Euro Area," 84.

30. Adrian Coles and Judith Hardt, "Mortgage Markets: Why U.S. and EU Markets Are So Different," *Housing Studies* 15, no. 5 (2000): 778.

31. Covered bonds are also backed by local government loans in some of these countries, but those bonds are not included in Table 4.

TABLE 4: 2009 RATIO OF COVERED BONDS TO RESIDENTIAL MORTGAGES OUTSTANDING

Country	Percentage
Austria	7.3
Belgium	N.A.
Denmark	100.0
Finland	6.5
France	23.9
Germany	19.6
Ireland	20.1
Italy	4.2
Luxembourg	0.0
Netherlands	4.7
Norway	26.3
Portugal	18.5
Spain	49.6
Sweden	56.7
United Kingdom	14.7

Source: *European Covered Bonds Council, ECBC Factbook, 5th ed. 2010, <http://ecbc.hypo.org/Content/default.asp?PageID=501>.*

In comparing the U.S. and European systems, it is noteworthy that private-label MBS investors look only to the mortgage collateral to protect against credit losses whereas covered-bond investors receive a bank guarantee as well as collateral. Conversely, covered bonds are issued as a single-class obligation, whereas MBS use their multiclass structured format to allocate the primary credit risk to the most junior tranche.³² The implication is that the MBS system is better able to handle relatively risky mortgages by allocating the risk of the junior tranche to more knowledgeable and risk-tolerant investors. In contrast, covered bonds are generally backed by very high-quality mortgages, including the associated contractual and regulatory requirements.

32. The multiclass structured instruments also allow the interest rate risk to be distributed among those investors most tolerant of this risk.

33. For a detailed discussion of the mortgage contracts offered in a range of developed countries, see Lea, "International Comparison of Mortgage Product Offerings."

A covered bond system is most effective with relatively safe underlying mortgages, whereas securitization is most valuable when the mortgages contain significant credit risk. Thus, both systems have adapted to fit the underlying mortgages with which they are associated.

Western European Mortgage Market Success: Safe Mortgages

THE FINAL COMPARISON to make between European and U.S. mortgage markets is of mortgage-contract features and underwriting standards. The United States is renowned for offering a wide menu of mortgage choice. European countries also offer a wide range of mortgage contracts, although the variation occurs more across countries than within an individual country.³³ Three key mortgage attributes have differentiated U.S. and western European mortgages:

1. Fixed-rate mortgages (FRMs) versus ARMs,
2. Prohibitions against prepayment penalties, and
3. Prohibitions against lender recourse to a borrower's nonhousing assets in default.

Fixed-Rate versus Adjustable-Rate Mortgages

HISTORICALLY, WESTERN EUROPEAN countries specialized in either FRMs or ARMs. For example, the United Kingdom has long emphasized ARMs whereas Denmark primarily used FRMs. The trend throughout Europe, however, is for countries to offer a greater menu of contract options, and both ARMs and FRMs now appear to be available in most countries. Many view the GSEs as critical for the provision of FRMs in the United States, but the facts show quite the opposite. The GSEs' MBS impose 100 percent of the interest-rate risk on third-party investors and generally allow free prepayment options for borrowers, accentuating investors' interest-rate risk. Neither of these features promotes FRMs.

Indeed, the limitations of the GSEs in promoting FRMs is reflected in the fact that the U.S. ARM share has reached as much as 35 percent during at least three separate episodes over the last 15 years, while the ARM share in the European Union is about 40 percent.³⁴ Finally, the availability of FRMs in most western European countries—and the dominance of FRMs in several western European countries—demonstrate that GSEs are not essential for FRM contracts.

Government Regulations Prohibiting Prepayment Penalties

SOME U.S. STATES restrict the ability of residential mortgage lenders to impose prepayment penalties on their mortgage contracts. In addition, the GSEs have always resisted acquiring mortgages with prepayment penalties, in part as a mechanism to standardize their MBS. This contrasts with the U.S. market for commercial mortgages, where prepayment penalties in the form of yield maintenance or defeasance are standard. Western European residential mortgage contracts also regularly require significant prepayment penalties, very much like the penalties U.S. commercial mortgages require.³⁵ The absence of prepayment penalties on standard U.S. FRMs adds approximately 50 bps to the mortgage interest rate. Prepayment penalties have contributed to the superior performance of the western European mortgage markets. However, private U.S. mortgage markets would be able to provide comparably lower U.S. mortgage rates for U.S. borrowers willing to accept prepayment penalties.

Recourse and Limited Mortgage Defaults

PERHAPS THE MOST important distinction between U.S. and western European mortgage contracts is in recourse and limited mortgage defaults. In the United States, recourse varies by state; even where it is allowed, it is rarely applied.³⁶ This is because banks must satisfy strong U.S. consumer-protection rules before they can obtain a recourse judgment, and U.S. consumers have the option to apply for a relatively easy bankruptcy. Recourse is, therefore, not an important safeguard for U.S. mortgage investors. In contrast, recourse is standard and enforcement is firm for most western European mortgage contracts; as a result, western European lenders, borrowers, and governments act in their mutual interest to create safe mortgages.³⁷ Even with rapidly falling home prices, default rates on western European mortgages remain remarkably low from a U.S. perspective. Furthermore, the superior western European mortgage-market performance applies to most market indicators, as shown in Table 1.

4

THE LIKELY STRUCTURE AND PERFORMANCE OF A PRIVATE U.S. MORTGAGE MARKET

BY COMBINING INFORMATION from the above case studies of 15 European countries with the unique features of the U.S. housing and mortgage markets, a view of the likely structure and performance of a private U.S. mortgage market can be developed. Of course, future regulations may either facilitate or rule out certain features, so the view put forth in this chapter is necessarily conditional on how mortgage-market reform is actually implemented.

34. John Krainer, "Mortgage Choice and the Pricing of Fixed-Rate and Adjustable-Rate Mortgages," *Economic Letter*, Federal Reserve Bank of San Francisco, February 1, 2010; and European Central Bank, "Housing Finance in the Euro Area."

35. Mercer Oliver Wyman and Mortgage Insurance Trade Association, "Risk and Funding in European Residential Mortgages."

36. Andra C. Ghent and Marianna Kudlyak, "Recourse and Residential Mortgage Default: Theory and Evidence from the U.S. States" (working paper 09-10, Federal Reserve Bank of Richmond, Richmond, VA, July 7, 2009), http://www.fhfa.gov/webfiles/15051/website_ghent.pdf.

37. For a description of the mortgage-collateral rules and recourse across all western European countries, see European Mortgage Federation, "Study on the Efficiency of the Mortgage Collateral in the European Union," May 2007, <http://62.102.106.72/Common/GetFile.aspx?ID=5353&logonname=guest&mfd=off>.

As developed earlier in this chapter, the fundamental features of a mortgage market are described by the mortgage origination, contract design and underwriting, and placement with long-term investors. Below, the chapter looks at those features—as well as possible future innovations and regulatory requirements—to describe the changes that can be expected if the United States shifts from a GSE-dominated to a private-institution-dominated mortgage market.

- **Mortgage originations.** U.S. mortgages have always been originated by private firms and banks, and this will surely continue in the absence of the GSEs.
- **Contract design and underwriting.** The absence of GSEs will immediately allow a private market to provide an expanded range of contract choices. The GSEs focused on creating a single standardized mortgage contract, the 30-year fixed payment FRM with no prepayment penalties and effectively no recourse to borrower assets beyond the housing collateral. While private lenders did create a range of alternative mortgages—including ARMs, jumbos, and so forth—they always had to compete with the subsidized GSEs.

Without the GSE obstacle, a private market will provide an extended menu: fixed-rate versus adjustable-rate, prepayment penalties or not, recourse or not, and so on. A lower mortgage rate will result when the choice benefits the lender; a higher rate will result when the choice benefits only the borrower. Borrowers will choose the contract features that are best for their specific circumstances. Of course, complete and accessible disclosures of the terms and conditions of these mortgages would be required for borrowers to make informed decisions. The Federal Reserve's July 2008 expansion of the Truth in Lending regulations already ensures a great deal of this disclosure, and a further expansion to fill in any missing parts may be necessary.³⁸

Informed borrowers will make good decisions as long as a competitive mortgage market provides a full menu with fair prices.

The outcome of this process will likely be a U.S. mortgage market in which mortgages are intrinsically safer, with default and foreclosure rates that more closely resemble the European markets than the recent U.S. subprime experience. Mortgage default is incredibly costly to all parties: lenders and investors face the legal costs of foreclosure and the need to sell properties under distressed conditions, borrowers lose their homes and credit ratings, and the government is called upon to fix the problem after the fact. A key virtue of a private mortgage market is that both risky and safe mortgages will be originated, but the holders of the risky contracts will pay the full price of their risk, and the holders of the safe mortgages will realize the full benefits of their safety.

- **Mortgage investors.** On the surface, the changes for mortgage investors will be minor. The GSEs hold approximately 12 percent of all U.S. whole home mortgages and MBS, and this share will be readily taken up by the depository institutions and capital-market investors. At a deeper level, however, the changes will be more substantive. The market will determine who holds the new mortgages: depositor-institution mortgage portfolios can be funded with deposits or with covered bonds, or they can be sold to third-party investors through traditional securitization. The preferred outcome will depend largely on the quality of underlying mortgages. Pools of high-quality mortgages may be retained by depository lenders and funded with either deposits or covered bonds. Pools of riskier mortgages will more likely be securitized, taking advantage of structured finance to allocate the first-loss risk among the most knowledgeable and risk-tolerant investors.

38. Federal Reserve Board of Governors, "Highlights of the Final Rule Amending Home Mortgage Provisions of Regulation Z (Truth in Lending)," news release, July 14, 2008, <http://www.federalreserve.gov/newsevents/press/bcreg/regz20080714.htm>.

Though not always recognized, over the past 100 years of U.S.—and world—finance, the demand for virtually risk-free investments has generally exceeded readily available supply. This meant any entrepreneur able to expand the supply of AAA-rated investments would receive a large payoff. In fact, the demand for such securities was a major force leading to the creation of the senior and super-senior AAA-rated tranche of subprime MBS and collateralized debt obligation securitizations. These senior and super-senior securities turned out not to be anywhere near as safe as advertised. The high demand for AAA-rated investments persists today, perhaps more than ever. Truly high-quality mortgages could be an important part of the solution as backing for either AAA-rated covered bonds or a senior MBS tranche. The mortgage markets and the capital markets will both benefit.

- **Further features.** The re-creation of the U.S. mortgage market without the GSEs will surely motivate a variety of renewed activities and new innovations. For example, the role for private mortgage insurance (PMI) in the U.S. mortgage market could expand. Although the GSEs were a major customer for the PMI industry, modern U.S. PMI existed and expanded well before the GSEs became important. More generally, a key benefit of a private mortgage market is that the market itself will test and evaluate the proposed innovations, implement the successes, and discard the failures. And this activity will occur without imposing costs on U.S. taxpayers.
- **Regulatory requirements.** While a private mortgage market would generally operate in a safe and stable fashion, as it has in western

Europe, a critical role for regulation and government oversight remains. As previously noted, the FHA and HUD programs would continue under the proposal set out in this chapter. Also, the borrower protections and full disclosures under the Truth in Lending Act and similar statutes are critical. Expanded regulatory oversight of the depository institutions in regard to all their activities as mortgage originators, servicers, investors, and issuers of covered bonds is required. There are two reasons such depository regulation is needed: (1) deficient bank regulation was a major source of the subprime crisis and must be fixed, and (2) a private mortgage market will likely channel a greater volume of mortgage lending, investing, and securitizing through the banking system. Since taxpayers backstop the banking system through government deposit insurance, their interests must be protected through aggressive regulation.

5 ALTERNATIVE PROPOSALS

THE NEED TO reform the U.S. mortgage markets has been recognized at least since 2008 when the full dimensions of the GSE and subprime crash became evident. For example, Federal Reserve Chairman Ben S. Bernanke provided an early call for action, including alternatives ranging from a completely private market to re-creating the GSEs.³⁹ The Government Accountability Office (GAO) and Congressional Budget Office (CBO) followed with similar arrays of options, including factual comments on the alternatives.⁴⁰ The long-awaited Treasury/ HUD white paper and proposal was released February 12, 2011.⁴¹

39. Ben S. Bernanke, "The Future of Mortgage Finance in the United States" (speech; UC–Berkeley/UCLA Symposium: The Mortgage Meltdown, the Economy, and Public Policy; Berkeley, CA; October 31, 2008), <http://www.federalreserve.gov/newsevents/speech/bernanke20081031a.htm>.

40. Government Accountability Office, "Fannie Mae and Freddie Mac: Analysis of the Options for Revising the Housing Enterprises' Long-Term Structures"; and Congressional Budget Office, "Fannie Mae, Freddie Mac, and the Federal Role in the Secondary Mortgage Market," CBO Study, December 2010, <http://www.cbo.gov/ftpdocs/120xx/doc12032/12-23-FannieFreddie.pdf>.

41. Treasury and HUD, "Reforming America's Housing Finance Market."

Consistent with the premise of this volume, the Treasury/HUD white paper sets the unequivocal goal of winding down the GSEs. And consistent with the specific proposal offered in this paper, the white paper proposes to achieve this goal by lowering the conforming loan limits and raising the GSEs' guarantee fees. Furthermore, the white paper's "Option 1" is, in effect, the private-market proposal offered in this chapter. The white paper's "Option 2" is also closely aligned with the proposal of this chapter; it primarily adds the capability to expand the FHA or a similar government-guarantee program rapidly in the event of a future crisis.

The white paper's "Option 3" differs more substantially from this chapter, however. It suggests possibly offering government mortgage guarantees on a continuing basis and on a potentially wide range of mortgages. In one interpretation, this option replaces the government guarantee of the GSEs with a direct guarantee on all conforming MBS. Specific versions of similar proposals are available from Acharya, Richardson, Van Nieuwerburgh, and White; the Center for American Progress; Ellen, Tye, and Willis; and Hancock and Passmore.⁴² While these plans differ in details and specificity, a composite can be summarized as follows:

- These plans anticipate that the government will set high underwriting standards for all mortgages that underlie the qualifying MBS.
- Investors in the qualifying MBS will be protected from default losses by a mixture of private capital and government guarantees—with the government component considered essential.

- Both the private and government insurers will receive risk-based insurance premiums.

For simplicity, this structure is referred to as the "insurance proposal." It is clearly preferable to any plan that would re-create the GSEs, since for the first time the government would control the underwriting standards and be compensated for the risk it bears. The two key questions are:

1. Can the government carry out this activity effectively and efficiently?
2. Is the government's role important for a well-functioning U.S. mortgage market?

The answer to both questions is negative.

Regarding the first question, the government generally is ineffective in setting standards for its insurance programs. Government is fundamentally unable to enforce risk-based pricing—where those posing greater risks are required to pay appropriately larger premiums. Government plans almost always lead to significant subsidies, especially for the highest risks. This occurs because political pressures, understandably, make it very difficult for a government program to set high underwriting standards that exclude many higher-risk parties from the program. And once higher-risk parties are allowed into the program, the same political pressures make it very difficult to impose higher premiums on these riskier policyholders.

As a result, government insurance programs invariably have two negative effects. First, by subsidizing the riskier participants, the government actually

42. Viral Acharya, Matthew Richardson, Stijn Van Nieuwerburgh, and Lawrence J. White, *Guaranteed to Fail* (Princeton: Princeton University Press, 2011); Center for American Progress, Mortgage Finance Working Group, "A Responsible Secondary Market System for Housing Finance," July 21, 2010, http://www.americanprogress.org/issues/2010/09/pdf/housing_finance_slides.pdf; Ingrid Gould Ellen, John Napier Tye, and Mark A. Willis, "Improving U.S. Housing Finance through Reform of Fannie Mae and Freddie Mac: Assessing the Options," Furman Center for Real Estate and Urban Policy, New York University, May 2010, http://furmancenter.org/files/publications/Improving_US_Housing_Finance_Fannie_Mae_Freddie_Mac_9_8_10.pdf; and Diana Hancock and Wayne Passmore, "An Analysis of Government Guarantees and the Functioning of Asset-Backed Securities Markets" (Finance and Economic Discussion Series No. 2010-46, Federal Reserve Board, 2010).

encourages risky behavior. Second, sooner or later, the riskier pool will create large losses, and taxpayers will cover the costs. The National Flood Insurance Program provides a case study. While for many years the program appeared to break even—with premiums covering losses—it turned out that no reserves had been accumulated for a disproportionate disaster. This became clear only when the losses created by Hurricane Katrina required a taxpayer bailout on the order of \$18 billion. Bank insurance provided by the Federal Deposit Insurance Corporation provides another example.⁴³

With regard to the second question, government insurance simply is not needed. Most western European mortgage markets operate without government insurance, and there is no evidence this has impeded their performance. Furthermore, the United States already has two forms of mortgage insurance programs that can—and would—be expanded if needed. First, PMI already exists, including a well-structured regulatory regime. It is likely that certain classes of mortgages should be insured and that the PMI industry would provide the insurance. Second, the government's FHA program for insuring mortgages for lower-income and other socially worthy borrowers has existed since 1934, and it has never required a government bailout. The FHA program could be expanded rapidly if private markets failed to provide adequate access to the U.S. mortgage market, for example, in a future financial crisis—whether originating in the housing market or elsewhere in the economy—in which the supply of private capital to the mortgage market is disrupted. In effect, this is the Treasury/HUD white paper's Option 2.

6

SUMMARY AND CONCLUSIONS

THIS CHAPTER HAS developed and evaluated a proposal to reform the U.S. mortgage system along

private-market principles and without any form of GSEs. The proposal would be implemented through the simple process of reducing the GSE conforming loan limit by, say, \$100,000 annually, in which case the GSEs would cease to operate after about seven years. The transition process would be smooth, be anticipated by the private markets, and allow for a government reaction should it fail to proceed as expected. The proposal also advocates continuing the current FHA and HUD programs in support of lower-income families. In this form, the proposal is very similar to both Options 1 and 2 in the Treasury/ HUD proposal released in a February 2011 white paper.

The primary question regarding the proposal is very direct: Will a private market provide the stability and access to mortgage credit required by U.S. homebuyers? This paper provides an affirmative answer based on two sets of evidence. First, the GSEs have played no role in originating U.S. mortgages and a relatively minor role as investors in these mortgages, so it will not be difficult for the private markets—principally depository institutions and capital-market investors—to replace them. Second, western Europe provides a very important case study of the high performance achieved by private mortgage markets in the absence of significant government interventions.

The analysis in this paper also outlines how a private U.S. mortgage market operating without GSEs likely would be structured. Mortgage-origination activity would be unchanged from the current system since originations are already carried out only by private-market entities. Similarly, mortgage investing would continue to be dominated by the two largest existing holders: depository institutions and capital-market investors. Depository institutions will continue to hold a significant number of whole mortgages in their portfolios, and capital-market investor portfolios will continue to be dominated by MBS. Covered bonds are also likely to play a more important role in the U.S. market as depository institutions fund

43. For further discussion of failed government insurance programs, see Dwight M. Jaffee and Thomas Russell, "Should Government Provide Catastrophe Insurance?" *The Economists' Voice* 3, no. 5 (2006): article 6, <http://www.bepress.com/ev/vol3/iss5/art6>.

some of their mortgage portfolios by issuing secured debt to capital-market investors. In this fashion, the market should readily absorb the 12 percent market share vacated by the departing GSEs.

The most important changes in the U.S. mortgage market are likely to occur in the types of mortgage contracts offered and in the underwriting standards imposed on borrowers. A private mortgage market is likely to provide borrowers with an expanded menu of choices, including such features as FRMs versus ARMs, contracts with or without prepayment penalties, and contracts with or without recourse to a borrower's nonhousing assets. At the same time, borrowers would face risk-based pricing: borrowers who present a higher risk to lenders or who take riskier mortgages will face appropriately higher mortgage rates. Lower-risk borrowers and contracts will be rewarded with lower mortgage rates. Given this direct incentive, borrowers overall will choose safer mortgages, thus reducing the average mortgage interest rate. Based on the western European experience, U.S. mortgage interest rates would likely fall under the proposed system, since the benefits of safer mortgages would more than offset the loss of government subsidies. In addition, the proposal would benefit U.S. taxpayers since the taxpayer costs of the GSE subsidy far exceeded its possible benefits.