

GUARANTEED TO FAIL



FANNIE MAE, FREDDIE MAC
and the Debacle of Mortgage Finance

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A Blueprint for Mortgage Finance Reform

Executive Summary:

The goal of reforming housing finance should be to ensure economic efficiency, both in the primary mortgage market (origination) as well as in the secondary mortgage market (securitization). By economic efficiency, we have in mind a housing finance system that

- corrects any market failures if they exist; notably in this case is the externality from originators and securitizers undertaking too much credit and interest rate risk as this risk is inherently systemic in nature;
- maintains a level-playing field between the different financial players in the mortgage market to limit a concentrated build-up of systemic risk; and
- does not engender moral hazard issues in mortgage origination and securitization.

Motivated from economic theory, we argue that such a mortgage finance system should be primarily private in nature. It should involve origination and securitization of mortgages that are standardized and conform to reasonable credit quality. The credit risk underlying the mortgages should be borne by market investors, perhaps with some support from private guarantors. There should be few guarantees, if any, from the government.

The question is how does one effectively get to this private system given the current state of mortgage finance? We call this the “genie in the bottle” problem. A quarter century ago, the proverbial “genie” was let out of the bottle when mortgage markets were deregulated yet left the government guarantees and special treatment of Fannie Mae and Freddie Mac (the “government-sponsored enterprises”, or GSEs) in place. Capital markets over the past twenty five years have developed to be reliant on these guarantees. To wean the system off these guarantees – to put the “genie back in the bottle” - we need to transition away from a government-backed system to a private-based one. The problem is that the transitional process will only succeed if private markets are not crowded out, regulatory capital arbitrage by private guarantors is averted, and systemic risk inherent in mortgage credit and interest rate risks is managed.

We envision that the initial phase of this process would preserve mortgage default insurance because such guarantees have been essential for the way that the securitization market for mortgages has developed. However, the government share of these guarantees would be steadily phased out. To achieve this, the transition should include a public-private partnership in which the private sector decides which mortgages to guarantee and sets the price for the mortgage guarantees but insures only a fraction (say 25%), while the government is a silent partner, insuring the remainder and receiving the corresponding market-based premiums. The public sector involvement should be limited to conforming, tightly underwritten mortgages (for example, to mortgages with loan to value ratios that are at most 80%). The private sector mortgage guarantors would have to be regulated to be well-capitalized and subject to an irrefutable resolution authority. This way, the market pricing of mortgage guarantees will reflect neither explicit nor implicit government guarantees. And, the government guarantees being offered in passive partnership to private markets, and importantly, at private market prices, will ensure that the private sector is not crowded out.

We envision that if such a transition plan were followed, then the private sector would be encouraged to shrug off any regulatory uncertainty and allowed to flourish. Financial innovation in these markets could return. New investors that are focused on the credit risk of mortgage pools would emerge. Mortgages would become more standardized and underwriting standards would improve. To help the transition process along its way to an efficient mortgage market in the long run, reliance on the GSEs' guarantees should be mandated to end in a phased manner. One example of such a mandate would be a gradual reduction of the size limit for conforming mortgages; another would be an increase in the fees that the GSEs charge for their guarantees. These mandates could be implemented sooner if the private capital market develops more quickly.

Although our book, *"Guaranteed to Fail: Fannie Mae, Freddie Mac, and the Debacle of Mortgage Finance"*, was written before the Obama Administration's recently announced plan, there is much common ground between the two: (a) The GSEs should be wound down; and, (b) Efforts to assure housing affordability for low- and moderate-income households should be explicit, on-budget, and primarily the domain of the Federal Housing Administration (FHA). However, the Administration does not currently have a specific proposal for the long-run future role of government guarantees in the U.S. housing finance. Instead, the Administration offers three possibilities, without indicating its preference: (i) a wholly private structure; (ii) a largely private structure, but with an agency that would provide guarantees to new mortgage-backed securities (MBS) at times of severe stress in the mortgage markets; or (iii) a largely private structure, with a government agency providing "tail risk" or catastrophic insurance in the event that a private mortgage guarantor defaulted on its obligations.

We believe that the first of these three possibilities is the appropriate long-term goal; but we believe that our transition plan offers a superior means of getting there. We believe that the Federal Reserve is already the agency for dealing with general and severe stress in financial markets, including MBS, so that any additional effort by a new agency would be duplicative. Further, we believe that the "tail-risk" government insurance will inevitably be underpriced and thus will likely end up being a "back-door" means of subsidizing general mortgage borrowing. Our proposal calls for the government providing side-by-side guarantees – only in the interim – and would explicitly use the market-based pricing of the private guarantors. Also, our proposal will encourage the private sector to develop tail-risk insurance capabilities, which can then expand and replace the government; the advocates of option iii have no such phase-out scenario.

In the following pages, we provide

- (I) an exact timeline and implementation plan corresponding to our proposal;
- (II) a set of questions and answers relating to our proposal; and,
- (III) a detailed evaluation of the Obama Administration's plan.

I. TIMELINE

❖ Shutter Fannie Mae and Freddie Mac:

- Create a Resolution Trust Corporation (RTC) for the GSEs to wind down their \$1.7 trillion portfolio. The preferred structure would be equity partnerships along the lines of those created to resolve the Savings & Loans (S&L) crisis. Since the typical paydown rate for the GSEs in normal times is around 25%, this suggests almost 60% of the original portfolio could be sold off within the first three years.
- In terms of purchases of new loans, the government would effectively be out of this business. We see no need for the GSE RTC, or some other government entity, to be an active trader in these markets. There is a well-developed capital market that can play this role. That said, for purposes of market stabilization, the GSE RTC could purchase modest quantities of MBS that have been guaranteed by the GSEs in the first three years. This would delay slightly the winding down of the portfolio.
- Since the GSEs are to be shut down, the GSEs' securitization and guarantor function for mortgages should similarly be phased out, by reducing the size of loans that they can securitize (the "conforming loan limit") and raising their guarantee fees (the "g-fees").
- After three years, the GSE RTC would sell the remaining portfolio over the next 7 years or sooner. The GSE RTC would be mandated to sell 1/7th of the remainder every year, but, depending on market conditions, might sell a greater amount.

❖ Conforming mortgages:

For conforming mortgages (such as those with loan to value less than 80%, FICO scores above 660, and to borrowers with measurable income – from labor or asset holdings - that can cover the interest on mortgages), mortgage originators have three primary choices:

- *Hold the mortgage loans* on their balance sheet and be subject to a K% capital requirement.
- *Securitize the mortgages, and sell these securities to the capital market at large.* Under Dodd-Frank, banks will be required to retain a 5% interest and must hold at least K% capital against their 5% interest. Qualified residential mortgages, whose criteria remain to be determined, are exempt from this retention requirement. Prudentially regulated capital market investors must also hold at least K% capital on their holdings of these MBS. Of course, market participants that are considered systemically risky (the "systemically important financial institutions", or SIFIs, determined by the Financial Stability Oversight Council, or FSOC, under the Dodd-Frank Act) would be subject to even higher capital requirements. If the securities are structured into various tranches, it must be recognized that the weighted-average capital requirement of the combined tranches must also be at least K%. The expectation is that a MBS market without guarantees will eventually dominate as capital markets develop savvy mortgage-credit investors, and as the transparency of structured products improves.
- *Securitize the mortgage but purchase a guarantee.* Private guarantors would offer insurance on 25% of the securitized mortgage pool at insurance rates determined in the market place. As a silent partner, a newly formed government mortgage insurance company (GMIC) would provide the remaining 75% insurance at those same rates, backed by the full faith and credit of the U.S. government. Initially, given their experience in focusing only on interest rate and prepayment risk and not credit risk, capital market investors might prefer these guaranteed MBS. The expectation, however, is that because this insurance is priced by the market and therefore costly, many investors would prefer to take the credit risk themselves and earn higher yields.
 - The conforming mortgage limit for provision of guarantees by the GMIC would start at \$625K in the first year (current GSE limits exceed \$729K in some high-cost geographic areas), decline by \$75k each year to \$400k in the 4th year, and by \$66k each year thereafter to \$0 by the 10th year. The GMIC would cease to exist after a decade-long period.
 - The private mortgage guarantors would be subject to rigorous prudential regulation and a credible resolution authority (see below).

❖ Non-conforming mortgages

For mortgages that are non-conforming, banks again have three primary choices:

- Hold the mortgage loans on their balance sheet and be subject to a $K^*\%$ capital requirement (where K^* exceeds K , K being the requirement for conforming mortgages).
- Securitize the mortgages, and sell these securities to the capital market at large. Under Dodd-Frank, banks would be required to hold a 5% interest, and, under this rule, they must hold at least $K^*\%$ capital to support their 5% interest. Prudentially regulated capital market investors must also hold at least $K^*\%$ capital on their MBS holdings with the proviso that systemically important financial institutions (SIFI's) would be subject to greater capital requirements. And like above, if the securities are sliced and diced into various tranches, it must be recognized that the weighted-average capital requirement of the combined tranches must also be at least $K^*\%$.
- Private insurance could be offered on 100% of the securitized mortgage pool at insurance rates determined in the marketplace. There would be no role for the government other than fulfilling its regulatory function. These private mortgage guarantors would automatically be considered by the Financial Stability Oversight Council (FSOC) to be systemically important financial institutions (SIFI's), which in effect means they would be subject to (i) higher capital requirements, i.e., $K^{**}\%$ (where K^{**} exceeds K^*), (ii) other forms of enhanced prudential regulation, and (iii) a credible resolution authority (see below).

❖ Resolution authority:

The private mortgage guarantors and their resolution authority would have the following properties:

- The private mortgage guarantors cannot be financed via short-term (systemically risky) liabilities as the risks they guarantee are long-term and systemic in nature.
- If the private guarantors are housed within a larger, complex financial institution, then the insurance unit must be ring-fenced and financed separately, again not using short-term liabilities for funding purposes.
- Upon the failure of one of these private insurers, any losses associated with unpaid mortgage guarantees to capital market investors would be *pari passu* with the senior unsecured debt of the guarantor. In other words, capital market investors would now receive payment on only a fraction of the mortgage balance. This is quite similar to how covered bonds in the mortgage market in other international jurisdictions are treated. The investors would, however, be assured of receiving the 75% from the GMIC.

❖ The bigger picture:

There is tremendous subsidization of homeownership in the United States. The Congressional Budget Office (CBO) estimated that the total cost of tax expenditures - such as the mortgage interest rate tax deductibility, the tax exemption of implicit income from owned housing, the exemption from capital gains upon sale of a house, the subsidies to the GSEs, etc. - is alone close to a staggering \$300 billion per year. This number needs to be substantially reduced to enable private markets to allocate capital more efficiently in the economy. In particular,

- There is over-consumption of housing which crowds out more productive economic investment, such as human capital, social infrastructure and business investment.
- The public mission of stimulating home ownership can be debated. While the GSEs may have had a little impact on increasing housing accessibility for the poor, the GSEs engaged in many activities that were completely unrelated to this mission. There are many more direct and effective ways to support housing initiatives at the federal, state or municipal level. Furthermore, the GSE subsidies applied equally to first and second homes, encouraged leverage, and benefited the rich substantially more than the poor. The latter is true of several of the other tax expenditures as well.

II. Q&A

1. ***What does economic theory tell us about government intervention in markets?*** Regulation is only necessary when there is a market failure. So the relevant question *must* be: What, exactly, is the market failure in mortgage finance that justifies government intervention? The purpose of such intervention should be to remedy a clearly identified market failure, or, in other words, fill in where markets do not exist or are unlikely to achieve socially efficient outcomes.
2. ***Is government intervention necessary in mortgage markets?*** It is clearly untrue that mortgage finance necessarily requires heavy government involvement, in particular, guarantees of mortgage defaults. Looking at the cross-section of mortgage funding models across various developed countries, no country has any entities that resemble Fannie Mae or Freddie Mac. The majority of countries rely on a deposit-based system in which the mortgage lender retains the mortgage loans on their books. These institutions are subject to prudential regulation just like any other bank. And the argument cannot be that this has a major impact on homeownership rates. Of the 25 most developed countries, the U.S. lies 17th in ranking. Of particular importance, what is unique about U.S. mortgage finance is that almost 2/3 of all mortgages are securitized, whereas abroad, the next largest securitizers – Australia and Canada – are only around 20%.¹
3. ***What is the argument then in favor of mortgage-backed securitization?*** While the deposit-based system mentioned above leads to the lender retaining the risk of mortgages (“skin in the game”), there are reasonable economic grounds for preferring the U.S. mortgage finance system of securitization. Securitization truly can turn “lead into gold”: Securitization takes illiquid mortgage loans and pools them to form liquid mortgage-backed securities (MBS) that trade on the secondary market. Because illiquidity commands a risk premium, the more liquid mortgage assets from securitization command better prices and thus a reduced mortgage rate. An additional benefit is that the credit risk gets transferred out of the systemically risky banking sector to the capital market at large. Also, the 30-year fixed-rate mortgage is a difficult financial instrument for banks to hold, since their deposits and other liabilities are considerably shorter term; the securitization of these mortgages, however, allows their natural customers – life insurance companies and pension funds, which have long-lived liabilities – to invest in these long-lived assets. In other words, if securitization works the way it is supposed to, the banking sector can better share its mortgage risks with rest of the economy. Finally, MBS provide banks with access to investors worldwide, which diversifies their funding base. A successful return of securitization, though, will crucially depend on increased transparency and reduced complexity of the structures. We believe the reforms proposed by the Dodd-Frank Act, the SEC’s regulation AB, the FDIC’s new safe harbor rules for securitization, and the FASB regulations 166/167 go a long way towards ensuring that securitization will be safer and more transparent in the future.
4. ***What was the market failure, if any, in this financial crisis that requires government regulation?*** The market failure of the financial crisis is by and large that financial institutions produce systemic risk but do not bear the costs of that risk – we call this a *negative externality*. Financial institutions take risks either on the asset or liability side that are aggregate in nature and can trigger loss of intermediation to households and corporations (a “credit crunch”) and potentially also trigger contagion through inter-connectedness, bank-like runs, and fire sales on assets leading to downward price spirals. Other financial institutions share the costs of such events, which can lead to a complete collapse of the financial system. The private markets cannot

¹ Denmark’s mortgage market relies for 90% on covered bonds, a close cousin of mortgage-backed securities, but which provides investors with full recourse not only to the mortgage loans but also to the bank’s capital. Several other European countries, such as Germany, the U.K., and Spain, have substantial covered bond market shares.

solve this problem efficiently because individual firms do not have incentives to deal adequately with the systemic risk they produce.

If government intervention is required in U.S. mortgage finance, it therefore follows that the purpose of such intervention should be to reduce or manage the systemic risk that emerges from mortgage finance.

5. ***On systemic risk grounds, isn't securitization a better system for mortgage finance than a deposit-based system?*** The answer is generally yes – on the assumption that securitization works as intended. To understand why the U.S. mortgage finance system failed, one has to understand the source of this failure – the government sponsored enterprises (GSEs), Fannie Mae and Freddie Mac (see next several points).
6. ***What was the role of the GSEs, specifically Fannie Mae and Freddie Mac?*** The GSEs have been performing two separate functions. Their first function – *the guarantee function* - is arguably the most important: guaranteeing the credit risk in conforming (prime non-jumbo) mortgages that the GSEs securitize. They charge a small fee (recently, around 20 cents per 100 dollars of unpaid mortgage principal) for this guarantee, and they hold 45 cents of capital for every 100 dollars of mortgage face value that they guarantee. The second is essentially the *proprietary trading function*: purchasing mortgages and both prime and non-prime (Alt-A and subprime) MBS. They financed these asset purchases almost entirely by issuing debt (so-called “agency” debt). Because of the implicit government guarantee (which has now become an explicit guarantee), the GSEs are able to borrow at below-market rates. The GSEs are required to hold 2.50 dollars of capital for every 100 dollars of mortgages and MBS that they hold.
7. ***What was the problem with the GSEs?*** Given both the implicit guarantee of the U.S. government (resulting in a below market cost for debt financing) and favorable capital requirements, the GSEs grew unencumbered for decades. From the last major GSE legislation in 1992, for example, Fannie Mae and Freddie Mac combined went from holding \$153 billion in mortgages and guaranteeing the credit risk of another \$714 billion to holding \$1.5 trillion and guaranteeing \$3.5 trillion, respectively by the end of 2007.
8. ***Were the GSEs systemically risky?*** Yes, due to their interconnectedness - \$1.6 trillion derivative positions, \$3.5 trillion mortgage guarantees (i.e., approximately 7 times that of the infamous A.I.G Financial Products Group), their widely held debt, the possibility of fire sales resulting from liquidation of their \$1.5 trillion portfolio, mortgage finance being at the center of the economy's financial plumbing, and their failure igniting a run on short-term liabilities of the banking sector and possibly sovereign U.S. debt.
9. ***What are the major flaws of the GSE model?***
While a number of problems exist, three stand out:
 - The obvious one is that unpriced government guarantees destroy market discipline and lead to below-market borrowing rates. This in turn encourages excess leverage and risk taking. Private profit taking with socialized risk is simply unacceptable as a matter of public policy.
 - Less discussed, but equally important, is the fact that the mortgage finance system essentially ordained the GSEs as the dominant mortgage player. Under capital rules, if a bank makes a portfolio of loans, the bank must hold 8% capital. If these loans, even of identical risk, were mortgages, the bank would need to hold only 4% capital. If these same mortgage loans were then sold to the GSEs and bought back as mortgage-backed securities, the bank would need to hold only 1.6% capital. Since the GSEs had to hold only 0.45% capital to support their guarantees on these MBS, the lower overall 2.05% capital

requirement basically assured GSE involvement. In fact, over 37% of MBS were held within the banking sector, which is contrary to the “originate-to-distribute” prediction of the desired risk-sharing purpose of securitization business model described above.

- Starting in the 1990s, and increasing over time, partly due to government mandates and partly due to risk taking decisions by the GSEs, the GSEs took on mortgages with high credit risk, such as loan-to-value ratios greater than 80% (i.e., down payments less than 20%), borrowers with FICO scores less than 660, and Alt-A loans (i.e., those with lower documentation levels). The light regulatory capital requirements - 2.5% for portfolio holdings and 0.45% for their MBS default guarantees – may have seemed reasonable when set back in 1992, but the mortgage-backed assets of the GSEs of 2007 had a quite different credit risk profile than those of 15 years earlier.

10. ***Why did mortgage securitization fail?*** Securitization failed in mortgage markets because the risk transfer it promises did not (sufficiently) take place, largely because of regulatory arbitrage of capital requirements, and because the credit rating agencies massively mis-rated private-label mortgage-backed securities. The GSEs, as private companies, were essentially mandated to be front and center of mortgage securitization markets. The mortgages that they guaranteed saw unprecedented default rates during the crisis of 2007-2009. The GSEs had underestimated and underpriced that default risk, which combined with the losses on their investment portfolio, resulted in their insolvency. But non-conforming mortgages securitized in “private-label” MBS fared even worse. They saw default rates 3-5 times as high as those on conforming mortgages.

- The credit rating agencies massively mis-rated these private-label MBS securities, as witnessed by the fact that in January 2010 less than 10% of subprime MBS were still rated AAA compared to 80% in January 2008. The ratings problems were even worse for collateralized debt obligations (CDOs) that had tranches of mortgage-backed securities as collateral.
- Other too-big-to-fail financial institutions exploited loopholes in regulatory capital requirements through private-label securitization to concentrate risky tail bets with little or no capital. They either directly held MBS on balance sheet or provided guarantees to MBS that they transferred to off-balance sheet special purpose vehicles (conduits and SIVs). The future U.S. mortgage finance system needs to prevent such buildups in systemic risk by tightening the regulatory capital treatment of (tranches of) MBS and guarantees written to special purpose vehicles. The new FASB 166/167 rules concerning consolidation of assets in special purpose vehicles for the purpose of regulatory capital calculations, the SEC’s Regulation AB, and the FDIC’s new safe harbor rules for securitizations are all steps in the right direction.

11. ***If a mortgage finance system has securitization as its anchor, does it require heavy-handed government involvement, e.g., government guarantees of mortgage defaults?*** The answer is NO. There are many securities markets that expose investors to credit risk, which function as intended. It is certainly true that government guarantees of mortgage defaults remove credit risk from the pools of mortgages underlying the mortgage-backed securities. This helps standardize these mortgage pools, allowing for greater liquidity and secondary market trading. But as we have argued above, these government guarantees come at great cost, not least the distortions that these guarantees produce in the mortgage market and the crowding out of private markets. The role of the government in securitization should be limited to set regulations that improve data disclosure, increase standardization, and reduce complexity of securitized products so that these markets can flourish again.

12. ***Your proposed solution for mortgage finance system does, however, involve some form of government guarantees. Why?*** The executive summary termed this the “genie in the bottle” problem. Capital market investors have relied on government guarantees for 25-plus years,

focusing on the valuation and trading of MBS securities that carry only interest rate and prepayment risk. There needs to be a transition that allows the private market to develop. In reality, private markets do not spring up out of thin air. As has been demonstrated through past financial innovations, such as the emergence of mortgage-backed securities, high-yield bonds, and leveraged loans, it takes years to develop the investor base and institutional knowledge of the markets. One of the failures of the current crisis was that, like previous mortgage market failures (e.g., collateralized mortgage obligations in the early 1990s), the market for subprime securitization products arose so quickly that when the financial crisis started, there wasn't really the market or expertise for standby private capital to step in.

13. ***So how will your proposal work?*** Since mortgage default guarantees were an essential element of the development and liquidity of the mortgage market, to the extent possible, mortgage default insurance should be preserved in the short term as we transition to a fully private market. The problem is that the private sector cannot be the sole provider, as this insurance is systemic due to its dependence on macroeconomic events. The negative externalities caused by such aggregate risk exposure are not fully reflected in the price of insurance. Yet because there is not the right incentive structure and no accountability (let alone political considerations), the public sector cannot step into the breach. We argue for a public-private partnership in which the private sector determines which mortgages to guarantee and at what price to guarantee them, insuring only a 25% fraction, while the government is a silent partner, insuring the majority 75% of the remainder and receiving the corresponding market-based premiums. It is important that the public sector involvement be limited to conforming, safe mortgages. And to help the transition along its way, the loan limit for conforming mortgages would be gradually reduced over time. Market pricing of the guarantees will ensure that a competing private sector mortgage market (without guarantees) will not be crowded out. Precedence for such partnerships exists, such as the private-public program given by the Terrorism Risk Insurance Act (TRIA) of 2007. Most important, and described in prior pages, the private sector firm/subsidiary would be “well-capitalized” and subject to an irrefutable resolution authority.
14. ***Are there any concerns?*** Most notably, once the GSEs are effectively shuttered, it is hard to believe that systemic risk in the mortgage finance market will not persist. One can imagine that this risk will be gradually built up by private sector financial institutions that garner favorable capital requirements and government guarantees. It is crucial therefore that the external costs of systemic risk are internalized by each financial institution to prevent private sector “GSEs” from forming.
15. ***What about the affordability of housing?*** Affordability issues have bedeviled housing policy and were partly responsible for the demise of the GSEs. In the apparent pursuit of affordability, the U.S. has had policies (such as the deductibility of mortgage interest against income tax) that are extremely costly to the federal budget (as much as \$300 billion/year), yet mostly favor higher income households. These policies ultimately made housing less affordable because they pumped up housing prices by making mortgage debt artificially cheap.
16. ***What about encouraging home ownership?*** Many of those same policies have also been supposed to encourage home ownership. But they mostly encourage upper-income households, who would buy their homes anyway, to buy larger houses on larger lots, and to take on excessive debt in doing so. An important consequence is that the U.S. has invested too much in housing and not enough in other forms of productive capital (including business investment, social infrastructure, and human capital), so that U.S. GDP is lower than it otherwise could be.

III. The Administration's Plan

From a level of 30,000 feet, it is hard to argue against the fundamental premise of the administration's plan for mortgage finance, and, in particular, for the GSEs. Their various plans all call for effectively winding down and eventually shuttering Fannie and Freddie and, as a replacement, for a privatized system of housing finance with little government involvement:

"Under our plan, private markets – subject to strong oversight and standards for consumer and investor protection – will be the primary source of mortgage credit and bear the burden for losses. Banks and other financial institutions will be required to hold more capital to withstand future recessions or significant declines in home prices, and adhere to more conservative underwriting standards that require homeowners to hold more equity in their homes. Securitization, alongside credit from the banking system, should continue to play a major role in housing finance subject to greater risk retention, disclosure, and other key reforms. Our plan is also designed to eliminate unfair capital, oversight, and accounting advantages and promote a level playing field for all participants in the housing market. The Administration will work with the Federal Housing Finance Agency ("FHFA") to develop a plan to responsibly reduce the role of the Federal National Mortgage Association ("Fannie Mae") and the Federal Home Loan Mortgage Corporation ("Freddie Mac") in the mortgage market and, ultimately, wind down both institutions."

("Reforming America's Housing Finance Market", Administration Report to Congress.)

That said, there is plenty to quibble about in the report itself and, in particular, with respect to the implementation of the administration's proposals. We separate our remarks into four areas:

1. The causes of the crisis and the GSE's role

We agree with the basic notion that we want to look forward and not back. But the role and subsequent failure of the GSEs within the U.S. mortgage finance system provide valuable lessons for how to reform the system.

There is little doubt that the financial crisis was not brought about just by the reckless profit-seeking incentives of then-private-but-always-implicitly-guaranteed Fannie and Freddie. Private-label securitization of sub-prime and Alt-A mortgages, which were destined to fail when house prices fell and which were not guaranteed by Fannie and Freddie, left much to be desired as well. There were poor underwriting practices and standards; the capitalization of originators and securitizers was woefully inadequate and many of these also enjoyed explicit or implicit government guarantees; the private-label MBS were massively mis-rated by the credit rating agencies, whose ratings many investors took on blind faith; and the dispersed owners of sliced-and-diced tranches of risk had little incentive to pursue efficient renegotiation of defaulted or near-default mortgages. In the end, many private players became too big to fail, just like Fannie and Freddie.

But the data do not support the idea that the GSE's mortgage portfolio and credit guarantees followed safe and sound practices prior to the 2005 period. While the quality of the 2005-2007 vintages were certainly below those of the earlier period, the main determinant of defaults was the collapse in home prices. If such a collapse had occurred prior to the 2005 period, then the GSEs would have failed then too, perhaps not as spectacularly, but failed nonetheless. The data from the FHFA (via Fannie Mae and Freddie Mac) show significant increases in the riskiness of their mortgages starting in the 1990s. It is not rocket science to understand that high loan-to-value (LTV) ratios and lower FICO scores increase risk exposure. The fact that national house prices, according to the Case-Shiller index, increased 132 straight months from 1995 to 2005 is the primary reason mortgage defaults were low in this period. The GSEs, or future variations of the GSEs, need to therefore go back to sound underwriting. We think

the 90% LTV cited in the Administration's report is too high and favor an 80% LTV ratio for first and second liens combined. That is, a household with 20% equity in its house would not be allowed to take on a second mortgage or a home equity line of credit, while a household with 30% equity could take on a second mortgage no larger than 10% of the value of its house.

Also missing from the report, and perhaps most important, is the key problem that the mortgage finance system placed the GSEs as the heads of U.S. mortgage finance. They received implicit government guarantees that enabled them to borrow at near-government rates with little or no capital. If banks involved Fannie or Freddie in the mortgage underwriting and securitization process, the system allowed for twice the leverage even though the underlying risk was the same. It should not be surprising that the U.S. banking sector, including Fannie and Freddie, held 37% of GSE MBS in 2007. This is the opposite implication of the originate-to-distribute model of securitization: risks remained on the financial sector's balance sheet rather than being dispersed to capital-market investors and other intermediaries.

It is important to understand the consequences of this regulatory capital arbitrage. A pool of mortgages, no matter how these mortgages are sliced and diced in securitization or guaranteed by one counterparty or another, has the same overall risk. If regulators believe a certain amount of capital needs to be held against these mortgages, then sound economics suggests this should be similar at the beginning and end of the securitization process. Moreover, if systemically important financial institutions hold these mortgages or securitized versions, then the capital requirements should actually go up to reflect the external costs of systemic risk. In equilibrium, one might expect therefore that the less systemic institutions would hold these securities, in contrast to what was observed in the period leading up to 2007.

The importance of this observation cannot be understated. The new and improved mortgage finance system must be a level playing field or systemic risk will once again be built up within a few financial institutions: those who can hold the risk at the lowest cost and whose costs are artificially cheap because of explicit or implicit government guarantees.

2. The unwinding of the GSEs

The report makes four suggestions for unwinding the GSEs. While each of the four recommendations is reasonable, each lacks specifics:

A. Increasing guarantee fees to bring in more private capital.

"We support ending the unfair capital advantages that Fannie Mae and Freddie Mac previously enjoyed and recommend FHFA require that they price their guarantees as if they were held to the same capital standards as private banks or financial institutions."

("Reforming America's Housing Finance Market", Administration Report to Congress.)

There is no recognition that the government, no matter how well intended, cannot accurately price default risk. Without accountability, and subject to no market discipline, it is difficult to see how the pricing will improve under the watchful eye of the FHFA. Without market pricing, it is not clear how private markets will emerge.

B. Increasing private capital ahead of Fannie Mae and Freddie Mac guarantees.

"In addition to increasing guarantee pricing, we will encourage Fannie Mae and Freddie Mac to pursue additional credit-loss protection from private insurers and other capital providers. We also support increasing the level of private capital ahead of Fannie Mae and Freddie Mac's guarantees by requiring larger down payments by borrowers. Going forward, we support

gradually increasing the level of required down payment so that any mortgages insured by Fannie Mae or Freddie Mac eventually have at least a ten percent down payment."

("Reforming America's Housing Finance Market", Administration Report to Congress.)

Fannie Mae and Freddie Mac were statutorily required to hold mortgages with at least 20% down payment. The way the GSEs got around this restriction was to have private mortgage insurance (PMI) on the mortgages. While PMI provides protection to Fannie and Freddie, it does not change the fact that mortgages with high LTVs are more likely to default. These defaults lead to deadweight costs that push the value of the property down. To lower the mortgage risk, 10% down payment is not sufficient. Encouraging additional credit-loss protection is not a bad idea per se as long as it is structured in a way that does not reduce the overall capital in the system. Mortgage insurers, by their very nature, are systemically risky. For example, leading up to the financial crisis, \$960 billion of PMI had been written with 80% of the insurance performed by just 6 companies. In 2007 alone, these companies lost 60% of their market value, effectively causing them to suffer a capital shortfall. The key goal should be to prevent a systemic risk buildup anywhere in the financial sector, whether public or private.

C. *Reducing conforming loan limits.*

"In order to further scale back the enterprises' share of the mortgage market, the Administration recommends that Congress allow the temporary increase in conforming loan limits that was approved in 2008 to expire as scheduled on October 1, 2011 and revert to the limits established under HERA. We will work with Congress to determine appropriate conforming loan limits in the future, taking into account cost-of-living differences across the country."

("Reforming America's Housing Finance Market", Administration Report to Congress.)

While reverting to a loan limit of \$625,000 is a necessary action, it is by no means sufficient. The implication of the above paragraph is that these limits would remain in place, otherwise why mention the cost-of-living differences nationwide. A conforming loan limit of \$625,000 keeps the government firmly entrenched in the jumbo segment of the housing market. For the private sector to emerge, and as long as the GSEs are "alive", there has to be a formal way to eventually choke the life out of these GSEs. Gradual loan limit reductions all the way down to zero and according to a clear timeline would seem like a straightforward way to do this.

D. *Winding down Fannie Mae and Freddie Mac's investment portfolio.*

"The PSPAs require a reduction in this risk-taking by winding down their investment portfolios at an annual pace of no less than 10 percent."

("Reforming America's Housing Finance Market", Administration Report to Congress.)

While we prefer a more immediate closing of the GSEs, lest they still crowd out the private sector, and for their portfolio to go into an RTC-like entity, the 10% reduction should be quite manageable given the normal pay-down rate of the mortgage portfolios. We advocate a faster paydown rate if market conditions permit, and we advocate legislation to that end so that future administrations cannot renege on this plan.

3. The Public Mission

The report writes that:

“we should make sure that all Americans who have the credit history, financial capacity, and desire to own a home have the opportunity to take that step. At the same time, we should ensure that there are a range of affordable options for the 100 million Americans who rent, whether they do so by choice or necessity.”

(“Reforming America’s Housing Finance Market”, Administration Report to Congress.)

As one path to the above goal, the report calls for a reformed and strengthened Federal Housing Administration (FHA), which includes (i) a commitment to affordable rental housing, (ii) measures to ensure that capital is available to creditworthy borrowers in *all* communities, including rural areas, economically distressed regions, and low-income communities, and (iii) a flexible and transparent funding source to support targeted access and affordability initiatives.

A reasonable question to ask is why households that have the “credit history and financial capacity” cannot access the mortgage market. Where is the market failure that private markets cannot operate here but can elsewhere?

Is it not mildly worrying that the administration still emphasizes a role for government agencies to target creditworthy low and moderate income households, in effect, to continue the “American dream” of homeownership? It is taken as a given that these programs are socially optimal. The enormous subsidies thrown at housing - the mortgage interest rate tax deductibility, the tax exemption of implicit income from owned housing, the exemption from capital gains upon sale of a house, and the subsidies to Fannie and Freddie - have not served us well. Many low-income households ended up losing their little home equity and are left with little but a ruined credit history. As documented in numerous economic studies, most of these programs involve transfers of wealth to the well-to-do and not to the poor. More generally, there needs to be serious analysis and debate whether this is the best way to redistribute wealth to households in need.

4. The Administration’s three plans

The Administration offers three possibilities, all of which involve efforts to assure housing affordability for low- and moderate-income households -- albeit explicit, on-budget, and primarily the domain of the Federal Housing Administration (FHA). Putting aside the above discussion on whether this is the socially optimal goal, returning to the past tighter standards of the FHA and making all of these programs transparent removes some of the major issues that arose with Fannie and Freddie.

Conditional on a government role through the FHA, the administration presents three plans: (i) a wholly private structure; (ii) a largely private structure, but with an agency that would provide guarantees to new MBS at times of general and severe stress in the MBS markets; or (iii) a largely private structure, with a government agency providing “tail risk” or catastrophic insurance in the event that a private guarantor defaulted on its obligations. As is clear, we believe that the first is the appropriate long-term goal; but we believe that our plan is a superior interim means of getting there. The other two plans offered by the administration allow for the government to slide into the mortgage market through the backdoor and remain permanent fixtures.

In one option, the government comes in like the Lone Ranger (or should we say “Loan Ranger”) and saves the day in a financial crisis. It is not atypical for government entities to act as a lender of last resort, but, to keep the mortgage system in check, it should be the case that whatever the government lends out in a crisis should be at exorbitant rates. In other words, it should really be THE last resort.

Where to set the threshold for government intervention is difficult and determining the level of guarantee fees that will adequately compensate the government for the default risk of mortgages issued during a crisis is even more difficult. Also, isn't this the function that we already expect the Federal Reserve to perform?

The final option offered by the administration looks a little like what we currently have in disguise. When mortgages start to default, private mortgage guarantors that sold protection would absorb the first losses. If defaults continue to mount, and private guarantors are wiped out, the government would step in and make the MBS holders whole. In this plan, the government assumes the so-called tail (or economic catastrophe) risk. While such a system brings back some market discipline and tries to address systemic risk, it nevertheless is a dangerous idea for four reasons.

First, can we think of any instance in which the government does a good job in pricing credit risk, whether it is deposit insurance for banks or hurricane insurance in Florida? The answer is a resounding no. Even if they had the very best people working for them, setting the correct price would be virtually impossible. Without the interaction and competition amongst market participants and resulting information revelation, the prices of the tail risk will be wrong. And, eventually, moral hazard will rear its ugly head. The problem of pricing the risk accurately is only aggravated by the fact that this is tail risk. By its nature, tail risk only materializes rarely. Lack of data thus plagues the pricing process.

Second, markets (and politicians) become impatient if they have to pay for tail risk insurance which (by its nature) may not materialize for many years. They will call for a reduction in catastrophic risk insurance fees, often at the very moment that more credit (tail) risk is taken on. This is what happened with FDIC insurance fees. Banks successfully lobbied to stop contributing to the fund during the quiet time. While its coffers appeared full at the time by standards of expected losses, the fund experienced a massive unexpected shortfall when the catastrophic risk materialized in 2008-2009.

Third, if there is one thing the current financial crisis has taught us, regulators are always one step behind well-paid financiers. The crisis was the poster child for financiers' coming up with clever ways of pushing risk out into the tails and avoiding capital requirements. It doesn't take much imagination to see how mortgage financiers will do the same here, given that they in effect control the quantity of tail risk borne by the government.

Fourth, if private mortgage insurers suffer first losses, and an event occurs that triggers a government payout, then by construction all the private mortgage insurers go bust. Next, the government takes over the mortgage market, crowding out private markets from then on. There is a certain "been there, done that" feel to this plan. And we will be back to solving the "genie in the bottle" problem that we face right now!