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Before the US Senate Banking Committee hearing:

Housing Finance Reform: Should there be a Government Guarantee?

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Chairman Johnson and Senator Shelby, thank you for allowing me to be part of this distinguished panel today. My name is Richard Green, and I am the Lusk Chair in Real Estate and the Director of the Lusk Center for Real Estate at the University of Southern California, where I am also Professor of Policy, Planning and Development and Professor of Finance and Business Economics.

As you know, I have been asked to discuss whether the US mortgage market requires a federal guarantee in order to best serve consumers, investors and markets. I will divide my remarks into four areas:

(1) I will argue that the United States has had a history of providing guarantees, either implicit or explicit, regardless of its professed position on the matter. This phenomenon goes back to the origins of the republic. It is in the best interest of the country to acknowledge the existence of such guarantees, and to price them appropriately before, rather than after, they become necessary.

(2) I will argue that in times of economic stress, such as now, the absence of government guarantees would lead to an absence of mortgages.

(3) I will argue that a purely "private" market would likely not provide a 30 year fixed rate pre-payable mortgage. I think this is no longer a particularly controversial statement; what is more controversial is whether such a mortgage is necessary—I will argue that it is.

(4) I will argue that in the absence of a federal guarantee, the price and quantity of mortgages will vary across geography. In particular, rural areas will have less access to mortgage credit that urban areas, central cities will have less access than suburbs. Condominiums already are treated less favorably than detached houses, and this difference is likely to get larger in the absence of a guarantee.

Before discussing the substance of my remarks, I should make some disclosures. First, I worked as a Principal Economist and then Director of Policy Strategy for Freddie Mac between September of 2002 and January of 2004. Part of my compensation for that work was restricted shares in the company. I never sold my shares in Freddie Mac, and I have no expectation of ever seeing them have material value. I think it appropriate that common shareholders were substantially wiped out by the government conservatorship of the company. Second, I have performed research with two Fannie Mae employees, Eric Rosenblatt and Vincent Yun, for an academic paper. The only compensation I received for this was intellectual satisfaction. Finally, when the Fannie Mae Foundation was publishing *Housing Policy Debate*, I received compensation for reviews I wrote for the publication.

I. The United States has a long history of providing ex-post (after the fact) guarantees, as well as other guarantees.

One could reasonably argue that the United States was born from a bail-out. One of the most famous compromises in US history was a deal negotiated among Hamilton, Jefferson and Madison for the new Federal Government of the United States to assume the Revolutionary War Debts of the Continental Army and the individual states. While Jefferson would later write that he regretted the compromise (probably because he saw Virginia as a net loser on the deal), it helped bind the states together. Moreover, because of Hamilton's financial acumen, Assumption probably allowed states and the Continental Army to pay less in interest costs than they otherwise might, and so allowed the country to begin on a strong financial footing.[1]

The Transcontinental Railroad also received financing at least in part because of government guarantees (as well as direct subsidies). While the railroads were built by private companies (the Central Pacific and the Union Pacific), capital costs were financed by bonds that were explicitly backed by the Federal Government. While the backing was explicit, the equity investors in the railroads were not required to pay guarantee fees; profits were privatized while risk was socialized. In the end, the shareholders of both railroads lost their investments, but somehow the managers, including Coliss P Huntington and Charles Francis Adams, obtained and retained great wealth.

More recently, of course, we have had many “private” institutions receive federal backing, including commercial banks (who benefited from the Troubled Asset Relief Program (TARP) as well as the Federal Deposit Insurance Corporation (FDIC)), the “purely private” investment banks (who benefited from TARP), issuers of Asset Backed Securities (who benefited from the Term Asset Backed Securities Loan Facility (TALF)) and, of course, the Government Sponsored Enterprises. While one might argue that the GSEs have received more largess than the other private institutions, the fact is the federal government has shown, again, that it will intervene when large, systemically dangerous institutions are on the verge of collapse.

Furthermore, we still don’t know the full extent of government largess, because we don’t yet know the potential cost of off-balance sheet assets that commercial banks may be forced to repurchase because of alleged misrepresentations.

In light of the fact the federal government cannot credibly commit to no-bail-out policies (after all, TARP was the creation of a Republican administration), no matter what one thinks about the principle of government guarantees, as a practical matter it makes sense to recognize them explicitly and to price them.

[11] Ron Chernow, Alexander Hamilton, The Penguin Press: New York. Chapter 16.

Recent evidence suggests that neither the private nor private sectors is particularly good at pricing risk (although the FHA program, which has performed remarkably well through the crisis, might be an exception). The government should thus begin by pricing risk cautiously; perhaps more important, it should require institutions that might benefit from guarantees to hold capital. While market participants fear that higher capital requirements would raise costs to consumers, (1) such costs may be appropriate and (2) they may be actually be small. As financial institutions become less levered, their required return on equity should fall.[2] Indeed, because bankruptcy is costly, a policy that reduces the probability of bankruptcy, such as strong capital standards, could actually lower the total cost of capital for lenders. As we unfortunately know too well now, though, measuring capital is difficult, so guaranteed mortgage finance in future should require both fees and robust capital standards.

II. In times of economic stress, debt markets do not operate in the absence of government guarantees

Beginning with the great depression, the United States has faced at least four periods when private debt markets largely shut down—liquidity was so absent that spreads were not only wide, they were impossible to measure owing to the absence of transactions: the Great Depression; the double-dip recession of 1979-81; the Long-Term-Capital financial crisis; and the Great Recession of 2008-09.

In the aftermath of the banking crisis of 1930-33, mortgage lending shut down. As Ben Bernanke wrote in his classic paper[3]:

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[2] Franco Modigliani and Merton Miller's eponymous and famous theorem predicts that the total cost of capital to a firm should be invariant to capital structure. F. Modigliani and M. Miller (1958) "The Cost of Capital, Corporation Finance and the Theory of Investment". *American Economic Review* **48** (3): 261–297.

[3] Ben S. Bernanke, Nonmonetary Effects of the Financial Crisis on the Propagation of the Great Depression (1983). *American Economic Review*, 73(3):257-276.

> ..because markets for financial claims are incomplete, intermediation between some classes of borrowers and lenders requires nontrivial market-making and information gathering services. The disruptions of 1930-1933 (as I shall try to show) reduced the effectiveness of the financial sector as a whole in performing these services.

In other words, the banking crisis was principally a liquidity crisis; lenders had a reluctance to make even good loans to each other. The passage also underscores the more ubiquitous problem with financial institutions: they are rife with incomplete markets. Even in the absence of government guarantees, financial institutions have principal-agent problems, adverse selection problems, lemons problems, and pooling problems.

The Hoover Administration created the Federal Home Loan Bank System and the Roosevelt Administration created the Federal Housing Administration, the Federal Deposit Insurance Corporation, the Home Owners Loan Corporation and, later, the Federal National Mortgage Association to restore liquidity.

And restore liquidity they did. Figure 13 in Son and Lee[4] (which graphs data from Goldsmith 1955[5]) shows the sharp drop in liquidity between 1930 and 1933, and how it is restored in 1934. The Federal Home Loan Bank system was established in 1932, FDIC in 1933 and the Federal Housing Administration in 1934. While one does not want to make post-hoc ergo prompter-hoc arguments, one could argue that the new Federal Institutions allowed for the possibility of price discovery, which in turn brought about some restoration of liquidity.

More recently, the double-dip recession of 1979-1981 led to a diminution of liquidity in the mortgage market. Between 1977 and 1982, net lending from savings institutions, the primary source of mortgage finance, dropped by 67 percent.[6] At about this time, and not coincidentally, Government Sponsored

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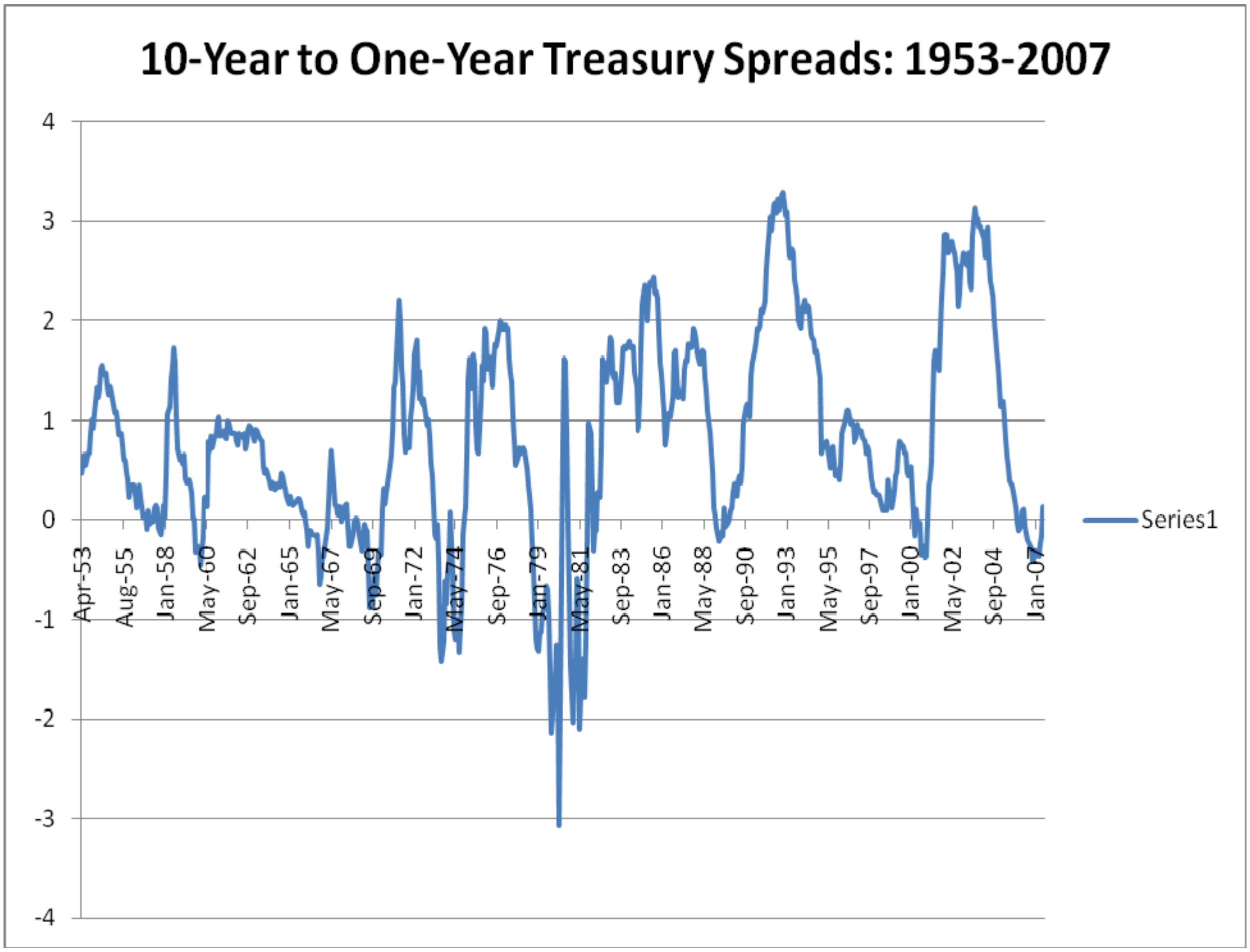
[4] Jin Son and Keun Lee (2010), Financial Crisis and Asset Market Instability in the 1930s and 2000s: Flow of Funds Analysis. http://apebhconference.files.wordpress.com/2009/08/son-n-lee.pdf

[5] Raymond W. Goldmith (1955). *A Study of Savings in the United States*. Princeton University Press: Princeton.

[6] See Flow of Funds Accounts of the United States, Table F.1, line 40.

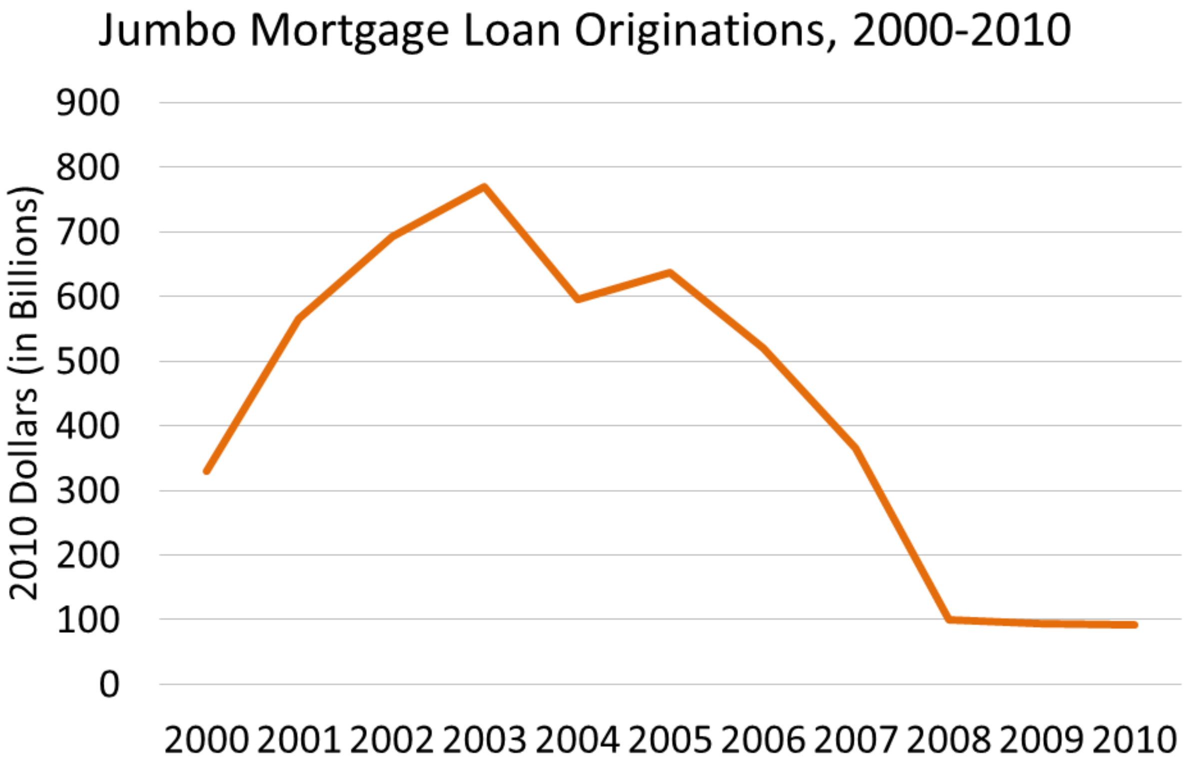
Enterprise lending expanded by a factor by 3. GSE-backed Mortgage Backed Security lending quadrupled during this time, and GSE portfolio lending more than doubled. Both Savings and Loans and Fannie Mae were technically insolvent over this period, but the federal government exercised forbearance, which could be looked at as a whispered guarantee.



We should note that mortgage institutions were troubled less by credit risk than interest rate risk: Savings and Loans as well as Fannie Mae had long-term mortgages on their balance sheets; they funded these mortgages with short-term debt. The yield curve between 1979 and 1981 was highly inverted (in fact, short term rates were higher than long-term mortgages by an unprecedented amount). One might take the view that while financial institutions have control of credit risk, they have no control over the short-term interest rate set by the Federal Reserve System. In any event, investors were apparently more comfortable with Freddie Mac and Fannie Mae’s credit risk guarantees than depositors were with Savings and Loans.

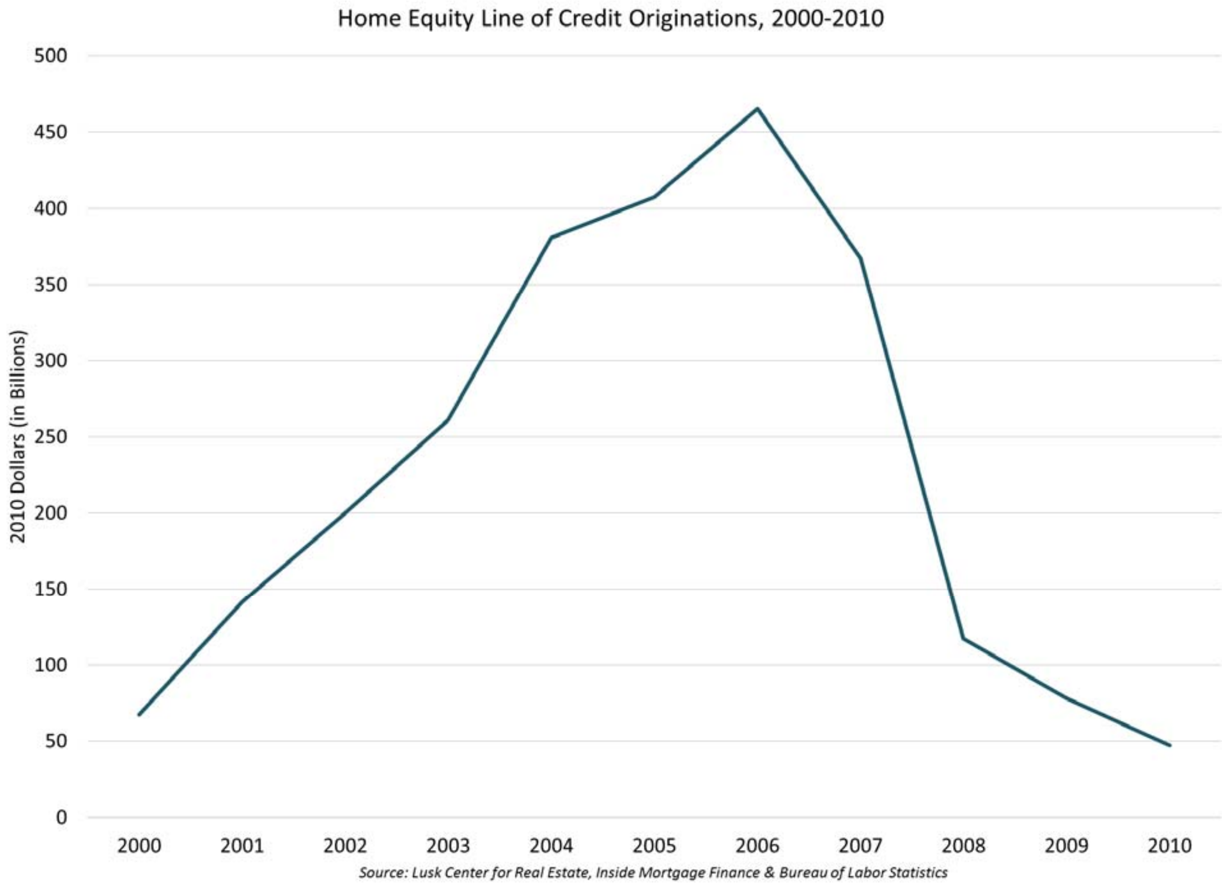
Most dramatic was the Long-Term Capital Management Crisis, which was something of a rehearsal for the most recent crisis. When conduits for commercial mortgages shut down, Fannie Mae and Freddie Mac continued to lend. Anthony Sanders (no fan of GSEs) shows in a graph that the spread between Jumbo and Conforming Mortgage widened from 10 to 40 basis points in the aftermath of the Long-term Capital Financial Crisis.

Of course, in the current environment, the government sponsored enterprises, which are wards of the state, are the dominant sources of mortgage lending. It is frightening to think where housing markets, already at their weakest point since the great depression, would be in the absence of the GSEs. While one might argue that the lack of other lending arises from a private sector being crowding out by the public sector, the segments of the housing market which are not eligible for GSE purchases have very nearly shut down. According to Inside Mortgage Finance, the prime jumbo mortgage originations have dropped by more than 5/6 since the peak, and in 2010 were at about 1/3 the level of any year before 2008.



Source: Lusk Center for Real Estate, Inside Mortgage Finance & Bureau of Labor Statistics

Home equity lines of credit, which are an important mechanism for the elderly to use housing wealth to smooth consumption, have seen similarly dramatic drops.



III. The 30-year fixed rate mortgage might go away in the absence of government guarantees

There are two issues here: whether the US long-term self-amortizing mortgage requires some sort of government support, and whether it is important.

Counterfactuals are impossible to prove, but we do have some evidence that the GSEs mattered to making the long-term mortgage common. While such loans existed before the Home Owners Loan Corporate made them the standard instrument in the United States, they were not common. Moreover, as we look at other countries, we find that long-term fixed rate pre-payable mortgages are rare. So far as I can tell, Denmark is the only other country that has such mortgages, and while that market appears "private," it has heavily regulated, specialized institutions that issue that bonds that fund mortgages. When these institutions faced problems in 2009, the Danish government injected liquidity into them. And while there is much to praise about the Canadian mortgage systems, it too has government involvement (most low-down payment loans are supported by government mortgage insurance) and is vulnerable to a particular type of risk: borrowers must roll over their debt every five years or so[7]. The current state of the commercial real estate Market underscores that maturity defaults—defaults that arise because borrowers cannot roll over debt when capital markets are troubled—are just as bedeviling as payment defaults.

David Min has a nice explanation of why the 30-year mortgage is good for consumers[8]:

> There are three major arguments in favor of continuing to emphasize the 30-year fixed-rate loan in the United States:
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> - First, the 30-year fixed-rate mortgage provides cost certainty to borrowers, which means they default far less on these loans than for other products, particularly during periods of high interest rate volatility.
> - Second, the 30-year fixed-rate mortgage leads to greater stability in the financial markets because it places the interest rate risk with more sophisticated financial institutions and investors who can plan for and hedge against interest rate fluctuations, rather than with unsophisticated households who have no such capacity to deal with this risk and who are already saddled with an enormous amount of financial burden and economic uncertainty.
> - Third, the 30-year fixed-rate mortgage leads to greater stability in the economy because short-term mortgages are much more sensitive to interest rate fluctuations and thus much more likely to trigger a bubble-bust cycle in the housing markets. Indeed, there may be reason to believe that a primary cause of the recent housing bubble-and-bust cycle was the rapid growth of short-duration mortgages during the 2000s, which caused U.S. home prices to become more

[7] Thanks to Tsur Somerville of the University of British Columbia for making this point to me about Canadian mortgages.

[8] See http://www.americanprogress.org/issues/2010/11/housing_reform.html

> sensitive to the low interest rate environment created by Alan Greenspan’s Federal Reserve.

I would add that the pre-payable 30-year mortgage allows households to duration match assets and liabilities. Most households have two principal assets—their house and their human capital. Houses are long-term capital assets—and as such their values are sensitive to real interest rates. The 30-year mortgage allows households to hedge interest rate risk. This hedge isn’t free—long-term interest rates are usually higher than short-term rates for a reason. But having the option og the hedge helps household mitigate risk.

On the other hand, the ability to freely repay a mortgage allows households to be mobile. If one needs to move from one state to another to take a new job, free prepayment reduces the cost of such a move. Once again, this option is not free—investors need to be compensated for the risk they take—but it helps households better manage risk.

We at business schools teach the importance of hedging duration risk. It is no less important for households than it is for financial institutions. The 30-year fixed rate pre-payable mortgage is the instrument that allows households to do so.

IV. In the absence of a guarantee, we would observe differences in the price and availability of mortgage credit across communities.

Some housing markets have many fewer transactions than others. It can be difficult to infer house prices, and therefore to assess mortgage risk in these markets.

Brent Ambrose and Richard Buttimer[9] write about how rural markets, where houses trade infrequently, might be ill-served in the absence of a guarantee:

> …our analysis confirm[s] that the conforming rural market is closely tied to the conforming urban market, while the

[9] See Brent Ambrose and Richard Buttimer (2005) GSE impact on rural mortgage markets, *Regional Science and Urban Economics*, 35(4):417-443.

> jumbo rural market is less closely tied to the jumbo urban market. We interpret this as evidence that GSE involvement in the rural market, while a relatively small portion of the overall GSE business, is, nevertheless, serving to provide rural conforming mortgage borrowers with improved access to credit, especially when compared to rural jumbo borrowers.

The problem rural markets face applies to central urban markets as well. Lang and Nakamura show how thin markets in urban centers make valuation more difficult and undermine liquidity in the lending market [10]

A ruthless economist might argue that this simply means that rural areas and central cities are obsolete places that “deserve” their second class status for borrowing or lending. But when lending is underprovided because of information problems, resources are being wasted, and a well-tuned policy that allows for lending on favorable terms can provide a more efficient outcome than the market alone.

There are times, moreover, when even the most attractive neighborhoods for lending find themselves without easy access to credit. We find ourselves at this such a time right now. Even though lenders are advertising jumbo mortgages, borrowers are currently finding it very difficult to obtain one.

To begin, the process is long—loan approvals are taking as long as four months, which essentially eliminates a spot market in housing. Second, as with the case of rural and inner-city markets, appraisals are an impediment to lending, because the thinness of markets is making it difficult to determine appraised values. Third, the underwriting standards have swung from being too lenient to being considerably harsher than they were in the 1990s or even the late 1980s, which, based on performance, was a period in which underwriting was strong. For example, lenders are often looking for reserves equal to 10 percent of the value of the house along with a 20 percent down payment.

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[10] See W. Lang and L. Nakamura (1993) A Model of Redlining, *Journal of Urban Economics*, 33(2):223-234.

Perhaps such underwriting standards would be fine, were it not for the fact that they would prevent a substantial number of households from obtaining mortgage credit. As Peter Linneman and Susan Wachter[11] showed many years ago, the largest impediment to obtaining credit is not so much the ability to make monthly payments as it is to obtain a downpayment.

Professor Jaffee has argued that other countries (including Canada, Australia, and many European Countries) have homeownership rates as high as the United States despite having more onerous terms for borrowers, and that therefore the United States need not worry about making mortgage funds more difficult to obtain[12].

The problem with this line of reasoning is that the income and wealth distributions in these countries are substantially more even than in the US. For example, according to the OECD, the top half of the income distribution in the US has higher income than all but two other countries (the Netherlands and Luxembourg), the bottom quintiles income ranks 19th. The wealth distribution in the US is even more skewed than the income distribution.

If these differences in wealth and income reflected differences in effort and talent, this would not be a source of concern, at least to me personally. But we know that intergenerational wealth is an important determinant of the income distribution, and we are a country where for many generations not all of us had equal access to capital.

According to the Federal Reserve's *Survey of Consumer Finances*, median wealth among non-Hispanic white Families was $171,000 in 2007; among non-white and Hispanic families it was $28,000. It is not a coincidence that the homeownership rate for white households is more than 20 percentage points higher than for the remainder of the country—easier access to mortgage credit over

[11] P. Linneman and S. Wachter (1989), The impacts of borrowing constraints on homeownership. *AREUEA Journal* 17, 389–402.

[12] See Dwight Jaffee (2010), Reforming the US Mortgage Market through Private Incentives, http://research.stlouisfed.org/conferences/gse/Jaffee.pdf.

the years allowed white Americans to build wealth more easily than non-white and Hispanic Americans.[13]

Differences in wealth—particularly home-owning wealth--from past generations had an impact on successor generations. Dalton Conley has used Panel Survey of Income Dynamics Data to show that the probability of a child attending college can be largely predicted by two things: whether her parents went to colleges, and whether her parents had home equity.

It is doubtful that the private market on its own can redress this inequality of wealth that arises not because of differences in effort across people, but because of differences in how previous generations were treated.

There are those who argue that it was the attempt to advance mortgage credit to minorities that led to our current condition—I do not accept that argument. The loans that have performed most poorly were originated by institutions that were not covered by the Community Reinvestment Act or the Affordable Housing Goals. Moreover, as Mr. Wallison[14] himself once noted, Fannie Mae and Freddie Mac did not do a good job of advancing credit to minorities or low-income neighborhoods. While this is to their discredit, it undermines that argument that their troubles arose because they made too many loans to underserved borrowers.

Indeed, part of the problem is that institutions that received no guarantee made no effort to assure their loans were suitable, and often steered borrowers away from vanilla 30-year fixed rate products toward more dangerous products that were larded with

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[13] The government itself discriminated against certain neighborhoods based on racial characteristics for many years. The Home Owners Loan Corporation and the Federal Housing Administration had maps that green-lined neighborhoods that were considered desirable and red-lined those that were not. Neighborhood "desirability" was determined in part by its ethnic and racial make-up. In a recent law review article, Thomas Mitchell, Stephen Malpezzi and I (**Forced Sale Risk: Class, Race, and The 'Double Discount'**, *Florida State University Law Review*, Vol. 37: 589-68 (2010)) moreover found that many African-Americans had their home equity stripped through partition sales and sheriff's sales.

[14] See http://www.aei.org/article/23974.

fees. These were more profitable in the short-term, but exploded in the slightly-longer-term. Such recent past behavior does not support the conclusion that government guaranteed loans are more menacing than those produced in the purely “private” sector.