

BACKGROUND

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Why Is Federal Housing Policy Fixated on 30-Year Fixed-Rate Mortgages?

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Abstract

Robust mortgage financing exists in virtually every developed nation of the world without the degree of government involvement found in the U.S. Yet, many groups argue that eliminating the government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac would imperil mortgage financing in the U.S., and some even claim that a government guarantee is needed to ensure the widespread availability of the 30-year fixed-rate mortgage (FRM). Advocates of these federal guarantees argue that the 30-year FRM provides borrowers with long-term security, but they often fail to mention any of the risks associated with these long-term fixed-rate mortgages. These risks exist, however, and government policies tend to shift these risks from financial markets to taxpayers. Even though no one policy guarantees the existence of the 30-year FRM, we argue that it is misguided to justify broad government intervention and taxpayer guarantees to preserve any one type of mortgage product.

Robust mortgage financing exists in virtually every developed nation in the world without the degree of government involvement found in the U.S. While the U.S. homeownership rate is about average among developed nations, U.S. citizens typically pay among the highest interest rates in the industrialized world. Still, many groups argue that eliminating the government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac would imperil mortgage financing in the U.S.

Some groups take the necessity of the GSE model even further, arguing that some form of government guarantee is needed to preserve specific mortgage products. In particular, groups such as the

KEY POINTS

- The 30-year fixed-rate mortgage (FRM) predates the highly developed secondary mortgage market in the U.S. by at least 20 years.
- No particular government policy has guaranteed the existence of the 30-year FRM, and these loans do exist in the U.S. without any government backing.
- Adjustable-rate mortgages (ARMs) did not cause the recent financial crisis. More than 80 percent of households that faced foreclosure between 2007 and 2010 were making the same payment on their mortgage as when they first took out their loan.
- Negative equity—being “underwater”—in a home mortgage is the most important predictor of default.
- A 30-year FRM with a low down payment amounts to debt ownership, not home ownership.
- Government policies should not favor any particular loan mortgage product because no one product can best serve the needs of every borrower at any one time.

This paper, in its entirety, can be found at <http://report.heritage.org/bg2917>

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National Association of Realtors claim that a government guarantee is needed in the secondary market to ensure the widespread availability of the 30-year fixed-rate mortgage (FRM). Yet, is a GSE system really necessary to preserve the 30-year FRM? If so, should government policy promote any one mortgage product over others?

In this paper, we argue that it is misguided to justify broad government intervention and taxpayer guarantees in the U.S. housing finance system to preserve any type of mortgage product. Policymakers should reform the mortgage finance market by first recognizing that no single type of loan will be best for all borrowers at all times. At present, no single government policy guarantees the existence of the 30-year FRM, and Congress should not enact any such guarantee. On the other hand, policymakers can ensure that the private sector will create more mortgage products by eliminating the onerous regulations imposed by the 2010 Dodd–Frank Wall Street Reform and Consumer Protection Act.

The American Dream: To Own a Home, Not a Mortgage

Owning one’s own home is commonly viewed as part of the American Dream, and the benefits of homeownership likely extend beyond the individual to the community. When people own homes, they become more engaged in civic institutions that increase the value of the community and society. Evidence also indicates that these “spillover effects” exist in the U.S.¹ However, it does not follow that the federal government should undertake a policy of actively encouraging people to purchase homes, and encouraging people—especially those with low

wealth—to finance home purchases with low-equity long-term debt makes little sense.

Nonetheless, government programs to boost homeownership in this manner have expanded nearly continuously since the 1930s.² Currently, the federal government controls a dominant share of the U.S. housing finance system, and it encourages borrowing by guaranteeing the operations of Fannie Mae, Freddie Mac, and Ginnie Mae.³ The federal government also extends loan insurance through the Federal Housing Administration (FHA), the Veterans Affairs (VA) home-lending program, and the U.S. Department of Agriculture Rural Development Program.

Outside the financial markets, the federal tax code promotes housing investment and consumption largely by allowing taxpayers to deduct mortgage interest from their federal income tax liability.⁴ Yet, as government intervention has increased, the rate of U.S. homeownership has remained nearly constant over the past 50 years. On the other hand, the level of residential mortgage debt has increased nearly sixfold. Federal Reserve data show that inflation-adjusted mortgage debt increased from about \$1.8 trillion in 1968 (the year Fannie became a GSE) to roughly \$10 trillion in 2013.

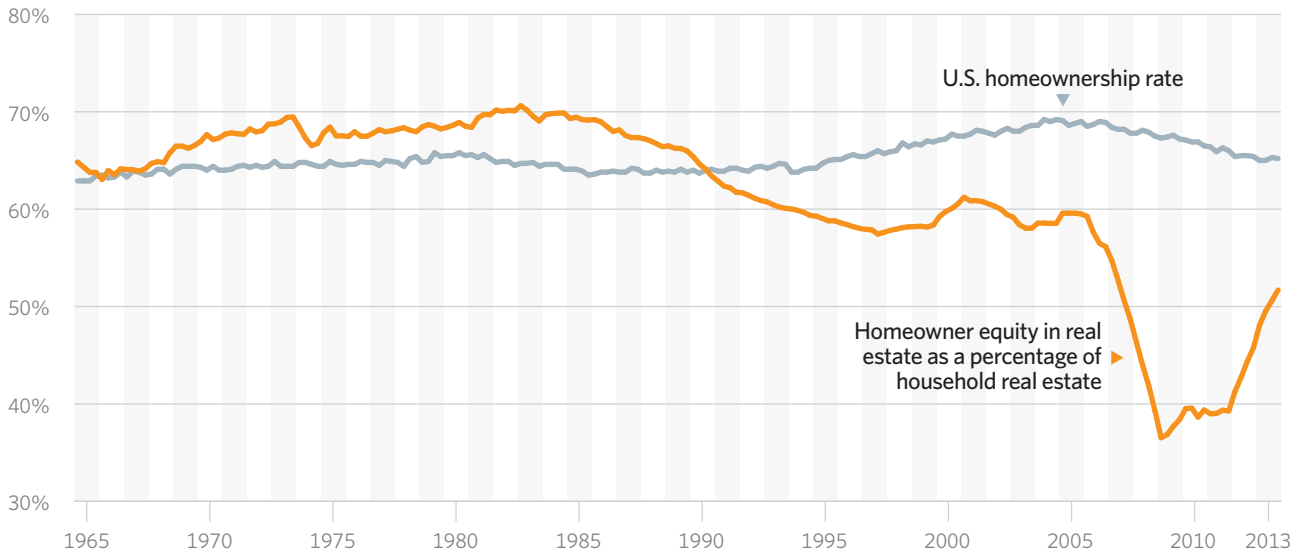
Moreover, the level of equity that households have accumulated in their homes has trended downward since the 1980s and is approximately 20 percentage points lower than it was in the 1970s. (See Chart 1.) While countless government programs are touted as boosting homeownership, most government policies actually increase mortgage ownership. A large portion of this debt is in long-term FRMs, particularly 30-year FRMs. In most other countries, 30-year FRMs are not as prevalent.

1. Edward L. Glaeser and Jesse M. Shapiro, “The Benefits of the Home Mortgage Interest Deduction,” National Bureau of Economic Research *Working Paper* No. 9284, October 2002, pp. 2–4, <http://www.nber.org/papers/w9284.pdf> (accessed March 13, 2014).
2. See John L. Ligon and Norbert J. Michel, “GSE Reform: The Economic Effects of Eliminating a Government Guarantee in Housing Finance,” Heritage Foundation *Background* No. 2877, February 7, 2014, <http://www.heritage.org/research/reports/2014/02/gse-reform-the-economic-effects-of-eliminating-a-government-guarantee-in-housing-finance>.
3. Congressional Budget Office, “Budgetary Impact of Major Federal Programs that Guarantee Mortgages—CBO’s February 2014 Baseline,” February 2014, http://www.cbo.gov/sites/default/files/cbofiles/attachments/43882-2014-02-Mortgage_Programs.pdf (accessed March 28, 2014).
4. The tax benefit of the mortgage interest deduction provides little benefit to low-income households, many of whom pay no federal income taxes. See Congressional Budget Office, “An Overview of Federal Support for Housing,” *Economic and Budget Issue Brief*, November 3, 2009, <http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/105xx/doc10525/11-03-housingprograms.pdf> (accessed March 28, 2014); Congressional Budget Office, “The Distribution of Major Tax Expenditures in the Individual Income Tax System,” May 2013, http://www.cbo.gov/sites/default/files/cbofiles/attachments/43768_DistributionTaxExpenditures.pdf (March 28, 2014); and Curtis S. Dubay, “The Proper Tax Treatment of Interest,” Heritage Foundation *Background* No. 2868, February 19, 2014, <http://www.heritage.org/research/reports/2014/02/the-proper-tax-treatment-of-interest> (accessed April 15, 2014).

CHART 1

Homeownership Rate and Homeowner Equity

While the overall U.S. homeownership rate has remained relatively steady for nearly 50 years, homeowner equity as a share of total household real estate began declining in the mid-1980s.



Source: Federal Reserve Bank of St. Louis, "Homeownership Rate for the United States," <http://research.stlouisfed.org/fred2/series/RHORUSQ156N> (accessed June 3, 2014), and Federal Bank Bank of St. Louis, "Households; Owners' Equity in Real Estate as a Percentage of Household Real Estate, Level (HOEREPHRE), Percent, Quarterly, Not Seasonally Adjusted," <http://research.stlouisfed.org/fred2/series/HOEREPHRE> (accessed June 6, 2014).

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U.S. Government Unique in Support of Mortgage Market

The U.S. is the only major country in the world with a federal government mortgage insurer, government guarantees of mortgage securities, and government-sponsored enterprises (GSEs) in housing finance. Comparing the U.S. with 11 other industrialized countries, only two have a government mortgage insurer (the Netherlands and Canada), two have government security guarantees (Canada and Japan), and two have GSEs (Japan and Korea).⁵ The U.S. is the only major country with a housing

finance system heavily geared toward the 30-year FRM for reasons that go well beyond the existence of the GSEs.

For instance, Canada and several Western European countries provide lenders with strong recourse protection that makes it very difficult for borrowers to walk away from mortgages.⁶ This protection starkly contrasts with the U.S. system, where borrowers have very friendly bankruptcy laws, and lenders must satisfy liberal consumer protection laws. These rules vary by state, but overall, U.S. foreclosure laws favor the borrower more than in many

5. Michael Lea, "International Comparison of Mortgage Product Offerings," Research Institute for Housing America *Special Report*, September 2010, http://www.housingamerica.org/rlha/rlha/Publications/74023_10122_research_rlha_lea_report.pdf (accessed March 6, 2014).

6. Dwight M. Jaffee, "Reforming the U.S. Mortgage Market Through Private Market Incentives," in Satya Thallam, ed., *House of Cards: Reforming America's Housing Finance System*, George Mason University, Mercatus Center, March 2012, pp. 17-36, http://mercatus.org/sites/default/files/House_of_Cards_March_2012.pdf (accessed March 6, 2014). Unlike the U.S. market, less than one-third of Canadian mortgages were securitized before the 2008 financial crisis. The majority of Canadian banks issuing mortgage loans held the loans instead of selling them to investors. During the crisis, the system-wide default rate in Canada stayed near its historical average of 1 percent. At the peak of the crisis, more than 11 percent for U.S. mortgages were 30 days past due. Renee Haltom, "Why Was Canada Exempt from the Financial Crisis?" Federal Reserve Bank of Richmond, *Econ Focus* (4th quarter, 2013), p. 25, http://www.richmondfed.org/publications/research/econ_focus/2013/q4/pdf/feature2.pdf (accessed April 30, 2014).

other countries. Even in strict states such as Nevada, the foreclosure process can take years to complete, giving homeowners the option of staying in the home without making mortgage payments.⁷

Policies that shift mortgage risk away from financial firms and onto taxpayers have shaped U.S. mortgage markets for decades.

Moreover, laws in many other countries force borrowers to accept some of the interest-rate risk on long-term FRMs by allowing monthly payments to vary with interest rates for the initial portion of the loan term. Long-term fixed-rate loans without government backing exist in some Western countries, such as Denmark and Germany, but in these countries it is more common to have fixed interest rates over shorter periods of time (five to 10 years) with options to reset for the overall longer-maturity loans.⁸ Given the stronger recourse laws and more even distribution of financial risks, it is not surprising that mortgage default rates in Western Europe and Canada were much lower than in the U.S., even amid rapidly falling home prices during the recent crisis.⁹

More broadly, volatility of home prices and home construction from 1998 to 2009 in the U.S. was among the highest in the industrialized world.¹⁰

The fact that the U.S. market was dominated by 30-year FRMs does not appear to have helped the U.S. to weather the 2008 crisis. Further explaining the crisis in the U.S., many of these long-term FRMs pose greater risks to taxpayers than to the financial institutions that originated and/or invested in them. Policies that shift mortgage risk away from financial firms and onto taxpayers have shaped U.S. mortgage markets for decades.

Brief History of Long-Term FRM and Government Policy

Long-term fixed-rate mortgages (15-year and 30-year FRMs) accounted for nearly 62 percent of all mortgages in the U.S. from 1990 to 2012.¹¹ In December 2012, the 30-year FRM accounted for more than 61 percent of the market. Yet, no single government policy is responsible for this high market share, but rather various policies instituted over many decades account for the prevalence of the 30-year FRMs. The Great Depression is typically cited as the period when these policies began, but federal involvement in housing actually started before the 1930s.

In fact, a major housing boom in the 1920s was fueled by a combination of expansionary monetary policy, federal promotional campaigns, and private market innovations.¹² Leading up to the 1920s, people typically financed homes with multiple mortgages, including at least one short-term loan that required refinancing approximately every five

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7. Jennifer Robison, "Will Nevada Foreclosure Law Slow Housing Recovery?" *Las Vegas Review Journal*, September 16, 2013, <http://www.reviewjournal.com/business/economy/will-new-nevada-foreclosure-law-slow-housing-recovery> (accessed April 1, 2014).
 8. European Central Bank, "Housing Finance in the Euro Area," March 2009, pp. 26-27, <https://www.ecb.europa.eu/pub/pdf/other/housingfinanceeuroarea0309en.pdf> (accessed March 17, 2014). German mortgage lending institutions generally use a mortgage lending valuation framework that is countercyclical and very different from what U.S. institutions use. This difference appears to have contributed to the stability of the German real estate market. See Reiner Lux, "Valuation for Lending Purposes: Appraisal Theory and Practice in Germany and the United States," March 28, 2014, <http://www.housingrisk.org/wp-content/uploads/2014/04/Lux-Valuation-for-lending-purposes-Appraisal-theory-and-practice-in-Germany-and-the-United-States.pdf> (accessed April 30, 2014).
 9. Jaffee, "Reforming the U.S. Mortgage Market Through Private Market Incentives," p. 30.
 10. *Ibid.*, pp. 23-25.
 11. This figure is a monthly average, which stood at 62 percent in December 2012. The figure peaked at approximately 82 percent in December 2008. Federal Housing Finance Agency, Historical Summary Tables, <http://www.fhfa.gov/Default.aspx?Page=252> (accessed April 9, 2014).
 12. The Federal Reserve began active monetary policies for the first time in the 1920s. See Federal Reserve, "History of the Federal Reserve," <http://www.federalreserveeducation.org/about-the-fed/history/> (accessed November 19, 2013). The federal government also launched a series of promotional campaigns to persuade people to buy homes throughout the 1920s. In particular, the Department of Labor started the Own Your Own Home campaign in 1918, and throughout the 1920s Herbert Hoover was the president of Better Homes of America, Inc., a public-private partnership. See Michael S. Carliner, "Development of Federal Homeownership 'Policy,'" *Housing Policy Debate*, Vol. 9, No. 2 (1998), p. 301, <http://www.michaelcarliner.com/HPD98-OwnershipPolicy.pdf> (accessed December 5, 2013).

years.¹³ Most private-market innovations centered around lengthening loan terms and enabling people to finance a larger portion of a home's purchase price, but the refinancing feature lasted throughout the 1920s.

Many of the more activist polices of the 1930s addressed this aspect of home financing because it became a problem during the Depression. In particular, the refinancing feature along with massive job losses and a collapse in home prices contributed to the failure of many banks and private mortgage insurance companies during the 1930s. Many banks became insolvent when they had to refinance home mortgages that exceeded the value of the underlying home, loans that are now commonly referred to as being "underwater."

Federal Policy Takes Hold in the Primary Market. Two federal agencies created to deal with this issue were the Home Owner's Loan Corporation (HOLC) in 1933 and the Federal Housing Administration (FHA) in 1934. The HOLC bought short-term mortgages that had defaulted and then restructured them into 20-year FRMs. The FHA, on the other hand, provided lenders with mortgage insurance on "approved" loans, the very first of which was a 20-year FRM with a 20 percent down payment (for no more than \$16,000).¹⁴ These two agencies expanded the use of long-term FRMs to lessen banks' exposure to mortgage defaults and refinancing risk.¹⁵

FHA loan terms have been altered many times since the agency was created, and the 30-year FRM appeared in 1954.¹⁶ For approximately two decades after the Depression, fear of that era's refinancing problem led to a pervasive bias against adjustable rate mortgages (ARMs). For example, the Federal Home Loan Bank Board prohibited its member banks from providing ARMs.¹⁷ Additionally, many states passed laws and issued regulations that either prohibited ARMs or restricted their use.

Thus, government policies promoted FRMs and simultaneously discouraged the use of ARMs to deal with Depression-era financial problems long after the Great Depression. These policies had the complementary goals of removing risk from the banking sector and providing more funds to boost housing construction jobs. While the FHA and HOLC had an immediate impact on housing finance, government polices took much longer to have a major impact on the secondary mortgage market.

The Secondary Market Takes Shape, Slowly. A nascent version of a private secondary mortgage market, in which banks sell home mortgages to a third party, surfaced in the 1920s, but was destroyed by the housing price collapse of the 1930s. Federal efforts to restart this market in the early 1930s were unsuccessful, but the goal of those policies was to induce private companies (called associations) to buy mortgages from banks, thus lowering banks'

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13. Many homeowners during this period had various types of interest-only, short-term mortgages with balloon payments that required periodic refinancing. For more on the history of the housing finance market, see Ligon and Michel, "GSE Reform."
 14. The maximum of \$16,000 was approximately three times the median home price, highlighting the fact that a main goal of the FHA was to stimulate construction jobs, not to assist low-income individuals. See Kerry D. Vandell, "FHA Restructuring Proposals: Alternatives and Implications," *Housing Policy Debate*, Vol. 6, No. 2 (1995), http://www.knowledgeplex.org/kp/text_document_summary/scholarly_article/relfiles/hpd_0602_vandell.pdf (accessed May 7, 2014).
 15. The HOLC was disbanded in 1936. For more on the history of these markets, see Thomas N. Herzog, "History of Mortgage Finance with an Emphasis on Mortgage Insurance," American Society of Actuaries, 2009, <http://www.soa.org/library/monographs/finance/housing-wealth/2009/september/mono-2009-mfi09-herzog-history.pdf> (accessed May 7, 2014), and Richard Green and Susan Wachter, "The American Mortgage in Historical and International Context," *Journal of Economic Perspectives*, Vol. 19, No. 4 (Fall 2005), pp. 93-114, http://repository.upenn.edu/cgi/viewcontent.cgi?article=1000&context=penniur_papers (accessed May 7, 2014).
 16. Vandell, "FHA Restructuring Proposals," p. 304. The term was lengthened to 25 years for some FHA loans in 1938. See also Herzog, "History of Mortgage Finance with an Emphasis on Mortgage Insurance."
 17. Adjustable-rate mortgage is a broad definition for any mortgage product that has a built-in feature to recalibrate at different points over the life of the loan to a different interest rate (higher or lower, typically within a limited range). Federal Home Loan Bank member institutions were prohibited from offering ARMs until 1981. See Diana G. Browne, "The Development and Practical Application of the Adjustable Rate Mortgage Loan: The Federal Home Loan Mortgage Corporation's Adjustable Rate Mortgage Loan Purchase Program and Mortgage Loan Instruments," *Missouri Law Review*, Vol. 47, No. 2 (Spring 1982), p. 183, <http://scholarship.law.missouri.edu/cgi/viewcontent.cgi?article=2656&context=mlr> (accessed May 7, 2014).

financial risk while providing funds to build homes.¹⁸ When private associations failed to materialize, the federal government created the Federal National Mortgage Association (Fannie Mae) in 1938.¹⁹

Diversification across mortgage products not only benefits the overall market, but also individual customers, who benefit from having more choices.

Congress initially authorized Fannie Mae to purchase only FHA-insured loans to bring into the secondary market. At first, Fannie was effectively a lender that competed with savings and loan associations (S&Ls), a main source of mortgage funding after the Depression. Fannie's operations only made life easier for the S&Ls' competitors—private firms known as mortgage companies. These companies did not have access to customer deposits like the S&Ls, so they relied on Fannie Mae to provide them with funds for originating mortgages. At least as far back as 1959, mortgage companies actively lobbied for federal support of their operations.²⁰ In 1970, mortgage companies effectively got their wish.

Fannie Mae completed its transition to a quasi-private government-sponsored enterprise (GSE) in 1970, when for the first time, it was authorized to buy mortgages that are not insured by the government (referred to as conventional loans). Congress also passed the Emergency Home Finance Act of 1970, which created the Federal Home Loan Mortgage Corporation (Freddie Mac). Freddie was started

specifically to alleviate S&Ls' financial difficulties by expanding the secondary mortgage market for these institutions.²¹

Initially, only Freddie Mac issued mortgage-backed securities (MBS), while Fannie Mae continued to function more like a lending institution. Throughout the 1970s, Fannie and Freddie worked to standardize conventional loan documents to further boost the secondary market, and Fannie finally issued its own MBS in 1981. This timing was somewhat fortuitous because the GSEs' conventional secondary mortgage market filled a huge funding void after the S&Ls crashed in the late 1980s.²² Interestingly, the fact that the market consisted mostly of FRMs contributed to the S&L crash and also to Fannie Mae's insolvency.²³

Policymakers gradually removed ARM lending restrictions as they recognized that a mortgage market dominated by FRMs was not a good match for the volatile inflationary environment of the late 1960s and 1970s. By 1988, ARMs had approximately 60 percent of the U.S. market, nearly the same share currently held by FRMs in the U.S.²⁴ This difference underscores the fact that no single mortgage product is ideally suited for all economic conditions.

Trade-offs and Risk in Mortgage Products

Diversification across mortgage products not only benefits the overall market, but also individual customers, who benefit from having more choices. Having many different options in available mortgage products is critical to a well-functioning market because borrowers' needs vary and frequently change. For example, many potential borrowers may want a short-term, interest-only loan because they

18. Today, these investments are called mortgage-backed securities (MBS), but the concept was not yet developed in the 1930s. Efforts to begin some form of secondary mortgage market predate the 1900s, but the market never developed. For a full discussion, see Richard W. Bartke, "Fannie Mae and the Secondary Mortgage Market," *Northwestern University Law Review*, Vol. 66, No. 1 (March–April 1971).

19. Fannie Mae was originally a federal agency. For more on the history of Fannie Mae, see Michel and Ligon, "Fannie and Freddie: What Record of Success?" Heritage Foundation *Background* No. 2854, November 7, 2013, <http://www.heritage.org/research/reports/2013/11/fannie-and-freddie-what-record-of-success>.

20. Bartke, "Fannie Mae and the Secondary Mortgage Market," p. 11.

21. Herzog, "History of Mortgage Finance with an Emphasis on Mortgage Insurance," p. 25.

22. Formally, the bulk of the securities trading in the secondary market now takes place in the to be announced (TBA) market. For additional information on the TBA market, see James Vickery and Joshua Wright, "TBA Trading and Liquidity in the Agency MBS Market," Federal Reserve Bank of New York *Economic Policy Review*, May 2013, <http://www.newyorkfed.org/research/epr/2013/1212vick.pdf> (accessed April 15, 2014).

23. Although insolvent, Fannie was allowed to continue operating. The U.S. Government Accountability Office reported that Fannie suffered "cumulative net losses of over \$350 million in 1981, 1982, 1984, and 1985." U.S.S. Government Accountability Office, "Government-Sponsored Enterprises: The Government's Exposure to Risks," August 1990, p. 9, <http://www.gao.gov/assets/150/149461.pdf> (accessed October 16, 2013).

24. See Green and Wachter, "The American Mortgage in Historical and International Context," pp. 99–100.

TABLE 1

Comparing Interest Payments: 30-Year and 15-Year Fixed-Rate Loans

In this example, based on a \$200,000 mortgage, a home buyer would pay \$84,000 more in interest payments for a 30-year fixed-rate loan than for a 15-year fixed-rate loan.

	30-Year Fixed Rate	15-Year Fixed Rate	Difference
Monthly Payment*	\$987	\$1,508	-\$520
Monthly Paid to Principal*	\$556	\$1,111	-\$556
Monthly Paid to Interest*	\$432	\$396	+\$35
Total Interest	\$155,462	\$71,367	+\$84,095

* Averages over the full life of the loan term.

Source: Authors' calculations. See Appendix A for more information.

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expect to move and/or sell their home within a year or so. Similarly, lenders may find that they can best provide home financing by creating new mortgage products that do not yet exist in the U.S.

Different mortgage products have different risks with different trade-offs for borrowers and lenders. Table 1 presents a comparison of 30-year and 15-year FRMs to highlight these trade-offs. Even though the 15-year FRM is usually available at a lower interest rate, these calculations use the same rate for both the 15-year and 30-year loans. In practice, the differences are even more pronounced than shown in Table 1. (For more details on these calculations, see Appendix A.) The example shows that borrowing \$200,000 for 30 years results in a monthly payment that is \$520 less than borrowing the same amount for only 15 years. Lengthening the loan term dramatically lowers the monthly payment, but drastically increases the total interest owed on the loan.

Table 1 shows that \$200,000 borrowed at 30 years results in a total interest cost of \$84,095 more than if it were borrowed for only 15 years. In other words, even at the same interest rate, the total interest cost for the 30-year loan is more than double the cost of the 15-year loan. This trade-off, lower monthly payments for higher interest costs, cannot be judged objectively. Some borrowers may find this trade-off completely acceptable while others might not. The fact that this higher interest is not spread evenly over the life of the loan can also influence borrowers' decision to borrow at the longer term.

For all amortized loans (i.e., loans that allow for reduction in principal as opposed to interest-only

loans), the monthly payment includes both principal and interest components. With everything else remaining constant, monthly payments on longer-term loans contain a larger proportion of interest at the beginning than payments on shorter-term mortgages do. In other words, the longer the term, the more time borrowers spend paying interest instead of paying off their loan balance. (See Table 2.) This additional time to pay off the balance constitutes an added risk for borrowers and lenders, which becomes apparent when the home must be sold.

Naturally, upon the sale of a home, any mortgage balance must be paid off before the homeowner receives any of the proceeds. For any given rate of home price appreciation, a borrower with a 30-year FRM will have less equity than one with a shorter-term mortgage.²⁵ In other words, the long-term borrower will owe the bank more than if they had borrowed at the shorter term. If home prices fall too much, long-term borrowers may be unable to pay off their loan balances with the proceeds from selling the home.

Still, a borrower's decision to accept this risk in return for a lower monthly payment is purely subjective. Having the federal government tell borrowers that they can or cannot take out a 30-year mortgage is akin to telling workers whether they can invest in equities. In either case, by limiting choices in this manner, government regulators are assuming that they know which risks and benefits are best for all borrowers. Aside from the fact that policymakers cannot acquire this knowledge, the additional risks associated with mortgage lending suggest that policies should not favor any particular mortgage product.

25. The only possible exception to this rule could involve the use of certain interest-only mortgages.

TABLE 2

Comparing Total Housing Equity: 30-Year and 15-Year Fixed-Rate Loans

Time Frame	Mortgage Type	Monthly Interest Payment (Average)	Remaining Principal	LOAN-TO-VALUE SCENARIOS		
				3% Home Price Appreciation <i>(beginning principal: \$200,000)</i>	3% Home Price Depreciation <i>(beginning principal: \$200,000)</i>	No Down Payment and 3% Home Price Depreciation <i>(beginning principal: \$250,000)</i>
Year 1	30-year fixed	\$708	\$196,646	76.4%	81.1%	101.4%
	15-year fixed	\$698	\$190,280	73.9%	78.5%	98.1%
Year 5	30-year fixed	\$682	\$181,700	70.6%	74.9%	93.7%
	15-year fixed	\$624	\$146,966	57.1%	60.6%	75.8%
Year 15	30-year fixed	\$604	\$130,989	50.9%	54.0%	67.5%
	15-year fixed	\$396	\$0	0.0%	0.0%	0.0%

Source: Authors' calculations. See Appendix A for more information.

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Risks to Banks

When mortgages go underwater, both borrowers and lenders lose. Homes cannot be sold at a high enough price to pay off a mortgage, so borrowers remain in debt while lenders have nobody to pay them what is owed. In theory, this risk is shared by both borrower and lender, but in practice lenders in the U.S. bear most of the burden because many states have laws that favor the borrower when a mortgage goes underwater. In fact, many of these laws provide incentives for borrowers to walk away from underwater mortgages.

For example, in most states, borrowers who file bankruptcy cannot be forced to pay off their home mortgage with their other assets.²⁶ Even outside of bankruptcy, many U.S. states provide incentives for borrowers to stop making their mortgage payments, and foreclosures can take several years to complete, while the borrower is allowed to remain in the home. Lenders also bear a great deal of basic credit risk in a mortgage contract.

That is, lenders take on the risk that borrowers will make all of the scheduled payments for the life of a loan. The longer the term of the loan, the more risk that the loan will not be paid back. Another type of mortgage risk, referred to as *interest-rate risk*, is that the value of a mortgage falls when interest rates rise. For example, if a bank lends money at 4 percent interest on a 30-year FRM, it loses money when interest rates rise because it cannot earn the higher rate. On the other hand, FRM lenders are in a better position when rates fall because their existing loans pay a higher rate than any new loans would earn.

While these scenarios may appear to balance out—a rise in rates favors the fixed-term borrower while a fall in rates benefits the fixed-term lender—a key feature of the U.S. market pushes virtually all FRM interest-rate risk onto the lender. When interest rates fall, borrowers are virtually unrestricted from refinancing their loan by securing a new loan

26. Nothing in this paper should be construed to imply that filing bankruptcy is a desirable process. Nonetheless, homeowners can stop paying their mortgage and declare bankruptcy to protect all their non-housing assets in many states. Karen M. Pence posits that loans are 3 percent to 7 percent smaller in states that are “defaulter-friendly,” implying that lenders respond to the less-restrictive laws by reducing mortgage loan supply. Karen M. Pence, “Foreclosing on Opportunity: State Laws and Mortgage Credit,” *The Review of Economics and Statistics*, Vol. 88, No. 1 (February 2006), pp. 180.

at a lower rate and paying off the old loan. Many state laws prohibit banks from charging borrowers fees (prepayment penalties) when they pay off a loan ahead of schedule. Furthermore, after 1979, Fannie Mae would only purchase FRMs *without* prepayment penalties.²⁷

In many ways, these features make long-term FRMs in the U.S. a one-way bet for borrowers at the expense of lenders. As a result, lenders typically charge higher interest rates on long-term FRMs versus ARMs and shorter-term FRMs. The premium on 30-year FRMs effectively means that all U.S. borrowers who take on a 30-year FRM pay at least a portion of the costs to remain shielded from these risks. For instance, all 30-year FRM holders in the U.S. pay for the option to refinance when rates fall even though they may never refinance. On the other hand, ARMs typically have lower rates because borrowers share some of these risks—a difference that has been incorrectly identified as a key cause of the recent financial crisis.

The Recent Housing Crisis and False Narratives

There are numerous misconceptions about the recent crisis in the U.S. housing and financial markets that continue to shape the housing finance reform debate. One particularly common argument is that ARMs contributed to the crisis because of their “reset” feature, which changes a borrower’s monthly payment based on periodic changes in market interest rates. One problem with this story is that ARMs make up a relatively small share of the overall U.S. market.²⁸ More importantly, many ARM borrowers were not exposed to unique risks relative to those with FRMs.

Why Are 30-Year FRM Rates Greater Than Other Types of Mortgages?

- The lender accepts all credit risk.
- The lender accepts all interest-rate risk.
- The borrower reserves the option to prepay with no penalty.
- The lender has limited and costly options for recourse.

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While ARMs did lead to higher monthly payments for some borrowers, Federal Reserve data show that the majority of households holding ARMs were in delinquency *before* the reset occurred. Most ARM borrowers during this period were having problems making their mortgage payments before higher interest rates affected them.²⁹ In fact, only 12 percent of foreclosures between 2007 and 2010 were due to the payment reset on ARMs. The majority of foreclosures were on fixed-rate mortgages.³⁰

Additionally, more than 80 percent of households that faced foreclosure during these years were making the same payment on their mortgage as when their loan was originated.³¹ Thus, pervasive use of ARMs did not cause the recent housing crisis. What really mattered when home prices started to fall was not the type of mortgage product the household was holding, but the level of equity in the home.

Indeed, ample evidence suggests that negative equity, especially in a decreasing home price envi-

27. In the secondary market, a prepayment has virtually the same consequences as a mortgage default. Prior to 1979, Fannie Mae would purchase loans with limited prepayment penalties, typically limited to within the first five years of the loan. See Browne, “The Development and Practical Application of the Adjustable Rate Mortgage Loan,” p. 183.

28. Mortgages with adjustable rates averaged about 20 percent of the conventional mortgage market from 2000 to 2007. These same products accounted for roughly 30 percent from 1984 to 2008.

29. Christopher L. Foote, Kristopher S. Gerardi, and Paul S. Willen, “Why Did So Many People Make So Many *Ex Post* Bad Decisions? The Causes of the Foreclosure Crisis,” Federal Reserve Bank of Boston *Policy Discussion Paper* No. 12-2, July 20, 2012, pp. 5–7, <http://www.bostonfed.org/economic/ppdp/2012/ppdp1202.pdf> (accessed May 7, 2014). See also Kristopher S. Gerardi et al., “Making Sense of the Subprime Crisis,” Federal Reserve Bank of Atlanta *Working Paper* No. 2009-2, February 2009, p. 6, <http://www.frbatlanta.org/documents/pubs/wp/wp0902.pdf> (accessed May 7, 2014).

30. Foote et al., “Why Did So Many People Make So Many *Ex Post* Bad Decisions?” p. 58.

31. *Ibid.*, p. 6.

ronment, is more of a factor in mortgage defaults than whether a borrower has an ARM or an FRM.³² Both prime (ARM) and nonprime (FRM) borrowers with negative equity in their homes face a higher chance of defaulting on their mortgages.³³ While subprime mortgages generally pose a higher risk of default than prime mortgages, low-equity subprime mortgages face an even greater probability of default.³⁴

For instance, Federal Reserve data show that subprime mortgages are about six times more likely than prime mortgages to result in foreclosure. Yet, the same data show that the combination of subprime homeownership with substantial negative equity increases the likelihood of mortgage default to 60 times that of a prime borrower with positive equity.³⁵ Overall, having some equity in a home is clearly a good way to protect against borrower default.

As discussed above, borrowers with 30-year FRMs take longer to build home equity compared with those with shorter-term FRMs and ARMs.³⁶ Starting in 2006, when home prices declined 15 percent nationally—nearly 60 percent in some regions of the U.S.—all mortgages backed with little-to-no equity were exposed to substantial default risk.

Given the trends of higher debt and lower equity in the U.S., the spike in the rate of defaults and delinquencies in 2006 as home prices began to fall was not surprising.

Policy Recommendations

Policymakers should reform the mortgage finance market by first recognizing that no single type of loan will be best for all borrowers at all times. Congress should seek to remove obstructions so that private capital can flow to its most productive uses, not to preserve a product that some people may prefer. The first step should be to begin dismantling the regulations that Dodd–Frank imposed on the financial sector. Going forward, Congress’s best courses of action include:

- **Shutting down Fannie Mae and Freddie Mac.** Congress should get the federal government out of the U.S. housing finance market. A good first step would be to adopt some of the policies outlined in either Chairman Jeb Hensarling’s (R–TX) Protect American Taxpayers and Homeowners (PATH) Act or Representative Justin Amash’s (R–MI) New Fair Deal Banking and Housing Stability Act.

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32. The probability of a borrower—prime or non-prime—with negative equity transitioning into 60-day delinquency is magnified by a period of unemployment, especially for owner-occupied borrowers. Laurie S. Goodman et al., “Negative Equity Trumps Unemployment in Predicting Defaults,” *The Journal of Fixed Income*, Vol. 19, No. 4 (Spring 2010), pp. 67–72. Alternatively, Gerardi et al. argue that the strongest predictor of default is an experience of individual unemployment, all else constant, and estimate that individual unemployment raises the probability of default by 5 percentage points to 13 percentage points. See Kristopher Gerardi et al., “Unemployment, Negative Equity, and Strategic Default,” Federal Reserve Bank of Atlanta *Working Paper* No. 2013-4, August 2013, pp. 16–22, <https://www.frbatlanta.org/documents/pubs/wp/wp1304.pdf> (accessed May 7, 2014).
33. Gerardi et al., “Unemployment, Negative Equity, and Strategic Default”; Goodman et al., “Negative Equity Trumps Unemployment in Predicting Defaults,” pp. 71–72; and Foote et al., “Why Did So Many People Make So Many *Ex Post* Bad Decisions?” p. 8.
34. There is no one definition of a subprime loan, and many characteristics can go into the categorization of subprime mortgage loans. Generally, subprime mortgage loans require a borrower to possess one (or more) credit risk factors not associated with a prime loan. These risk factors can include, but are not necessarily limited to, low credit scores (below 680) and high loan-to-value mortgages (generally greater than 90 percent). Rajdeep Sengupta and William R. Emmons, “What Is Subprime Lending?” Federal Reserve Bank of St. Louis *Economic Synopses*, Number 13, 2007, <https://research.stlouisfed.org/publications/es/07/ES0713.pdf> (accessed April 23, 2013).
35. Experiences in negative equity substantially increase the probability of foreclosure for prime homeownership, too. Gerardi et al. show in Figure 6 the probability of foreclosure for prime homeownership increases 5 percentage points between 0 percent equity and negative 50 percent equity. The unit of analysis in this study is “homeownership experiences” instead of individual loans. They employ a dataset based on deed records in the Commonwealth of Massachusetts from 1989 through 2008. Their counterfactual models estimate the comparative impact between 2002 and 2005 vintage loans on experiences of subprime homeownership. Kristopher Gerardi, Adam Hale Shapiro, and Paul S. Willen, “Decomposing the Foreclosure Crisis: House Price Depreciation Versus Bad Underwriting,” Federal Reserve of Atlanta *Working Paper* No. 2009-25, September 2009, pp. 3–17 and 41, <http://www.frbatlanta.org/filelegacydocs/wp0925.pdf> (accessed May 7, 2014).
36. Joao Cocco posits that alternative mortgages (mostly comprising ARMs) can provide benefits to individual portfolio diversification, tax benefits, and a reduction in the transaction costs incurred in housing transactions. Joao F. Cocco, “Evidence on the Benefits of Alternative Mortgage Products,” *The Journal of Finance*, Vol. 68, No. 4 (August 2013), pp. 1663–1690. In earlier work, John Campbell and Joao Cocco find that ARMs are less attractive for less risk-averse households with large mortgages, volatile income, high-default cost, or low moving probability. John Y. Campbell and Joao F. Cocco, “Household Risk Management and Optimal Mortgage Choice,” *The Quarterly Journal of Economics*, Vol. 118, No. 4 (November 2003), pp. 1449–1494.

- **Eliminating any semblance of affordable housing goals for lenders.** Lenders should assess borrowers' credit risk, not implement politicians' favored social policies. Short of a full repeal of the Dodd–Frank Act, Congress should eliminate the Consumer Financial Protection Bureau (CFPB), the federal agency that enforces Dodd–Frank's new mortgage regulations. Short of eliminating the CFPB, Congress can remove barriers to capital formation by eliminating the ability-to-repay rule, the qualified mortgage, disparate impact, and all of the mortgage servicing rules imposed by Dodd–Frank.

Conclusion

The 30-year FRM is now the dominant mortgage product in the U.S., but it did not become so pervasive simply because of the GSEs. Furthermore, 30-year FRMs exist in the U.S. without any government backing in the jumbo market, which is so named because its loans are larger than those eligible for GSE purchase. Supporters of the status quo point out that the 30-year FRM provides borrowers with long-term security, but they ignore certain costs and risks associated with a 30-year FRM. These risks exist, and government policies have typically attempted to shift these risks from financial markets to taxpayers.

The truth is no government policy can eliminate these financial risks, and the dangers associated with different types of debt vary as economic conditions change. History shows that policymakers tend

to fight this reality with disastrous consequences. For instance, numerous government regulations contributed to the domination of U.S. markets by short-term adjustable rate mortgages (ARMs) in the 1920s, a factor that contributed to financial turmoil during the 1930s. Largely in response to those problems, policymakers implemented various policies so that mortgage markets would become dominated by long-term FRMs—a feature that caused financial hardship in the 1980s.

The secondary market operations of Fannie Mae and Freddie Mac certainly played a large role in shaping the U.S. mortgage market. FRMs' domination of this market is the consequence of many economic events and government policies spread over decades. Even though no single federal government policy created or proliferated the conventional 30-year FRM, many interest groups claim that shutting down the GSEs would imperil the existence of the 30-year FRM. It is misguided to justify broad government intervention and taxpayer guarantees to preserve any one type of mortgage product, and there is no inherent reason that the 30-year FRM will not exist without the GSEs.

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Appendix A

The data in the simplified examples in Table 1 and Table 2 are drawn from amortization schedules for a 15-year mortgage and a 30-year mortgage, each with loan principal of \$200,000. The amortization schedules for both the 15-year and 30-year mortgage scenarios use a monthly periodic interest rate based on a fixed annual interest rate of 4.28 percent. Thus, for sake of comparison, there is no interest rate spread between the two mortgages. The calculations assume a fixed interest rate over the life of the loan with no recalibration to a lower fixed interest rate. Hence, the borrower does not exercise a prepayment option and does not borrow against accumulated positive equity.³⁷ Typically, interest rates on FRMs are higher than those on ARMs. For instance, over the past five years, the U.S. rate on the 15-year FRM averaged 75 basis points (0.75) below the 30-year FRM rate.³⁸ Moreover, most Americans do not stay in the same mortgage contract. The average length of tenure has historically been around six years, but this duration period has increased to around nine years during the recent turmoil in the housing market.³⁹

In practice, the decision to take on a long-term fixed-rate mortgage is more complex than these examples suggest. For instance, the figures presented here say nothing about whether a household could otherwise make higher payments on a 15-year FRM and/or invest (in any mix of assets) the “difference” between the total payments for a 15-year FRM and 30-year FRM. In reality, these considerations can influence choices between various mortgage products and time horizons, especially for households in higher-income quintiles.⁴⁰

The calculations in Table 2 assume that the change in the value of the home (home price depreciation or appreciation) is the total change from origination to the fixed point specified in the scenario (e.g., Mortgage Year 5). Thus, a 3 percent decrease in the home price in “Scenario Mortgage Year 5” corresponds to a home valued at \$242,500 compared with the \$250,000 at origination of the mortgage. The monthly interest payment is the average from the point of origination of the loan to the end of the specified fixed point (i.e., the end of 12-month period in the “Scenario Mortgage Year” specified).

37. In actuality, American households do elect to borrow against the increase in home equity. This type of borrowing activity has undermined many households in the past. Mian and Sufi (2009) estimate that borrowing on home equity accounted for at least 39 percent of new mortgage defaults from 2006 to 2008. Atif Mian and Amir Sufi, “The Consequences of Mortgage Credit Expansion: Evidence from the U.S. Mortgage Default Crisis,” *The Quarterly Journal of Economics*, Vol. 124, No. 4 (November 2009), pp. 1449-1496.

38. There are also many other mortgage products available to U.S. borrowers, and ARMs typically start with rates lower than FRMs. See myFICO, “Choose the Type of Home Mortgage Loan That Makes Sense for You,” <http://www.myfico.com/loancenter/mortgage/step2/chooseloan.aspx> (accessed April 14, 2014).

39. See Ken Fears, “Reflecting on the 30-Year Fixed Rate Mortgage,” National Association of Realtors, August 5, 2013, <https://economistsoutlook.blogs.realtor.org/2013/08/05/reflecting-on-the-30-year-fixed-rate-mortgage/> (accessed April 9, 2014).

40. Peter M. Basciano, James M. Grayson, and James Walton, “Is a 30-Year Mortgage Preferable to a 15-Year Mortgage?” *Journal of Financial Counseling and Planning*, Vol. 17, No. 1 (2006), pp. 14-21.