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The Future of the Capital Markets: Connecting Primary Consumer and Mortgage Credit Markets to Global Capital

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Policy Issues: The Roles Fannie Mae and Freddie Mac Emerging from the Financial Crisis of 2008

There are three moving forces that are central to understanding the role of government-sponsored institutions in the mortgage market. Understanding these forces helps clarify the features of the GSEs that are most important and should be preserved. Briefly, these forces are:

1) The 30-year, fixed-rate, pre-payable mortgage likely would not exist without government support.
2) The original and still most important support provided to the 30-year fixed-rate loan is the encouragement, by regulation and capital standards, to depositories and the GSEs to hold these loans.
3) Securitization of mortgages through a standardized process lowers mortgage interest rates by a substantial amount. Securitization by Wall Street has never been nor should be expected to be similarly successful.

Each of these forces is discussed in detail. There is one more important feature, only recently learned, that makes the GSEs more than useful:

4) Without the government-sponsored institutions, Ginnie, Fannie, and Freddie, the current financial crisis would be much worse than it has been.

1. The special role of the thirty year, fixed-rate, prepayable residential mortgage.

The 30-yr fixed-rate pre-payable mortgage is a creature of the federal government. This loan design was created by government fiat by FHA in 1934. Prior to its introduction, residential mortgage loans in the United States had terms of five to ten years and were *not* amortizing—they were today what we would call balloon loans, simple short-term copies of the ordinary bonds issued by government and corporations, which paid interest regularly until maturity, at which time the principal amount was refunded.

Other developed countries have also encouraged residential mortgage markets with amortizing long-term loans (20 to 30 years), but in all others (save one small special case, Denmark), these loans all have adjustable rates and re-price at least every five years. The United States is unique in supporting a residential mortgage that is long-term, amortizing, *fixed-rate*, and pre-payable. The pre-payability is a feature of state law in all 50 states.

The 30-year fixed-rate mortgage created by FHA was intended to calm down both sides of the residential credit market and encourage the resumption of borrowing and lending. Real estate lending troubles were at the center of the sharp decline in economic activity that we call the Great Depression, though we cannot blame real estate "bubbles". Instead, it was the conscious and deliberate monetary policy of the time that led to a profound deflation (the price level fell 30 percent in 3 years between 1930 and 1933) that precipitated the decline in real economic activity.

In addition to the sharp rise in unemployment caused by this decline in the price level, the deflation also disturbed the relationship between assets and liabilities of borrowers. The dollar (nominal) price of real assets and wages fell with the overall price level, while debts were denominated in dollars, and still owed in dollars. The deflation increased the real value of these nominal debts. The situation can be thought of as dollar prices of assets declining while dollar prices of debts stayed fixed, raising debtors' indebtedness. Or it could be thought of as real values of assets staying fixed while real values of debt rose. Expressed either way, borrowers were in trouble.

Borrowers were in trouble because even if they were still employed, their dollar incomes fell 30% (unless they were government employees, whose incomes stayed the same in dollar terms) along with the price level while the dollar obligations on their debts remained the same. Borrowers could not pay their mortgages nor could they refinance them.

The FHA-insured 30-year mortgage succeeded in calming both sides of the market. Lenders were more willing to lend because FHA took the risk of default. Borrowers were more willing to borrow because the loans were long-term and did not require them to refinance before the loan was paid off in the way the earlier 5 to 10 year term, non-amortizing loans did. Both sides felt more secure.

The biggest risk the government was taking by insuring FHA mortgages was not the particular default risk, but the risk of a large change in the price level. It was the change—decline—in the price level between 1930 and 1933 that bankrupted borrowers, caused widespread default, and thus bankrupted banks too. It was anticipated at the time of FHA's creation that the price level would be stable long-term, because the dollar was still tied to gold. It was believed at that time that so long as we were on the gold standard, a serious inflation could not occur.

Why was the government willing to take on the risk of mortgage default when private insurers were not? A short and easy answer was simple desperation to get markets to resume borrowing and lending. In 2009, the Federal Reserve bought $1.1 trillion of Fannie and Freddie mortgage-backed securities and $125 billion of their corporate debt (bonds). But a deeper answer is that the insurer—the government—also had control over the most important variable that could influence defaults (and had caused the eruption of defaults that had just occurred)—the price level. Anyone who borrows or lends in dollar (nominal) terms is betting on the future value of the dollar, which is the same as betting on the rate of inflation, which is betting on future monetary policy. Borrowers gain from inflation rates higher than expected, because inflation erodes the real value of their debt. Debtors lose from inflation higher than expected, because inflation erodes the value of their assets. Borrowers lose from deflation, because a deflation raises the real value of their obligations, while debtors gain. Some have suggested that the Fed has a mis-match issue (liabilities and assets have different durations). Of course the Fed has a mis-match issue; unlike others with a mis-match issue, the Fed has control over future rates of inflation, and consequently future interest rates.

But a change that is very extreme in ether direction creates problems for lenders, especially leveraged lenders such as US depositories, and thus the economy in general. If deflation is so extreme that borrowers can no longer meet their dollar-denominated obligations, as in the Great Depression, defaults by borrowers cause lenders to become insolvent. If inflation is so extreme that the equity of financial institutions is wiped out (because an increase in the long-run inflation rate lowers the value assets by more than it lowers the value of liabilities), as it was for many Savings and Loan Associations in the late 1970s and early 1980s, institutions again fail from insolvency. These two kinds of insolvencies are very different, but they both result in stress on the financial system, and both are (and were) the result of conscious, deliberate monetary policy.

Thus, economies that are large and complex have never had, and I imagine never will have, truly laissez-faire credit markets because the single most important player, the monetary authority, has the power to redistribute wealth between borrowers and lenders, and more. In the United States, close to 70 percent of non-financial credit (non-financial = the sum of borrowings by businesses, households, and governments at all levels, with intermediaries netted out) is touched by federal policy through an assortment of policy tools: the Federal government's own

debt, the tax-exemption of interest on municipal bonds, all borrowing intermediated through insured depositories, loans held by and guaranteed by the government-sponsored enterprises (including the Farm Credit system), plus various other direct and guaranteed government lending programs (including FHA and VA mortgage insurance and guarantees). This astounding figure—close to 70 percent of nonfinancial credit—has prevailed since at least the end of WWII. The level is even higher right now, with the government owning large chunks of investment banks, which were previously in the 30 percent of the credit market not tied to the federal government (mainly corporate bonds and other corporate non-bank borrowings) as well as other assets, but I have not toted up the numbers lately. Anyone who thinks that the United States has a laissez faire financial system is simply ignorant of the proportions of the government role in credit markets.

Only a country that is optimistic about its ability to control the price level long-term would consider insuring or encouraging a long-term fixed-rate prepayable mortgage. The thrift crisis (which, in retrospect, looks fairly tame), demonstrated that such a policy could turn out to be costly, and costly as a result of the government's own monetary policies. The thrift crisis did not occur because the people who owned and ran the thrifts were incompetent or witless. It was the result of deliberate policy choices on the part of the US monetary authority to raise the rate of inflation above what had been previously expected. Thrifts were encouraged—by deposit insurance and capital requirements—to make the loans that policy makers wanted them to make. I am not suggesting that policy makers knew, when they encouraged lenders to make these loans, that they were going to raise the rate of inflation, but only that it was changes in government policy with respect to inflation rates that "caused" the thrifts to become insolvent. The equity holders of the thrifts benefitted from government support in good times, and suffered from it when inflation rates rose.

We have no evidence that a long-term fixed-rate residential mortgage loan would ever arise spontaneously without government urging. Other developed countries that support long-term adjustable-rate loans have not spontaneously developed, in the private realm of the mortgage market, long-term fixed-rate loans for household borrowers. The development of such a loan has happened only once on a large scale, here in the United States.

The point of this discussion about the uniqueness of the long-term fixed-rate residential mortgage and role of the government in the credit markets is to demonstrate that pleas for "free

market" forces in credit markets should be dismissed out of hand. The United States does not have a "free market" in credit, especially residential mortgage credit, nor does any other large or developed country. The most important innovations in the mortgage market in the last 80 years—introduction of a long-term amortizing loan, creation of national liquidity facilities for regional lenders (Fannie Mae), introduction of a liquid secondary markets in mortgages (Ginnie and Freddie), and the supporting contract designs to support loan servicing in securitized markets—were all undertaken by institutions that were either explicitly part of the government or had important government ties. The largest private innovations, adjustable-rate loans and subprime loans, cannot be said to be such great successes. Among the private innovations, the creation of credit scores appears the most constructive and successful.

What about the possibility of giving up the long-term fixed-rate loan, and getting along with only adjustable-rate loans, as do nearly all other developed countries?

At one point in the early 2000s, well before any hint of the subprime crisis but after the dotcom recession was over, Alan Greenspan, noting that long-term fixed-rate mortgages were a source of systemic risk in our financial markets, suggested that one way to eliminate this systemic risk was for borrowers to simply have adjustable-rate mortgages instead. He noted that ARMs have lower interest rates on average (which is true). The extreme public outcry made him abandon this suggestion with alacrity. People were not interested that Canada, the UK, France, Germany, and many other countries seemed to achieve high rates of home ownership despite having only adjustable-rate loans. (It turns out that Alan himself had a fixed-rate mortgage. Why? He said he liked the certainty. Bernanke has a fixed-rate mortgage also, same reason.)

Americans are evidently comforted by their 30-yr fixed-rate loans. Long-term fixed-rate loans are more expensive than ARMs even when the credit risk is assumed by a government-related entity such as FHA or Fannie or Freddie. This is because all residential loans are prepayable, and the lender or investor takes the risk of a prepayments arising from fluctuations in interest rates. Lenders thus charge a premium to cover this risk. It is not small: on average it is about 125 basis points. Borrowers cannot disclaim their right to prepay a fixed-rate loan, so the only way for them to avoid paying a premium for pre-payability is to have a loan with an adjustable rate.

Nonetheless, borrowers clearly prefer fixed rates. It appears that borrowers should only choose adjustable-rate loans when 1) they are sufficiently affluent that a substantial change in

their mortgage payment would not seriously disrupt their personal finances (as in the jumbo market, which until recently was about half fixed rate, half ARMs, 2) when nominal interest rates are very high and the term structure is steep, making payments on ARMs far lower than on fixeds, as in the early 1980s, and 3) when borrowers are confident they will reside in a given house only for a short time. When interest rates fall, ARM borrowers overwhelmingly refinance from adjustable rates to fixed rates. Even in the present crisis, default and delinquency rates on fixed-rate mortgages are about half than those on ARMs, even in the prime market. This appears to be more of a self-selection phenomenon than ARM resets. Anyone suggesting, as Greenspan did, that we abandon rather than accommodate the long-term fixed-rate prepayable residential mortgage would be in for serious grief. Americans now seem to regard the availability of long-term fixed-rate mortgages as part of their civil rights.

2. The role of government support in the continued existence of the 30-year fixed-rate residential mortgage.

The original and still most important support provided to the 30-year fixed-rate loan is that US bank regulations encourage depositories to make and hold these loans. The GSEs were also encouraged to hold 30-year fixed-rate loans by being allowed low capital requirements on substantial portfolios of both whole loans and MBS. Depositories and the GSEs still hold the majority of 30-year fixed-rate loans and mortgage–backed securities (MBSs) based on them. (Many depositories hold MBSs of loans they originated themselves and securitized through Fannie or Freddie.)

The importance of depositories and the GSEs is readily apparent in the figures on the holdings of MBS. In particular, defined-benefit pension plans, which are by nature long-term investors, seem natural candidates to be holders of long-term mortgages, but they are not. They hold substantial amounts of Fannie and Freddie debt (straight bonds), but essentially none of the MBS. Pension plans fund long-term *real* (inflation-adjusted) annuities. Evidently the prepayment risk of long-term fixed-rate pre-payable loans, which fall in value when the rate of inflation rises, and prepay when the inflation rate (and interest rates) fall, is incompatible with this goal. Fixed-rate mortgages are a worse fit than plain bonds for insuring inflation risk because they fall in value more when the rate of inflation and interest rates rise, but do not enjoy a symmetric rise in value when interest rates fall because they instead prepay.

Default risk in mortgages is largely diversifiable, but prepayment risk is not. Even in the current recession, the geographic variation in property value changes and defaults is substantial. By the OFHEO purchase-only indices (as of December, 2009), national house prices are down just over eleven percent from their high in early 2007. The census division with the largest decline is the Pacific, down 28 percent (on a seasonally adjusted basis), and the one with the least decline is West South Central, down 1.2%., is hardly down at all. Defaults are highly concentrated in the sand states (California, Arizona, Nevada, and Florida), which are suffering from a combination of the largest price declines as well as the largest explosions of subprime lending. (The combination is not an accident.) Aside from the current crisis, both real estate price changes and defaults have been geographically concentrated. When defaults are geographically concentrated, holding a nationally distributed portfolio diversifies much of this risk.

On the other hand, prepayment risk is a systemic risk. Changes in interest rates influence the behavior of borrowers in all fifty states. Prepayment risk can be transferred to another party, but not eliminated. For example, when an investor buys Fannie Mae or Freddie Mac bonds, the interest paid on loans held in portfolio ultimately pays the interest on the bonds. Thus, the bondholders bear ordinary interest rate risk but not prepayment risk, and the equity holders of Fannie and Freddie bear the prepayment risk on the portfolio loans.

Even REMICs (Real Estate Mortgage Investment Conduits) just re-shuffle prepayment risk, they do not eliminate it. When a REMIC takes the form of being tranched (sliced) by prepayment priority, the earliest-paying tranche will perform much like a short-term bond, while the later-paying tranches will bear even more prepayment risk than would an ordinary, un-REMICed, untranched pool of mortgages. By contrast, in normal times, default risk is diversified away in a big national pool of loans.

The systemic nature of prepayment risk brings us back again to the issue of where prepayment risk comes from. When interest rates fall, borrowers prepay and refinance. When interest rates rise, average mortgage life lengthens and existing mortgages and mortgage securities become less valuable. Interest rate fluctuations do not come primarily from random, uncontrollable forces, but from deliberate policy choices of the monetary authority. Inflation is, in the first analysis and the last analysis and most analyses in between, a monetary phenomenon. It is appropriate that the government have some role in allocating and insuring this risk given that it has substantial control over it.

By allowing federally-related institutions to make and hold mortgages of this design, the taxpayers bear the systemic risk, both from prepayments and from unusual levels of defaults, (rare, but happening now). Taxpayers bear this risk through their liability for taxes to make good on the promises made through deposit insurance and guarantees behind Ginnie, Fannie, and Freddie. The benefits of this system accrue mainly to homeowners. Given that nearly all income taxes are paid by homeowners, and that nearly all homeowners begin their home ownership with a mortgage, it is mainly homeowners who benefit and also homeowners who bear the risk of the arrangement. Thus, the beneficiaries (homeowners) and the bearers of risk (the taxpayers) are ultimately the same folks, but at different points in their lives. This system gives people a hand up when they are young and cash-constrained, and has the potential to cost them something, more if they are big successes in making money, later in their high-earnings years if problems arise. It is not hard to imagine that most people regard this as a satisfactory trade-off.

3. The role of the GSEs in securitizing mortgages

The GSEs promote liquidity and therefore low interest rates by

1) standardizing mortgage terms
2) standardizing loan servicing
3) standardizing mortgage-backed securities.

All three factors help to produce a market of homogeneous securities that trade at a low cost in a liquid market.

The first mortgage-backed securities (MBS) were created as part of a new government program, Ginnie Mae, in 1968. At that time, they were called pass-through securities because they passed interest on mortgage loans through to security holders. The Budget Task Force of 1968 was assigned responsibility for getting Fannie Mae's debt off the federal budget to make the federal debt, which had been growing fast in the 1960s, look smaller. The plan was to reorganize Fannie, which had been operated as a cooperative among the depositories with which is did business from its creation in 1938, into a stockholder-owned corporation, with stock that could be owned by the general public, not just by banks. To achieve this, the FHA mortgages on Fannie's books were packaged into securities guaranteed for timely payment of interest and principal by the full faith and credit of the federal government, to be sold to the general public.

FHA loans were already federally insured, so the additional assumption of risk for the government was de minimis.

The creation of Ginnie Mae in 1968 lowered FHA borrowing rates by a startling 60 to 80 basis points. Given that the real (inflation-adjusted) interest rate on FHA loans is in the range of 4 to 5 percent, this is a substantial, not trivial, reduction. The reduction in the interest rate was not the result of additional federal assumption of risk, which was de minimis, but of a genuine improvement in market design. The decline appears to be attributable to two things. First, by securitizing loans through Ginnie, lenders turned illiquid whole loans into liquid securities, which they were willing to hold at lower yields. Second, the existence of a national secondary market disseminated high-quality information about price and made the pricing of mortgages both lower and tighter nationwide. In sum, the additional cost was tiny, but the benefits were substantial.

The benefit was so obvious and large that the thrifts immediately wanted an institution to perform the same function for their conventional mortgage loans. (Fannie had traditionally done more business with commercial banks than with thrifts.) Thus, in 1970, Freddie Mac (The Federal Home Loan Mortgage Corporation) was created to securitize conventional mortgages. Freddie was organized as a cooperative among the thrifts, with ownership and governance through the Federal Home Loan Bank System, also owned and operated by the thrifts.

FHA insurance for mortgages had introduced some uniformity in mortgage instruments as lenders met FHA standards in order to get FHA insurance. Freddie Mac further standardized the conventional mortgage market, which until then had many practices that differed by state. While some differences across states still remain (mainly with respect to loan foreclosure and its interaction with personal bankruptcy), mortgage lending is far more uniform across states now than it was prior to the creation of Freddie.

The details of the contracts created to make Ginnie and Freddie work well should command a great deal of respect. One of the issues securitization created was: who would do the back office work (servicing) on securitized loans and how could we assure it was done well? When the lender held the loan and serviced the loan, there was no conflict of interest. Separating servicing from ownership of whole loans was a challenge. The solution for Ginnie was to assign 44 basis points (0.44 percentage points) of interest, calculated as a fraction of the outstanding principal balance, as income to the servicer. Today we would call this an interest rate strip of 44

basis points. The creators of Ginnie knew well that this was more than servicing should cost, and intended for it to be. They predicted, correctly, that servicers would bid and pay for the right to collect the 44 basis points. The investment necessary to purchase the rights to the servicing (which tends to run about 1.25 percent of loan principal) would thus manifest itself in the price servicers would pay for servicing, which would represent the difference in the present value cost of servicing and the present value of the 44 basis point interest strip.

The investment made by the servicer to purchase the interest/only strip becomes a hostage to exchange to assure the performance of the servicer. And of course, the longer the expected life of the loan, the higher the present value of the interest rate strip, so the servicer has a vested interest in preventing foreclosures on loans. Servicers were also required to collect money monthly from borrowers to be deposited into escrow accounts to pay homeowner property taxes and hazard insurance. This helped borrowers meet their obligations by turning the otherwise lumpy (from a time passage point of view) payments for taxes and insurance into smooth monthly payments. One of the stupidest features of the subprime lending debacle (and there were many) was that most subprime loans had no tax and insurance escrows. Yet the borrowers had quite low credit scores, indicating that they needed help getting their personal finances in order. These borrowers needed escrows more, not less, than prime borrowers.

A further discipline to the secondary market is that Ginnie, Freddie, and Fannie all monitor servicer performance. Ginnie can simply seize a servicing portfolio (without compensation) and sell it to another servicer. Fannie and Freddie have the right to force a servicer who is not performing to sell its portfolio (usually at a loss, since a non-performing portfolio will need some investments to be returned to satisfactory performance) to an approved servicer. This threat gives servicers another reason to maintain high standards of performance. Exercise of the threat is fairly rare.

This set of contracts to support MBSs crafted “by the government” has endured as the basic servicing contract on prime loans to today.

Fannie Mae soon followed by creating securitization programs also after Ginnie and Freddie were up and running. Until 1970, Fannie had made a secondary market in mortgages only by buying them for its portfolio, and issuing bonds to fund them. Freddie Mac was focused entirely on securitization, and had only a small portfolio of loans (under $25 billion) until it was “privatized” in 1989 by FIRREA. Post-FIRREA, Freddie underwent a reorganization similar to

that of Fannie in 1968, in that the thrifts were no longer Freddie's owners and directors, but Freddie's stock became public and traded on the New York Stock Exchange. Freddie quickly accumulated a portfolio nearly the size of Fannie's.

Why can't Wall Street replicate the success of Ginnie, Freddie and Fannie? The presumption of Federal backing is not the only difference between them and Wall Street. There are other differences that are more important. Other differences are

1) Ginnie, Freddie & Fannie all have standardized loan contracts.
2) All three all have standardized servicing agreements.
3) All issue large and homogenous pools of loans.
4) Wall Street securitizers do not take into account the benefits of additional liquidity they could add to other markets by creating similar securities, in other words, they do not internalize the benefits of additional liquidity to the rest of the market.
5) Ginnie, Fannie, and Freddie all suppress inefficient information production in the secondary market for its contribution to market liquidity. Wall Street wants more unique securities, not fewer.

Ginnie, Freddie and Fannie all have standards for loans they will securitize, for both loan structure and loan servicing. I have heard bank lobbyists complain that Freddie and Fannie have "commoditized" mortgage lending. Yes, yes they have, and with great benefits to mortgage borrowers. This standardization or commoditization lowers costs to borrowers and causes them little inconvenience.

In contrast, Wall Street did not attempt to create any standards, and packaged many varieties of loan designs with varieties of servicing agreements and little by way of reporting conventions. At the June, 2009 conference at the Federal Reserve Bank of Kansas City, a former subprime investment banker complained bitterly about the absence of a standard servicing and reporting agreements in subprime lending, and appealed for a Federal intervention to create one. When such an appeal comes to pass, there are no Republicans left.

Wall Street is happy to securitize smaller pools, and eager to get deals done before customers disappear. Without the patience to assemble large pools from different lenders, liquidity in the secondary market later is sacrificed. Liquidity is further sacrificed by tranching the pools into even smaller and more unique securities, with the expectation that each security can find a home where the risk taste best aligned and its value is highest. Wall Street also values

knowing which pieces are owned by whom, so that it can arrange deals when someone wants to buy or sell.

When a new mortgage-backed security is created, there is potentially an externality for the entire MBS market. If the security is very much like existing securities, the entire market becomes a little bit more liquid. The entire market benefits from the additional liquidity. By being large entities with many outstanding securities, Freddie and Fannie internalize this externality. They do not want a novel security because it would not create the same liquidity benefits for the rest of the book. By contrast, the private-label securitizers are indifferent to creating more liquidity in the rest of the market. They are focused only on creating a security they can sell to someone today. Rather than seeking to make a market more liquid, investment bankers are instead always looking for "a man with an ax" –an investor with a specific investment desire that can be carved out of a pool of loans, leaving a residue that must be packaged and affirmatively "sold".

In additional important difference relates to how the GSEs suppress inefficient information production by limiting what information is disclosed about individual mortgage pools. Prepayment speeds differ by coupon and also with geography. Some areas are growing, others are contracting. Borrowers move and prepay more in growing markets than in stable markets. Some areas have higher turnover, and loans prepay when people move, Ginnie, Fannie, and Freddie's MBSs all efficiently suppress information about the location of mortgages in individual MBS pools. Ginnie and the GSEs keep the MBS market liquid despite some geographical differences in prepayment speeds by ***not revealing*** the geography of loans in any given MBS. … Wait! What about market transparency?

More transparency is not always better. This can be understood easily in a similar arrangement seen in the municipal bond market. A structure used for promoting liquidity in the municipal bond market is a random call feature used for bonds that fund small but long-lived projects. Take a dam, for example. Bondholders are repaid from citizens' water bills. If the issue is large, such bonds are often structured in sets that repay at different times, for example, 10 years, 11 years, and so on up to 40 years. For smaller projects, each slice may be too small to find a liquid market. Instead, the entire issue is given the same maturity, but a specified fraction of it is called at random for repayment each year. The investors buy many such issues, and thus

have a good idea of when on average they will be repaid, and thus easily tolerate the uncertainty of individual issues, and value the greater liquidity.

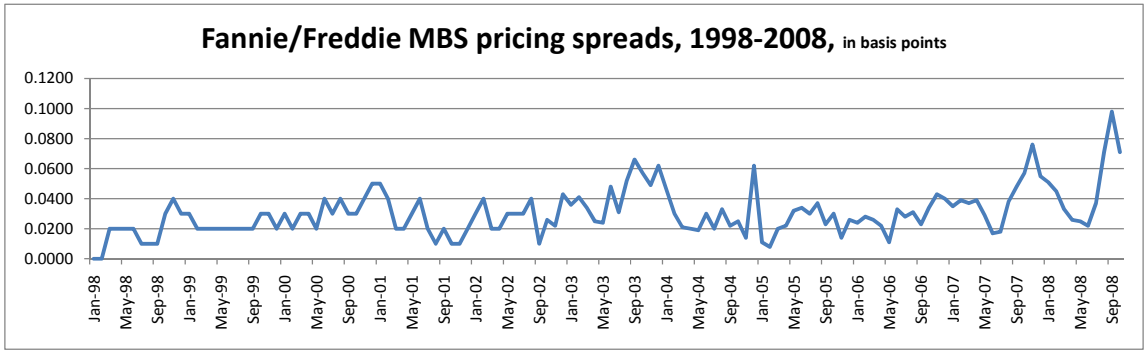
Suppose that right after the bonds were sold, the issuer spun the wheel to select the call date of each bond. Would it be efficient to release the information early, prior to the call? NO! Once the call dates were known, the bonds would degenerate into the tiny, illiquid serial bonds that the market was trying to avoid. What's more, the issuer and the investors *agree* that the best arrangement is not to reveal early. This is a clear case where the optimal level of information is not the fullest information.

In principle, the value of a set of MBS could be either increased or decreased by revealing information that distinguishes them from one another. More pieces might accommodate a greater variety of investors with pieces precisely tailored to their risk tolerance. Or, it could be that liquidity concerns dominate, and that a larger, more homogeneous, more liquid market in MBSs tightens spreads and lowers prices. There are different ways of homogenizing risk, including pooling risk (MBSs vs. whole loans, even S&P500 futures contracts vs. individual stocks in the S&P500) (see information theorist Hal Varian's provocative ideas on subprime koolaid), providing ratings (professional opinions on risk to make clear where similarities lie), and providing insurance (assignment of risk to a professional evaluator of risk for a fee). Each has its pros and cons.

The experiment to show which is more important in the market for MBS on conventional prime mortgages has been done: Some years ago Freddie Mac was persuaded (by Wall Street!) to reveal more about the geography of its MBS pools on the theory that this would make the pricing more "accurate" and securities more valuable. Since then, Fannie's securities (MBSs) have consistently sold for a slightly higher price than Freddie's *because Freddie tells the market more* about each one, and hence the Freddie MBSs are less perfect substitutes for each other, and a bit less liquid. The Fannie MBSs trade as if they are more alike because the market has no information with which to make distinctions among them. The really interesting thing is that the market unambiguously *prefers* the security about which it is *less* informed. Over the period since 1998, the current coupon yield for Freddie MBSs has been above that for Fannie MBSs by on average 3 basis points, (with a standard deviation of 1.5 basis points). From January 1998 to December 2008, the yield on the Freddie security was never below that on the Fannie security. And this is despite the feature that the Freddie securities pay the security holder a few days

earlier, which in principle should make them more valuable. Yes, more transparency makes the securities of ***lower***, not higher, value, on average.

Below are data from 1998 to 2008 on Fannie/Freddie yield spreads.



It is only three basis points on average, but it is a bitter three basis points, making business slightly less profitable for Freddie.

So perhaps the Freddie securities are more "accurately" priced, but they are without question less valuable as a result because they are less similar. From a social point of view, the bottom line is in the pricing: the securities are less valuable when more transparency is provided, and all things considered, investors and borrowers both gain when the additional information is not disclosed. The losers are the market makers and those who would be in the know about who holds the different securities and make money trading in the secondary market based on their special knowledge. These are the same folks who created and made markets in subprime mortgage-backed securities.

But surely not all detail should be suppressed. What kind of information should be suppressed, what kind should be transparent? To be efficiently suppressed, information should have the following properties:

The information should be about factors that are not systemic,

The risks should not be too large.

The risk should diversify away when investors hold a variety of different issues. The arrangement of municipal bonds with random calls for repayment is ideal because the risk is perfectly diversifiable. The suppression of information about prepayments is not perfect, but it is an improvement over full information, says the market.

Even in the market for the US Treasury's own securities there is a tension between giving Wall Street what it wants by way of maturity variety versus keeping borrowing costs low for the taxpayers. Wall Street always wants Treasury's new borrowings to be new securities, distinct from prior issues, so that the new bonds are not perfect substitutes for older ones. In many cases, what would be efficient is for Treasury to re-open an existing issue (especially if it is trading at a high price relative to the rest of the yield curve) and sell additional bonds into it. Wall Street intermediaries prefer a larger number of unique issues in order to keep trading spreads wide and to put themselves in the position of having superior information about who owns which bonds.

Wall Street also fought the introduction of Treasury Inflation-Protected Securities. IBankers complained that there is little trading in them (or was in the UK, where similar bonds existed already.) About this, they are right, the trading volumes are low. The volume is not low because there is no interest in these bonds, but because they such satisfactory assets that buyers just hold them, and do not trade them much. Nonetheless, on any given day, nearly all TIPS trade with a spread at the minimum tick – 1/32, (one thirty-second of one percent of par value) indicating that despite the low volumes, market markers feel they face very little risk in maintaining an inventory. The low trading volumes do not mean this security is socially useless, but that it is especially useful.

If the securitization operations of Freddie and Fannie were shut down, and all securitization was left to Wall Street, we would see a market in which

1) Fewer mortgages will be securitized
2) We will see a wider variety of types and sizes of securities
3) Buyers will have to do more diligence before purchasing any given security
4) Market-making spreads will be wider
5) Mortgage interest rates for borrowers will be higher

The only beneficiaries of this alternative system would be the intermediaries. Both investors (ultimate holders of the MBS) and homebuyers would be worse off. And of course, if Ginnie is still standing (I have heard no pleas to dismantle Ginnie except from AEI), more business will go to FHA and Ginnie.

Without Freddie and Fannie, it would be in the interest of mortgage lenders to create a consortium or cooperative amongst themselves to securitize mortgages. It would be an organization much like Fannie or Freddie today, but perhaps more successful in resisting the lure

of subprime securities. Both Fannie and Freddie were run conservatively in their co-op days. But I do not expect mortgage lenders to be able to create such an organization. First, there is a conflict of interest between large lenders, who could securitize at least some loans themselves, vs. smaller banks, who would likely have to sell loans to the larger banks for securitization; that conflict is larger now than when the largest bank had only one percent of all bank assets (roughly 1989). All lenders would benefit, but the small banks would benefit more and the large banks less, thus, strategically, the large banks have an interest in blocking a co-op. This appears to be the conflict of interest that inhibited the Federal Home Loan Bank system from creating a third GSE. We should not think that a co-op created among the banks would be free of Federal responsibilities, because the members would all be insured depositories.

What about the portfolios?

F&F both have substantial portfolios of loans. Their portfolios are close to three-quarters of a trillion dollars each, and the difference between the interest earned on the portfolio and interest paid on the bonds that fund the portfolio is their largest source of income. I do not have a strong opinion on how large the F&F portfolios should be. But experience tells us that any attempt to whittle down the GSE portfolios will raise mortgage interest rates at least temporarily. In addition, decreasing the size of Fannie and Freddie's portfolios will not lead to a reduction of risk exposure by the federal government, the goal of most who advocate such changes. Instead, it would largely result in an increase of holdings of mortgages and MBS by depositories.

In other words, the 30-year fixed-rate loans are not likely to leave the Federal umbrella, but only move to another place under it. Reducing the portfolios would not be without pain for the mortgage and housing markets. Even in the early 1990s, when the mortgages held by the dismantled insolvent thrifts had to find new homes, mortgages rates were clearly elevated by this displacement. It seems unlikely that policy makers would choose any time soon to force F&F to divest their portfolios, as this would just depress mortgage values and force already beleaguered banks to mark down their assets once again. If the portfolios of F&F are to be whittled down, the least disruptive option may be to simply not have them buy any more loans for portfolio. As loans in the existing portfolios mature, the portfolios will shrink.

One caution on dismantling the portfolios of Fannie and Freddie comes from looking at who is in favor of this policy. The main proponents, not only of dismantling the portfolios but

eliminating Fannie and Freddie altogether, are the large commercial banks, the other natural home for mortgages. The large banks are in the best position to be able to securitize mortgages in F&F's absence (thought the market would not likely be as efficient, because securities would not be as standardized and homogenous). They expect, correctly, that smaller banks would have to sell mortgages to them to access the secondary market. Theirs is the voice we hear in the Wall Street Journal. (I remain puzzled as to why the WSJ should be more enthusiastic about large commercial banks with unambiguous federal support of deposit insurance than with other financial institutions with similar government backing.) Another F&F combatant is the American Enterprise Institute, whose opposition is more understandable, since it is funded by contributions. It is important to remember that commercial banks are not exactly "free market" institutions, but owe much of their access to inexpensive funding to deposit insurance (which they pay for) and to federal regulation.

If Freddie and Fannie were as well-capitalized as the average mid-size bank, they would be no more risky than the average mid-size bank. In retrospect, the risk taken on by Freddie, Fannie, and the largest commercial banks was substantially greater than that taken on by mid- and small-size banks, who seem to have avoided making or buying any subprime loans.

Covered Bonds

Covered bonds, used by Denmark to fund its long-term fixed-rate mortgages, (and by some other countries to fund long-term adjustable rate mortgages) have been promoted as superior to asset-backed securities. In practice, they are nearly identical to asset-backed securities and to the arrangements we have had for many years, especially to Fannie and Freddie MBSs. Essentially, nothing is achieved with covered bonds that could not also be achieved with higher capital requirements for Fannie and Freddie. Covered bonds are, like asset-backed securities, backed by the cash flows on a pool of assets, in the case of the mortgage market, a pool of mortgages. And covered bonds, like F&F MBSs, have more resources behind them than just the mortgages in their pools to cover losses.

There are two differences between covered bonds and the MBSs issued by F&F, both essentially cosmetic. One is that the mortgages backing the bonds remain on the balance sheet of the issuer. Whether the assets are on of off the balance sheet is irrelevant so long as the MBS have recourse to assets on the balance sheet. F&F MBS do have such recourse. Another is that

the pool of assets backing the covered bond is usually larger in principal value than the bonds themselves, so that the security is explicitly over-collateralized. The MBSs issued by F&F are implicitly over-collateralized because they are guaranteed against default by F&F, but not backed by any particular pool of loans. If the default losses on a given MBS were sufficiently large, F&F are obliged to make up the difference from reserves and other assets. All of the reserves against losses and equity of F&F are ultimately available to the MBS holders. Thus, in essence, F&F MBSs are already over-collateralized.

So long as the securities outstanding are MBSs guaranteed by F&F, and the experience on the mortgages behind them (in terms of defaults and prepayments) are well-disclosed, and the other assets are also fully disclosed, it should make no difference whether the securities are called covered bonds or MBSs or whether the recording of the securities is on the balance sheet or in some other section of their regular reports. Covered bonds are not "the answer" or even a very interesting suggestion, or all that different from what Fannie Mae & Freddie Mac have done lo these many years. The only interesting variation is how much "coverage" is desired. This is more appropriately addressed with general capital standards than rigidly structured bonds.

Another disadvantage of covered bonds in the US would be that where these bonds are used, they are issued by large banks. In countries that have only a few large banks, and essentially no small ones, this creates no comparative disadvantage. In the US, with its many smaller banks, the small banks would have to either sell through the large banks or create a co-operative entity through which to sell covered bonds together. This co-operative entity would have to look a lot like either Freddie or Fannie.

And finally, covered bonds are evidently not the panacea claimed by some. Both Spain and the UK use covered bonds to fund mortgages yet both were also fraught with problems in real estate lending in the recent crisis.

Do we need to return to substantial down payments?

Offering mortgages to borrowers with good credit histories but small down payments was not the core of the financial crisis, instead it was offering *any* mortgage to people with poor credit histories, in large numbers, in concentrated areas. Even with the large decline in property values in some areas, borrowers with good credit who do not lose their jobs, become ill, or get divorced are very unlikely to default, even if their down payments were slim. A careful study by

Willen et all of all mortgages made in Massachusetts prior to the 1991 recession found that only six percent of the prime borrowers who had negative equity defaulted over the next three years.[1]

Credit scores are a new feature in the mortgage market. They were hardly present in 1990, but almost universal by 1996. Prior to 1996, lenders mainly used high down payments as their defense against default. What lenders learned with credit scores is that they could make even high LTV loans to borrowers with good credit, and these borrowers would keep paying even if their houses were underwater.

A factor that made the subprime crisis worse than other housing crises is that the expansion of credit to a new, previously-not-served set of borrowers was so large that it moved house prices. Prices have fallen most in areas where they rose most, and these are the same areas in which subprime borrowers were over-represented.

At present, the prime mortgage book is worse than in most years, but still in much better shape than the subprime mortgage book. As of June, 2009, the "seriously delinquent" rate for prime conventional mortgages (either held by or securitized through Freddie or Fannie) is 3.2 percent, while the rate for securitized subprime loans is 23.7 percent. And of course, the prime book is only performing as poorly as it is because of the contraction in real activity caused by the subpime mess and the subsequent bank panic.

Ownership Structure

There are many possibilities for the structure of Fannie and Freddie going forward. Some can be easily ruled out as undesirable, while others area worth more study.

Among the possibilities are

1) A single entity with government ownership and control as for FHA and Ginnie Mae
2) a cooperative among lenders, as Fannie and Freddie once both had
3) a cooperative among borrowers, similar to the organization of the Farm Credit System or the Credit Union system, or even to borrower-owned and -controlled mutual insurance companies.
4) A shareholder-owned, profit making institutions, subject to limitation on activity by charter and to regulation, as in their old structure.

[1] Christopher Foote, Gerardi, Kristopher, and Willen, Paul, (2008, June) "Negative Equity and Foreclosure: Theory and Evidence", *Public Policy Discussion Papers*, Federal Reserve Bank of Boston.

A government program like FHA?

FHA and Ginnie Mae are playing a large and important role right now, with a market share of originations in 2008 of 25 to 30%. For some years, FHA has operated at a disadvantage to the conventional market because of the rigidities inherent to being part of the bureaucracy. First, FHA originations are slower than originations that go through through F&F. According to FHA's January 15, 2009, report on recent originations, average processing time was 2.5 months, roughly 10 weeks, from application to closing, even though most transactions used streamlined systems. FHA was slower to create automated underwriting systems, introducing them only after Freddie and Fannie both had systems in place.

Second, FHA is more vulnerable to exploitive behavior on the part of lenders. Fannie and Freddie have more flexibility for discouraging exploitation by lenders. F&F can also adjust guarantee fees to reflect its experience with a given lender, while FHA insurance premiums are one-size-fits-all. There have been episodes of lender exploitation of FHA (seller "gifts" of downpayments to borrowers, implicitly raising the loan-to-value ratios and default rates) that required legislation to fix that would have been promptly corrected by internal policy adjustments at Freddie and Fannie.

Third, Fannie and Freddie can innovate more nimbly than can FHA and Ginnie Mae. Both built automated underwriting systems (Desktop Underwriting and Loan Prospector) and only well after these were in place did FHA begin to work on such a tool. Even now, FHA lenders will often consult either DU or LP before approving even an FHA loan. Among the 6300 non-subsidized loans analyzed in the FHA closing cost study, nearly a thousand had explicit fees charged to borrowers for use of either DU or LP, (charges varied from $10 to $150). Such tools unquestionably speed the loan approval process. It is unlikely that FHA would have built such a tool without the nudge from Fannie and Freddie having built such systems.

Pure government ownership and operation for Fannie and Freddie is not a good idea. FHA and Ginnie Mae are both purely government operations. The good features of their structures lie in their simplicity. They have strict constraints on what business they can and cannot do, and what loans they are allowed to insure and securitize. They are subject to maximum loan size limits that vary with property values in different areas, they can insure and securitize only the simplest loans (30-year fixed and simple ARMs), they can insure and securitize only new loans, no seasoned loans, and lenders from whom they will accept loans are

subject to approval standards and to strict servicing guidelines. These limits have successfully constrained the risks that they take.

But FHA and Ginnie Mae perform better because they compete with Fannie and Freddie, and match at least some of their innovations. If all of the securitizing entities were government bureaucracies, the performance would not be as good as we get from a mix of the two.

A lender co-operative?

Time was when F&F were organized as lender cooperatives. Fannie was a co-op, primarily of commercial banks, from its beginning in 1938 until it was reorganized in 1968. Freddie was a co-op among the thrifts, run by the Federal Home Loan Bank Board, from its creation in 1970 until FIRREA in 1989. In 1989, the largest commercial bank in the US had less than one percent of bank assets. While US banking is still competitive today, it is considerably more concentrated now, and a handful of large banks now hold close to half of bank assets and do more than half of mortgage lending. The conflict between smaller banks and larger banks with respect to how the GSEs should be run would be greater now than it was in their former co-op days, and makes the lender co-op idea a worse structure for today than it was in the past. Any co-operative would be likely be dominated by the largest banks.

There are good reasons *not* to allow the largest banks to run the GSEs to the disadvantage smaller banks. Smaller banks deserve an important place in our banking system. There is accumulating evidence that smaller depositories treat their customers in a less exploitive way than do newer, larger, and less regulated financial institutions. In particular, they are less inclined to exploit financial confusion on the part of borrowers. See Stango and Zinman, Buck and Pence, who examine evidence from the Survey of Consumer Finances, and Agarwal et al. on the mortgage counseling experiment in Illinois, and the FHA Closing Cost report, http://www.huduser.org/Publications/pdf/FHA_closing_cost.pdf.

How many GSEs should we have?

One might think that with only two organizations securitizing mortgages, we would see tacit collusion and monopoly pricing such as we get when two gas stations sit on opposite corners.

The gas station paradigm is instructive. If one station lowers its price, its rival across the street sees that price change at least as soon as any customer. The rival can respond right away by lowering price also. The first mover sells no more gas than the rival, he just sells the gas for less. Thus, there is no incentive to lower price when the rival sees the change at least as soon as the customers do.

This paradigm does not fit F&F. Freddie and Fannie do not post their guarantee fees in the way that gas stations post prices. Each deal is negotiated, customized, and secret. The ultimate results are seen only in quarterly summaries of business activity. Thus, customers ***do*** know price before rivals do, and know many about the details about their own deals that are not known by rivals. Cutting price ***does*** generate more business.

Two GSEs thus reach an outcome close to what we would expect from perfect competition.

On the other hand, the more operators we have in the secondary market, the harder it is to maintain the standardization and homogeneity of securities that give us more liquidity and lower mortgage rates. Two GSEs appear to give the maximum benefit of standardization and liquidity, but still give us competitive pricing.

In principle, the Federal Home Loan Bank system could have created a third securitizing GSE. It did not, despite some efforts in that direction. I imagine that the reason the FHLB system failed to create another securitizing GSE is that there are conflicts of interest among the members about how the entity should be structured, with larger institutions wanting more power than smaller ones. They have a collective action problem. They all would benefit from having their own securitization facility, but since some would benefit more than others, the plan is blocked by those who would get less. They cannot create a facility only for some members, and have been unable to negotiate to create a facility appealing to all.

Ownership by private shareholders versus a borrower cooperative

The new charters for Freddie and Fannie should 1) establish higher capital requirements for Fannie and Freddie, and 2) have different capital requirements for different lines of business, in particular higher-default risk business, and 3) price the government guarantee. It seems unlikely that we can alter asset markets to entirely avoid price bubbles (we seem to have had them from time to time as long as we have had asset markets, and they can be produced in experimental settings too), either in the stock market or the housing market, and once upon a

time, in tulip bulbs. But if our financial institutions are less levered, the bursting of a price bubble is of less consequence. The dotcom recession of 2001 was driven primarily by the fall in asset values after the world realized that the internet was going to deliver far more value to consumers than to sellers. The 50 percent margin requirement (think of it as a capital requirement) plus the centralized clearing arrangements that monitor account values continuously and cashes out accounts that fall below required margin limited the fallout of the decline in asset values. The decline in stock values hardly touched the banking system. Housing was hardly involved in that recession, as single family construction chugged right along. This tells us much about how to limit a contraction in one sector from doing damage to other sectors.

Given the big decline in house prices beginning in 2007, it was inevitable that we would have a big decline in residential construction (the high prices resulted in over-building, and once soaring vacancy rates made the over-building apparent, prices fell). Residential construction is a sufficiently large fraction of real activity that its contraction by half would mean a recession, all by itself. Did the credit crisis make things worse? Almost certainly, yes. On average, recessions that included banking panics have been worse than recessions without banking panics. The dotcom recession of 2001 involved no financial panic, mainly because the assets that fell in value (stocks) were held with at most 50 percent borrowed money, and even this money was subject to closely monitored margin rules. Higher capital requirements can make the consequences of price bubbles less severe.

So we need higher capital requirements in financial institutions, and especially to turn pseudo-insurance companies (AIG and other writers of credit default swaps) into bona fide insurance companies, so that they are subject to capital regulation. That's the easy part.

What about shareholder ownership, as prevailed until the crisis?

When then were taken over last summer, F&F were owned by private shareholders, both had stock traded on the New York Stock Exchange, both operated as profit maximizers subject to constraints in the form of capital requirements and restrictions on their business activities imposed by regulators, and some directors appointed by the president instead of by shareholders.

Two problems arose with this arrangement. First, there was no force to help F&F resist buying pieces of subprime mortgage securities and whole Alt-A loans. They could not securitize these mortgages directly, but they were not precluded from buying the higher-rated pieces. They

did buy Alt-A loans for portfolio securitized them also. Their prime books are suffering in the current conditions, but the crippling losses have come not from their traditional business but from the subprime and Alt-A exposure.

Second, F&F both have outstanding research shops, and each had the resources to do more research for the benefit of borrowers, for example, by helping to develop clear and standardized disclosures. But their main contact was with lenders, and both thought of lenders as "their customers". Until very recently, F&F were reluctant to do any research on disclosure or comprehension of mortgage issues by borrowers, and this was part of a general reluctance to "get between" lenders and the lender's customers, the borrowers. Even web site tools making loans easier to analyze brought forth lender complaints from lenders that "this was not their job". Lenders attitudes have changed since then, and the lenders are now eager for any help on assuring that borrowers understand the deal. It would be good to institutionalize these changes in attitude before the current crisis is forgotten.

As an example of work F&F did not do because the lenders were "their customers" is became apparent in an episode involving yield-spread premium analysis. When the first "yield-spread premium" disputes were being litigated, the data being examined in the case was made available to both plaintiff's and defendant's experts for independent research. One expert sought to cooperate with staff economists at one GSE, who eagerly began examining the data. Previously, the GSEs only had HUD-1 data on very-low-credit-quality loans, and on small samples of standard loans. When the parent of the defendant, a big GSE customer, got wind of this activity, it was promptly halted.

Seven years later, this data plus another important set of data collected by FHA for the FHA Closing Cost Report has told the same story about how mortgage brokers price discriminate and exploit borrower ignorance of financial matters more aggressively than do direct lenders, especially than small depositories and credit unions, who treat their borrowers with more benevolence. It is not a story that makes Americans feel proud of how financial institutions treat their citizens, with minorities, the less-well-educated, and older people charged more than others, other things equal. The GSEs could have been at the forefront of this research. The economic staff was capable and eager, but leadership blocked their efforts. In mid-July, 2009, the Board of Governors of the Federal Reserve voted to prohibit all practices that tied agent compensation to the interest rate on the loan, essentially banning yield-spread premiums.

So a serious issue is how to make sure, in the long run, not just while the crisis is in recent memory, that the GSEs have borrower interests, not lender and broker interests, closest to their hearts. One possibility is a borrower-owned mutual. For example, the Hartford insurance company is a mutual insurance company, essentially owned by its insureds. However, insurance companies have another overlay of governance from the state regulation of insurance that assures they are adequately reserved. Credit Unions are another form of mutual organization, with depositors owning and controlling them. Credit Unions are among the most benevolent of our financial institutions. Not only do they set prices to merely cover costs, not to extract all the market will bear, but they reach out to borrowers to help them be better borrowers, weaning them from payday loans and excessive credit card debt. On the other hand, the credit unions' secondary market facilities, organizations that pooled loans from individual credit unions and took them to Fannie and Freddie for securitization, did not escape the lure of subprime. Like Freddie and Fannie, the credit unions did not make any subprime loans, but their secondary institutions did buy some subprime securities, and are in trouble as a result.

The issue of organization and governance deserve more study. I do not know enough about where control of mutual insurance companies really resides, or even how credit unions are controlled, to offer a completely firm opinion on structure. It seems that a return to the structure where the GSEs are owned by outside shareholders but regard lenders are "their customers" is not a good idea. A change that puts borrower concerns ahead of lender concerns is in order. There are several ways to move in this direction, the issue is important and deserves more study.

The GSEs outside of single-family.

Multi-family construction is generally less sensitive to the level of interest rates than single-family because owners of rental units are either individuals with accumulated wealth or corporate entities, for whom cash constraints are not so binding as on households. What volatility is present in multi-family construction seems to come from spurts of activity generated by new tax credit programs. Credit conditions for multi-family fluctuate with the likelihood that intended condominiums will turn into rentals.

So far, Fannie Mae's multifamily book has not generated much by way of losses in this recession. Delinquency rates are up from historical levels, but by absolute standards, they are still quote low (0.36 percent in April 2009, vs. 0.09 one year ago). Freddie Mac's multi-family

book is even better, with delinquencies at 0.12 percent vs, 0.03 percent a year ago. But rental markets are softening, rents are down, vacancies are up, and collections down. Fannie's multi-family holdings are $174 bn, and Freddie's $91 bn.

Freddie and Fannie's multi-family underwriting is conservative. Fannie requires a 125 percent debt-service ratio, 20% down payment minimum, and makes 10 year loans. More than 50% of the multi-family book is now held in portfolio, but recent new production is mainly being securitized. Multi-family loans are not bundled with single-family, but securitized in separate MBS.

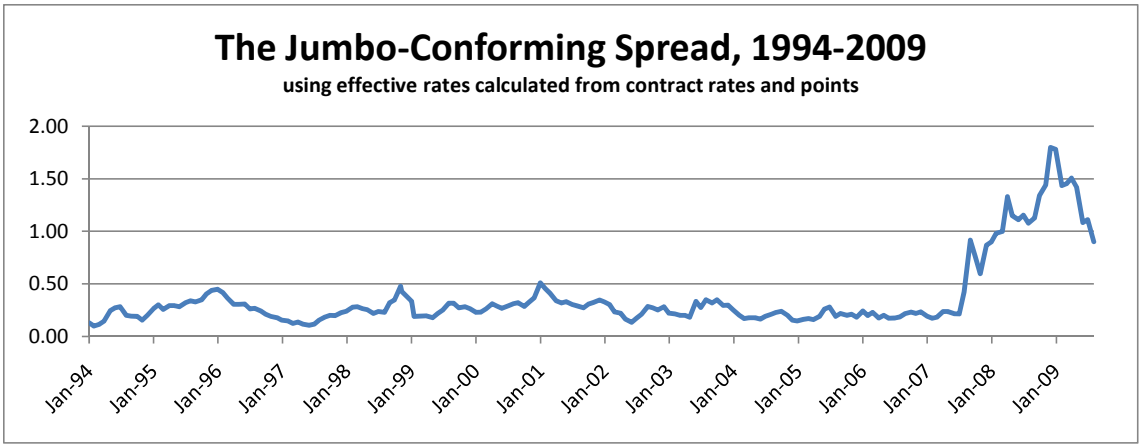
Fannie and Freddie provide about three-quarters of all multi-family lending, and the buildings they finance are occupied primarily by elderly and low-to-moderate income households.

In all GSE activity, as well as in all activity in depositories, there is at least a small amount of subsidy coming from federal backing, either explicit or implicit. The case for a GSE role is thus more difficult to make for multi-family lending than for single-family. On the other hand, given the success of both in underwriting these loans, there seems little reason to inhibit this activity.

It is very difficult to make a case for the GSEs to have a role in commercial property lending. Underwriting in commercial property is more difficult than in either multi-family or residential. In commercial property busts, the critical factor is nearly always slackening demand on the part of commercial renters, not the difficulty of obtaining credit. Given the heterogeneity of commercial properties, it does not appear that what the GSE's have to offer, other than credit with the government's good name, would contribute very much.

How big a difference do Fannie and Freddie make?

Most of the time, rates on mortgages that were eligible for purchase or securitization by Freddie or Fannie have been cheaper than larger, ineligible loans ("jumbo" loans) by 25 to 40 basis points. When the credit crisis began, one of the early manifestations of it was a widening of the jumbo-conforming spread, out to 180 basis points (that's 1.8 percentage points) and higher. The gap still stands at about 100 basis points today (March, 2010).



The still-gaping jumbo-conforming spread calls for further comment on our present situation. All of the discussion here has been about the role of Freddie and Fannie in normal times, and what they can contribute when markets are otherwise performing smoothly. Though there are signs of return to normalcy—house prices rose in May and June as reflected in both the FHFA house price indices and the Case-Shiller house price indices—the situation is still far from normal.

In 2008, FHA insured nearly 30% of new mortgage originations, up from only 3 percent in 2006. In the first quarter of 2009, Ginnie Mae did 26 percent of mortgage securitizations (FHA plus VA), Fannie and Freddie did the other 74 percent, and there were no new private-label securitizations. The FHFA Mortgage Interest Rate Survey has ceased reporting rates on adjustable-rate loans because there are not enough of these for statistical reliability. Corporate and municipal spreads are narrowing, but still wide. Lending standards of all kinds are more strict now than for many years.

During the financial crisis, our government-created mortgage institutions have made the difference between a bad recession and something much, much worse, especially with respect to housing. Essentially, credit has continued to flow, but almost entirely through FHA and Ginnie, Freddie, and Fannie. In 2008, mortgage originations totaled about $1.5 trillion, of which 89 percent were either FHA and VA or conventional, conforming, prime loans. The other 11 percent were mainly jumbo prime, with a sliver of subprime and Alt-A loans. Nearly all of these new originations were securitized. Loan securitizations were 74 percent Freddie and Fannie, and 26 percent FHA/VA. There were no private-label securitizations (data from *Inside Mortgage Finance*).

While most of this discussion was about the operation of the GSEs in more normal economic environments, the role of the GSEs in the crisis deserves attention also. Their presence makes a bigger difference, not a smaller one, in times of great confusion and uncertainty in financial markets. One way of thinking about the wide credit spreads we see today is that rates are not necessarily so high for the usual borrowers, but that rates for the government are unusually low. It is a great irony of the crisis that although it was caused by United States policies (with contributions from the UK and a few others), it provoked a great increase in the world's desire to hold US Treasury bonds.

Evidently the world has more confidence in the ability of the US government to collect the eventual taxes to refund its own bonds than it has in the ability of individuals and businesses to repay their debts. There is an element of irrationality in such beliefs, because the very borrowers who are deemed less credit-worthy as individuals or businesses are the same as those who will pay the taxes to refund the bonds. It makes sense for the government to use its superior standing in the credit market to make credit flow to non-government entities. There are no structures more successful for doing this than the housing credit institutions we created in the twentieth century. Mere depositories would have done much less. Such a role was not contemplated for them (with the exception of FHA, which was created in a crisis specifically to make credit flow). Nonetheless, they have served and made the crisis less painful than it otherwise would have been. Thus, in deciding what to do about them as we go forward, we should acknowledge another advantage to their existence.