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RETURNING PRIVATE CAPITAL TO MORTGAGE MARKETS: A FUNDAMENTAL FOR HOUSING FINANCE REFORM

HEARING

BEFORE THE

SUBCOMMITTEE ON
SECURITIES, INSURANCE, AND INVESTMENT

OF THE

COMMITTEE ON
BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE

ONE HUNDRED THIRTEENTH CONGRESS

FIRST SESSION

ON

EXAMINING THE IMPORTANCE OF BRINGING PRIVATE CAPITAL BACK TO MORTGAGE MARKETS, CONSIDERING WHAT MECHANISMS WOULD ACHIEVE THIS GOAL, LIMIT TAXPAYER RISK, AND FACILITATE A STABLE AND LIQUID MORTGAGE MARKET

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RETURNING PRIVATE CAPITAL TO MORTGAGE MARKETS: A FUNDAMENTAL FOR HOUSING FINANCE REFORM

TUESDAY, MAY 14, 2013

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
SUBCOMMITTEE ON SECURITIES, INSURANCE, AND INVESTMENT
Washington, DC.

The Subcommittee met at 3:19 p.m. in room SD–538, Dirksen Senate Office Building, Senator Jon Tester, Chairman of the Subcommittee, presiding.

OPENING STATEMENT OF SENATOR JON TESTER

Senator TESTER. I would like to call this hearing to order of the Securities, Insurance, and Investment Subcommittee titled Returning Private Capital to Mortgage Markets: A Fundamental for Housing Finance Reform.

I want to welcome our witnesses, and I look forward to hearing from them this afternoon about some of the benefits and challenges associated with bringing private capital back to the mortgage markets. And, more specifically, we will get at how different risk-sharing mechanisms will achieve this goal while limiting taxpayer risk and facilitating a stable and liquid mortgage market. This is a crucial issue within the context of Fannie and Freddie as they consider and engage in different risk-sharing mechanisms later this year and also as we consider what the future of housing finance reform might look like.

We know that private capital will not automatically return to this market without an understanding of how the new system will function and what the rules of the road will be. Part of that is understanding more fully the mechanisms that are being considered to facilitate credit risk-sharing and seeing how investors respond to the enterprises' trial run later this year.

The FHFA has directed Fannie and Freddie to complete $30 billion in risk-sharing transactions and has directed them to consider expanded mortgage insurance, senior/subordinated securities and credit-linked securities.

While these mechanisms provide opportunities for the enterprises to better manage credit risk, we must also understand how they will limit taxpayer risk, impact mortgage affordability and accessibility for consumers in all communities and all markets, facilitate market liquidity and stability, including in times of economic stress, interact with the TBA market and scale over time.

We need to understand what different mechanisms would mean for different market participants and players in the mortgage market, like small financial institutions, for example, and how these mechanisms should be structured and what levers exist to ensure that private capital actually returns to the mortgage markets and that it does not leave taxpayers on the hook if it disappears in times of stress.

The good news is the housing market is showing signs of strength, property values are rising, and the enterprises are turning a profit, which once seemed unimaginable. The announcements of Fannie and Freddie last week are good signs, but they cannot lull us into complacency with the status quo. And I do not believe they should be used as an excuse to leave the enterprises in perpetual conservatorship.

Now is the time for us to be working toward solutions that will bring private capital back into our mortgage markets and create a vibrant and competitive mortgage market that is built to last and able to withstand the next crisis. A marketplace that uses instruments like the 30-year mortgage will keep the dream of home ownership within reach of hardworking middle-class Americans.

From my conversations with Members of this Committee, I think the opportunities to build consensus are there and the time to get serious is right now. I look forward to working with my colleagues, who will roll up their sleeves and get to work.

We have some great witnesses with us here today, and I am looking forward to hearing from all of them as we drill down on this important topic.

And, with that, I will turn it over to the Ranking Member, Senator Mike Johanns.

STATEMENT OF SENATOR MIKE JOHANNS

Senator JOHANNS. Mr. Chairman, let me start out and just say thank you for holding today's hearing on this very critical, timely and important topic.

And I would like to thank our witnesses for their insights and their expertise. I am going to have a very brief opening statement because I am most interested in hearing from you.

I would say at the outset of the hearing, though, that I believe there is a bipartisan consensus that is emerging around the idea that the status quo with Fannie Mae and Freddie Mac is not an acceptable approach. A nationalized housing market with an implicit Government guarantee, I would argue, is not good government.

I am hopeful that risk-sharing provisions such as those discussed today will begin to form the basis for private capital to come back into the housing market. The level of risk-sharing, the amount of private capital, the percentage of the Government guarantee—well, those are complex details and details we need to come to grips with before we can go forward.

Perhaps today's hearing can start to shed some light on the appropriate path forward. So I look forward to hearing from the witnesses, forging ahead on the important work of reforming a broken housing finance system.

Thank you, Mr. Chairman.

Senator TESTER. Thank you, Senator Johanns.

Does any other Member have an opening statement?

OK. I want to welcome our witnesses here today—four folks who have spent quite a bit of time working on housing issues—and I want to thank them for their willingness to take time out of their busy schedule to be here this afternoon.

First, we have Dr. Mark Willis, who is a Resident Research Fellow at the Furman Center, and he teaches housing and community development policy jointly at New York University's Law and Wagner Schools. Before joining the Furman Center, Mark was a visiting scholar at the Ford Foundation and has also worked in community development at JPMorgan Chase and for the city of New York.

Welcome, Dr. Willis.

Next, we have Mr. Andrew Davidson. He is the President of Andrew Davidson and Company, a New York firm which he founded in 1992. His firm specializes in the application of analytical tools for mortgage securities and other asset-backed securities. Prior to founding Andrew Davidson and Company, Mr. Davidson worked at Merrill Lynch where he was a managing director, producing research reports and analytical tools to evaluate mortgage-backed securities.

Welcome to you, Mr. Davidson.

Then we have Dr. Phil Swagel. Dr. Phil Swagel is a Professor at the University of Maryland School of Public Policy, where he teaches international economics, and is an academic fellow at the Center for Financial Policy at the university's Robert H. Smith School of Business. Previously, Dr. Swagel served as an Assistant Secretary for economic policy at the Treasury Department, acting as a member of the TARP Investment Committee, advising Secretary Paulson on all aspects of economic policy.

Welcome to you, Dr. Swagel.

And last, but certainly not least, Dr. Robert Van Order is the Chair of the Department of Finance and a visiting professor of real estate and finance at George Washington School of Business. Prior to his teaching career, Dr. Van Order served as a chief economist at Freddie Mac from 1987 until 2003, pioneering the development of Freddie's models of mortgage default, prepayment and pricing. Prior to joining Freddie Mac, Dr. Van Order served as a director of the Housing Finance Analysis Division, for HUD.

Welcome to you, Dr. Van Order.

Each of you will have 5 minutes for your oral statement. Your complete written testimony will be made part of the record.

And I think we will start with you, Dr. Willis.

STATEMENT OF MARK A. WILLIS, PH.D., RESIDENT RESEARCH FELLOW, FURMAN CENTER FOR REAL ESTATE AND URBAN POLICY, NEW YORK UNIVERSITY

Mr. WILLIS. Thank you very much, Chairman Tester, Ranking Member Johanns and Members of the Committee. I thank you for the opportunity to testify today on the role for private capital in reforming mortgage markets.

My name, as you now know, is Mark Willis, a resident research fellow at the Furman Center for Real Estate and Urban Policy at

NYU. I am on the Mortgage Finance Working Group convened by the Center for American Progress and have done research for the Bipartisan Policy Working Group.

My comments today reflect my own views and should not be attributed to any of the organizations to which I am affiliated.

I want to make two major points in my testimony.

First, restoring private capital's historic role in the financing of home mortgages—that is the financing of large jumbo mortgages—should be a straightforward matter once regulatory uncertainties are resolved.

Second, requiring the use of private credit risk-taking capital in front of a Government guarantee is also possible, but imposing such requirements should only be implemented after we have tested their impact on access to, and affordability of, mortgages that serve the vast bulk of the home buyer market.

By test-driving different approaches, we will be better able to weigh the costs and benefits of having private capital take more of the risk and avoid unnecessarily disrupting the availability and affordability of new mortgages.

I assume we are here because of a desire to decrease the risk of loss to taxpayers by having private capital absorb some amount of that loss.

Some argue that the private sector is better able than the public sector to absorb and price the risk. However, we should note that the Government had to bail out purely private credit risk-takers whose mispricing helped fuel the subprime boom and bust.

While it is a challenge for Government, or anyone, to set exactly the right fee for providing a wrap, Government requires less of a return than private risk takers do to provide that guarantee.

It is also argued that sharing risk with private investors could add an extra set of eyes to assess credit standards and underwriting criteria and monitor whether the loans are being properly underwritten and serviced.

Additionally, it is hoped that the active involvement of private sector actors will discourage, if not prevent, attempts by Government officials to fiddle with underwriting and other standards for political gains.

While private capital is now, and always has been, the source of all the funding of home mortgages, it consists mainly of what are called rate investors. Credit investors, on the other hand, have generally only funded so-called jumbo loans—loans traditionally above $417,000.

FHA can take a number of steps to move us down the road of housing finance reform in a measured and informed way.

Now that the housing market seems to have stabilized, it is time to let the jumbo market again stand on its own without a Government guarantee. It accounts, after all, for some quarter of the dollar volume of per year and over 8 percent of all mortgages by unit count.

The best way to trim back is to raise the g-fee on all loans over $417,000 until the private sector is able to capture as much of the market as it is willing to finance. By not formally pulling out until the private sector has moved in, the Government can avoid inadvertently leaving big gaps in the marketplace.

Once the securitization market for jumbo mortgages is functioning at scale, it will be possible to see how willing a private mortgage market is to offer mortgages that are comparable to what is available in the conforming market, including, for example, long-term, fixed-rate mortgages which are well priced and available without regard to geography or other factors that would limit access to those that now have it.

If the loans are comparable, then the limit could be reduced again in stages. At each stage, the same test for comparability should be applied.

On a second path, FHFA should also continue its current quest to determine the costs and constraints of bringing in private credit risk-taking capital ahead of Fannie and Freddie. Shared risk does offer the potential to reduce the burden that could ultimately fall on taxpayers.

However, using such private capital has drawbacks as well—higher cost to borrowers and potentially tighter underwriting standards. Moreover, requiring private capital to take first loss will limit the Government's ability in times of economic stress to ensure the continued availability of mortgage financing unless a way is found to dial back that requirement when, as we saw not so long ago, private capital quickly abandoned the mortgage market.

Of all the options discussed to share risk, only those involving insurance seem compatible with the continued availability of well priced, longer-term, fixed-rate mortgage products with rate locks from 30 to 90 days. The two main types that are often most mentioned are mono-line companies and credit-linked notes, and these have differences based on regulatory requirements plus the functioning of the capital market versus an insurance market.

In addition to testing the cost and viability of different options for sharing risk, it is important to be able to assess the tradeoff between the cost to the borrower and the degree of risk-sharing.

Another focus for reform is to ensure that the lower cost of funds made possible by the Government wrap pass through to borrowers.

As for the transition, once a determination is made as to the degree of risk-sharing that is optimal, the provision of the Government wrap can be moved to another entity such as the Government National Mortgage Association known as Ginnie Mae. The remaining functions in Fannie and Freddie could then continue in a new legal entity.

New entrants should also be allowed, if not encouraged, to compete with the successors to Fannie and Freddie in securitizing mortgages that are eligible for the Government wrap.

Let me conclude by saying that by running tests that provide market-based information we will able to proceed in a measured and informed way and so make sure that we do not unnecessarily and unintentionally impair access to, and affordability of, housing finance to the vast bulk of the housing market.

Thank you.

Senator TESTER. Thank you, Dr. Willis. We appreciate your testimony.

Mr. Davidson, proceed.

STATEMENT OF ANDREW DAVIDSON, PRESIDENT, ANDREW DAVIDSON & CO., INC.

Mr. DAVIDSON. Chairman Tester, Ranking Member Johanns and the Members of the Subcommittee, today we are discussing the financial structure of the mortgage market. In my written statement, I discuss rates investors and credit investors and how to bring them back into this market. However, it is important to keep in mind that mortgages are more than just a bundle of financial risks.

Mortgages are a set of legal documents that create obligations for borrowers and lenders.

Mortgages are a complex payment system that transfers capital from investors to borrowers and mortgage payments back from borrowers to investors.

Mortgages are an instrument of Government economic and social policy as well as monetary policy.

And mortgages are the hopes and dreams of millions of Americans seeking a better life.

Because of the multiple dimensions of mortgages, housing finance reform is both difficult and essential.

Today, there are trillions of dollars invested in GSE-guaranteed MBS. This investment largely flows through the TBA market, which is an essential component of our housing finance system. Unfortunately, that market now relies almost completely on the U.S. Government and taxpayers to bear the credit risk.

There is a substantial amount of private capital currently bearing credit risk, just not in the GSE market. Due to the poor performance of the underlying loans in the private-label market, many securities that were purchased with the idea that they were low-risk investments are now subject to credit risk.

There is about $600 billion of investment in credit-sensitive bonds, much of it by firms that bought the bonds from the original investors. The existence of this large market has created tremendous analytical and investing expertise in mortgage credit risk.

Thus, the issue is not so much how do we return capital to the mortgage market but how to structure the market so this capital and expertise is deployed for new GSE-guaranteed mortgages and not just for legacy private-label mortgages.

Capital markets mechanisms, such as senior/subordinated bonds and credit-linked notes, can serve this purpose. If properly structured, these approaches will not impose an undue burden on borrowers.

My firm analyzed the cost of private-market credit enhancement for the Bipartisan Policy Center's Housing Commission. While we found a wide range of costs, depending on the risk characteristics of the loans, we also found that credit costs using private markets would be about the same as the current guarantee fees charged by Fannie Mae and Freddie Mac for similar quality loans as they are originating now.

The choice between senior/subordinated bonds and credit-linked notes, as well as other approaches, are primarily regulatory as opposed to economic. All securitizations are a particular pathway through a thicket of regulations that affect disclosure, tax treatment, regulatory capital and other operational requirements. Find-

ing the right path has slowed the process of Fannie Mae and Freddie Mac utilizing these structures.

Capital markets solutions will generally be most effective if they allow the broadest range of investors for both the guaranteed securities and the credit-sensitive securities. Protection from double taxation, exemption from securities registration, allowing reinvestment from both an SEC and tax perspectives, and simplifying risk retention rules are all necessary. CFTC oversight and CFPB QM requirements also need to be addressed. Clear and consistent rules would increase liquidity and lower the cost to borrowers.

While the use of these instruments will lower the risk to taxpayers from Government guarantees of MBS, the stability of the mortgage finance system, and many other goals associated with Government involvement in the mortgage market depend more on the industrial organization of the mortgage market than the form of credit enhancement. Thus, the success of any system of housing finance will also depend critically on the path to get from the current structure of the housing finance system to the desired outcome.

While there is much to commend the idea of shutting Fannie and Freddie down and starting again, I believe the best path forward will be to transform the GSEs from what they are to what we would like them to be. In this way, there are three possible paths:

One, we capitalize the GSEs to shareholder-owned companies. We tried this, and it did not work.

Two, nationalizing the companies and have them operate as Government-owned corporations—I do not think this will work either.

Or, three, transform Fannie Mae and Freddie Mac into issuer-owned cooperatives. Freddie was originally owned by mortgage lenders, and I believe we should return to that type of structure.

Cooperatives offer several advantages. They can establish standards and provide access to all originators. They can be effective at monitoring loan quality. They can provide a mechanism for risk retention and true sale treatment. Cooperatives, using capital markets credit instruments, can provide a stable source of financing through periods of stress. And, most importantly, the TBA market can be maintained throughout the transition from conservatorship to cooperative ownership so that mortgages can continue to fulfill their many roles.

Thank you for your interest in my comments. I look forward to your questions.

Senator TESTER. Well, thank you, Mr. Davidson. We appreciate your comments.

Dr. Swagel.

STATEMENT OF PHILLIP L. SWAGEL, PH.D., PROFESSOR IN INTERNATIONAL ECONOMIC POLICY, MARYLAND SCHOOL OF PUBLIC POLICY, UNIVERSITY OF MARYLAND

Mr. SWAGEL. Thank you. Thank you, Chairman Tester, Ranking Member Johanns and Members of the Committee. Thank you for the opportunity to testify on the vital topic of returning private capital to mortgage markets.

The Government now stands behind more than 90 percent of new mortgages, distorting the economy and putting taxpayers at risk.

Bringing in private capital is the essential first step in housing finance reform.

This can take several forms. One would be the capital of new firms that compete in conforming securitization. A second form would be private-label securitization and balance sheet lending; that is, mortgage origination with no Government guarantee. And the third would be risk-sharing under which firms would sell non-guaranteed tranches of guaranteed MBS or use other forms of risk-sharing.

This can proceed without legislative action, and indeed, under the FHFA strategic plan it is moving forward. Ultimately, however, investors will require legislative action for this to take off in scale. After all, private-market participants will naturally hesitate to invest in 30-year mortgages unless they understand the rules in the future.

The policy levers to bring in private capital include four possible levers. One is raising the price of the Government guarantee. Two is reducing the quantity of insurance offered by the Government or otherwise narrowing the scope of the mortgages eligible for the Government guarantee. Number three would be opening the housing finance system to new competition that, in turn, brings in private capital. And four would be requiring the firms that securitize Government-insured MBS to arrange for the first loss private capital to take losses before the Government guarantee. My written testimony provides details on several forms of this first loss capital.

Reducing or eliminating the Government role in housing finance involves moving forward with all four policy levers.

As reform moves forward, at first, all conforming mortgages will still be guaranteed by the Government but behind first loss private capital at the MBS level.

As the price for the Government insurance increases and as more private capital is required in front of mortgages to receive a Government guarantee, eventually, not all conforming mortgages will receive the Government guarantee. Some conforming mortgages will choose to be originated without a guarantee, and the share of the Government in housing finance will go below 100 percent, or the nearly 100 percent it is today.

Eventually, as the pricing of the guarantee fee becomes high enough and as so much private capital is required, eventually, no MBS securitizers will purchase the Government guarantee. Eventually, that would be a fully private market.

So, in other words, to reach an outcome of a fully private market, at first the housing financing system must transition through the intermediate steps in which the Government guarantee recedes. There is a sense in which it is useful to formalize the Government guarantee so that it can recede.

Interest rates for mortgages will rise as reform proceeds, reflecting the compensation demanded by private investors for taking on housing credit risk. In a sense, this reflects the fact that the previous system was undercapitalized. Whether it is possible for reform to arrive a fully private system depends on the social and political reaction to these higher mortgage interest rates.

I worry that a housing finance system that is notionally private will inadvertently recreate the implicit guarantee in the previous

system. In my view, it would be better for the inevitable Government involvement in housing finance to be made explicit.

Taxpayers should be compensated for taking on housing risk. Rather than leaving it implicit, they should be paid for providing a guarantee, and there should be considerable private capital ahead of the secondary Government guarantee.

Housing finance reform that brings back private capital should proceed immediately even without resolving the question over the eventual role of the Government.

The policy levers required to move forward with reform are the same for all of the options under consideration, including a system that is fully private, or at least notionally fully private.

Bringing in private capital is the essential first step in reform.

Thank you very much.

Senator TESTER. Thank you, Dr. Swagel.

Dr. Van Order.

STATEMENT OF ROBERT VAN ORDER, PH.D., CHAIR, DEPARTMENT OF FINANCE AND PROFESSOR OF FINANCE AND ECONOMICS, GEORGE WASHINGTON UNIVERSITY

Mr. VAN ORDER. Thank you, Senator Tester and Committee Members. I am very pleased to be here.

This, obviously, is an important topic. I would like to start out also by saying it is actually a very difficult topic, intellectually as well as policy-wise. There are lots of different structures that have been tried in the United States for mortgages, and around the world. In some ways they are very similar, and in some ways they are very different, and they all have flaws.

The topic, it seems to me, at hand is particularly about long-term fixed-rate mortgages. Adjustable-rate mortgages can, and have been, done around the world very easily by banks and funded with deposits.

The question mostly for us, I think, is funding them through capital markets and how you do it.

There seems to be a consensus emerging of the Government as a kind of backup, as putting it as the last guarantor and trying to get as much capital in front as you can. And I think that is right and appropriate.

It is very much analogous to the role of deposit insurance and the way they have historically funded things like adjustable-rate mortgages and other things, where the Government backs up a Government insurance company in a bank that has capital in front of it. These are very common structures.

One of the things I want to do—I have three points.

The first one I want to talk about is what actually private capital is because it is actually quite ambiguous. Right now, something like 90 percent of the mortgages in the country are done through companies that are more or less owned by the Government. But, if you went back a few years, Fannie and Freddie actually, you could argue, had private capital; that is, they had private shareholders.

If you went back a longer time ago, you saw the savings and loans that actually clearly had private capital. They all got into trouble.

And it seems to me while private capital is an important way of thinking of it, what is really important is where the risk is and how the risk gets controlled. Both of those are important.

And I think this structure of having the Government at the end is an interesting one. It is also not a very new one, and I think that is one of the things I first want to remind you of.

When I first got to Freddie Mac, I was curious about guarantees and things because, you know, it was what my employer had. And we took a look historically and asked the question, what fraction of mortgages have benefited from guarantees from the Government, either directly from FHA, from deposit insurance or from GSEs?

The answer was it had always been about 90 percent. The only difference had been the structure of it. And that is about what it is now.

The only time it was actually less than that was from about 2003 until 2006, with the private-label market.

This is not an unusual state of affairs. It is a common one. And the question is, what is the structure to manage it?

Second, I have included in my testimony an appendix which is a little bit of data on credit risk and what actually has happened over the last few years. And I think it is important to understand, when we get into regulating things and talking about changes, what was and was not the problem.

What was not the problem, particularly, was low downpayment loans or low-income loans. They do have high default rates. They are sometimes a problem. But, in terms of the lift, what was it that really went south?

It was not particularly those. They did do badly, but the increase in their costs and decline in the credit quality was roughly the same as for lots of other products.

In a period like we had a few years ago, when property values fall by anywhere from 25 to 50 percent, even loans with big downpayments suddenly have negative equity, and even borrowers that have good credit history and have high incomes default more.

What did seem to matter was two things:

One was the year in which the loan was originated. That is an easy one. If the loan was originated in 2003, that was golden, not because the world was necessarily better—it was a little bit—but because property values went up like crazy for the next few years, and that covers a lot of mistakes. Loans originated in 2006, with the same observable characteristics, were way worse.

The second thing that mattered was the channel. There are some data—neat data—that I, as an academic, can get and lots of data now are proprietary, but some free data from FHFA on defaults by GSE loans and by private-label loans. The private-label channel was worse. Not only was it worse in the sense that on average it had higher defaults, but the lift, the increase in defaults, from 2003 to 2006 was worse.

The point here partly is in looking at this a lot of what happened is stuff that is difficult to observe from the outside. There were some changes in the downpayment structure, some changes in the credit score of borrowers, but those were not nearly enough to explain what happened to defaults. It was a bunch of different things.

And what I want to do finally is to talk about setting up incentive structures and push for contingent capital, particularly from the standpoint of management having a stake in the downside. So one of the things I want to leave you with is a proposal for various types of management incentive programs which look like holding bonds in a company, so that while they get the upside if they hold shares in the company, they also are forced to participate in the downside because their bonds will be converted into capital.

Thank you.

Senator TESTER. Thank you, Dr. Van Order. We appreciate it very much.

Thank you all for your testimony.

I think we will do 5-minute rounds and 5-minute questions, and we will do as many rounds as you want.

I am going to start, and I will not direct it to anybody. I assume you all want to put your two bits in.

I want to start by drilling down a little bit to better understand how credit risk-sharing mechanisms might impact mortgage affordability—something that you have all addressed. The very basic question, which is, how exactly would these mechanisms be priced in the cost of a mortgage or mortgage rate?

You can start, Dr. Willis.

Mr. WILLIS. So the cost to the borrower includes—let's say there is a Government wrap and there is private capital ahead of it. So it would include the sum of the cost of the Government wrap.

Let us look at the example of Ginnie Mae, which charges a fee for its wrap. And I think in the proposed idea here of a Government wrap for a conforming market on MBS going forward, there should be a charge based on that risk, and then the private sector requires a return on their taking the risk.

There is a huge difference between what Government needs to charge and what the private sector needs to charge. The private sector requires a large reward for taking risk.

The Government, on the other hand, in economics jargon, is not risk-adverse. It can and, under the Federal Credit Reform Act, does charge for its risk at a much lower price. It looks to get the full money back. It looks to get its return on an expected basis based on the Government borrowing rate, but that yields a much lower cost here.

And there is a debate about whether the Government should be charging the same as the private sector, but as long as it does not and is being properly compensated under the Federal Credit Reform Act, any change in the mix between what is the risk the Government wrap is taking versus the risk to the private sector affects the cost. The more you increase the share that is private sector, the more you are increasing the cost, the more expensive the cost of insurance.

Senator TESTER. Mr. Davidson.

Mr. DAVIDSON. Yes, there are two different components we need to think about the cost.

One is the cost of credit enhancements; let's say there is a 3 percent capitalization requirement. Or, let's say a 4 percent subordination that is going to be from the credit buyers. The other 96 percent is basically being covered by the rates investors. And so the most

important thing is protecting that 96 percent, in terms of the cost to the borrowers, and that is really why this Government guarantee becomes important.

And not in good times, but in bad times, the spread between, let's say, treasuries and mortgage rates can go up a lot if there is no confidence in investing in those loans.

On the other hand, if we just look at the cost of the credit side—you know, let's say in good times—and, let's say, 3 to 4 percent is what needs to go into this credit enhancement piece. And then the borrower—the investors require, let's say, 10 percent to 15 percent excess returns. That just translates into a 30 basis points to 60 basis points cost of credit.

The GSEs are currently charging about 50 basis points.

So to that 30 basis points at the low end you have to add operational costs and the costs for a wrap. That is at the 50 basis points.

And so it might raise guarantee fees 30 basis points more. Or, if we want to broaden from where we are now, it might be a little bit more.

But we are not talking about changing mortgage rates by 50 or 100 basis points. We are talking within the range of where we are now.

Senator TESTER. Good.

Dr. Swagel.

Mr. SWAGEL. Chair, I will just add two things.

I agree on the range of pricing. I mean, the Fed is going to be raising interest rates by a lot more, and that is going to be a lot more noticeable.

Senator TESTER. That is true.

Mr. SWAGEL. And it is important to have this layering of risk—the loan level capital, the real downpayments, private mortgage insurance with real capital and then the MBS level capital.

So, two small notes in addition. The guarantee fee pricing could actually go down in the future? I think it is going to go up. It should go up now. The Government is not being compensated. But when there is enough private capital, a good deal of private capital, then the insurance the Government is providing is less costly; it is less risky.

So this can go in both directions.

You know, on the other hand, I do not think the Government is all that great an investor, and I think it is important to make sure that Government is properly compensated for taking on this risk.

And one benefit of the way that the risk is calculated now is the Congressional Budget Office, I think, does us all a favor by calculating the risk on the same basis as the private sector and really protects the taxpayers from selling the insurance or counting a profit for selling underpriced insurance.

Senator TESTER. Dr. Van Order.

Mr. VAN ORDER. Yes, I agree on the accounting dimension.

It seems to me that there is a lesson to be learned from the private-label market in terms of structuring. The risk-sharing in the private-label market and the risk-sharing in corporate structures in general is not so much sharing as prioritizing.

And I think the idea is to set up structures that look like that, where you know exactly who takes the first loss, exactly who takes the second loss, the third, the fourth, and you put the Government at the end, saying, yes, there really is a guarantee. This makes it much easier to do things like a TBA market, but to share the risk by slicing it in different directions and really understanding the priorities.

One of the things with the structuring was there really were different clienteles that took the different pieces of the deals. It blew up. There were some problems with it. But the underlying idea that there were different clienteles who would take different strips of the risk and having the Government at the back is what we have been doing for the last 50 years in one way or the other.

Senator TESTER. OK, Senator Johanns.

Senator JOHANNS. Thank you, Mr. Chairman.

Let me focus on some specific items that are of interest to me. I want to start out with the GSEs.

You know, we turn the clock back a few years, and that was a mess, to say the least. Do you have a sense or, maybe beyond a sense, do you have proof that you could offer to me that the GSEs are slowly working their way out of the mess, becoming profitable; there is a light at the end of the tunnel?

Anyone one of you.

Mr. WILLIS. The piece that I would suggest to think about here is the g-fee, which is now more than twice of what it was historically. The main losses in Fannie and Freddie were in the Alt-A piece. They are not making Alt-A loans now.

Senator JOHANNS. Right.

Mr. WILLIS. So it appears that they have more—the fee that they are charging relative to the risk they are taking seems to be very favorable.

So, if you look at those ratios I talk about, it seems pretty clear why they are making money on the additions to the portfolio—the mortgages they are adding today.

Mr. DAVIDSON. I do not think we can really talk about the profitability of the GSEs without having a capital model in place and some measure of what risks they are taking on and whether or not they are properly insuring through enough capital for those risks in a bad environment.

But even beyond that, my sense is at least the new book of business is well capitalized, or is earning enough return that would cover a reasonable amount of capital for a downside risk. But it is hard to go beyond that.

Senator JOHANNS. It is hard to go beyond that.

Mr. SWAGEL. Yes.

Senator JOHANNS. And it is hard to have a crystal ball and say, well, the real estate market is going to continue to improve, and I mean if, if, if.

But what I am getting to here is it seems to me that there is healing going on. There is healing in the market. There is healing in the book of business they are doing. They have changed the way they have done business.

So this kind of leads to my next question. If, in fact, that is the case, is there a point then where we can say to the GSEs, if you

want to go out there and do business in the new world, fine, but pull back on the Government guarantee? Is that a doable model?

All of you have talked about Government guarantee and this and that, but I am really getting down to brass tacks here. Is it a doable model to move them off the Government guarantee program—because I think that gets you in trouble—and have a system that is capitalized through the private sector?

Mr. VAN ORDER. Yes, I would say I think it is doable, but there is always the question.

Fannie and Freddie never had an explicit guarantee. They always wrote on their paper that this not guaranteed by the Government, which almost certainly meant that it was because no one else had to put that on their securities.

Senator JOHANNS. And 100 and some failed——

Mr. VAN ORDER. So how do you do this; you see, I am going to get you off the guarantee, but this time we mean it?

It seems to me the way to do it is in the context of this structure of having the Government at the end of the queue, explicitly there, and then having capital rules in terms of minimum capital requirements.

But I also like stress tests. And I am going to come back to my retention capital. I like the idea of having a part of their capital, a part of their debt, be something that when times get tough can be automatically converted into equity, to give incentives to management and to have angry bond holders who have seen suddenly seen their bonds converted into worthless—not worthless, but shares.

So I think you can do it. I think you do not want to pretend to not have the guarantee. I think you want to have it there, keep it at the end and as small as you can, and work your way back.

Mr. SWAGEL. Yes.

Senator JOHANNS. Go ahead.

Mr. SWAGEL. I was going to say very quickly I think it can recede, that exactly what you said can happen. It is just going to take place slowly.

The market is dominated by the Government. We are not going to get to zero, or something close to zero, quickly. But bringing in private capital is the first step.

And I think eventually then the guarantee needs to be formalized. Rather than guaranteeing Fannie or Freddie as firms, transfer the guarantee to the MBS themselves and then let that guarantee shrink.

Senator JOHANNS. You know, I am running out of time here, but here is the thought that goes through my mind. It seems to me that the GSEs are out there. You are right; there is not really an explicit guarantee. But guess what? Taxpayers stepped in and bailed out the system. Without that, we do not know where we were at.

The challenge I think we face in going forward is politicians, of course, have a tendency to want to improve upon every system, and so they come in and say let's do some more of this or more of that. And all of a sudden there are some quirky things going on, and all of a sudden there are some mortgages that probably are not very good. Then we get down to a point where we were a few years ago.

My philosophy is if we as politicians want to boost home ownership, do a program to boost home ownership. Put money into. Appropriate money for it. Buy down the interest rate. Do whatever to try to boost home ownership.

And let's just be honest. That is what we are doing.

I think what we ended up with, to me, seemed like kind of a hybrid thing. Well, we did not really guarantee. But guess what? We did guarantee because we had to step in.

So that is what is going through my mind, and maybe there will be some follow-up questions to try to see if that makes any sense or not.

Thank you, Mr. Chairman.

Senator TESTER. You bet.

Senator Reed.

Senator REED. Thank you, Mr. Chairman.

And, gentlemen, thank you for your testimony.

Dr. Swagel, I thought in reading your testimony you make the point that even for those who want a privatized system a first step is some type of Government guarantee to begin the process.

In fact, I think you made an excellent point that the option the Treasury laid out can be viewed not just as options but as actually three necessary steps to get to a final end point, which is a privatized system with a standby residual Government role.

Could you elaborate on that? Is that the concept you have?

Mr. SWAGEL. Absolutely. It feels like a long time ago—February of 2011—when the Treasury put forth their paper, and they put forth the three options with the receding Government guarantee.

And what was striking to me was that they were presented as three separate options, but to get to the first one you have to go through the third and second. It really is as the guarantee recedes, and that can recede by having the Government guarantee fewer mortgages or by, as we have all said, having the amount of capital in front of the guarantee go up.

But they are all in the same line of the guarantee receding. You have to go through those stages.

Senator REED. Right. Now one of the things I think you all generally pointed out is that if you have MBS, for example, you want the first loss to be borne by a private insurer and that insurer has to be well capitalized.

So it raises several issues. One is, what do you mean by well capitalized, and two, who is going to make sure they are well capitalized?

So do you have any——

Mr. SWAGEL. Yes. I mean, I was at the Treasury during the crisis, and obviously, AIG used to be AAA.

So, the private capital—there are lots of different ways of doing it. We want to make sure it is real capital. We want to know who exactly takes the losses——

Senator REED. Right.

Mr. SWAGEL.——and to make sure the loss-bearing capacity is there.

So, in a sense, I think that is a nice part about the kind of so-called A–B structure, that the people who own the B pieces—they are taking the losses and everyone understands that.

Senator REED. A final point too is that in your testimony you point out that—in fact, I think—am I over time?

Senator TESTER. You are fine.

Senator REED. Well, fine. Excuse me.

You point out that waiting to do this and not moving forward on GSE reform is a choice in and of itself. And I presume that you think that is the wrong choice. Or, can you comment upon that?

Mr. SWAGEL. I do. So I worry that, in some sense, waiting until there is the perfect solution means that we do not do anything, and doing nothing means the GSEs stay in Government hands. You know, the Government share is 90 percent.

And while there are many excellent people at the two firms, inevitably, they are going to leave as the status of the firms is uncertain.

So I do worry about making that choice.

Senator REED. Gentlemen, can I open it up—because I have raised these questions. I wonder if Dr. Willis or Mr. Davidson——

Mr. WILLIS. What I would like to add to these three options, in that it provides a path, is that—what I would add to that is that at each stage you ought to test and see whether the change in additional costs or changes in affordability and access are something that is a concern here.

So you go bring private capital back into the jumbo market. Then you can see whether you want to lower that limit any further because, as we know right now, credit is very tight, so a little unfair. The jumbo market likes 60 percent loan-to-value. Banks prefer adjustable mortgages to put in their portfolios.

So, yes, that is the sequence, but I do not think it is inevitable you want to march all the way down that path.

Senator REED. Right.

Mr. WILLIS. And, when we get to the end, we do know that banks cannot hold of these mortgages. So we are going to have to watch as we go down here, what the impact is—extending further down the road to reply purely on the private sector.

And then the question is, where we have a conforming market, how and to what degree do we want to have private capital ahead?

Senator REED. I think there is another aspect too here—that the markets go up and down. And there are times when the private market, just because of the returns and the economic climate, will cover all the needs. But there are those times where we deliberately want to support the market, and we have to have that option.

So a complete system where there is no way for the Government to come back in—and one of the things Senator Johanns suggested is that maybe it is through a different mechanism—a housing trust fund or—but I think even in terms of this guarantee and this privatization there has to be at least a way to come back and move the market.

Mr. WILLIS. Well, to have a mortgage market if you are relying on private capital to take first loss and it abandons the market as it did——

Senator REED. Right.

Mr. WILLIS.——you will not have any, no matter what subsidy you provide.

So you do need to at least have FHA available and be ready to scale up. And some people may think you need more than FHA to be there, like we had the conforming market this last time around.

Senator REED. One of the ironies is that as the private capital fled in 2008 and 2009, the only game in town was Fannie and Freddie, but at least we were able to keep a housing market until we started seeing other factors contribute to the re-emergence.

Mr. WILLIS. I would just add even in the case in Fannie and Freddie—they could not do over 80 percent loan-to-value because the private money in the mortgage insurance industry also basically left the market.

Senator REED. Thank you very much, Mr. Chairman.

Senator TESTER. Thank you, Senator Reed.

Senator Corker.

Senator CORKER. Thank you, Mr. Chairman. You are doing a great job.

I enjoy your hearings. Thank you. Thanks for having this one.

And I appreciate all the witnesses being here.

To the last point—I was going to go in a different order, but Dr. Willis, you made one of my points, and that is when we had the crisis, because the mono-lines are all sort of part of the system, when the crisis—when you have a systemic crisis like that, basically they are gone. Is that correct?

Mr. WILLIS. They do not appear to have had enough capital. That is correct.

Senator CORKER. So, if you were going to have a system where you had private sector risk in front, you could do it numbers of ways. One would be a credit-linked note; I think you all referred to that. You could have A piece or B piece. But, if you really relied on the system to have private capital up front solely through insurance—I think there should be insurance on loans above 80 percent. I agree with that.

But if you look at that, that is really not capital when you need the capital. Would that be correct?

In other words, if you have private sector—let's say you had a 90–10 ratio and 10 percent was private sector, if you are relying on insurance, the insurance would not be there at the very time you were hoping for it to be there. Is that not generally a true statement?

Mr. WILLIS. Again, that was the case—the idea, not to disagree, but the idea was you pick up a lot of the capital. That is right.

Senator CORKER. History will show that I do not think private mortgage insurance will be a very good first-loss position because it would not be there when you need it.

Let me ask you a question, all of you. Is there any reason we would not go ahead and be dropping loan limits?

I mean, you could be sort of getting to where Johanns was heading a minute ago by taking us from where we are today at 725 down to where we were pre-crisis. I mean, the average home in America today is much less than, or less than, where it was back when this began. So is there any reason we would not begin doing that today?

Mr. WILLIS. There are two ways to do it.

Absolutely, from my point of view, I agree we should go down at least to $417,000 and then maybe test whether to go lower.

Many proposals are to lower the loan limits in stages. And my fear is that you are not opening the whole market at once. So private investors may not feel justified to——

Senator CORKER. So, adjust that down over a period of time.

Mr. WILLIS. My preferred way would be to increase the g-fee above $417,000 until the private sector comes in so that you always have the existing system that can provide mortgages to the point where the private sector comes in. If you just withdraw down, you might leave gaps in the market that you do not need to.

So it is an issue of how you do it, not whether you should.

Senator CORKER. Does anybody disagree with we ought to figure out some way of lowering the limits? If you do, say yes.

Mr. SWAGEL. No, absolutely, I agree. We give a tax break to $1.1 million in mortgages. So you can imagine scaling down, or refocusing, those benefits on people who really need them to buy a house.

Senator CORKER. I assume everybody else generally agrees.

Mr. VAN ORDER. Yes, the $417,000, which is sort of the underlying limit right now, is based on when property values were at their peak.

The way it is done now, you cannot lower it without legislation. You have to wait until property values come up. But it is certainly the case that even at $417,000, in most parts of the country, that is a pretty big house.

Senator CORKER. Right. Let me keep on moving through and thank you for being the way you are.

The GSE's balance sheets today are pretty large, and I know they have had to buy back some loans that have had some difficulties. Do you know of any reason we would not be moving quickly in this market, with rates where they are, to unload that portfolio or at least take advantage of market conditions?

Mr. DAVIDSON. My view, generally, is that we should not be mixing securitization and portfolios. So anything we can do to separate those activities—if you could just get Treasury and the Fed to do their purchases from the GSEs——

Senator CORKER. Fannie and Freddie, yes.

Mr. DAVIDSON.——that would be great. It would definitely be much better for those organizations.

Senator CORKER. So does anybody disagree that we ought to be taking advantage of market conditions and taking this balance sheet down in a methodical thoughtful way?

Mr. VAN ORDER. Well, yes, with an emphasis on methodical and thoughtful.

The portfolio was not the problem for Fannie and Freddie. It was credit losses on the regular business.

You can let it fade away. Whether you hold it or sell it into the market, at this point, it does not affect anything real.

Senator CORKER. Well, it helps you, though, move to a system more quickly, I think, where you have an explicit Government guarantee, if that is where we are going to end up, and it causes that process to move along in a much better way.

Mr. VAN ORDER. The loans that they have in their portfolio are basically two sorts.

Most of the time, until recently, they bought back their own mortgage-backed securities. So you are not really changing the credit guarantee by whether you hold them or whether you sell them.

The other were the private-label securities, which are amiss, and they are winding down. They turned out not to be as bad as people thought.

So the private label—you could sell them, but they are a big messy. The other stuff are already guaranteed anyhow.

Senator CORKER. Go ahead, Phillip.

Mr. SWAGEL. I just wanted to add that I strongly agree with what Andrew said about not mixing them, and in some sense the portfolios were not the problem for Fannie and Freddie; they were the problem for everyone else.

Senator CORKER. Right.

Mr. SWAGEL. I mean, the systemic risk in the system came from the funding required to fund the portfolios.

So I agree with what Andrew said.

Senator CORKER. Very good. Is there a way—if we were to set up an A and B piece, some ratio like I laid out earlier, certainly not at 4 and 96 but at some number, would that provide—is there mechanism that would provide the B-piece's owners, the sub-piece, a way of actually doing underwriting in a way that is better than just taking all comers?

Mr. DAVIDSON. One of the issues is that the GSE portfolios are gigantic, and so the traditional way you would underwrite a sub-piece would be to go through the loans and do loan-level analysis. I think if the GSEs are going to start selling off their credit risk, people are going to have to take that risk a little bit more on a generic basis and not on a loan-by-loan basis and focus more on the processes that the GSEs have rather than the loan-level data.

I mean, we love to look at loan-level data at our firm. We have millions and millions of loans. But, when you have a structure that has 100,000 or 200,000 or 300,000 loans in it, that really makes it a lot more difficult to do loan-level due diligence.

Senator CORKER. If you were scaling up, though, a new entity—let's say you had designed a way to basically move away from Fannie and Freddie in a methodical way and you created an entity that had an explicit guarantee and you were building up the process there, where you had the A and B pieces or a credit-linked note, either one that worked best, or maybe some other mechanism.

Would there be a way, if you were building up and not looking at the portfolio that is in place, but building up to actually look at the B-piece's owners or the credit-linked note pieces, to be able to look at the actual loans that were being put forth and give greater underwriting ability to those people who are actually buying the B piece? Is there a way to do that?

You still think it is too much scale?

Mr. DAVIDSON. I do not think you will really have an efficient system that is built on that, but there is no reason why you should not have access to loans if you need it.

I think it would just be very difficult to say we have a system with 25 million loans or 50 million loans and that the investors are going to be focusing on 5 or 10 million of those loans in that level of detail.

Senator CORKER. Sorry, Mr. Chairman, for being over. You are doing a great job leading. I am not doing a good job following.

[Laughter.]

Senator TESTER. Thank you, Senator Corker. Your apology goes to Senator Warner.

Senator WARNER. Yes, that is right. I am expecting to get my extra 3 minutes added on as well, but to then say I am going to build off my friend, Senator Corker's, comments.

Let's, again, keep looking at this A piece/B piece structure with the assumption being that we are putting them—you know, the current model, kind of out of its misery.

Wouldn't that B piece—I think you may have mentioned, Mr. Davidson, if it had been at 4 percent—let's assume for hypothetical's sake that we are at double that. Should we have any concern that some have expressed, that if you double that, you have got banks over here with a 4 percent tier-1 capital requirement, that you may be—basically, too many of these banks will simply hold these loans on their books since the price of that private capital up-front will mean it is more economical to keep these within the banking industry itself.

Mr. DAVIDSON. The senior/sub A–B structures have an advantage versus insurance in that if you require too much capital—so let's say that I am right and we need 4 percent, but to be careful we make it 8 percent, which might not be the worst idea. We now have an extra 4 percent of capital, or 4 percent of credit enhancement, that is not going to take very much risk.

If you can convince investors that it is not a very risky instrument, they will price that not too much differently than a senior bond. So the cost of having extra credit enhancement is much less than having too much equity.

So, for example, if we told one bank, you have to have 4 percent equity, and another bank, you have to have 8 percent equity, the 8 percent equity——

Senator WARNER. Obviously——

Mr. DAVIDSON. Right, they would be out of business.

But in the capital markets, too much credit enhancement costs less. It is still costly but not——

Senator WARNER. Would the panel concur with Mr. Davidson's comments or disagree?

Mr. SWAGEL. Absolutely, and I would go even further—that if it does encourage more balance sheet lending, as long as banks have lots of capital and good regulation, well, that would be fine.

Senator WARNER. Any others want to weigh in on that?

[Pause.]

Senator WARNER. I guess the other question too is that with what we are hoping coming out of FHFA in terms of a greater standardization of the securitization portal, with the repurchasing agreements, with servicing agreement standardization, should there be a particular—as we try to get the FHA to kind of get the utility functions better done, should there be any priority in any of

those items that you feel if you were in charge of FHFA right now, with getting one of these right, right away?

Mr. WILLIS. I think they have already shown some priority in terms of reps and warranties and with regard to servicing guidelines here. And I think those are really important as well as pooling and servicing agreements. You remember PSAs were a huge mess because every PLS, for example, seemed to have a different one.

So I think if part of what you are asking is are they putting in place standardization that should help the market, it seems to me pretty clearly that they are doing the right piece here.

Others may want to comment on the common securitization platform. It is always better, I guess, to improve that once than improve it in both of the different divisions.

Senator WARNER. And if they were getting it right, wouldn't that, Mr. Davidson, get to the point in terms of the whatever that private capital, first risk dollar is?

If there is this standardization that we all hope they are getting toward and we all are encouraging them getting toward, that should actually improve your ability to do that underwriting.

Mr. DAVIDSON. That is correct. So the more you are operating under standards that are public, the less you need the need for sort of the loan-level due diligence in underwriting, provided that you have some process in place to make sure that Fannie and Freddie are actually doing what they said they are doing. And so that would help liquidity.

Senator WARNER. Do you want to add?

Mr. SWAGEL. I was just going to add in addition to what FHFA is doing I think a really hard thing is getting, in a sense, what people broadly refer to as legal and regulatory certainty—that if we want a restart of private-label securitization there has to be some confidence about the regulatory environment.

And it is a tough one because if a bank or lender does something wrong, we should go after them. But they have to understand the rules.

And since we want origination to take place within QM and outside of QM, I think right now there is a lot of uncertainty that is probably preventing some of that from happening.

Senator WARNER. I want to get my last question in before my time is expired, unlike certain Senators.

Let's assume for a moment that we were unwinding GSEs as we know them now and we were creating these new issuers with this private capital. One of the concerns as we try to think through this—and we want to make sure we maintain this robust market—is, how do we make sure that there is an ability for those small community-based banks or credit unions or others to access this market if they do not have access to the Fannie or Freddie window?

Could we create a co-op? Is there some mutual? Is there another way that we can make sure in one view of this new world where they are going to still get equal treatment and fair treatment?

And I would love to hear from each of you.

Mr. VAN ORDER. I think that is actually tough, and I think a part of the problem is there is this real conflict we have in a lot of players who all can put bad things to you.

I mean, we had a similar problem a long time ago in the savings and loan industry when there was a comparable collapse and it was a lot of little institutions that took risks. And they kind of all took the risks at the same time, and they added up.

And one of the things I think you need to worry about as you replace Fannie and Freddie is, are you replacing them with something that has better incentives to control risks, or are you replacing it with something like the S&L industry a long time ago?

Senator WARNER. I would love to hear everybody else, and then I will give it to Senator Warren.

Mr. SWAGEL. I will go very quickly.

Yes, it is a really important issue in the sense that it goes to the market structure of the industry, and I think what we want in the future is competition. We want lots of firms undertaking the role that Fannie and Freddie are doing now and doing securitization with a guarantee.

And we see the negative effects of not enough competition in the spread between mortgage-backed security yields and mortgage interest rates. There is not enough competition in origination, and so interest rates for home buyers are higher. So home buyers are harmed by not enough competition in this industry.

And so we want the competition of the small banks. I think a mutual is a good way to do it.

I would say if there is competition and other firms competing with Fannie and Freddie, some of those should serve the smaller banks. The smaller banks should not have to go through the big banks to do it.

Mr. DAVIDSON. My concern with any of the multiple issuer/multiple guarantor models is either a race to the bottom or difficulty in regulating them. And that is why I favor transforming Freddie and Fannie into issuer-owned cooperatives with requirements of access to small issuers.

It has worked for the home loan banks. They give advances to all their members, regardless of size, as long as they can put up the appropriate amount to capital.

Mr. WILLIS. You just made part of the comment I was going to.

I think it is a really important issue, and as I said, we should do this one step at a time and see what is happening. And if small originators are being eliminated, we need to think carefully about the system we have created.

I would just add to the Federal home loan banks—they have a voting system that allows the small banks to have a larger share of the vote than they would have based on their capital, and that might fit with the cooperative model that Andy is mentioning.

Senator TESTER. Congratulations, Senator Warner. You outdid Corker.

Senator Warren.

Senator WARREN. Thank you very much, Mr. Chairman. Thank you, Ranking Member. I am glad you're having this hearing.

And thank you all for being here.

I just want to shift the question just a little bit. You have been talking some about the transition and mixing within that where we are trying to ultimately end up.

The question I want to ask is, what is the center of the bull's-eye?

However we get there by transition, what exactly are we aiming for?

And I read your testimony. I listened to all of you. And I just want to see if I have this right across the board—that you all favor layering the risk between the private market and what the Government has to do, publicly; that you all favor making explicit the guarantee that is there, that Fannie and Freddie—or whoever would call whatever names we give them—are making and then make people pay for that guarantee that they are getting; and that the two variables, the sort of hard nuts to solve in this, are how you ever get the pricing right when the Government is doing the pricing and how you get the layering details right; that is, who steps in at what point.

And the reason for that is that it bifurcates into two points in time. One is the worry about the lending incentives; that is, that the private market is out there with the right set of incentives. The Government is, obviously, rather different on that. And the second is whether or not you have got adequate loss bearing capacity if there is collapse.

Is that a fair description—because if it is, we need to know that—that that is really the center of what all four of you at least are anchoring in on. And to the extent it is not, I just want to hear from you.

So that is why I put it out there.

And, Dr. Van Order, maybe you would be the right place to start.

Mr. VAN ORDER. Well, I particularly am interested in the incentives because any time you have structures like this, which are good, there is always the potential for moral hazard.

We used to call this unbundling. The traditional bank or savings and loan took all the risk. The securitization process unbundled it. That is neat. It goes back to our founding father, Adam Smith, and the division of labor.

The problem with it is as you do that, as you get along the food chain, you have got the moral hazard problems. People can abuse one another.

I think these are the right structures, but I have not seen anything in them that really makes sure that that thing does not happen.

And it happened like crazy a few years ago. It happened in the private-label market; it happened in all sorts of situations, where people did not feel they had a stake in what they were selling to other people or they would not get caught.

So I like capital, but I really think you need to worry about the incentives at the level of management and the companies to really perceive themselves as being on the risk all the way down, not just for a little bit of it.

Senator WARREN. I understand your point, but I just want to make sure that I am locked in on this, Dr. Van Order, and that is while you would put the emphasis on the incentive question and

others might put it in other places, the basic structure as I described it is where you would end up? I just want to be sure on that.

Mr. VAN ORDER. Mm-hmm.

Senator WARREN. OK. Good. Let the record reflect you are nodding yes.

Mr. VAN ORDER. OK.

Senator WARREN. OK. Good.

Dr. Swagel.

Mr. DAVIDSON. Sorry.

Senator WARREN. I was just going to come up the line here.

Mr. SWAGEL. I agree. I agree, absolutely.

The emphasis I would add, since we are going to agree on that emphasis, is on the shrinking of the guarantee. So make it explicit because I think it will be there.

If you do not make it explicit, it is implicit, but then shrink it.

Protect the taxpayers. Provide better incentives. And then I think that also helps address the price——

Senator WARREN. But, Dr. Swagel, let me just push back.

Mr. SWAGEL. Please.

Senator WARREN. How do you shrink it if at the end of the day we talk about a Fannie and Freddie that had no explicit guarantee and yet when it all falls apart, when the market falls apart, the answer is the United States taxpayer is called to come in and backstop?

Mr. SWAGEL. Yes.

Senator WARREN. So I do not even understand what it means to say that part of the target is to shrink it.

Mr. SWAGEL. So I would use the tools that I mentioned—have more first-loss private capital——

Senator WARREN. No, no, no. I am not asking you about tools to shrink it. I am asking you, how the end can be to shrink it in a world where you have got the guarantee and if the world falls apart the U.S. taxpayer will be called on to come in? Every single player in the marketplace after 2008 now knows that.

And so I do not see how it is anything different from we price for it and we try to figure out how to layer in a way to deal with the incentives.

I just do not understand how you can talk about shrinking it.

Mr. SWAGEL. Well, it might be a semantic difference. In my mind, shrinking the guarantee is when the Government covers less than every conforming mortgage and when there is first-loss private capital before the guarantee.

Senator WARREN. Well, this is layering question. That was the second half we were doing. So maybe we are in the same place then.

Mr. SWAGEL. Yes. So it is really just a matter of how much layering and then what is the market share of the Government.

Senator WARREN. All right. Fair enough. Fair enough.

Mr. Davidson.

Mr. DAVIDSON. So I guess my main adjustment to that thought is that I think there are different segments of the mortgage market that are going to have different structures.

So, for example, there is the FHA portion where the Government is providing the credit piece and the wrap on the MBS. Then in this other layer we have been talking about what is currently the GSE market. That is the area where we have the multiple layering of private capital and Government guarantee.

Senator WARREN. But let me ask, Mr. Davidson, is there really—do you have any doubt that the Government implicitly backstops the entire market?

Mr. DAVIDSON. So, you know, the Government did not backstop the AAA private-label bonds, which are now trading at 50. So it did not backstop the entire market.

What the Government did was step in and say we will make sure there are new mortgages that we will stand behind. But it did not stand behind the private-label MBS. It did not stand behind the CDO market.

Senator WARREN. Well, one could argue, respectfully, that when you step into a market that has collapsed and offer funding into it, you have backstopped that market.

Yes, we imposed some losses. And this is what I was talking about. That is what the layering does. It imposes losses, but it does not change the fact that the Government is the one that still backstops the entire market.

Mr. DAVIDSON. I guess what I am saying is I want to segment backstopping loans that already existed and backstopping new loans. Clearly, every new loan is now guaranteed fully by the U.S. Government, but there are loans that were originated that are not being backstopped by the United States in the legacy book.

Senator WARREN. Oh, fair enough. Fair enough.

Dr. Willis.

Mr. WILLIS. I agree that we should keep a guarantee on the MBS.

I also agree that the Government has got to come in if there is a systemic failure, and so we might as well charge now and buildup a reserve against that contingency to protect the taxpayers.

I think there is a role for private risk ahead of that Government wrap. I think we should test for that to see what effect it has.

Whatever your view of MI going forward (I recognize that Senator Corker is not in favor of the MI), I do not think anybody wants to defend the way it was.

But there are a lot of changes perhaps in the rescission rules, capital, all sorts of things, with regard to insurance. And you could talk about them even taking a deeper loss than above 80–20. They actually take 35 percent. There also were issues with reps and warranties.

Senator WARREN. Fair enough.

Mr. WILLIS. So that is a way to do risk.

So there are a number of ways to do that.

As for getting the pricing right, everybody wants to point out the Government did not do it well. Quite honestly, FHA—that loss is relatively small here, particularly compared to what the private sector lost here. Ginnie Mae is still doing very fine here.

I do not suggest that the Government not charge fully based on the Fair Credit Reporting Act accounting for the risk, but I will point out that if worse comes to worst and they make a mistake,

we have ways of—you know, the Government is not going to go out of business, and it can survive.

And people disagree about this. It then can raise the rates and pay itself back in a sense by penalizing future borrowers, but that may not be a fair way to do it.

Senator WARREN. Thank you, Mr. Willis.

I appreciate the difference in focus for each of you, but I take it we at least understand the structure that all four of you are putting forward.

Thank you. I did my best to go over.

Senator TESTER. You did well.

Senator WARREN. I am trying to follow the lead of my seniors.

Senator TESTER. Yes, it is a poor example that they set, though, Senator Warren.

[Laughter.]

Senator TESTER. No, it is just fine.

And we will have another round. We have got plenty of time. I mean, this is a very important issue.

And thank you, guys, for your straightforward testimony. I very much appreciate that.

As you know, the FHFA has directed the enterprises to engage in about $30 billion of risk-sharing transactions this year and directed them to consider things like expanded mortgage insurance, senior/subordinated securities, credit-linked securities—things you guys have talked about. And I am sure that this is going to be an effort to pave the way for further risk-sharing in the future.

Are there specific things that we, as policymakers, should be looking at as these transactions unfold and market participants respond?

Mr. WILLIS. What I am concerned about in the direction they are going now in is in order to do the $30 billion they seem to think that they have to raise g-fees even higher—g-fees that are now twice as high as they were before, credit quality on new mortgages probably better than it has ever been. And that is solely in order to make sure that they can run this experiment without losing money.

And I think they are foreclosing policy options for you all by doing that.

They should run these experiments, see in fact what they cost, and then you can have an open discussion about what the tradeoffs are here in terms of bringing private capital, in terms of what kind of products, as I have said, what kind of underwriting, *et cetera.*

Right now, they are marching ahead, as I read it, to increase the g-fee just so they can run this experiment. And, as I said, I think that forecloses or makes it harder for you to choose some of the options that you may want to choose once we see the end of this experiment.

Mr. DAVIDSON. I would say in the experiment, you know, one of the biggest problems why we did not have a deal a year ago is the regulatory impediments to doing the kinds of transactions that make economic sense. So I would hope that you would sit down with FHFA, Fannie Mae and Freddie Mac and ask them what hoops were they trying to jump through that prevented them from doing the transaction that they thought would be most economic.

Senator TESTER. OK. Excellent.

Mr. WILLIS. I think we should recognize that Freddie actually has done both of these, right?

They do K Series, which is a senior/subordinated on the multi-family, and they did what is called moderns—others here can comment more about them—which were using credit-linked notes. So they have tried this in the past.

Senator TESTER. OK.

Mr. SWAGEL. Right. I agree with what Andrew said.

You know, the $30 billion seems like a small amount to me, but I understand that they want to test it out.

You know, I think g-fees can go up and down. As I said, they will go down as the amount of private capital comes back.

But I think the key is for taxpayers to be protected. We should not be underpricing this insurance. We should all understand rates will go up.

In a sense, at the beginning, when the market is illiquid and there is only a little bit of this risk-sharing, there will be a premium. Investors will demand a premium. So rates will be too high, but hopefully, this market will develop, and that will smooth that over time.

Senator TESTER. So you anticipate the rates will be—when the offerings are made, they will be higher than they probably will be later on.

Mr. SWAGEL. Eventually, just because it will be such a small security class, that there will be a liquidity premium.

Senator TESTER. Gotcha.

Mr. VAN ORDER. Yes, I think this is fine.

My only question with experiments like this is to learn something you need to see them through a few cycles. One of the things that happened a few years ago with subprime loans was people began pricing them by just looking at one cycle. So this is something that will require a lot of patience.

I do not care that much about the pricing, but if you are going to do this, you have got to watch it for a while because I think things will look good for a while. And we want to be careful if they look good, projecting it too far.

Senator TESTER. Gotcha.

Look, the structures that are under consideration are not new, but the effort, I think, with Fannie and Freddie is largely experimental, where they are going.

What specific issues would you be considering with respect to scalability of these mechanisms, both as enterprises increase risk-sharing transactions and as we consider the transition out of conservatorship?

Go ahead, Mr. Davidson.

Mr. DAVIDSON. So the credit-linked note structures are extremely scalable if you can get investors because they do not alter any of the operations of Fannie Mae and Freddie Mac. Unfortunately, they are not the most investable right now, and they create some issues for REITs because they are not REMIC transactions.

The senior/subordinated transactions, which are the cleanest and what has been done on the multi-family side, are great trans-

actions for your less liquid products, but they are not going to be as scalable.

So it is sort of a tradeoff. You have a clean structure that is not scalable and a scalable structure that is not, you know, clean from a regulatory standpoint.

Mr. WILLIS. I did not come here to defend the insurance side of this, but I will point out the insurance is probably quite scalable here particularly because there is a reinsurance market out there as well. So all of these are just relative.

I agree with everything else that was said here but just wanted to add that.

Senator TESTER. OK, Senator Corker.

Senator CORKER. Thank you again for your testimony, and I want to follow up on Senator Warren's comments about the shrinking.

I do think there was a semantics issue, and I just want to point out that let's just say you had a 90–10 model, just for talking purposes. You would have automatically shrunk the public side by 10 percent, immediately on the front end.

And I will say that if Fannie and Freddie in this last go-round had just had a 5 percent capital buffer there would have been zero taxpayer losses.

So it is not a small thing to talk about a 90–10, and that is an immediate shrinking. So I do think you all are talking past each other just a little bit on that issue.

On the mortgage piece that you just brought up, Dr. Willis, it is true that insurance is very scalable. But you do not really have much when you are done, right?

I mean it is not the same as hard cash, which is what you would have with a credit-linked note or with A or B piece. It is hard cash. It is there. It is gone. And if something happens——

Mr. WILLIS. Well, again, I am not an expert in insurance.

There is a concept called risk-to-capital.

Senator CORKER. You have a highly leveraged product in front of you. Is that——

Mr. WILLIS. Right, right. But if you leveraged it at—let's say you think you want 10 percent. You could leverage it at 10 to 1.

I mean, you could require that level of capital for them to have, and you would have the same protection there.

Senator CORKER. You would have 1 percent of the 10. You only have 1.

See, with the credit-linked note or with the A and B piece, you have 100 percent cash.

Mr. WILLIS. For that portion that——

Senator CORKER. For that portion.

Mr. WILLIS. Absolutely right.

Senator CORKER. So if you had a 10 to 1 leverage, you would have 1 percent cash in front.

Mr. WILLIS. Right.

Senator CORKER. I guess we have had numbers of discussions. So it is a very different model.

And I am all for private insurance on the portion above 80 percent. I just think as an equity piece that is not really what you are getting. Does that make sense?

Mr. WILLIS. I have to defer to you on the insurance, in the leverage, but all I am pointing out is you could require them to hold more capital. You could require them to hold more reserves equivalent to whatever you wanted elsewhere.

The insurance model is a different model. It builds up capital over time. There are other—there are differences that you are referring to.

But, as a matter of practice, you could make them hold; say it is only acceptable capital in front of the Government guarantee if you hold the certain ratio here.

Senator CORKER. It would still be a leverage ratio.

Mr. WILLIS. OK.

Senator CORKER. I think everybody agrees to that.

Dr. Van Order, the incentive piece—I am interested in what you are saying there.

I mean, if you—let's just say you had an A and a B piece, the not scalable but superb model. And I assume that with the B piece, whoever held that would want to be able to determine who the servicer is because they would have all the risk. Is that correct?

Mr. VAN ORDER. Yes.

Senator CORKER. So talk to me a little bit about the kind of things that would be disincentives, or take them in the wrong direction, because it seems to me they would have every incentive to make sure that what they were doing was not going to fail. Tell me how that could go awry.

Mr. VAN ORDER. Everybody in the deal has limited liability. And the question is, at what point do you run out of yours?

But, yes, if you have got someone that is on the hook from beginning to end and they are in a position to handle the information properly from the servicer, then, yes, it should work pretty well. It should mimic.

What we would like to do is take the—we need the guarantee at the end. What we would like to do is take it off the table in terms of behavior. Right. So set up something so that they behave as if they did not have the guarantee and still have the guarantee.

Let me give you an example. You were talking about raising capital ratios to 5 percent. The problem with raising capital ratios to 5 percent is you might change the behavior of the people because at 5 percent a lot of safe assets are not profitable anymore and you might move them into riskier assets.

And that is——

Senator CORKER. But on the B piece, they would not be doing that. That is not what they would be doing.

Mr. VAN ORDER. That is a different question. You are right.

Senator CORKER. That is just your equity.

So, I guess, tell me how we might go awry.

Mr. VAN ORDER. Well, because when you have an equity position, you have a limited liability.

So what you would want to do if you are in an equity position is you might want to set up something where 90 percent of the time everything was fine and 10 percent of the time it went wrong and it went wrong in a huge way because your liability is limited.

Maybe I have got it turned around.

Senator CORKER. Let me go—thank you very much.

Let me go to another point.

So we have a superb non-scalable model which is the A and B piece, or we have a credit-linked note which is scalable but not quite as superb. How do we figure out a way to solve the problem?

Mr. DAVIDSON. My view is it has really only to do with the current regulatory structure. Right.

So it really has nothing to do with the economics because the economics of senior/sub and the economics of credit-linked note are virtually identical.

You have some amount of cash that is sitting on the sidelines. It is earning some return. And, if there are losses, it gets taken away from the investor, which is opposite of the insurance model where you keep your cash and then when something goes wrong you hand over your cash.

Senator CORKER. If you have any.

Mr. DAVIDSON. If you have any left.

So, really, if these experiments work and Congress wants to pursue this, it is not going to be that hard for you to change some of the rules so that senior/sub or credit-linked notes work both extremely well.

Senator CORKER. So the impediment is not due to the structure; it is due to us.

Mr. DAVIDSON. Yes.

Senator CORKER. And if we were to craft a piece of legislation where we wanted an A and B piece or credit-linked note, we could do so in a manner that both were very scalable and superb. Is that correct?

Mr. DAVIDSON. That is correct.

Mr. WILLIS. I will just add; you also have to deal with the compatibility with the TBA market, right, which today it is not, as I think you pointed out in your testimony.

Mr. DAVIDSON. That was my scalable point—was interfering with the TBA market.

Senator CORKER. This has been an outstanding hearing, and I thank all of you.

Mr. SWAGEL. Right. It just seems like that you would have—the A and B really would be quite different. Right?

The A would be liquid. The TBA market would be concentrated there. And then the B would just be very different. And different types of investors would have different interests.

Mr. WILLIS. But you would not be able to use the TBA market now to provide—easily provide—a rate lock, a forward committed rate, because you would not be able to do that with a B piece without legislative change.

Mr. SWAGEL. Right.

Senator TESTER. Thank you, Senator Corker.

We have got a vote at 5.

You each have 7 minutes because my close is very short. Go ahead.

Senator WARNER. Well, mine is going to be even quicker than that—one quick question.

Assuming we follow up on what Senator Corker is saying, we have got this A and B piece. I actually do think there is a way to structure—I do not have quite the concerns Dr. Van Order does

about that if we have got that 10 percent risk capital up front, and I think we can take care of most extraordinary risk.

What I worry about, though, is trying to make sure on the servicer piece. I try to understand the servicer piece more and more and the 25 to 50 basis points that they get paid. Usually, they get paid additional for back fees and other things through the operations. That is really a nice revenue stream there.

How do we make sure that if we have got this private capital up front, or even a Government backstop later, that if the servicer is not aligned the right way—back to your point, Dr. Van Order, in terms of incentives—we can get that servicer out of that role and get somebody that is better aligned, in, when they have got such a flush revenue stream there that may or may not be rewarding actual performance?

Mr. VAN ORDER. Actually, the Ginnie Mae market is a neat example of this because they have, for years and years, required very high servicing fees, and yet the originators and sellers would rather not receive them because they would rather sell the securities at higher prices.

What Ginnie Mae uses them for is the servicers are responsible for making the timely payment. Ginnie Mae is a backup to that, but the servicers are responsible for making it.

And it is profitable. The right to service—to pool the mortgages—trades at a positive price, and the reason is it is valuable.

And what Ginnie Mae has done—and Fannie and Freddie did a little bit, but Ginnie Mae did in a really neat way—was if you did not do this they could take all of your servicing, just take it away from you, and sell it to someone else.

So, actually, that was an example of—this was like a performance bond which they could take away from you, and I think that is a neat way of setting it up.

Senator WARNER. I would love for you to get me some more information about that.

Does anybody else want to have a quick comment?

Senator WARREN. Good. Thank you.

Senator TESTER. Senator Warren.

Senator WARREN. Thank you.

And I am going to have to be quick too because I have to go preside.

So let me ask the one question, something we have not talked about, and that is we were talking about pricing—how the Government prices for risk and how the private-market prices for risk.

And I think it was you, Mr. Davidson, who talked about with millions of mortgages in Fannie's or Freddie's—or whatever its successor is. The question is how do you price out of that to try to sell off some of that and how difficult that is when we are dealing with so many mortgages.

So the question I want to focus on for just a second is about data tagging, whether or not you have any familiarity with the idea behind this. The notion that we now have better capacity than ever in the past to tag even something like a mortgage with lots of information—information about the characteristics of the borrower, information about the characteristics of the originator—and to keep that information with that mortgage we can now do, or at least we

can theoretically do we could do, as it is sliced and diced and put into different pools and keep its performance information always pegging in so that, over time, you have this incredibly robust data base about performance.

Now you do not have cycles yet until it plays out over longer and longer periods, but you do have incredibly detailed information about how it is working.

Does that potential change just in the technology of what we can do or what we can do, I hope, in the near future that we were not able to do up through the present—does that give us a better capacity either for the Government to price risk or for the private market to be pricing the risk as it buys from the Government and, therefore, solve some of our pricing problem?

Any thoughts around that? Anybody?

Mr. Swagel?

Mr. SWAGEL. Sure. I think, yes, that is exactly right. So I very strongly agree.

In some sense, the previous model was you do not need to know any of this because Fannie and Freddie are there.

Senator WARREN. Yes.

Mr. SWAGEL. So this is just—it is sunlight.

Senator WARREN. This is like inverting that approach.

Mr. DAVIDSON. So, I mean, Fannie and Freddie just released a tremendous amount of delinquency data that the market never had before.

Senator WARREN. Yes.

Mr. DAVIDSON. Which is, you know, crucial to price these instruments.

But I guess I would caution that more data does not make it more correct data. And so——

Senator WARREN. What does that mean?

Mr. DAVIDSON. We still have the issue that someone is originating a loan. They are writing down what their income is on that document, and maybe it is verified in some fashion. And there is an appraisal. If the income and the appraisal are false because there was fraud, then all of the rest of the analysis you do after that is not valuable.

Some of that is——

Senator WARREN. Fair enough, but let me just break in there, Mr. Davidson, just because I am going to run out of time.

It is also the case that you can start picking up the originators that are not the ones who are following the rules because now you can isolate by originator for whose loans are going sour fast.

Mr. DAVIDSON. Yes. So I think a good representation and warranties and good data about that will improve this whole process.

Senator WARREN. Good.

Mr. WILLIS. It is another hearing, but do not forget second liens in your database.

Senator WARREN. Good point. Good point, Dr. Willis.

Mr. VAN ORDER. And a neat thing that is going on in developing these mega databases is linking it up with the borrower and the information from credit repositories. I think one of the neat things going forward will be the early warning systems in mid-stream so

you see this guy's credit score has deteriorated. How predictive is that?

And splicing these together is not easy, and there are serious issues, but I think that is pretty neat.

Senator WARREN. So I hear a glimmer of optimism. Good. Thank you very much.

Thank you so much. My apologies and excuse me.

Senator TESTER. Perfect. Thank you, Senator Warren.

I just want to thank the witnesses again. I especially want to thank the fact that if you guys had something to say you were not bashful about saying it, and I very much appreciate that. That is what hearings should be about—is getting good information so that we can make good decisions.

And I think this hearing has underscored the importance of getting private capital back into the marketplace, where we are protecting taxpayers and how we transition Fannie and Freddie out of conservatorship.

I certainly look forward to working with the folks here today and a whole lot of others that I know are very concerned about the housing finance system and concerned about us really doing the right thing and building a housing finance system that is going to last well into the future.

Just some housekeeping, this record will remain open for 7 days, and any additional comments and any questions can be submitted for the record at that point in time.

With that, once again thanking the witnesses, and this hearing is adjourned.

[Whereupon, at 4:50 p.m., the hearing was adjourned.]

[Prepared statements supplied for the record follow:]

PREPARED STATEMENT OF MARK A. WILLIS

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MAY 14, 2013

Chairman Tester, Ranking Member Johanns, and Members of the Committee, I thank you for the opportunity to testify today on the role for private capital in reforming mortgage markets. I am Mark A. Willis, a Resident Research Fellow at the Furman Center for Real Estate and Urban Policy at New York University and an adjunct professor at the Wagner School of Public Service, also at NYU. Previous to that, I was the Executive Vice President for community development at JPMorgan Chase, having started many years earlier at one of its predecessor institutions, Chase Manhattan Bank, as president and founder of its Community Development Corporation. Before that, I served as an economist at the Federal Reserve Bank of New York and worked in New York City government.

Since 2008, I have focused much of my research work on housing finance reform and have written articles, consulted for a number of organizations, lectured, and participated on numerous panels on this topic. I am also a member of the Mortgage Finance Working Group convened by the Center for American Progress and have conducted research for the Housing Commission of the Bipartisan Policy Center. The views contained in this testimony are mine and should not be attributed to any of the organizations to which I am affiliated.

I want to make two major points in my testimony today: First, restoring private capital's historic role in the financing of home mortgages—financing jumbo mortgages—is a straightforward matter once regulatory uncertainties are resolved. Second, requiring the use of private, credit-risk-taking capital for the much larger remainder of the housing finance market is also possible, but such requirements should only be implemented after we have tested their impact on access to and affordability of mortgages for the vast majority of the home buyer market. By test-driving different approaches, we will be better able to weigh the costs and benefits of having private capital take more of the risk and avoid unnecessarily disrupting the availability of new mortgages.

Background

Before discussing the details of increasing and deepening the role private capital plays in mortgage markets, it is useful to clarify the different roles it has played in housing finance in the past. Private capital is today, and always has been, the source of all the funding of home mortgages. What we are discussing now is to what extent this private capital is insured or guaranteed by the Government.

It is also useful to understand that there are two types of investors bringing private capital. First, there are those investors who are interested in taking only interest rate risk and prepayment risk (these are called "rate" investors). These investors purchase mortgage-backed securities (MBS) where there is essentially no credit risk, *e.g.,* when the Government insures against the risk of borrower default. Then, there are those who take that credit risk, either alone or in addition to interest rate and prepayment risk (these are called "credit" investors). It is generally understood that the pool of capital available from these rate investors far exceeds that for the credit investors.[1]

In recent decades, much of the funding for mortgages has come through the secondary market, as opposed to through financial institutions that make loans and hold them on their own books.[2] Many investors purchased MBS issued by Fannie Mae and Freddie Mac, which are backed by mortgages below what has been called the conforming loan limit (pre-crisis was set at $417,000), believing that there was an implicit Government guarantee of these securities. Direct investors in Fannie and Freddie also appear to have felt shielded from credit risk, despite the technical fact that these two agencies had been privatized decades ago, and it turns out that, at least for the debt investors, they were right—the Government has fully stood be-

[1] For example, rate investors in Fannie Mae and Freddie Mac debt and mortgage-backed securities have included sovereign funds which see the U.S. Government as providing a guarantee against credit loss.

[2] Banks do hold some mortgages in portfolio but 1) are limited in their appetite for long duration instruments such as 30-year fixed-rate mortgages, 2) look to diversify their assets to guard against sharp losses in any one sector of the economy, and 3) have only limited portfolio capacity in any case. While bank assets have grown in recent years, they still barely exceed the total value of mortgages outstanding and bank deposits fall well short of this total (See Federal Reserve Flow of Funds reports).

hind those securities. Even the equity investors in the Agencies appear not to have paid enough attention to the riskiness of the mortgages they backed or owned. In the end though, these investors did bear the cost of the financial failure of these two firms. Accordingly, most of the investors in this part of the mortgage market have in the past only had to concern themselves with interest rate and prepayment risk since the Government has guaranteed timely payment of principal and interest on all securities.

Only larger loans (the so-called jumbo loans) and loans that were subprime or labeled Alt-A—the financing and regulating of these latter types of loans I take as beyond the scope of this hearing—have traditionally been financed with private, credit-risk taking capital mainly by banks[3] and by investors in private-label mortgage-backed securities (PLS).[4] Before the crisis, loans larger than $417,000 were not eligible for purchase by Fannie Mae and Freddie Mac ("Fannie" and "Freddie"-collectively the "Agencies"). Thus, investors in these securities and banks had to cover default risks.

Following the 2007 onset of the nationwide decline in housing prices and the great recession, the Government expanded the range of loans that were eligible for purchase by Fannie and Freddie by raising the size limits for eligible loans. The Economic Stimulus Act of 2008 temporarily raised the loan limit in some parts of the country with high housing prices as high as $729,750 for them as well as for the Federal Housing Administration's (FHA) insurance program. While the limit for the Agencies has now fallen back somewhat to $625,000, that limit still encompasses over 97 percent of the mortgages and almost 90 percent of the dollar volume originated annually for the purchase of homes.[5] So it is not surprising that some 90 percent of the mortgages for the finance of home purchases rely on the Government guarantee, which means that the taxpayers remain entirely on the hook if defaults should exceed the financial capacity of Fannie and Freddie to absorb any resulting losses.[6]

Calls for using private, credit-risk-taking capital to decrease the risk of loss to taxpayers are made on several grounds: First, there is the simple desire to have private capital absorb some amount of the loss. Second, some argue that the private sector is better able than the public sector to price the risk,[7] although the latter is something of a specious argument given that the Government had to bail out purely private credit risk takers whose mispricing helped fuel the subprime boom and bust. While it is a challenge for Government (or anyone) to set exactly the right fee for providing a "wrap," Government does have one advantage: it can cover losses out of tax revenues and even recoup those losses by raising the premium it charges going forward for providing the guarantee (as it has done through the addition of loan level price adjustments and increases in the so-call g-fees charged by Fannie and Freddie and as FDIC has done with regard to deposit insurance). A third potential benefit of having private investors take credit risk alongside the Government could be an extra set of eyes to assess credit standards/underwriting criteria and monitor whether loans are being properly underwritten and serviced. Additionally, it is hoped that the active involvement of private sector actors will discourage, if not prevent, attempts by Government officials to fiddle with underwriting and other standards for political gains.

In the end, it is important that America have a housing finance system that can provide mortgage products that are well-priced and accessible and safe for all borrowers who can sustain home ownership, while at the same time minimizing systemic risk to the economy as a whole.

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[3] Banks also buy MBSs to hold in portfolio. These securities may or may not involve credit risk depending on whether the MBS is covered by a Government guarantee.

[4] If subprime and/or Alt-A re-emerges as an asset class, then it seems likely that a secondary market to fund it will also be able to re-emerge once a healthy jumbo PLS market has been reestablished.

[5] These percentages are based on an average of the annual HMDA data for home purchase loans by owner-occupants for the years 2004 through 2011.

[6] The U.S. Treasury has inserted $187.5 billion in capital into Fannie and Freddie in the form of senior preferred stock and has received back $121 billion in dividends. As of August 2012 all of the earnings of Fannie and Freddie are being swept back into the Federal budget. Based on the amount and rate of recent payments and sweeps from Fannie and Freddie the Government appears well on its way to recovering the full amount of the capital it invested.

[7] It is worth noting that the premiums charged by both FHA and GNMA (the Government National Mortgage Association guarantees MBS backed by FHA-insured mortgages) have been sufficient up to now to cover any losses out of the reserves they have built up over time. It is also likely that, given the rules governing FHA, a transfer of less than a $1 billion may be triggered during the next fiscal year even though FHA has enough money to cover foreseeable losses for the next 7–10 years and can expect higher net earnings going forward since it has raised premiums while the credit quality of new loans has risen significantly.

Taking Steps that Make Sense

The FHFA can take a number of steps to move us down the road of housing finance reform in a measured and informed way:

Turn the jumbo mortgage market back to the private sector

Now that the housing market seems to have stabilized, it is time to let the jumbo market stand on its own without a Government guarantee. It accounts, after all, for some quarter of the dollar volume of mortgages per year and over 8 percent of all mortgages by unit count.[8] While it may in the end make sense to trim back further the share of the market eligible for the Government wrap (see discussion below), opening up the market above $417,000 should provide a very significant opportunity to attract private, credit-risk-taking capital.

The best way to trim back is to raise the g-fee on all loans over $417,000 until the private sector is able to capture as much of the market as it wants to. An alternative approach, which some have suggested, is to lower loan limits one step at a time to $417,000, but this could leave parts of the market underserved or even unserved, especially if the private sector is reluctant to gear up to serve this market until it is of sufficient scale to justify the costs of setting up and running the necessary market infrastructure and to offer investors sufficient liquidity. While Project Restart[9] and other efforts are underway to re-think the workings of a PLS market, some remaining regulatory uncertainties, especially with regard to risk retention under Dodd-Frank, probably need to be resolved if the private sector players (*e.g.,* investors, originators, servicers, *etc.*) are going to be sufficiently motivated to take the lead to reach agreement among themselves on the rules of the road necessary to be able to come back at scale. Otherwise, it may take a g-fee increase that is significantly above what pricing should be needed in the long run for the private sector to compete for the jumbo business.

Then evaluate whether to lower the loan limit below $417,000

Once the jumbo private securitization market is functioning at scale, it will be possible to evaluate the impact of any further lowering of the limits for the private sector to begin to serve the vast bulk of the mortgage market which lies below $417,000. This part of the market (74 percent in dollar terms and 92 percent of the units) has historically benefited from a Government guarantee and not relied on credit investors.

If there is no significant difference in what private, credit-risk-taking capital proves willing to finance in the jumbo market compared to the existing offerings in the conforming market, then further testing of the right level for the loan limit should be undertaken. But any expansion of the non-conforming market should only be done in stages. At each stage, the goal should be to ensure that the additional market segment will continue to offer a comparable range of mortgages including, for example, long-term, fixed-rate mortgages, which are well-priced and available without regard to geography or other factors that would limit access to those that now have it.[10] Similarly, if the jumbo market requires higher downpayments and/or higher FICO scores, then extending it into the heart of the mortgage market would risk excluding many potential home buyers, particularly first-time and lower-wealth home buyers.[11]

An additional option is to consider varying the loan limits based on variations across metropolitan areas in median home prices. For example, a loan limit of $417,000 preserves a Government guarantee for only 14 percent of the mortgage market in San Francisco (27 percent of the units) while the comparable percentages for Dallas and New York are 83 percent and 47 percent (95 percent and 68 percent) respectively.[12]

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[8] These percentages are based on an average of the annual HMDA data for home purchase loans by owner-occupants for the years 2004 through 2011.

[9] Project Restart has been a project of the American Securitization Forum.

[10] Most observers agree that broad access to a long-term (15 or 30 years), fixed-rate mortgage, which have been at the core of the U.S. housing market, is critical for a healthy housing market. Many are concerned that the availability of this type of product might be put in jeopardy without the Government guarantee.

[11] See, for example, Roberto G. Quercia, Lei Ding, and Carolina Reid, "Mortgage Underwriting and Access to Credit", University of North Carolina, Center for Community Capital, October 6, 2011, which reports that some 40 percent of mortgages made between 2004 and 2008 were made with a downpayment of less than 20 percent. *http://www.ccc.unc.edu/documents/Mtge.Under.Access.Credit.CFPB.10.6.11.No.2.pdf.*

[12] These percentages are based on an average of the annual HMDA data for home purchase loans by owner-occupants for the years 2004 through 2011.

Weigh pros and cons of requiring private, credit-risk-taking capital ahead of a Government guarantee on "conforming" MBS

Since these tests are likely to reveal the value of having a conforming market supported by a Government guarantee on MBSs backed by qualified mortgages, FHFA should continue its current quest to determine the costs and constraints of bringing in private, credit-risk-taking capital ahead of Fannie and Freddie in that conforming market. Sharing risk does offer the potential to reduce the burden that could ultimately fall on taxpayers.

However, using such private capital has drawbacks as well. Private sector investors need to be rewarded for taking risk, and they may require tighter underwriting standards (called credit overlays) than the Government is willing to insure. It is simply naive to expect private investors to adjust their expectations of an acceptable return in order to make home ownership more accessible and affordable or to put capital at risk during market downturns. Their presence may also make it harder for smaller originators to have access to the Government wrap. Finally, it is important to consider any systemic risk posed by involving private capital across the board. Even if the investors in the MBS are protected by the Government wrap, it is important to ensure that large losses by private capital in this position do not result in the need to once again bail out the private sector.

Shifting risk onto the private sector is also likely to raise the cost of mortgages. Government is able to provide its guarantee at lower cost because, unlike private investors, it is does not have to be rewarded with a high rate of return for taking risk. Government has the ability to recover from losses by tapping other sources of revenue and so will not be put out of business if, by some unexpected set of circumstances, losses exceed the existing reserves built up by charging for the guarantee. Private capital, on the other hand, needs a high return to take on such risk and so its use will push up the rate that borrowers will have to pay. While some economists argue that the Government should charge the same as the private sector to take on risk (so-called "fair value" pricing), the accounting spelled out in the Federal Credit Reform Act is designed to ensure that the Government is appropriately compensated for the risk it takes, based on the Government's borrowing rate.[13]

Moreover, reliance on private capital to take first loss will limit Government's ability in times of economic stress to ensure the continued availability of mortgage financing through the conforming market, which can moderate the impact on housing prices and consequently on household wealth in the event of an economic downturn.[14] As we saw most recently with the housing bust and great recession, private capital can move quickly to withdraw from the mortgage market. New PLS originations disappeared and private mortgage insurance became close to unavailable. When that happened, Fannie and Freddie (along with FHA) stepped in to provide that essential countercyclical liquidity. Therefore, a requirement for private capital to be ahead of a Government guarantee will make the availability of mortgages backed by the Government guarantee (other than FHA) highly pro-cyclical unless a way can be found to dial back that requirement quickly.[15] Alternatively, the Government can decide to rely just on FHA to ensure continuation of a housing market that functions well enough for both buyers as well as sellers.[16]

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[13] Of course, every sector of the economy would like to have access to money at lower cost based on U.S. Treasuries plus a charge for risk that does reflects the Government's borrowing costs and not those of risk-averse investors. Favoring the housing sector is consistent with the belief that housing provides important social benefits. For a discussion of the FCRA versus fair value, see John Griffith, "An Unfair Value for Taxpayers," Center for American Progress, February 9, 2012. *http://www.americanprogress.org/issues/budget/report/2012/02/09/11094/an-unfair-value-for-taxpayers/*.

[14] As Mark Zandi wrote, "the FHA shows how Government action during the Great Recession forestalled a much worse economic fate. If FHA lending had not expanded after private mortgage lending collapsed, the housing market would have cratered, taking the economy with it." See Mark Zandi, "FHA role may be bloated, but we'd be much worse off without it" The Washington Post, December 15, 2011, available at*http://articles.washingtonpost.com/2011-12-15/news/35285815_1_mortgage-loans-private-mortgage-mortgage-securities.*

[15] If there is to be such a "dial", it will be necessary to determine who would make the decision, according to what criteria (*e.g.,* would there be automatic triggers or would the decision be delegated to a Government entity like Treasury, the Fed, or HUD), and what changes in procedures would need to be instituted to replace the functions that private capital was expected to perform. A similar issue exists with regard to any lifting of the loan limits for the FHA, but in this case FHA is already structured to work without relying on private capital.

[16] FHA was able to filled part of the gap opened up by the withdrawal of private capital by allowing its share of the home purchase to rise from less than 5 percent in 2006 to more than 30 percent in 2009. See U.S. Department of Housing and Urban Development, "Annual Report to Congress Regarding the Financial Status of the FHA Mutual Mortgage Insurance Fund Fiscal

Continued

Another aspect of the current housing market that needs to be preserved is the To-Be-Announced (TBA) market, where Fannie and Freddie "pass-through" MBS[17] are traded today.[18] Most observers agree that the loss of this very deep and liquid market, which benefits from its appeal to rate investors, would likely raise the cost of mortgages and jeopardize the continued availability of well-priced, longer term, fixed-rate mortgage products with rate locks from 30 to 90 days.[19] Unless we are prepared to do without such a market, we should consider bringing in private, credit-risk-taking capital only if it is compatible with a well-functioning TBA market.

For risk-sharing with a Government wrap, focus on insurance options because they are compatible with a TBA market

Unfortunately, one of the private, credit-risk-sharing vehicles commonly discussed is incompatible with the TBA (To-Be-Announced) market and particularly with its ability to allow for rate locks. This option looks to structure an MBS into at least two tranches, one senior and one subordinate, also called A and B pieces.[20] The senior ("A") piece would retain the Government guarantee of timely payment of interest and principal while the "B" piece would be sold off to private investors who would stand to lose all of their investment before the GSE would take any losses.[21] Mortgage payments are first distributed to the investors in the "A" piece, who are thereby shielded from losses that are less than or equal to the payments owed on the "B" piece. In other words, shortfalls in payment from borrowers are absorbed first by "B" investors, and only if losses are in excess of what the "B" piece can absorb will the "A" piece suffer losses. As a result of being willing to take the first loss, investors in the "B" piece look to be paid more than those holding the "A" piece, yielding an interest-rate charge to borrowers which is a weighted average of the two interest rates plus other charges such as a servicing fee, *etc.*

While the "A" piece with its Government wrap would be able to trade in TBA market, the "B" piece would not. Trading the "B" piece in the TBA market would violate SEC rules that prohibit the selling of securities where the underlying mortgages have not been identified in advance. The MBSs that Fannie and Freddie guarantee are specifically exempted from this requirement as are those guaranteed by GNMA.[22] This means that it will not be possible to use the TBA market to price the "B" piece in advance, making it a lot harder and presumably more expensive for loan originators to offer borrowers a rate lock. Also, the ability to raise capital using this structure is highly dependent on credit rating agencies, which will have to assess the risk inherent in the "A" piece if it is to trade without a Government wrap and yet whose role in the crisis was significant and has yet to undergo reform.

Instead, FHFA should focus on insurance type options for that extra layer of protection for taxpayers. Insurance can work with traditional, pass-through MBSs that, with a Government wrap, should be able to trade the same as Fannie and Freddie Mac MBS now do in a TBA market.

There are two main types of insurance that are most often mentioned for this purpose. One type is provided through mono-line insurance companies that are in business solely to insure mortgage risk. A variant of this approach is the private mortgage insurance (PMI) business that was a response to the statutory requirement that Fannie and Freddie obtain third-party coverage on loans with a LTV ratio above 80 percent. On a number of accounts, the PMI model evidenced major shortcomings when hit by the latest housing bubble and bust. However, with changes in rescission rules, tighter capital-to-risk rules, and enhanced regulation and supervision at the state and Federal levels[23] it may be possible to come up with a design

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Year 2012" (2012), available at *http://portal.hud.gov/hudportal/documents/huddoc?id=F12MMIFundRepCong111612.pdf.*

[17] The term "pass-through" refers to the fact that the payments made on the mortgages that back the security are simply passed through to the holders of the MBS in proportion to their investment.

[18] A TBA market also exists for GNMA securities but it serves only mortgages that qualify under the FHA, VA, or RHS programs.

[19] For example, see James Vickery and Joshua Wright, "TBA Trading and Liquidity in the Agency MBS Market," New York: Federal Reserve Bank of New York, 2013, available at *http://www.newyorkfed.org/research/epr/2013/exesum_vick.html.*

[20] No judgment is being made here as to the relative merits of a senior subordinate structure for the PLS market where there is no Government guarantee and no TBA market.

[21] This structure is even now being used by Freddie Mac for some of its multifamily MBS in its K-series, but it should be noted that multifamily MBS does not trade in a TBA market.

[22] The Government National Mortgage Association (GNMA) guarantees securities with mortgages backed by FHA or other mortgages backed by a Government agency.

[23] In general, insurance companies are subject to state regulation with no Federal oversight bodies comparable to those that exist for banks.

that would be acceptable to the customers of their product, *e.g.,* Fannie and Freddie, and to the regulators and credit rating agencies.[24]

An alternative way to insure first loss would be to use credit-linked notes (CLNs)-a type of security which can be bought and sold in the public credit markets.[25] With CLNs, private investors put their capital at risk by purchasing the notes. These CLN investors advance the full amount of the note, and these funds are held in trust (thus this is described as a "funded" insurance model).[26] If a loss occurs, the funds go to cover the losses; if no loss occurs, the funds are returned to the CLN investor. In the meantime, the CLN investors receive regular payments which provide them with a return on their capital. Compared to the Senior-Sub or the traditional mortgage insurance model, this structure is more flexible as to what risks can be covered. Rather than covering an individual loan, or a single security, a draw on the CLN can be triggered by performance of a so-called "reference pool." This reference pool can be as simple as the specific mortgages backing that MBS, or a broader group of mortgages, or a cross section of a GSE's entire book of business, or other even broader economic indicators such as the unemployment rate or house price index.

A key factor in the choice among these alternative forms of insurance comes down to the overall cost imposed on borrowers for a given amount of protection. While in theory, the cost of the private capital to cover a given amount of risk should be the same regardless of the institutional form, these two types of insurance are subject to very different regulatory regimes which can affect the relative costs of providing the coverage. Moreover, there are other differences that should also be taken into account such as impact on small originators, on the widespread availability of mortgages across geographies and all segments of our society, scalability, ability to modify and restructure loans, *etc.*

Investors in CLNs, for example, may be more restrictive in the types of loans they are willing to insure and in dealing with smaller originators and originators that work in only a limited number of geographies. Investors in CLNs may prefer to work with originators that have been rated for the quality of their origination and servicing systems or have large, diversified pools of mortgages while insurance companies may find that working with as many originators as possible over time may help them diversify their risk, rather than seek to diversify one MBS at a time. At least in theory, though, a large enough "reference pool" could accomplish the same thing for CLNs. Insurance companies may also be more motivated and capable than the principals in the CLN to provide a second set of eyes to monitor the origination and servicing systems to minimize loss and be more flexible in allowing for loan modifications and refinancing.

As for scalability, both approaches would seem to be able to scale up, assuming that there is sufficient private capital willing to invest in the stock of the insurance company or buy the CLNs. The insurance companies also have access to re-insurers which can add to their capacity to take on risk. For CLNs, a critical element for them to be able to compete effectively may be sufficient scale to provide liquidity for the trading of these securities.

Test for the optimal allocation of risk-sharing versus cost to the borrower

In addition to testing the cost and viability of different options, it is important to keep in mind that any incremental costs will have to be borne by borrowers. Since, as noted earlier, the Government does not need to charge as high a premium for taking on a given amount of risk as private capital requires, the higher the degree of risk-sharing, the higher the likely cost to borrowers.

In order to sort out the tradeoff between the cost to the borrower and the degree of risk sharing, the Government needs to be explicit in how much to charge to build-up an appropriately sized reserve to protect itself and thus the taxpayer from having to call on tax dollars. The amount it needs to charge (and the size of the reserve it needs to buildup) depends on how much risk it is taking. The amount of risk, in turn, depends on how much it lays off on the private sector as well as the underwriting and servicing standards it sets.

At one extreme, Government can require enough private capital to be able to absorb all expected loss with a high degree of certainty. In this case, the Government would only need to impose a very small charge to cover the *de minimis* probability

[24] Even with risk-sharing ahead of the Government wrap at the MBS level, requiring PMI might still make sense at the loan level for loans with LTV greater than 80 percent. Alternatively, a risk-sharing system could be built on a strengthened PMI model but with first-loss coverage much deeper than 30–35 percent.

[25] CLNs have been used previously by Freddie Mac under a program called Freddie Moderns.

[26] It is a separate matter if the investors themselves can absorb the losses without becoming insolvent or potentially creating systemic risk across a broader segment of the financial system.

of the tail risk that it retains. Alternatively, the amount of first loss placed on the private capital can be limited or none at all, leaving the Government with more of the risk, which it can cover at lower cost than the private sector would likely be willing to do.

In evaluating its risk, the Government will also need to take into account counterparty risk, that is, whether the insuring entity will be able to come up with the money it has promised. For CLNs, this issue may not arise if the notes are fully funded. However, once the full amount of the notes has been paid out, the Government must make up any difference. In contrast, insurance companies may be able to pay out more but they are regulated based on risk-to-capital which means that, at any point in time, there is a limit to the losses that they can cover. However, if desired, there is a way to structure an insurance contract similar to the protection provided by a CLN and that would be to set a cap on total payout, *i.e.,* include a stop-loss provision.

Insurance companies also could have more discretion to allow loans to be modified or refinanced if the buyers of the CLNs require highly prescriptive rules for the treatment of any mortgages that are in the "reference pool." Similarly, insurance companies would seem to have more ability to rescind coverage in the case of defects in the origination process, but this is technically an issue of the language in the insurance contract requiring payment contrasted with the language in a CLN as to when it also must pay out.

To determine the tradeoff between more risk-taking by the private sector and the cost of mortgages, it makes sense to test some different structures with varying amounts of risk being laid off on the private sector. The challenge in designing these tests will be to choose which levels of protection to test in order to get a good idea of the parameters of the tradeoff. To do this, it is essential for the Government to determine the appropriate premiums it needs to charge for different levels of residual risk.

Ensure cost savings are passed on to borrowers

Regardless of the final structure chosen, it is critical to ensure that the borrower benefits from the lower cost of funds made possible by the Government wrap. Many have argued that the duopoly of Fannie and Freddie allowed them to capture for their shareholders and senior management excess profits that limited the benefit of the implicit Government guarantee from flowing to borrowers. Going forward, this means that all the players—from the originators to the servicers to the securitizers to the private, credit-risk-sharers (if there are any)—provide their services based on a competitive price. If any of these markets lack sufficient competition, then it will be essential for Government to intercede in some way to prevent monopoly like profits at the expense of the borrower. One proposal that has been put forth to deal with this possibility is set up a cooperative to securitize the MBSs and retain first-lost risk with the originators putting up the capital and being themselves members.[27] I leave it to others to identify other alternatives that would also help ensure the savings are passed on to borrowers.

Transition

Separate out the provision of the Government wrap from Fannie and Freddie for "conforming" MBS and re-launch Fannie and Freddie without any Government guarantee, either implicit or explicit

Once a determination is made as to the degree of risk-sharing that it considers optimal (that share could be zero), the provision of the Government wrap can be moved to another entity such as the Government National Mortgage Association (GNMA/Ginnie Mae).[28] The remaining functions in Fannie and Freddie could then continue in a new legal entity or entities. New entrants should also be allowed, if not encouraged, to compete with the successors to Fannie and Freddie in securitizing mortgages.

Coordinate any changes with attention to the role of FHA and the single securitization platform being developed by FHFA

While this hearing does not directly concern what role the Federal Housing Administration (FHA) should play in a reformed housing finance system, it is worth

[27] See Toni Dechario, Patricia Mosser, Joseph Tracy, James Vickery, and Joshua Wright, "A Private Lender Cooperative Model for Residential Mortgage Finance" Staff Report No. 466 (Federal Reserve Bank of New York, 2010), available at *http://www.newyorkfed.org/research/staff_reports/sr466.pdf.* A similar proposal has been put forth by Andy Davidson.

[28] The Housing Commission of the Bipartisan Policy Center has proposed that the role of "public guarantor) be performed by GNMA or by a newly created Government entity.

noting why its continuation is important and, in particular, what changes should be made now to enhance its ability to protect both taxpayers and future borrowers from being exposed to unnecessary risk. FHA has three roles to play: First, FHA needs to ensure that all those who can sustain home ownership have access to reasonably priced long-term, fixed-rate mortgages. Second, FHA needs to prevent the collapse of local, regional, or national housing markets when the private sector pulls back from offering mortgages. Third, FHA needs to promote innovation by piloting new products and underwriting and servicing practices.

All three roles are important, but the provision of countercyclical support to the new mortgage market is probably most relevant to this hearing. If it is concluded that private capital should be brought in ahead of the Government wrap and if there is no mechanism devised to dial it back in the face of a withdrawal of private capital has withdrawn, then it is essential to preserve FHA's ability to scale up even more than it did during the most recent fall in housing prices and the great recession. Even with Fannie and Freddie still originating loans (although with limited support from the PMI industry to do loans with LTV's in excess of 80 percent), FHA alone provided as much as 40 percent of mortgages for home purchase with over 70 percent of these loans going to first time home buyers.[29]

It is worth noting that FHA also needs to pull back from the jumbo market. As part of the response to the fall in house prices and the financial crisis, the FHA was permitted to dramatically increase the size of loans that it could offer. With the stabilization of the housing market and the desire to crowd in private capital to the jumbo market, the loan limit for FHA should be lowered to $417,000 if not to the lower levels that prevailed earlier.

Impact of a single securitization platform

FHFA has announced plans to develop a single securitization platform to replace the back office functions of the Agencies. While its creation will not necessarily inhibit the ability to implement the steps outlined above, it might be just as easy, if not easier, to modify existing systems to accommodate the necessary changes. As originally announced, the plans for this platform were very ambitious, especially given the intention to design it with sufficient flexibility to accommodate the wide variety of originators and originating platforms beyond those of Fannie/Freddie. However, regardless of how flexible and all inclusive the final product, it needs to incorporate the possibility of providing first-loss protection either directly or through third-party entities.

Conclusion

In exploring how to bring more private capital into the housing finance system, there are a number of steps that FHFA should undertake. One path is to restore private capital's historic role in the financing of the mortgages bigger than $417,000. This should be able to be done in a straightforward matter, once regulatory uncertainties are resolved, by raising the g-fee until the private sector takes over that part of the market. With actual information on the cost of and product mix of loans being offered in the jumbo market, we will be better able to evaluate the benefits of having a Government guarantee supporting MBSs in a conforming market. Many housing market experts worry about loss of a TBA market and of a well-price, fixed-rate mortgage with 15 and 30 year maturities. By taking one step at a time, we will be able to see for ourselves if lowering loan limits further will limit access and affordability of mortgages. By doing it in stages, it will be possible to prevent unnecessarily harming the bulk of the housing market.

Given the skepticism that a purely private mortgage market would work well for the vast bulk of the housing market (save for the portion served by FHA), FHFA should also continue to pursue its exploration of the cost and structure for requiring private capital to take first loss ahead of a Government guarantee. By test-driving different approaches, we will be better able to weigh the costs and benefits of having private capital take more of the risk and avoid unnecessarily disrupting the availability and affordability of new mortgages.

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[29] U.S. Department of Housing and Urban Development, "Annual Report to Congress Regarding the Financial Status of the FHA Mutual Mortgage Insurance Fund Fiscal Year 2012" (2012), available at *http://portal.hud.gov/hudportal/documents/huddoc?id=F12MMIFundRepCong111612.pdf.*

Statement of Andrew Davidson

President, Andrew Davidson & Co., Inc.

before the

United States Senate Committee on Banking, Housing and Urban Affairs

Subcommittee on Securities, Insurance, and Investment

"Returning Private Capital to the Mortgage Markets:

A Fundamental for Housing Finance Reform"

May 14, 2013

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Mr. Chairman and Members of the Subcommittee:

Thank you for this opportunity to discuss returning private capital to the mortgage markets. Private capital investment in the mortgage market can be bifurcated into "Rates" investing and "Credit" investing. Rates investors bear interest rate risk and prepayment risk, but generally seek to avoid credit risk. Private capital Rates investors provide trillions of dollars to the mortgage backed securities market through investments in MBS guaranteed by Fannie Mae, Freddie Mac and Ginnie Mae. This component of the market has performed extremely well through the financial crisis. Prior to the crisis, there was also a significant amount of Rates investing through the triple-A sector of the private-label mortgage market. This sector has largely vanished since the crisis.

Credit investors take on the risk of not receiving full and timely payment of principal and interest, generally due to the inability or unwillingness of the borrower to make payments and the inadequacy of collateral to cover the debt. Prior to the crisis, private capital provided funds for Credit investing through a variety of vehicles including investment in Government Sponsored Enterprise (GSE) stock, investment in Mortgage Insurer (MI) stock and through investment in subordinated classes of private-label securitizations. During the crisis, virtually all the equity of the GSEs and MI companies was wiped out, and the GSEs were placed in conservatorship. The mortgage market now primarily relies on the US Government bearing the credit risk of newly originated mortgages via FHA guarantees and Treasury's preferred stock investment in the GSEs.

While it is generally well known that there is significant amount of private capital in Rates investing in guaranteed MBS, it is less well known that there is still a significant amount of Credit investing in the private-label mortgage market. Of the approximately $2.2 trillion dollars

of private-label mortgages at the peak of the market, there is still approximately $900 billion of private-label mortgages outstanding. Approximately $800 billion of those securities are exposed to credit risks and do not meet the highest credit standards. Assuming an average price of 75, there is over $600 billion currently invested private-label securities that bear credit risk. Much of that investment was unanticipated, as investments that were thought to be low risk turned out to be exposed to credit risk. On the other hand, since the crisis, a significant portion of the bonds have been bought by Credit investors seeking to invest opportunistically. Due to the size of exposure the market has developed the analytical and investment infrastructure to manage this risk.

Table: Major forms of investment in the mortgage market
(grey indicates markets which were severely diminished by the crisis)

	RATES	CREDIT
GSE (Fannie, Freddie)	Government Guarantee TBA/MBS	Corporate Guarantee GSE equity MI equity
Private-Label (non-agency)	Non-Government Guarantee AAA/Senior	Collateralized Credit Enhancement Subordinated Credit-linked note

Private Capital in the GSE vs. Private-Label Markets

Today, there is a substantial amount of continuing and new Rates investment in the GSE mortgage market, but little Credit investment. Conversely, there is substantial continuing and new Credit investment in the private-label market, but little Rates investment. In this light, the goal of returning private capital to the mortgage market can be thought of as two separate problems.

1. Return private capital to "Rates" investing in the private-label mortgage market

2. Return private capital to "Credit" investing in the GSE mortgage market.

Rates investing in the private-label market generally refers to the most senior or highest rated classes of private-label securities. While there was approximately $2 trillion of AAA bonds at the peak of the private-label market, representing about 20% of all mortgages, it is important to recognize that this may not have been as significant as it seems. A substantial portion of these bonds were held by Fannie Mae, Freddie Mac and Home Loan Banks and thus were not truly private capital as the holdings were supported by issuance of GSE debt. In addition, a significant portion of the private-label senior bonds were floating rate notes and therefore did not support fixed-rate mortgages.

Given the tremendous regulatory uncertainty surrounding private-label securitization, it is not likely that there will be significant growth in this sector in the near future, nor is it likely that this sector would provide a stable source of financing for the bulk of the mortgage market under even the best of circumstances. Past history indicates that in times of stress this market significantly underperforms the guaranteed market for Rates investments.

Private Capital for the GSE market

For the remainder of this statement, I will concentrate on the second flow: returning private capital to Credit investing in the GSE market and the institutional structures necessary to support those flows. To begin this discussion it is useful to understand the amount of capital that is required to bear the credit risk of the GSE market. There are currently about $10 trillion dollars of mortgages outstanding. Fannie Mae and Freddie Mac currently bear the credit risk of almost 50% of those loans and issue about $1 trillion of new mortgage commitments each year. One simple way of assessing the amount of capital needed is to look at bank capital

requirements. If these loans were held by insured depositories, risk-based capital would be about 4%. The current portfolio of loans would require capital of about $200 billion. On an annual basis, the GSE guarantees would be generating about $40 billion of capital requirement at the 4% level. Because this amount is less than the several hundred billion dollars of capital that currently bears the credit risk of the legacy private-label mortgages, it is highly likely that capital could be attracted to this market given the right mechanisms and the appropriate pricing.

Prior to conservatorship, GSEs shareholders bore this credit risk. However, the GSEs were only required to hold 45 basis points or 0.45% minimum capital for their off balance sheet credit exposure. If the GSEs had been required to hold more capital or forced to take on less risk, they would not have depleted their capital. Yet the nature of the GSEs was to continually insist that they were over capitalized and any required increase in capital was called a "tax on homeownership." It retrospect, it is clear that insufficient capital resulted in a severe burden for taxpayers. Due to this experience, taxpayers are reluctant to support a system that recapitalizes the GSEs under their pre-crisis structure.

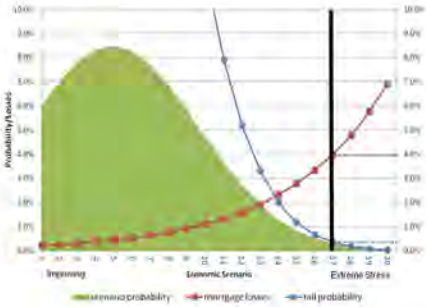
Determining the Amount of Capital?

When private capital is used to protect the government from losses, the risk to the taxpayer decreases as the quality of the loans increases and as the amount of private capital increases. Because the risk to the government guarantor decreases as the amount of private capital increases, it is important to set appropriate levels of credit enhancement. A framework for assessing the amount of capital required is to assess the amount of loss at different levels of probability or under different stress scenarios. The figure below illustrates these relationships. The red line shows the losses on a pool of mortgages under increasing stress scenarios. The

green area shows the probability of those scenarios. The blue line is the sum of the probabilities for each scenario combined with the probability of the scenarios with higher losses than that scenario. This chart indicates that credit enhancement of 4% would provide protection for 99.5% of all scenarios. In the most adverse scenario shown in the chart the government would pay 3% of the loan amount. Modest wrap fees would cover those losses over long cycles as the probability of loss is very low. A wrap fee of 3 basis points per year would be more than adequate to cover the loss. (3% loss x 0.5% probability = 0.15% lifetime loss, and 0.15% life time loss divided by 5-year life = 0.03% or 3 basis points per year.)

Risk of Loan Loss and Required Credit Enhancement

Higher subordination reduces the risk of triggering government guarantee.



Another way to assess the amount of credit enhancement required is to look at the historical performance of the loans guaranteed by Fannie Mae and Freddie Mac. It is noteworthy that the GSEs combined draw on the Treasury was under $200 billion. This amount represents less than 4% of their combined guarantee portfolio. In addition, many of the losses were from low or no documentation loans that should either be severely constrained or prohibited in guaranteed MBS.

Freddie Mac recently released detailed loan level credit performance data on its fully-documented, fully-amortizing, 30-year, fixed-rate mortgages. The performance of these loans through the crisis should provide an indication of the amount of credit enhancement required to protect a government guarantor from losses. This data was summarized in a report by Laurie Goodman of Amherst Securities.[1] The 2007 cohort of loans has the worst performance and experienced an 11.2% default rate, when measured as 180 days delinquent. (Assuming a 30% severity, that would translate into a 3.3% loss, at 40% severity, a 4.4% loss.) In addition, Goodman shows that there is significant variation on default rates by FICO and LTV characteristics.

Any guarantee program will need to establish a range of acceptable loan characteristics for guaranteed securities and an appropriate level of credit enhancement based upon the characteristics of the loans. Even after a range of allowable loan characteristics is determined, disciplined underwriting processes are required, particularly in securitization where the origination and underwriting processes are separated from the investment function.

It is essential to have contractual mechanisms to ensure that the underwriters have properly assessed the quality of the underwriting information and are held responsible for the accuracy of the information they provide. In that respect, the current representation and warranty process is flawed both in concept and in execution. In general, it would be better to move from a process that leads to enforcement of representations and warranties upon default to one that focuses on validation at the inception of the loan. In addition, a set of penalties for delivering flawed loans would be more effective than the current method of repurchase requests.

[1] Laurie Goodman et al, Amherst Mortgage Insight, "A First Look at Freddie's New Loan Level Credit Performance Data, March 25, 2013.

What is the Cost?

Private capital comes at a cost, as private investors demand returns commensurate with the level of risk they bear. Andrew Davidson & Co. has performed several analyses of the cost of private capital, including a study for the Bipartisian Policy Center's Housing Commission.[2] In our report we stated:

> Credit costs vary significantly based on borrower credit scores (FICO) and LTV ratios. For example, the credit cost for loans with FICO greater than 750 and LTV below 80% would be less than 25 basis points a year, while the credit cost for loans with FICO below 700 and LTV greater than 90% would be more than 10 times higher and exceed 250 basis points a year. Policy decisions to widen or narrow the "credit box" could have a great impact on the required Annual Credit Cost). The results here assume modest home price appreciation in the base case, consistent with long term income growth. However, during periods of falling home prices or greater market uncertainty, the market price for credit guarantees would be higher.

Using similar methods we found that the annual credit cost associated with the loans currently originated by the Freddie Mac would be about 30 to 35 basis points and that subordination levels of 6% would protect the government guarantor from losses at the 0.5% probability level. In addition to the annual credit cost of 30 to 35 basis points there would be additional operational costs of perhaps 6 to 8 basis points. The government guarantor should also charge a fee for its wrap. If that fee were 5 to 10 basis points, the overall required guarantee fee would be 41 to 53 basis points. Such a level is higher than the guarantee fees that the GSEs charged historically, but consistent with their current level.

Preserving the TBA market

While seeking to bring in new capital and new forms of capital to reduce the risk to taxpayers from future losses on mortgages, it is important that the new structures do not interfere

[2] http://bipartisanpolicy.org/library/research/modeling-impact-housing-finance-reform-mortgage-rates

the market's ability to attract Rates investors to provide for the trillions of dollars of funding currently provided by GSE mortgage backed securities. An important component of the tremendous success in attracting Rates investors to GSE MBS is the TBA market. This was the subject of another hearing of this committee on August 3, 2011.[3] At that hearing I said that the success of the TBA market was related to four factors.

1. Government Guarantee
2. Standardization of Loans/Pools from GSEs
3. Market Standards from SIFMA
4. Confidence arising from long history of market development

Changes to the TBA market affecting any of these could be detrimental to the liquidity and success of the market. In particular, I believe that proposals that allow multiple issuers of mortgage backed securities and eliminate the government guarantee are unlikely to attract the necessary volume of Rates investors to the TBA market. Such approaches could result in severe disruptions to funding for mortgages during periods of stress. Even proposals that maintain the government guarantee but substantially alter the functioning of the TBA market my not produce a stable, liquid market.

Corporate Guarantees and Collateralized Credit Enhancement

As part of any GSE reform, I believe Congress should continue the use of a government guarantee to support the trading of MBS, but should shield taxpayers from the risk of credit

[3] Statement of Andrew Davidson, US Senate Banking Committee, "Examining the Housing Finance System: The To-Be-Announced Market," August 3, 2011

losses by utilizing private capital to bear the credit risk of the underlying loans.[4] Generally this credit enhancement can be provided either as a corporate guarantee based upon the capital of the entity providing the guarantee or as a collateralized credit enhancement with performance supported by specific assets or cash.[5] Examples of corporate guarantees are the GSE credit guarantees on MBS and MI guarantees. These guarantees depend primarily on the financial capacity of the insurer as the payment for the guarantee comes from corporate funds.

Examples of collateralized credit enhancement include senior/subordinated structures and credit-linked notes. This form of credit enhancement, which is also sometimes called "funded" credit enhancement, depends primarily on the performance of the underlying loans relative to the amount of credit enhancement. The full amount of potential losses to the guarantor is funded in advance; excess cash flow not required to cover losses is returned to the investor over time. Interestingly, Home Loan Bank advances, one of the most stable sources of funding through the financial crisis, benefited from both corporate guarantees and collateralization.

The corporate guarantee approach offers the benefit that there can be flexible utilization of capital to cover many potential risks. It is also frequently argued that if the corporate guarantee is from a monoline company, there will be a continuous supply of capital to the market since the capital cannot be redeployed to other markets. Corporate guarantees also allow for very flexible contracts and the potential for renegotiation contracts in periods of stress.

[4] In February 2012, Andrew Davidson & Co. sponsored a round table discussion on the use of risk sharing for the GSEs. A summary of the meeting can be found at:
http://www.ad-co.com/analytics_docs/GSE_CreditSharingRoundtable_Summary.pdf

[5] In a speech this past Thursday to the Federal Reserve Bank of Chicago Bank Structure Conference, FHFA Director Ed DeMarco discussed similar concepts in describing an "Issuer Based Approach" and a "Securities Based Approach" to utilizing private capital.

Collateralized credit enhancement offers the benefit that there is no need to monitor the viability of the company providing the guarantee to assess the strength of the guarantee. The strength of the guarantee is determined completely by the amount of excess collateral or cash supporting the guarantee. Given the difficulty of monitoring corporate balance sheets, it is surprising that most regulation of guarantees in the financial sector has been in the form of corporate guarantees: both the FDIC and FHFA monitor the adequacy of the regulated firms' capital to cover the risk.

Both corporate guarantees and collateralized credit enhancement can be securitized and transferred to different owners. The securitized form of corporate guarantees is the equity of the guarantor. Such equity, however, provides little transparency into the value of the guarantees. During periods of stress, it may be extremely difficult for the company to raise new equity as the uncertain value of the existing obligations taint the new business. The securitized form of collateralized credit enhancement is a bond that can be traded. This facilitates liquidity and transparency, even in distressed markets, as new investment is clearly separated from prior distressed bonds.

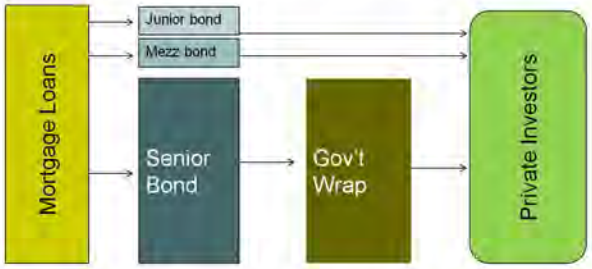
The two structures also have tradeoffs in terms of cost. Corporate guarantees allow the guarantor to spread capital over multiple obligations and maintain control of their assets. These guarantees, however, are usually backed by high-cost equity. The investor in a collateralized credit enhancement security does not have control of the assets used as collateral and often those assets can be invested in only high-quality assets with lower returns. Collateralized credit enhancement, however, can be structured into bonds of varying credit risk and therefore allow lower cost pricing of the lower risk portions of the support. Despite these differences, in theory, similar levels of support should have similar cost. In practice, regulation can create very

different levels of support (and therefore cost) as was the case with the unreasonably low capital requirement for the GSEs.

Collateralized Credit Enhancement: Senior/Subordinate and Credit-Linked Notes

Senior/Subordinated Structures and Credit-Linked Notes have been discussed as mechanisms to deliver private capital to bear the credit risk of GSE MBS. From a broad economic perspective the two are very similar. However, due to substantially different regulatory treatment, there is substantial difference in their implementation. The main differences between these, and other similar structures, are related to operational, legal, tax and accounting issues. All securitization transactions represent a particular pathway through a thicket of regulations. In the case of the GSE private capital transactions, the thicket has been difficult to navigate.

Schematic of a Senior/Subordinated Transaction with Government Wrapped Senior Bond



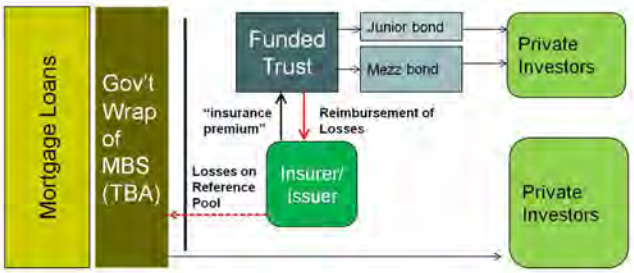
"Insured" loss amount is fully funded by the subordinate securities

For example, senior subordinated structures allow investment by a wide range of firms and are protected from taxation at the trust level by REMIC rules. However, the use of

senior/subordinate transactions by the GSEs would require a significant change in the operation of the GSEs. Under current rules, the GSEs cannot issue senior/subordinate transactions directly and instead they provide guarantees on privately issued transactions. These transactions require SEC registration and those registration requirements are not consistent with the operation of the TBA market. Subordination based solutions are also likely to introduce additional heterogeneity into mortgage backed securities issuance.

On the other hand, credit-linked notes would allow the GSEs to continue the current operation of their MBS programs, and hence the TBA market with little or no change. However the bonds would not be considered Real Estate Related Investments for REITs and there are other detrimental tax consequences since these transactions do not qualify as REMICs. In addition, Credit-Linked Note transactions generally require an entity to manage credit risk, as they essentially re-insure credit risk rather than bear credit risk directly.

Schematic of a Credit-Linked Note



Credit Linked Notes do not alter cash flows of MBS

Obstacles to Implementation

My understanding is that the GSEs and FHFA are pursuing a variety of approaches and variants on these approaches, including indexed debt, to address as many of these concerns as possible. The path to bringing these transactions to market has been delayed due to the complexity of the regulations governing these types of transactions and the different regulatory treatment of transactions with very similar economics.

Capital markets solutions will generally be most effective if they allow the broadest range of investors for both the senior guaranteed securities and for the junior credit sensitive securities. Protection from double taxation, exemption from securities registration especially for the senior notes (to facilitate the TBA market), allowing REIT investment from both SEC and tax perspectives and conforming risk retention rules are necessary components for an effective risk sharing program. The role of CFTC oversight, and CFPB QM requirements should also be addressed.

Clear, consistent rules would increase liquidity and lower the cost of these transactions. They would also allow the GSEs and FHFA to focus on the operational and economic aspects of these transactions rather than conflicting regulatory requirements.

Addressing the regulatory issues would not negate the investors' need for appropriate loan level disclosure and assurances as to underwriting quality and servicing practices including loss mitigation and enforcement of violations of representations and warranties. However, it is possible that investors would require less direct involvement with a well run standardized process from the GSEs than they would from other private issuers. FHFA oversight might provide the needed protection for investors.

Just as Home Loan Bank advances use a blend of corporate guarantees and collateralization, the private capital bearing the credit risk of the GSE MBS does not need to be limited to one type of credit enhancement. Corporate guarantees and collateralized credit enhancement could work hand in hand. For example, even with the use of credit-linked notes it may make sense to continue the use of mortgage insurance. Loan-by-loan mortgage insurance can reduce the risk of default and lower losses, therefore mortgage insurance can reduce the amount of required funded credit enhancement. In addition, it may make sense to encourage firms focused on mortgage investments, like REITs and Mortgage Insurance companies, to provide capital through collateralized mechanisms such as credit-linked notes, thus gaining the benefits of permanent capital and the transferability of securitized guarantees.

Industrial Organization of Housing Finance

The use of securitized collateralized guarantees such as subordinated bonds and credit-linked notes will lower the risk to the tax payer from government guarantees of MBS. However, the stability of the mortgage finance and many other goals associated with government involvement in the mortgage market depend more on the industrial organization of the mortgage market than the form of credit enhancement. The success of any system of housing finance will also depend critically on the path from the current structure of the housing finance system to the desired future structure.

On one hand, there appears to be a broad consensus developing that homeowners seeking mortgage financing would be best served by a system that allows for mortgage-backed securities with an explicit government wrap and with private capital standing in front of the government wrap for some segment of homeowners. On the other hand, there is little consensus about the

nature of the entities that would provide the private capital and the role of the government in providing standards and regulating the suppliers of private capital. One possible solution is to use "cooperatives."

A Cooperative Solution

On balance, I believe that cooperatives will provide the best possible structure to deliver private capital to the mortgage market and promote stability. When Freddie Mac was established, it was owned by the Federal Home Loan Banks which in turn were owned by the Savings and Loans. Thus, Freddie Mac began its life as a cooperative whose goal was to enable its members to access the securitization market. Utilizing cooperatives as a replacement for the publically owned GSEs would return the market to this structure. The Home Loan Bank System survived the crisis without the need for a capital infusion from the government. In fact, as I will describe below, the Home Loan Banks were a source of liquidity for the mortgage market during the crisis. Another example of a successful cooperative is DTCC. DTCC provides clearing services for bond trading and many other markets and has mechanisms that ensure that its members are appropriately collateralizing their transactions.

Securitization cooperatives should establish standards for securitization and promote risk sharing, to ensure that the risks of the securitized mortgages are transferred to the capital markets. At the same time, the cooperative must ensure that there is appropriate disclosure of risks and quality assurance that securitized loans meet underwriting standards. Another important consideration is the ability of the securitization infrastructure of mortgage finance to survive a financial crisis.

In light of these considerations, there should be a two tiered structure for the cooperatives. In the first tier, originators would form a cooperative that would set standards for mortgage originations and securitization. This tier would also own and control the mortgage securitization infrastructure. This approach is similar to the FHFA securitization infrastructure project which recognizes the need for operational consistency and stability in the market that is distinct from the risk bearing function.

In the second tier, firms that have loans to securitize would sell loans to the cooperative and provide some amount of equity funding that would serve as risk retention. The loans would be pooled and sold into the market. The government would provide a wrap on the mortgage backed securities and the cooperative would retain a portion of the first loss obligations on securities. The cooperative would also utilize collateralized credit enhancement transactions such as credit-linked notes and subordinated bonds to sell a significant portion of the credit risk into the market. Bucketing and insuring loans by vintage will make clear what risks are assumed by the cooperative and what risks are assumed by the government guarantor. Rather than insisting that the cooperatives fail or enter conservatorship before the government guarantee is triggered, it would be better if the government guarantee were triggered when the collateral and credit enhancement associated with a particular vintage are exhausted. Such an approach would provide a much greater level of stability to the financial system. Any difference in risk to the government guarantor could be reflected in the amount of credit enhancement required and the pricing of the government wrap.

Cooperatives also generally are less innovative than ordinary corporations but are generally more innovative than government entities. While the middle position may be a virtue in many situations, there may be difficulties in periods where more or less innovation is required.

Generally the most significant challenge of cooperatives is maintaining an effective governance mechanism when its members have differing goals. To this end, regulation and oversight will be required to ensure adequacy of capital and access to all qualified participants.

Regulation of the Cooperatives

As the cooperatives would be in a central position in the mortgage industry there would be multiple dimensions of government regulation. For example, the CFPB would be concerned with the underwriting, servicing, and disclosure rules as they relate to borrowers. As guarantor, the government would be concerned about the credit quality of the loans that are originated and the adequacy of capital supporting the first loss position. As securities regulators, the government would be concerned about the appropriate disclosure of risk to investors and coordinate disclosure requirements with Securities and Exchange Commission rules, even if these entities were not subject to full registration requirements. In addition, Treasury and the Federal Reserve System would want to monitor systemic risk associated with concentrated or undisclosed risk from mortgage securitization.

Number of Cooperatives

Because of the complexity of regulating the cooperatives, I believe it would be preferable to have fewer cooperatives. Two or three would probably be the ideal number; some have argued for one.[6] In the private-label market, we found that multiple issuers can lead to a "race to the bottom," as investors found it difficult to assess the constantly varying deal structures from multiple issuers. The alternative to a few cooperatives would be a much more invasive

[6] Toni Dechario, Patricia Mosser, Joseph Tracy, James Vickery, and Joshua Wright, "A Private Lender Cooperative Model for Residential Mortgage Finance," *Federal Reserve Bank of New York Staff Reports*, no. 466, August 2010 http://www.newyorkfed.org/research/staff_reports/sr466.pdf

regulatory scheme to establish standards. Such government standards would likely be subject to political manipulation and insufficient innovation. The FHFA common infrastructure project appears to be based upon the idea that, at least for the central plumbing of the market, proliferation of issuers with different approaches to mortgage securitization is not desirable. Time will tell whether or not the government-led infrastructure project will achieve its goals.

Many issuer based proposals favor a large number of issuers so as to allow one or more to fail without threatening the viability of the system. Fewer cooperatives would not pose the same risk to the financial system because the risk bearing function would be separate from the operational component, and the use of risk sharing transactions could substantially reduce the risk of insolvency. Fewer cooperatives would substantially reduce the cost of monitoring capital adequacy, as a large number of issuers would require a significant regulatory structure to monitor the activities of each entity.

A Stable Housing Finance System that Serves the Needs of all Constituencies

The combination of securitization cooperatives, collateralized credit enhancement and a government wrap of high quality MBS will enable the housing finance system to function effectively for borrowers, originators, investors and taxpayers.

For borrowers, this system allows the continuation of fixed-rate lending at a reasonable cost. High risk borrowers, such as high-LTV, first-time homebuyers, would probably still need to utilize FHA guaranteed lending. High income borrowers and borrowers seeking specialized types of loans could be served outside the government supported programs. The cooperatives would set market standards subject to government review, thus allowing standardization of loan underwriting requirements and servicing rules, thus providing protections to borrowers from

unfair practices. In addition, if there were any excess profits that result from a centralized credit function, those profits would feed back into the mortgage finance system rather than being captured by the private shareholders as we experienced with Fannie Mae and Freddie Mac.

For originators, cooperatives would provide a mechanism for all firms to participate in securitization, as the government can monitor membership requirements. Cooperatives would also provide a mechanism for risk retention, while still allowing sale treatment for originators. Under many other proposals, securitization risk retention requirements might require consolidation of securitizations on the issuers' balance sheet. While the cooperative would likely need to consolidate the securitizations, the originating firms would only show their equity investment in the cooperative on their balance sheet.

For investors, the structure described here would allow the continued functioning of the TBA market that has been so attractive to Rates investors. In addition the use of credit-linked notes and other risk sharing transactions would create a new market for Credit investors. The high quality loans and clear standards of the cooperative would create a market where investors could focus on the investment risks rather than the difficulty of complex and inconsistent offering documents and divergent servicing practices.

Taxpayers will be protected from loss by multiple levels of requirements. Clear underwriting standards describing what is allowed in guaranteed pools would be the first line of defense. Properly capitalized and non-rescindable mortgage insurance could be used to expand the credit box to include lower down-payment loans without subjecting the taxpayer to excessive risk. Cooperatives would be particularly effective at insuring that representations and warranties are enforced as the members would be on the hook for violations and the members are in the best

position to assess poor practices of other originators. Taxpayers would also be protected by equity provided by cooperative members associated with their use of securitization. Finally risk sharing transactions such as credit-linked notes will bring in a substantial amount of capital to stand in front of the government guarantee.

Liquidity and Stability

Perhaps most importantly, a system which combines a government guarantee on MBS, with a cooperative that can utilize capital markets funding of credit risk has a great potential for operating through a financial crisis. As an example, the Home Loan Bank System provided liquidity to the mortgage market by combining access to debt capital markets with borrower overcollateralization. Ashcraft, Bech, and Frame[7] wrote:

> During the second half of 2007, the FHLB System increased its advance lending by $235 billion to $875 billion by the end of that year. Advances have continued to grow into 2008, albeit at a slower rate, and stood at $914 billion as of June 30, 2008.

As firms utilized the FHLB system they provided additional equity and collateral to support their lending. Similarly, securitization cooperatives would allow originators to provide more capital to the cooperative to meet credit support requirements during stress periods, rather than the guarantor relying on new offerings in the stock market. The securitization structures would allow distress focused investors to take advantage of leverage provided by government guarantee by purchasing new risk sharing bonds. In fact, as a result of a flight to quality, the tightening of spreads (higher prices) on the government guaranteed MBS by Rates investors during a crisis, might offset the wider spreads (lower prices) required by Credit investors.

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[7] Adam B. Ashcraft, Morten L. Bech, and W. Scott Frame, "The Federal Home Loan Bank System: The Lender of Next-to-Last Resort?" *Federal Reserve Bank of New York Staff Reports*, no. 357, November 2008. http://www.newyorkfed.org/research/staff_reports/sr357.pdf

Transition to Cooperatives

There is a relatively straight forward transition from today's market to a cooperative based system. A system for administering the government wrap would need to be established, but could probably be built upon the current foundation at GNMA. Fannie Mae and Freddie Mac could be transformed into cooperatives, first by stripping out the unnecessary and unwanted functions, such as the retained portfolios, and by lowering loan limits and limiting loan types. Fannie Mae and Freddie Mac could also utilize risk sharing transactions to reduce their risk exposure. The stripped down entities could then be sold to qualified cooperatives that would be subject to appropriate levels of regulation.

With the appropriate government guarantee in place, the TBA market could continue unchanged through the transition of the GSEs from conservatorship to cooperative ownership. Most other GSE reform and housing finance proposals do not offer such a clear path from here to there.

Conclusion

The current GSE MBS market provides trillions of dollars of financing to the mortgage market. Government Guarantees and other structural features are required to maintain this market. Collateralized Guarantees in the form of credit-linked notes can be used to reduce the risk to taxpayers from government provided guarantees on MBS. Securitization cooperatives may be the best form of organization to deliver standardization and risk sharing. The existing GSEs could be transformed into originator-owned cooperatives with little disruption to the mortgage finance system.

I would like to thank the committee for giving me this opportunity to express my views on returning private capital to the mortgage markets. I have been involved with Mortgage-Backed Securities (MBS) since 1985. I was a managing director at Merrill Lynch responsible for MBS research and risk management for their mortgage trading desk. In 1992, I founded Andrew Davidson & Co., a New York based firm, specializing in the development and application of analytical tools for the MBS market that serves over 150 financial institutions. I have a broad view of housing finance as our clients include originators, servicers, mortgage insurers, GSEs, investors, dealers and regulators. I am also on the executive committee of the newly formed Structured Finance Industry Group (SFIG) which is dedicated to maintaining the role of structured finance and securitization as a core form of financing for the economy. The opinions in this statement are my own.

PREPARED STATEMENT OF PHILLIP L. SWAGEL

PROFESSOR, INTERNATIONAL ECONOMIC POLICY
MARYLAND SCHOOL OF PUBLIC POLICY, UNIVERSITY OF MARYLAND

MAY 14, 2013

Chairman Tester, Ranking Member Johanns, and Members of the Committee, thank you for the opportunity to testify on the vital topic of returning private capital to mortgage markets. I am a professor at the University of Maryland's School of Public Policy and a faculty affiliate of the Center for Financial Policy at the Robert H. Smith School of Business at the University of Maryland. I am also a senior fellow with the Milken Institute's Center for Financial Markets and a visiting scholar at the American Enterprise Institute. I was previously Assistant Secretary for Economic Policy at the Treasury Department from December 2006 to January 2009.

Bringing private capital back to fund mortgages and take on credit risk is an essential element of housing finance reform, particularly with respect to reform of the Government-Sponsored Enterprises (GSEs) of Fannie Mae and Freddie Mac. Housing finance reform should ensure that mortgages are available across economic conditions, while shielding taxpayers from taking on uncompensated risk and protecting the broader economy from the systemic risks that arose in the previous system. Bringing about increased private capital as part of housing finance reform will help protect taxpayers and improve incentives for prudent mortgage origination by lenders and investors with their own resources at risk.

The situation in housing finance today is that taxpayers fund or guarantee more than 90 percent of new mortgages through the GSEs and through Government agencies such as the Federal Housing administration (FHA). Fannie Mae and Freddie Mac stand behind virtually all new conforming mortgages through the two firms' guarantees on the mortgage-backed securities (MBS) into which the two firms bundle the home loans they purchase from originators. There is loan-level capital to absorb losses in the form of homeowner downpayments and private mortgage insurance (PMI), but no private capital at the level of the mortgage-backed security (MBS) ahead of the financial resources of Fannie and Freddie. With the U.S. Treasury committed to ensuring that Fannie and Freddie remain solvent, the U.S. Government effectively backstops conforming loans, leaving taxpayers exposed to considerable losses in the event of another housing downturn-and this risk remains even while the two firms are now profitable. Taxpayers further take on credit risk in housing through the Government backstop on the Federal Home Loan Bank (FHLB) system, and through guaranteed mortgages supported by the Federal Housing Administration (FHA) and other Federal agencies. I have previously testified on reforms to the FHA that would better protect taxpayers while focusing the agency on its mission to expand access to mortgage financing for low- and moderate-income families who have the financial wherewithal to become homeowners.[1] I thus focus here on GSE reform.

Bringing back private capital into housing finance would mean that private investors would absorb losses as some mortgage loans inevitably are not repaid. In some instances, this could involve mortgage loans with no Government guarantee, while in others there could be a secondary Government guarantee that kicks in only after private capital absorbs losses (or the guarantee could be alongside private capital, with losses shared). Private investors would be compensated for taking on housing credit risk, so that it should be expected that mortgage interest rates will increase as housing finance reform proceeds. This interest rate impact reflects the facts that the previous system was undercapitalized and provided inadequate protection for taxpayers.

It would be useful for reform to allow for a diversity of sources of funding for housing, and for private capital to come in a number of forms and through a variety of mechanisms. This will help make the future housing finance system more resilient to economic and market events that affect particular parts of financial markets and thus impinge on the availability of funds for housing.

At the level of the individual loan, capital for conforming mortgages will continue to be present from a combination of homeowner downpayments, private mortgage insurance, and the capital of originators that carry out balance sheet lending. The recent housing bubble and foreclosure crisis highlighted the importance of homeowner equity as a factor in avoiding foreclosures, as foreclosure rates were especially elevated for underwater borrowers—those who owed more on their mortgages

[1] February 28, 2013, Senate Banking Committee hearing on "Addressing FHA's Financial Condition and Program Challenges, Part II." *http://www.banking.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=6283a07f-b4c3448a-82e0-d62cfb06bf61.*

than the value of their home. As reform proceeds, it is vital to ensure that meaningful downpayments remain a central aspect of underwriting and a requirement for mortgages to qualify for inclusion in MBS that benefit from a Government guarantee. Similarly, regulators must ensure that private mortgage insurers have adequate levels of their own high-quality capital to participate in mortgages that receive a Government guarantee.

The larger changes involved with the return of private capital to mortgage origination will come at the level of the mortgage-backed security. With nearly all securitization of conforming mortgages going through the GSEs, there is essentially no capital at the MBS level. The so-called profit sweep agreement between the Treasury Department and the two GSEs prevents Fannie and Freddie from building up the capital that would be the norm for an insurer. Housing finance reform should involve changes on all of these dimensions so that private capital is present at the MBs-level. These changes are discussed next.

Fannie and Freddie are setting up risk-sharing mechanisms to allow private investors to invest in securities that will take losses ahead of the firms' guarantee (that is, ahead of the taxpayer guarantee). There is still little securitization of mortgages taking place without a guarantee (private-label securitization of non-conforming loans), and firms other than Fannie and Freddie are not allowed to compete in the business of securitization of conforming mortgages with a Government guarantee.

Risk-sharing by Fannie and Freddie on guaranteed single-family MBS

Risk-sharing could be implemented by having the two firms sell non-guaranteed tranches of MBS that take losses either before or at the same time as MBS tranches that receive the guarantee. This could be seen as selling off subordinated tranches of guaranteed MBS. This would be an incremental approach for bringing in private capital that could proceed ahead of legislative action; indeed, work on this is under way at both Fannie and Freddie as part of the FHFA strategic plan. Fannie and Freddie both already share risk in different ways on their MBS for multi-family properties so there are extant examples of such a mechanism.

Risk-sharing would translate into higher mortgage interest rates. The yields on these non-guaranteed tranches would be higher than on securities with a guarantee—after all, investors will demand to be compensated for taking on housing credit risk. Even so, these securities would still be protected from losses by post-crisis underwriting standards (which some would say are too careful), and by homeowner downpayments plus any PMI. The interest rates on mortgages facing homeowners would reflect a blend of the yields on the guaranteed and non-guaranteed MBS, along with costs such as the fee (g-fee) paid to the Government for taxpayer backing.

An important consideration as risk-sharing proceeds is that the initial volume of non-guaranteed MBS likely would be modest. Yields on the non-guaranteed tranches could thus be elevated by a liquidity premium (that is, by investors' demands to be compensated for the lack of liquidity in these new securities). It would be useful to spread any interest rate impact across mortgages that are bundled into all conforming securities until the risk-sharing program has proceeded enough to provide a liquid market for the non-guaranteed MBS tranches—or more likely, until all guaranteed MBS are protected by first-loss tranches.

As envisioned in the FHFA strategic plan, selling subordinated tranches of guaranteed MBS would allow for a return of private capital to conforming MBS even before housing finance reform clarifies the long-term status of the GSEs. A larger role for the private sector and a receding Government guarantee could be brought about by increasing the size of the subordinated tranches and thus providing more first-loss protection ahead of the firms (and thus ahead of the need for the Government to make good on its contractual obligation to keep the firms solvent). Note as well that the appropriate guarantee fee to charge on the senior MBS would eventually decrease as more private capital takes losses ahead of the Government.

Capital brought in by firms that compete in conforming securitization

A fruitful avenue for housing finance reform would be to allow other firms to compete with Fannie and Freddie in the securitization of conforming MBS. Firms undertaking such securitization would be required to maintain appropriate levels of capital, both their own and that of other investors, to take losses ahead of the Government. All firms would then pay for the Government guarantee that is secondary to considerable private capital.

Allowing for such competition would be beneficial to ensure that any inadvertent (but likely unavoidable) underpricing of the Government guarantee is pushed through to homeowners in the form of lower interest rates rather than allowing

MBS securitizers to profit from an elevated spread between (low) interest rates on MBS and (high) interest rates on mortgages. Indeed, Scharfstein and Sunderam (2013) document that a lack of competition results in just such an elevated interest rate spread, to the detriment of potential borrowers.[2]

Fostering competition would further help address the problem that Fannie and Freddie are too important to be allowed to fail. If enough additional firms enter in the business of mortgage securitization, then any such securitizer could fail while others continue to undertake securitization. Entry and competition as part of housing finance reform could thus help to avoid a situation in which mortgage financing is not available to American homeowners, with potentially serious negative impacts on the U.S. economy.

Two steps are vital to allow for entry and competition. The first is the completion of the common securitization platform now being developed jointly by Fannie and Freddie as part of the FHFA strategic plan. A common securitization platform would unify the markets for MBS packaged by the two GSEs—both are effectively guaranteed, but they trade separately to the disadvantage of the less liquid Freddie Mac securities. A common securitization platform would facilitate entry by new firms that securitize guaranteed MBS in competition with Fannie and Freddie, since the MBS of new entrants could trade in the same market as MBS issued by Fannie and Freddie rather than trading separately and facing a considerable liquidity disadvantage. In developing the common securitization platform, it will be important to maintain the TBA ("To Be Arranged") market that facilitates desirable features of such as the ability of homeowners to lock in interest rates.

The second step would be for the Government guarantee that now backstops Fannie and Freddie as firms to switch instead to a guarantee on qualifying MBS (rather than on the firms themselves). This step requires Congressional action, since it would formalize the Government guarantee on housing that is now merely a bilateral contract between the Treasury and each GSE. The Government guarantee on housing would be formalized, but only so that the guarantee could shrink by requiring increased first-loss private capital before the guarantee. In other words, the guarantee would be made explicit so that it could recede.

Housing finance reform must ensure that smaller financial institutions have access to the housing finance system on terms equal to those for the larger firms that dominate mortgage origination. The reform discussed here meets this essential criterion in two ways. The first is that the use of a common securitization platform would allow regulators to enforce non-discrimination provisions that require firms that obtain the secondary Government guarantee for their MBS to purchase qualifying mortgage loans on equal terms from qualifying lenders. That is, regulators would ensure that the system is open to all conforming loans. At the same time, it would be natural for smaller institutions to join together to form a securitizer on a mutual basis. As an observation, the securitization and guaranty businesses of Fannie Mae and Freddie Mac are generating substantial profits, reportedly on the order of $20 billion per year combined between the two firms. Forming a mutual securitization company would thus give smaller institutions a share of these profits while ensuring that they do not need to rely on larger firms for access to the housing finance system.

Firms competing in securitization of conforming MBS could have several forms of private capital ahead of the secondary Government guarantee, including both their own equity and capital arranged with other private entities. For example, securitizing firms might purchase MBS-level insurance from other private firms, much as individual homeowners purchase private mortgage insurance. As with any such insurance product, a key consideration is to ensure that the firms providing MBS insurance maintain appropriate amounts of high-quality capital.

An alternative to MBS insurance would be for MBS securitizers to issue credit-linked securities in which private investors provide funds to the securitizer in return for a yield (as usual with a fixed-income security), with provisions that specify the losses to be apportioned to the outside investors in the event of housing credit losses. Such credit-linked securities would bring in private capital in a similar fashion to the subordinated tranches of MBS discussed above.

The market for conforming MBS would thus include securities with and without a Government guarantee. The common securitization platform would again be important to ensure that the guaranteed securities trade together in a liquid market for all issuers. The non-guaranteed MBS tranches could then trade separately for each securitizer. Indeed, investors willing to take on first-loss housing credit risk

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[2] See David Scharfstein and Adi Sunderam, "Concentration in Mortgage Lending, Refinancing Activity, and Mortgage Rates," April 2013. *http://www.hbs.edu/faculty/Publication%20Files/Concentration_in_Mortgage_Lending_20130407_adfb023e-3c76-42df-9ede-312925dae538.pdf*

would be expected to demand considerable information on the characteristics of the mortgages in the MBS. A useful feature of the structure discussed here is that the amount and high quality of the private capital is clear—the non-guaranteed securities take losses up to the amount of capital at risk.

Private label securitization

An increase in mortgage lending without a Government guarantee would constitute a direct return of private capital to housing finance. Housing finance reform along the lines of the process discussed above would gradually increase the incentive for some mortgages that could qualify for a Government guarantee to choose to go without one. The increased incentive to avoid the Government guarantee would reflect the costs that correspond to a requirement for an increasing amount of first-loss private capital (risk-sharing), along with a higher fee charged by the Government for the secondary guarantee on conforming MBS. As an increasing amount of first-loss capital is required ahead of the Government guarantee and as the g-fee insurance premium rises, so too will the incentives rise for a larger-scale restart of private-label securitization. At some point, if enough private capital is required and the g-fee pricing is set high enough, some conforming loans that qualify for the guarantee will choose not to purchase it and prefer instead to arrange for non-guaranteed financing. This could include securitization of non-guaranteed (private label) conforming MBS.

If the Government no longer provides a guarantee for every conforming mortgage, then an auction mechanism could be used to set the price of the Government insurance. This would help to address the difficult challenge of setting the price for the guarantee. One way to achieve this outcome in which not all conforming mortgages are covered by a guarantee would be to gradually reduce the amount of insurance capacity offered by the Government. A safety valve mechanism could be put in place under which the Government would offer additional insurance capacity at a higher guarantee premium that market participants would find unattractive in normal times and thus prefer to arrange for private-label securitization but remain available in the event of a future crisis in which funding for non-guaranteed securitization dries up (as has been the case since the collapse of the housing bubble in 2006).

Steps that make guaranteed MBS less attractive would similarly boost the incentives for increased usage of private-label securitization of non-conforming loans—mortgages that do not qualify for the Government guarantee. This is because as costs for (conforming) guaranteed loans increase, some borrowers who might have taken out a conforming loan will instead turn to mortgages with non-conforming features such as a principal amount above the conforming loan limit. Even so, a broad restart of non-guaranteed securitization likely requires further progress in reducing the uncertainties regarding the regulatory environment and legal liability for loans that do not qualify for the safe harbor in the CFPB's qualified mortgage (QM) standard. Private-label MBS issuance was $4.2 billion in 2012 according to data collected by SIFMA (the Securities Industry and Financial Markets Association)—compared to more than $1 trillion in MBS issuance covered by a Government guarantee.

Policy Levers to Foster a Return of Private Capital into Housing Finance

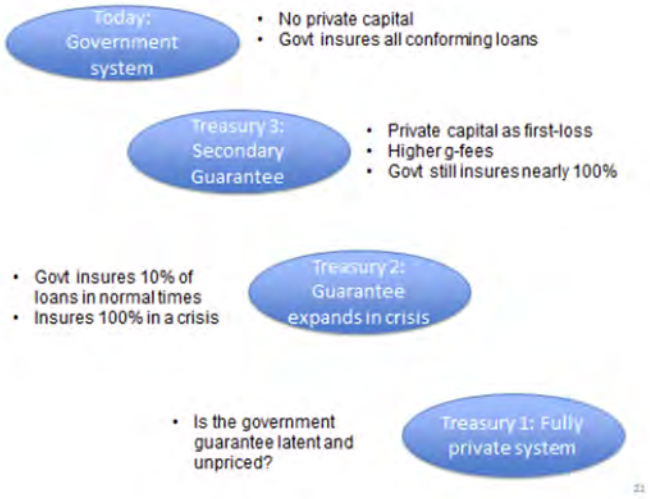
The various channels through which private capital could return to the housing finance system involve four main policy levers: 1) raising the price of the Government guarantee; 2) reducing the quantity of insurance offered by the Government or otherwise narrowing the scope of mortgages eligible for the Government insurance; 3) opening the housing finance system to new competition that brings in private capital; and 4) requiring firms that securitize Government-insured MBS to arrange for first-loss private capital to take losses before the Government guarantee.

Reducing or eliminating the Government role in housing finance involves going further with these four policy levers. The jumping-off point for reform is the current system in which there is no first-loss private capital and taxpayers stand behind essentially all conforming loans. It is instructive to consider the steps to move to a private system in which there is no Government guarantee on conforming mortgages (leaving aside the FHA and other smaller programs). To reach a private outcome, the housing finance system will first transit through the alternative in which there is a secondary Government guarantee behind first-loss private capital at the MBS level but all conforming mortgages continue to be insured by the Government (which now provides a secondary guarantee). This first alternative is precisely option three from the February 2011 Treasury-HUD White Paper on "Reforming America's Housing Finance Market." That is, Treasury-HUD option three is a necessary first step in the move toward a private housing finance system.

Moving further toward a private system from Treasury-HUD option three involves additional increases in guarantee fees and a requirement for yet greater first-loss private capital ahead of the secondary Government guarantee. As these policy levers are utilized, eventually only a modest share of mortgages will be included in MBS that receive the secondary Government guarantee. Instead, most mortgages will be funded privately, at least in normal times. In times of credit market stress, a greater share of mortgages would avail themselves of the Government guarantee, even at the cost of the higher g-fees and increased private capital. This outcome is precisely option two from the 2011 Treasury-HUD White Paper. Again, the second option in the Treasury-HUD white paper is a necessary stage on the transition to a private system.

Eventually as the policy levers are fully utilized, the pricing of the guarantee fee will be so high that no MBS securitizers will purchase the Government guarantee (or more simply, the amount of first-loss private capital required in front of the guarantee is set at 100 percent, eliminating the guarantee). This outcome is option one in the 2011 Treasury-HUD White Paper.

In other words, ending up at a housing finance system that is fully private involves a transition through intermediate steps in which there is first private capital in front of a secondary Government guarantee (Treasury-HUD option three) and then a stage in which the share of guaranteed MBS declines and the share of private-label securitization and non-guaranteed balance sheet lending increases (Treasury-HUD option two). Rather than seeing the three options in the Treasury-HUD White Paper as separate proposals, it is useful to note that they differ by the settings of the policy levers of the price and quantity of the Government backstop, the scope of conforming mortgages, and the amount of required private capital. These levers in turn determine the share of conforming mortgages that will be covered by the Government insurance and thus the choice between the three Treasury options. In other words, the seemingly distinct policy options often considered in the debate over housing finance reform are better seen as points on a spectrum that differ by the share of credit risk taken on by the Government and by private investors. This approach is depicted in the figure below.



Moving forward with Housing Finance Reform that brings back private capital

The key question in housing finance reform remains the degree of Government involvement, and especially whether there should be some form of a Government guarantee on some housing credit risk, even if one that takes effect only after private investors take losses first. I have written previously that I see it as a political and social reality that future U.S. Governments will intervene if potential home

buyers cannot obtain mortgage financing such as during a financial crisis.[3] An implication is that a housing finance system that is notionally fully private will inadvertently recreate the implicit guarantee in the previous system that failed so badly and that left taxpayers with a costly bailout. It would be better in my view for the inevitable Government involvement to be made explicit. Taxpayers would be compensated for taking on housing risk, with considerable private capital ahead of the secondary Government guarantee.

Housing finance reform that brings back private capital can proceed without resolving the question over the eventual role of the housing finance system. This is because the policy levers required to move forward with reform are the same ones to reach any system with a smaller role for the Government than today, including the system with a secondary Government guarantee and the alternative in which there is no role for the Government (at least no explicit role). Indeed, as noted above, to reach the system with no Government guarantee, a partial guarantee will be in place during a transition.

Whether it is possible for housing finance reform to arrive at a system that is fully private (at least notionally) will depend on the societal and political reaction to the higher mortgage interest rates and reduced availability of credit that correspond to the increased protection for taxpayers from a system with a greater role for private capital. It is unclear whether a private housing finance system is politically and socially feasible. But the way to find out is to start by adjusting the policy levers that bring in private capital.

This implies that (the sometimes passionate) disagreements about the role of the Government at the core of the policy debate over U.S. housing finance reform are misplaced. The next steps are the same for all plans now under serious consideration; namely, that the price the Government charges to insure mortgages should rise, the volume and scope of mortgages that the Government offers to insure should decline, and the amount of private capital should increase.

The disagreement is over how far to turn the policy levers affecting the price and quantity of the Government insurance, and how that in turn will affect the interest rates and types of mortgage products faced by American home buyers. How far to go toward a private system will ultimately reflect a societal and political judgment about the role of home ownership and the degree to which Americans support public efforts to foster home ownership.

The alternative is to wait for reform until there is agreement over the end point. Waiting to start with housing finance reform is a choice in itself—to keep Fannie Mae and Freddie Mac in Government control and to have little role for private capital. The longer that conservatorship continues, the more likely it is that it becomes permanent, with Fannie Mae and Freddie Mac in Government hands forever. This would mean a long-run housing finance system that most acutely puts taxpayers at risk while missing out on the possibilities for innovation that are most likely to occur with a system driven by private sector involvement and incentives. Such a nationalized housing finance system is a default outcome if no reform is undertaken.

PREPARED STATEMENT OF ROBERT VAN ORDER, PH.D.

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Getting private capital back into the mortgage market is clearly an important goal. Right now almost all mortgage lending is done via Fannie Mae and Freddie Mac, which are under Government control via conservatorship, and FHA and Ginnie, Mae, which are Government owned. It wasn't always that way. Forty years ago the industry was dominated by Savings and Loans, and more recently by Fannie and Freddie as privately owned corporations. Beyond that, in the years after 2000 the market in which mortgages were securitized became increasingly dominated by "private label" securities. All of these institutions have, to varying degrees, collapsed.

Appearances can be deceiving, and what is and is not private capital can be difficult to determine. Indeed, whether capital is private or not is not the most important question. What is most important is who ultimately bears the risk and how it can be controlled. In the cases of both the Savings and Loans and Fannie and Freddie the Government provided (explicitly in the first case, implicitly in the sec-

[3] Phillip Swagel, 2012. "The Future of Housing Finance Reform." *The B.E. Journal of Macroeconomics,* volume 12 issue 3, article 11.

ond) guarantees to shareholder-owned institutions, and these guarantees subsequently required very large cash outlays. In the case of private-label securities collapse in value caused a financial panic, which provoked other bailouts and was the impetus to the Great Recession. Making mortgage markets work again will require an understanding of who is taking the risk.

It is very likely that any system that we end up with will have a role for the Government as guarantor at the end of the process, and that what we mean by having private capital in the market means having private capital taking risk ahead of the Government. This requires decisions regarding both the quantity of capital ahead of the Government (*e.g.,* capital ratios) and the types of incentives used to keep risk under control. Discussions regarding risk-taking in the residential mortgage market often focus on the risks presented by specific mortgages or the risk inherent to the institutions that originate or fund mortgages. As discussed below, this focus is misplaced, as it is not obvious what specific properties make one mortgage more risky than another and institutional form (or name) matters less than specifics about the capital they hold.

A central point is that all this is very difficult. Many of the things associated with the huge increase in defaults in the Great Recession were close to unpredictable and certainly not easy for regulators to control. As a result we need policies that provide automatic solutions and incentives for those closest to the operations of financial institutions, their management, to control risk-taking. After reviewing some of the lessons learned I will focus on work done with Rose Neng Lai at the University of Macau on the use of contingent capital, both as a source of new capital in tough times and as a way of providing incentives to the mangers of financial institutions to take on less risk.

In the next section I review some of the issues involved in guarantees. This is followed by a discussion of what data so far tell us about what is important, followed by ways, including contingent capital, of improving capital standards.

Market Structure and Guarantees

For decades almost all American mortgages have benefited from some sort of Government guarantee, *e.g.,* directly via FHA insurance, or indirectly from deposit insurance for banks and Savings and Loans or guarantees for Government-Sponsored Enterprises (GSEs) like Fannie Mae and Freddie Mac. If financial markets were perfect, or close to it, and transfer payments were easy to make, there would be little economic justification for the Government to have a role in financing housing and certainly no need to provide guarantees to get people into good housing. Anything that needed to be done could be done with housing vouchers or direct provision of housing services, letting the financing take care of itself.

Guarantees can make sense outside of housing policy—deposit insurance and GSE guarantees, for example, as a way of stabilizing financial markets—and they can be justified in a "second best" sense as a way of promoting housing and home ownership when transfer payments are hard to make or there are inefficiencies in financing housing. But guarantees also have important incentive effects.

Basics of Guarantees

Guarantees have two principle effects:

- If not fully priced and regulated they lower the cost of housing and alter resource allocation, redirecting investment into housing and away from other uses. When targeted they promote housing for particular classes of households. This is "good" to the extent that housing is under produced, which is a hard case to make, or when targeting is important, for instance to encourage home ownership.
- They help prevent financial panics, by removing the motivation for "bank runs." However, if they are not well regulated, they lower the cost of risk-taking and promote excessive risk-taking.

The first effect is most closely associated with housing goals; the second is indirectly associated with it but also has broad macro effects. Both have costs, in terms of misallocated resources and "bailout" costs when institutions getting the guarantees fail.

The two costs are related; the bailout costs typically go along with misallocated resources, but even without misallocation bailout costs are disruptive and unpopular. In the United States a bailout of the Savings and Loans insurance fund ultimately cost taxpayers around $150 billion. For Fannie Mae and Freddie Mac cost is not clear because they appear to be making money again and may pay back most of what the Government injected, but still there was a bailout.

Guarantees have many of the characteristics of financial options in that the owners of guarantees get the upside from risk-taking but have limited liability on the downside. If a guarantee is not priced or regulated properly, then recipients get downside protection at below cost, essentially an underpriced insurance policy. This provides incentives to take on risk to maximize upside returns without having to worry about downside losses. Indeed, absent other factors, like reputation or franchise value, maximizing wealth will tend to involve maximizing the value of the guarantee, which in turn means maximizing risk. As a result the subsidy that comes with guarantees changes incentives. Because risk-taking is hard to observe and control, the subsidy is hard to control, as are bailout costs once the guarantee is in place.

Effects of guarantees and bailouts have been mixed. For instance, while they have received considerable support, neither banks nor Fannie Mae and Freddie Mac were a source of systemic risk, not because they didn't take risk, but because their guarantees kept the values of their deposits or debt from falling. That is the paradox of guarantees. They make it easier to take on risk, but they also limit systemic risk and bank runs. It's hard to have one without the other. Sometimes you can't live with; sometimes you can't live without them.

Probably more important than bailout costs, however, are the economic costs that come with recessions and Great Recessions. In the Great Recession systemic risk happened mainly in the private "shadow banking" system, which was not guaranteed (and because it was perceived as not guaranteed), but which still took on excessive risk and saw something akin to bank runs as investors lost confidence in the ability of the system's assets to cover its liabilities (See Gorton (2009) and FCIC (2011)).

Recent History

I have attached as an appendix a summary of some work on mortgage default done with a colleague at George Washington, Jason Thomas. It summarizes some of the data for the performance of loans (both those securitized by Fannie and Freddie and those securitized through the private-label channel) originated in 2003 and 2006, along with a simple analysis of the risk of requiring low-income lending. I am putting it there because I think a few pictures can summarize some important trends in defaults, and because some of what has been thought to be true about the surge in defaults is not true (or incomplete).

Major points are:

- ***The usual suspects matter.*** Looking at 2003 and 2006 vintage default rates, lower downpayment meant higher defaults if credit scores are held constant, and vice versa for credit score with downpayment constant.
- ***There are tradeoffs.*** A low downpayment can be offset with a higher credit score. What does seem to matter is low downpayment combined with low credit score. This is an example of risk layering.
- ***Economic conditions were very important.*** Loans originated in 2006 had much higher defaults than those in 2003 for all categories (of credit score and downpayment) and for both Fannie/Freddie and private-label mortgages.
- ***The Channel is very important.*** Private-label securities had much higher default rates, even controlling for credit score and LTV, than did Fannie/Freddie mortgages.

What is Risky?

The above describes things that were the case all the time. A more important issue is what things were risky in the sense of causing bigger changes in defaults from the good years (*e.g.,* 2003) to the bad years (*e.g.,* 2006). Main results are:

- ***Low downpayment, by itself was not especially risky.*** This was especially true for loans that were not risk-layered. In particular, there is no clear relation between downpayment and increase in default rate, holding credit score constant.[1] Furthermore most of the loss for low downpayment loans sold to Fannie and Freddie was taken by private insurance companies.
- ***Low credit scores did matter, as did risk layering.*** This was true for both channels.
- ***Loans with LTV from 75 percent to 85 percent had the biggest increase for every level of FICO.*** This might be because loans involving moral hazard

[1] This is probably because when dealing with prices falling by 40 percent in some regions, even downpayments of 20 percent provide much less protection than might be thought at loan origination.

were more likely to have downpayments right at 20 percent, and these loans were more sensitive to declines in property values. This "hump" in the risk profile is entirely from the 2006 vintage (see Table 2 in the appendix); there was no such hump in the profile of loans originated in 2003.

- ***The channel mattered;*** Private-label loans had much bigger increases across loan characteristics, by roughly twice.
- ***The housing goals*** added little to the risk of the GSEs.
- ***Size is ambiguous.*** The biggest intuitions (Fannie and Freddie) had the lowest default rates and the lowest increase during the recession. The private-label market, which was served by a wide range of institutions, was much worse. On the other hand Fannie and Freddie were very big, and the market was clearly sensitive to their behavior. A hard to quantify dimension of size is that it can generate "franchise value" (aka monopoly power), which has a tendency to produce risk aversion to protect the franchise.

Institutional performance

The above focused on defaults by loan product, channel, *etc.* An interesting question going forward is what type of institution structure do we need? I am inclined to think that while this is important, it is not crucial and that the key questions are incentives. A question behind all of this is the role of fixed-rate mortgages in our economy. They tend to have lower default rates that do adjustable-rate loans, but leave many intuitions subject to interest rate risk because their value fluctuates with interest rate changes. The GSEs and private-label markets both provided access for fixed-rate loans to bond market investors. This was less the case with private label because it securitized a considerable amount of adjustable-rate mortgages. In any event, because the overall size of the mortgage market (around $10 trillion in outstanding balance) is about the size of all the assets in the banking system it is likely that some sort of securitization structure will be needed. This can be done in a lot of different ways. Here I outline some things we have learned lately:

- The best source for private capital still might be Fannie and Freddie (or their clones-bond market institutions with the Government at the back end). They are currently profitable, as evidenced by combined net income of $13 billion per quarter (before accounting for the change in deferred tax assets). In any event it long run net outlays by Treasury may well be close to zero; that is it is possible that the residual value of Treasury's stake is at least as big as the amount of money it has put in.
- Private-label security issuance was hugely dependent on Collateralized Debt Obligations (CDOs) to buy the riskiest parts of their deals pieces. There are important information asymmetries in this market, which were behind the huge losses in it. Investors would need huge coupons to be willing to buy such "information-intensive" pieces. These costs would flow through directly to borrowers.
- It may be more efficient if the loss-bearing private capital layer is an equity claim to a mortgage insurer or GSE. Raising capital on a deal-by-deal basis, as in the private-label market, through subordinated tranches is less efficient because of information costs.
- Gross business volumes in 2012 between Fannie and Freddie were $1.4 trillion. It is unlikely that the private-label market could replace these volumes at current mortgage interest rates. Mortgages are complex instruments with multiple embedded options. Fannie and Freddie absorbed most of the mortgage credit risk and reduced the interest rate risk through retained portfolios. Maybe this didn't work perfectly, but we don't have any historical evidence that banks and capital markets can manage these risks better.

Comment

A problem with all of this is that a lot of went wrong was very hard to predict, and some proposals, for instance limiting low downpayment loans and low-income lending, are not likely to help much. The structure going forward is probably going to be something like GSEs, maybe more of them, maybe as co-ops or specially chartered mortgage banks, but with as much private capital as possible and with Government stepping at the back end.

This is because having the Government as final risk-taker is going to be hard to avoid, and probably shouldn't be avoided. That role can provide stability, but it leaves open a lot of questions about the details of risk and capital.

Capital and Contingent Capital

Whatever we do, we'll need better capital rules. Capital provides a cushion that protects debt holders and guarantors, and it provides incentives to control risk be-

cause more investor money is at stake. Before the crisis, Fannie and Freddie had two capital rules applied to them: stress tests that simulated company performance under stressful conditions and required that enough capital be held to survive them and a minimum capital requirement that applied even if they passed the stress tests. Clearly they did not have enough capital to withstand the Great Recession.

There are limits, however, to how far we can get by relying on capital ratios and shutting down insolvent institutions. It is very difficult to know whether or not institutions are really insolvent. This is in part because that is a difficult problem, but especially because accounting measures of capital are not up to the task. They tend both to overestimate and underestimate net worth, and they tend to be procyclical, requiring institutions to raise capital at exactly the times when this is most difficult. This leaves us with stress tests and manipulating incentives. I shall leave stress tests, which I believe are an excellent way of improving on required capital ratios, for another time and focus on incentives in the form of contingent capital.

Incentives: Contingent Capital

You don't have to agree with the recent bailouts to understand the difficult choices facing the Fed and Treasury when institutions like AIG, or Fannie and Freddie or a slew of banks get into trouble and threaten the rest of the financial system. In a well-ordered world there would be clear rules for resolution via bankruptcy: rules for settling claims would be clear and acted on quickly; bondholders would take over, and there would be no need for panic. This is something that happens relatively easily in structured securitization deals, but not for actual corporations. Bankruptcy is costly and time consuming. Uncertainty can breed panic and bank runs, and leave us with a choice between a bailout and a meltdown.

The current debate about financial regulation is largely about avoiding that choice in the future. It has focused on making insolvency less likely by making financial institutions hold bigger capital cushions and on making insolvency less costly by setting up resolution systems. These are daunting tasks. However, there is a relatively easy way of starting to address the problem: We can require banks, and other financial institutions, to issue contingent capital, for instance in the form of Conditional Convertible (or "CoCo") bonds. This can be done by requiring issuance of bonds that look like regular bonds most of the time, but which are automatically converted into common stock when capital levels are low.[2]

The automatic conversion gives CoCo bond investors a strong interest in risk management (they can't assume a bailout). If mandated as a part of pay, the bonds give management incentives to control risk, and movements in the market price of the bonds will provide daily evaluation of banks' risk. CoCo Bonds also limit concern about institutions being "too big to fail;" because conversion avoids bankruptcy it mitigates concerns about disruptions.

Why do this instead of just requiring more equity and less debt? One reason is that debt has advantages. It is easier to evaluate than equity, so it attracts a wider range of investors. Meeting debt payments imposes discipline on management, and debt has tax advantages.

A second reason for liking CoCo bonds is that they address a problem that higher capital ratios cannot easily solve: the problem of banks that are still solvent but with low capital ratios. Suppose that the minimum capital ratio for banks is 5 percent of assets. Banks will keep a cushion above the required level, but not by much because equity is more costly than debt. If a bank's capital ratio falls to, say, 3 percent, it will either have to raise capital or lower assets (lend less) to get back to 5 percent. It will be solvent but in trouble.

During a period when large numbers of banks are missing their ratios and there is a great deal of uncertainty, raising capital is difficult, putting banks in the position of having to cut back assets. In the extreme, getting back to 5 percent by shrinking the balance sheet would mean a 40 percent cut in assets. This problem will exist even with higher capital ratios as long as banks keep their ratios just above the minimum. With suitable triggers the decline in stock price that accompanies banks' declining asset values will convert CoCo bonds into equity, providing an automatic and countercyclical cushion.

CoCo bonds are not entirely appealing to holders of the bonds, who will want a higher interest payment on their bonds and will worry about premature exercise.

[2] A relatively early example of CoCo bonds is the first issue of the "Enhanced Capital Notes" by the Lloyds Banking Group PLC in November 2009. These are subordinated debt that will be converted into equity if the core capital falls to 5 percent of its risk-weighted assets. Other examples of CoCo bond issues are from Rabobank in May 2010, Credit Suisse in February 2011, and the more recent ones from Barclays Bank in April 2013. By classifying into Tier 1 capital, the mandatory leverage ratio required in the Basel Accord can be met easier.

A way of handling some problems is to make the shares convertible back into bonds if the company subsequently recovers.

It is important to emphasize CoCo bonds as a tool of monitoring and management. Traded bonds will provide a market read on the state of the banks, which will not be clouded by questions of bailouts. Including them in management's compensation, can provide some disincentives for risk-taking. To the extent management is compensated with stock and stock options (or close substitutes) it has the incentive to take on risk in much the same way as shareholders. Imposing CoCo bonds as a part of their package forces them to take on some downside. Furthermore, these do not have to be traded, which mitigates some of the criticism around the trading of CoCo bonds. They can be designed in very specific ways (for instance by tying conversion to the bank's asset value), which can unravel most of the disincentives that come from the asymmetric of outcomes to owning shares.

Comments

There are lots of structures that can work in principle. Given failure of the private-label market to provide market stability, having Government ultimately be a guarantor is probably necessary and not as scary as it might sound; it can enhance affordability and liquidity in the market where mortgages are traded-making a TBA market readily available. But there needs to be capital and incentives to limit risk-taking. While there are several ways of doing it I think that contingent capital can move incentives in the right direction.

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APPENDIX

What Is Credit Risk and Where Does It Come From?[3]

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The last decade has provided us with some great data on credit risk-across product types, origination channels and risk characteristics, because the market has experienced both good times and, especially, bad. Most of the data we have are for loans that have been securitized, by the Federal Agencies (Fannie Mae, Freddie Mac, often referred to as Government-Sponsored Enterprises or GSEs) or in the "Private Label" securities (PLS) market. Much of the data has been proprietary. The following sets of pictures from available data sets provide some summary information on where the risks have been. While obviously just a snapshot of a much wider set of data, they capture some important stylized facts.

A key point is that risk is not about the *level* of defaults; rather it is about dispersion.[4] We all know that some types of loans default more than others, but those differences can be priced, and they may not be especially important. If, for instance, pools of low downpayment mortgages always have the same very high default rates, we could readily price the loans to at least cover losses, in which case the pools would not have any risk and would have a fixed, risk-free return.

That does not happen often, of course, but the example is illustrative. What matters regarding risk is how far default rates (more broadly, default costs) vary from what is expected when conditions change. From this perspective, from the data presented, there are some surprises: Low downpayment loans, by themselves, were not especially risky; nor were "affordable" loans that Fannie Mae and Freddie Mac were mandated to buy.

Defaults and Risk

The following three pictures, set up as tables, summarize some of the data supplied by the Federal Housing Finance Agency (FHFA).[5] Here the focus is on fixed-rate mortgages. (Adjustable-rate loans have similar properties but worse experience in general.) The data set covers loans bought by Fannie Mae and Freddie Mac and those put into PLS. The tables present matrices that show performance of the loans for different origination years, controlling for two important measures of credit risk: loan-to-value ratio (LTV) and borrower credit score (measured by the Fair Isaac (FICO) statistical credit score).

The four LTV classes include:

- 75 percent and below, the safest category
- 75 percent–85 percent, the most common category, which clusters around 80 percent
- 85 percent–95 percent, high LTV loans, which cluster around 90 percent
- 95 percent, which contain 95 percent and higher

Credit scores range from low 500s to 800; they are put into discrete buckets. While there is not a clear definition of subprime, a reasonable definition for our purposes is that subprime covers anything with a credit score below 640 and anything from 640–680 with a loan-to-value ratio over 85 percent.

Performance is measured by the share of loans of that year's originations that were ever 90 days delinquent from the time of origination through 2009. Table 1 depicts defaults on loans originated in 2003, a good year because property values rose rapidly in the following 3 years. For instance, the table says for loans with LTV less than or equal to 75 percent and FICO score below 640 6.9 percent of the loans originated in 2003 ever had at least one spell where they were 90 days delinquent. Table 2. looks at the same measure for loans originated in 2006, a bad year with sharply declining housing prices. Table 3. presents the differences between Tables 2. and 1.

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[3] Prepared for Conference on "The Future of Housing Finance," cosponsored by George Washington University and PWC, May 14, 2013.

[4] More important, but not possible to cover here, is the notion that risk applies to a whole portfolio, not just individual asset types, which means diversification should count too.

[5] See *http://www.fhfa.gov/Default.aspx?Page=313.*

Table 1. Default Rates: 2003 Vintage (Ever Seriously Delinquent)

2003 GSE FRMs

LTV BUCKET (%)	FICO BUCKET			
	<640	640 – 680	680 - 720	>720
<75	6.9%	3.2%	1.6%	0.5%
75 – 85	9.6%	5.3%	3.0%	1.1%
85 – 95	13.3%	8.0%	4.9%	2.3%
>95	20.7%	10.7%	6.5%	3.2%

2003 PLS FRMs

LTV BUCKET (%)	FICO BUCKET			
	<640	640 – 680	680 - 720	>720
<75	11.0%	5.5%	3.3%	1.4%
75 – 85	16.3%	9.7%	6.3%	3.2%
85 – 95	18.4%	12.3%	8.8%	5.3%
>95	25.2%	14.8%	9.9%	6.1%

Table 2. Default Rates: 2006 Vintage (Ever Seriously Delinquent)

2006 GSE FRMs

LTV BUCKET (%)	FICO BUCKET			
	<640	640 – 680	680 - 720	>720
<75	20.0%	12.7%	8.0%	2.7%
75 – 85	24.8%	19.8%	15.0%	6.5%
85 – 95	27.5%	21.3%	16.8%	9.3%
>95	40.1%	25.6%	18.0%	9.5%

2006 PLS FRMs

LTV BUCKET (%)	FICO BUCKET			
	<640	640 – 680	680 - 720	>720
<75	31.8%	23.8%	18.9%	9.0%
75 – 85	46.3%	42.5%	36.0%	23.3%
85 – 95	47.6%	39.4%	31.0%	22.3%
>95	50.1%	39.0%	31.0%	22.4%

Table 3. Differences between Table 2 and Table 1

GSE FRMs

LTV BUCKET (%)	FICO BUCKET			
	<640	640 – 680	680 - 720	>720
<75	13.1%	9.5%	6.4%	2.3%
75 – 85	15.2%	14.5%	12.0%	5.4%
85 – 95	14.3%	13.3%	11.9%	7.0%
>95	19.4%	15.1%	11.5%	6.5%

PLS FRMs

LTV BUCKET (%)	FICO BUCKET			
	<640	640 – 680	680 - 720	>720
<75	20.8%	18.3%	15.7%	7.6%
75 – 85	30.0%	32.8%	29.7%	20.1%
85 – 95	28.8%	27.1%	24.0%	17.0%
>95	25.9%	25.2%	21.1%	16.3%

As can be seen by looking at the tables, default rates have varied greatly by product, vintage and mortgage characteristic. Major points with respect to the first two tables are:

- ***The usual suspects matter.*** Looking at 2003 and 2006 vintage default rates, higher LTV meant higher defaults if FICO scores were held constant, and vice versa for FICO with LTV constant.
- ***There are tradeoffs.*** For instance, in Table 1, for Fannie/Freddie data, 95 percent or greater LTV loans with credit scores in the (680–720) range had about the same default rates as those loans below 75 percent LTV loans with low credit scores (6.5 percent vs. 6.9 percent rates). What looks to be worst is not simply high LTV or low FICO, but high LTV combined with low FICO score. This is an example of risk layering.
- ***Economic conditions were very important.*** The 2006 vintage had much worse defaults than the 2003 vintage for all categories and for both Fannie/Freddie and private-label mortgages. The story is worse than the tables suggest because the 2006 loans had only 3 years of exposure until 2009; whereas the 2003 loans had six.[6]
- ***The Channel is very important.*** Private-label securities had much higher default rates, even controlling for credit score and LTV, than did Fannie/Freddie mortgages.

What is Risky?

But what about risk? Risk of default is not the same as expected level of default. As discussed above, we know that high LTV loans have high default rates, but to be riskier they must have more volatile losses, rather than simply higher losses. If losses on loans (more broadly on portfolios of loans) are more volatile, then the risk of insolvency is higher even if the loans are correctly priced.

The data sample depicted above is too narrow for complicated measures of volatility or dispersion. But it does depict a very severe sort of "one-shot" volatility from the extreme differences between 2003 and 2006. This measure of risk is akin to analysis from a stress test. If two products both have their losses increase by the same amount in the face of stress, then even if their losses are quite different on average, they are equally risky (and have the same implications for insolvency under that particular stress).

Consider Table 3. It depicts differences between the first two tables. It shows sensitivity to the very poor economic conditions after 2006, relative to the good conditions following 2003. It is a natural stress test.

Main results are:

- ***Low downpayment loans were not especially risky.***[7] This is especially true in the middle of the matrices; for most elements of both the GSE and PLS matrices there is no clear relation between LTV and increase in default rate, holding FICO constant.[8]
- ***High FICO scores did matter, as did risk layering.*** This was true for both channels; moving northeast from southwest in the pictures lowered the lift from 2003 to 2006.
- ***Loans with LTV from 75 percent to 85 percent had the biggest increase for every level of FICO.*** This might be because loans involving moral hazard were more likely to have LTVs right at 80 percent and these loans were more sensitive to declines in property values. This "hump" in the risk profile is entirely from the 2006 vintage (see Table 2); there was no such hump in the profile of loans originated in 2003.
- ***The channel mattered;*** PLS loans had much bigger increases across loan characteristics, by roughly twice.

The last two points are suggestive of moral hazard being associated with 80 percent LTV loans after 2003, being in PLS pools, and being sensitive to property value changes.

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[6] This data set only tracks defaults through 2009, so it is not possible to have comparable 3-year periods of exposure.

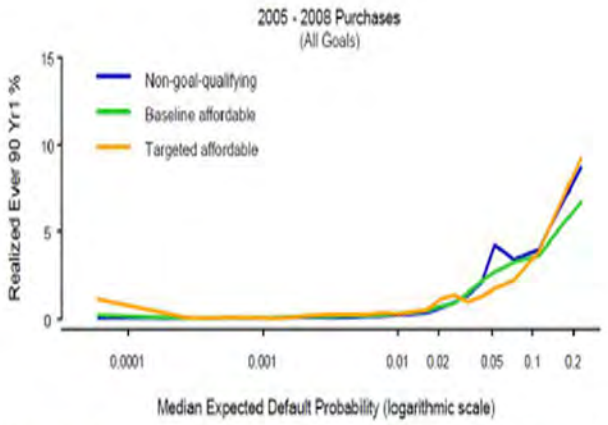
[7] For Fannie/Freddie loans risk is even lower for high LTV loans because most of the losses have been covered by private mortgage insurance. *http://fcic-static.law.stanford.edu/cdn_media/fcic-docs/2009-06-04%20Freddie%20Mac-%20Cost%20of%20Affordable%20Housing%20Mission.pdf.*

[8] This is probably because when dealing with prices falling by 40 percent in some regions, even downpayments of 20 percent provide much less protection than might be thought at loan origination.

Low income and targeted lending

The above does not separate out low income and other types of "affordable" lending products that have been blamed for defaults. Again, the question is not whether they had higher default rates (they did), but whether they were riskier. Here I look at some data and analysis provided to the Financial Crisis Inquiry Commission,[9] which compares actual performance with expected for various loan types, using Freddie Mac data.

The picture looks at three types of loans: those that did not qualify for housing goals (blue line), those that did qualify but were not done via special programs (yellow line), and those done via programs designed to attract goals-rich loans (green line). The horizontal axis has default rates estimates before the fact (from Freddie Mac models) and the vertical axis is corresponding actual default rates.



Note: Before separating into groups, data are bucketed into twentiles by expected default probability. 'Ever 90 Yr 1' is the incidence of 90-day delinquency during the first 12 months following funding. Performance is measured by loan count not UPB exposure.

The lines show that all three types did considerably worse than predicted. However, the blue and yellow lines (regular business and special affordable programs) are very close, indicating that the reaction to the Great Recession shock was the same for regular as it was for affordable loans. This bit of evidence suggests that the housing goals added little to the risk of the GSEs.

In summary, the news from the two sets of pictures is that two types of loans that might be thought to have been risky, low downpayment and "affordable," have not been especially risky. Risk, in the Great Recession stress test was largely due to economic conditions, the channel through which the loans were made and layered risk loans. *http://business.gwu.edu/creua/research-papers/files/FHA2011Q3.pdf.*

[9] See "Cost of Freddie Mac's Affordable Mission," presented to Freddie Mac Board, June 4, 2009. See *http://fcic-static.law.stanford.edu/cdn_media/fcic-docs/2009-06-04%20Freddie%20Mac-%20Cost%20of%20Affordable%20Housing%20Mission.pdf.*