Statement of Andrew Davidson

United States Senate Banking Housing and Urban Affairs Committee
Subcommittee on Securities, Insurance, and Investment
"Securitization of Assets: Problems and Solutions"
October 7, 2009

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Mr. Chairman and Members of the Subcommittee,

I appreciate the opportunity to testify before you today about securitization. My expertise is primarily in the securitization of residential mortgages and my comments will be primarily directed toward those markets.

Securitization has been a force for both good and bad in our economy. A well functioning securitization market expands the availability of credit for economic activity and home ownership. It allows banks and other financial institutions to access capital and reduces risk. On the other hand a poorly functioning securitization market may lead to misallocation of capital and exacerbate risk.[1]

Before delving into a discussion of the current crisis, I would like to distinguish three types of capital markets activities that are often discussed together: Securitization, Structuring and Derivatives.[2]

Securitization is the process of converting individual loans into securities that can be freely transferred. Securitization serves to separate origination and investment functions.

[1] Portions of this statement are derived from "Securitization: After the Fall", Anthony Sanders and Andrew Davidson, forthcoming.
[2] See Andrew Davidson, Anthony Sanders, Lan-Ling Wolff and Anne Ching, *Securitization*, 2003 for a detailed discussion of securitization and valuation of securitized products

Without securitization investors would need to go through a very complex process of transferring the ownership of individual loans. The agency mortgage-backed securities (MBS) from Ginnie Mae, Fannie Mae and Freddie Mac are one of the most successful financial innovations. However, as the last years have taught us, the so-called, “originate to sell” model, especially as reflected in private-label (non-agency) MBS, has serious shortcomings.

Structuring is the process of segmenting the cash flows of one set of financial instruments into several bonds which are often called tranches. The collateralized mortgage obligation or CMO is a classic example of structuring. The CMO transforms mortgage cash flows into a variety of bonds that appeal to investors from short-term stable bonds, to long-term investments. Private label MBS use a second form of structuring to allocate credit risk. A typical structure uses subordination, or over-collateralization, to create bonds with different degrees of credit risk. The collateralized debt obligation or CDO is a third form of structuring. In this case, bonds, rather than loans, are the underlying collateral for the CDO bonds which are segmented by credit risk. Structuring allows for the expansion of the investor base for mortgage cash flows, by tailoring the bonds characteristics to investor requirements. Unfortunately, structuring has also been used to design bonds that obfuscate risk and return.

Derivatives, or indexed contracts, are used to transfer risk from one party to another. Derivatives are a zero sum game in that one investor’s gain is another’s loss. While typically people think of swaps markets and futures markets when they mention

derivatives, the TBA (to be announced) market for agency pass-through mortgages is a large successful derivative market. The TBA market allows for trading in pass-through MBS without the need to specify which pool of mortgages will be delivered. More recently a large market in mortgage credit risk has developed. The instruments in this market are credit default swaps (CDS) and ABX, an over-the-counter index based on subprime mortgage CDS. Derivatives allow for risk transfer and can be powerful vehicles for risk management. On the other hand, derivatives may lead to the creation of more risk in the economy as derivate volume may exceed the underlying asset by substantial orders of magnitude.

For any of these products to be economically useful they should address one or more of the underlying investment risks of mortgages: funding, interest rate risk, prepayment risk, credit risk and liquidity. More than anything else mortgages represent the **funding** of home purchases. The twelve trillion of mortgages represents funding for the residential real estate of the country. **Interest rate risk** arises due to the fixed coupon on mortgages. For adjustable rate mortgages it arises from the caps, floors and other coupon limitations present in residential mortgage products. Interest rate risk is compounded by prepayment risk. **Prepayment risk** reflects both a systematic component that arises from the option to refinance (creating the option features of MBS) as well as the additional uncertainty created by the difficulty in accurately forecasting the behavior of borrowers. **Credit risk** represents the possibility that borrowers will be unable or unwilling to make their contractual payments. Credit risk reflects the borrower's financial situation, the terms of the loan and the value of the home. Credit risk has systematic components related to the performance of the economy, idiosyncratic risks related to individual borrowers and

operational risks related to underwriting and monitoring. Finally, **liquidity** represents the ability to transfer the funding obligation and/or the risks of the mortgages.

In addition to the financial characteristics of these financial tools, they all have tax, regulatory and accounting features that affect their viability. In some cases tax, regulatory and accounting outcomes rather than financial benefit are the primary purpose of a transaction. In developing policy alternatives each of these activities: securitization, structuring and derivatives, pose distinct but interrelated challenges.

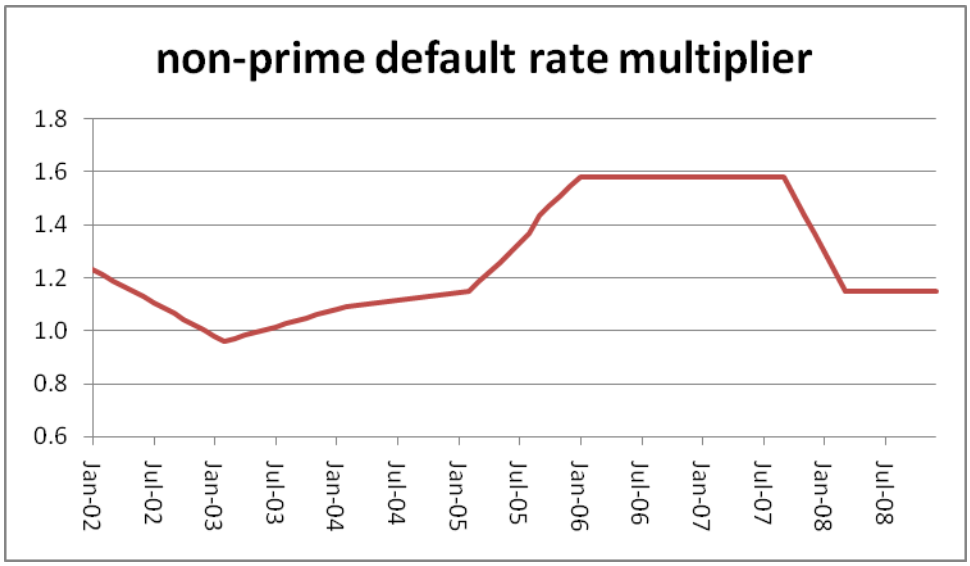
Role of securitization in the current financial crisis

The current economic crisis represents a combination of many factors and blame can be laid far and wide. Additional analysis may be required to truly assess the causes of the crisis. Nevertheless I believe that securitization contributed to the crisis in two important ways. It contributed to the excessive rise in home prices and it created instability once the crisis began.

First, the process of securitization as implemented during the period leading up to the crisis allowed a decline in underwriting standards and excessive leverage in home ownership. The excess lending likely contributed to the rapid rise in home prices leading up to the crisis. In addition to the well documented growth in subprime and Alt-A lending, we find that the quality of loans declined during the period from 2003 to 2005, even after adjusting for loan to value ratios, FICO scores, documentation type, home prices and other factors reflected in data available to investors. The results of our analysis are shown in Figure 1. It shows that the rate of delinquency for loans originated in 2006 is

more than 50% higher than loans originated in 2003. The implication is that the quality of underwriting declined significantly during this period, and this decline was not reflected in the data provided to investors. As such it could reflect fraud, misrepresentations and lower standard for verifying borrower and collateral data. The net impact of this is that borrowers were granted credit at greater leverage and at lower cost than in prior years.

Figure 1.



In concrete terms, the securitization market during 2005 and 2006 was pricing mortgage loans to an expected lifetime loss of about 5%. Our view is that even if home prices had remained stable, these losses would have been 10% or more. Given the structure of many of these loans, with a two-year initial coupon and an expected payoff by the borrower at reset, the rate on the loans should have been 200 or 300 basis points higher. That is, initial coupons should have been over 10% rather than near 8%.

Our analysis further indicates that this lower cost of credit inflated home prices. The combination of relaxed underwriting standards and affordability products, such as option-arms, effectively lowered the required payment on mortgages. The lower payment served to increase the price of homes that borrowers could afford. Figure 2 shows the rapid rise in the perceived price that borrowers could afford in the Los Angeles area due to these reduced payment requirements. Actual home prices then followed this pattern. Generally we find that securitization of subprime loans and other affordability products such as option arms were more prevalent in the areas with high amounts of home price appreciation during 2003 to 2006. To be clear, not all of the affordability loans were driven by securitization, as many of the option arms remained on the balance sheet of lending institutions.

Figure 2.

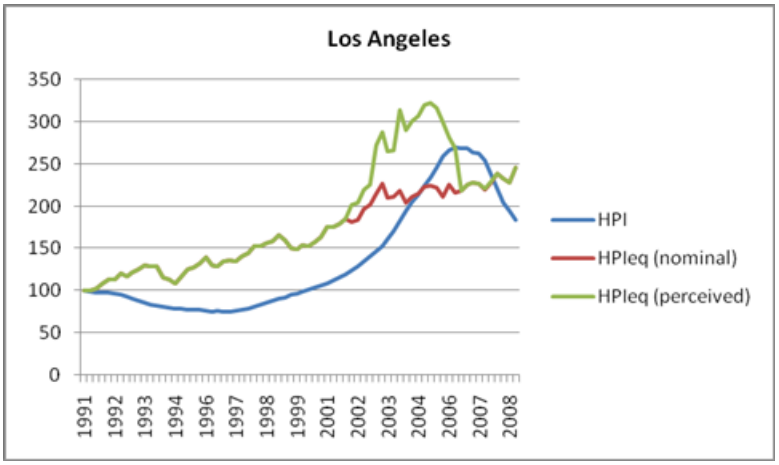
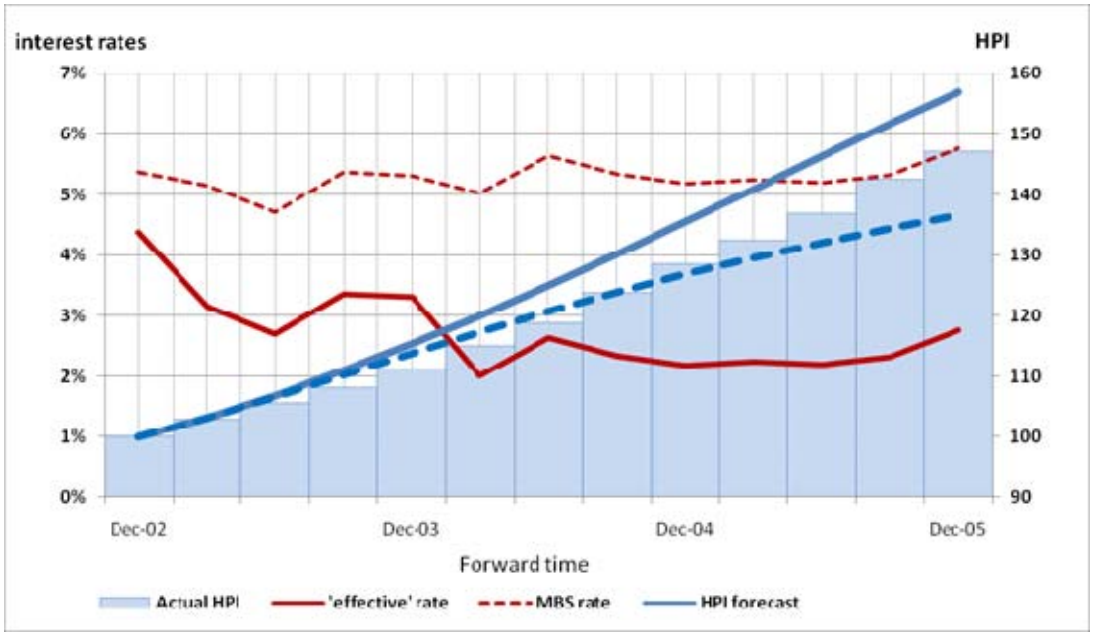


Figure 3 provides an indication of the magnitude of home price increases that may have resulted from these products on a national basis. Based on our home price model, we estimate that home prices may have risen by 15% at the national level due to lower

effective interest rates. In the chart, the gap between the solid blue line and the dashed blue line reflects the impact of easy credit on home prices.

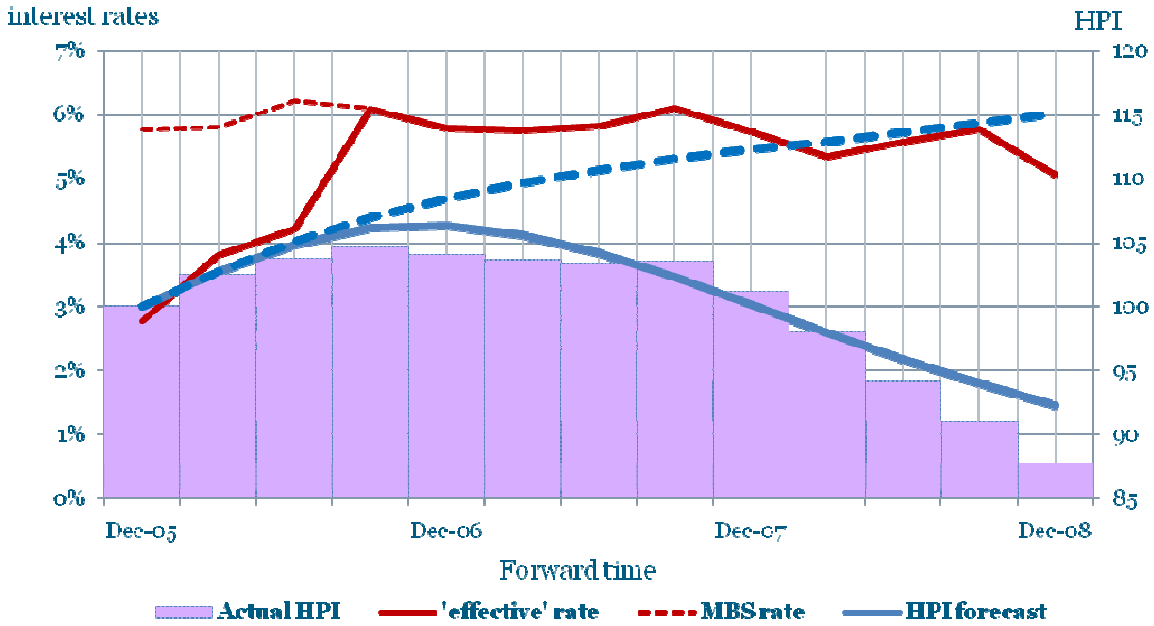
Figure 3.



On the flip side, we believe that the shutting down of these markets and the reduced availability of mortgage credit contributed to the sharp decline in home prices we have seen since 2006 as shown in Figure 4. Without an increase in effective mortgage rates, home prices might have sustained their inflated values as shown by the dashed blue line.[3]

[3] See http://www.ad-co.com/newsletters/2009/Jun2009/Valuation_Jun09.pdf for more details.

Figure 4.



Thus the reduced focus on underwriting quality lead to an unsustainable level of excess leverage and reduced borrowing costs which helped to inflate home prices. When these "affordability" products were no longer sustainable in the market, they contributed to the deflation of the housing bubble.

The way securitization was implemented during this period fostered high home prices through poor underwriting, and the end of that era may have led to the sharp decline in home prices and the sharp decline in home prices helped to spread the financial crisis beyond the subprime market.

The second way that securitization contributed to the current economic crisis is through the obfuscation of risk. For many structures in the securitization market: especially collateralized debt obligations, structured investment vehicles and other resecuritizations,

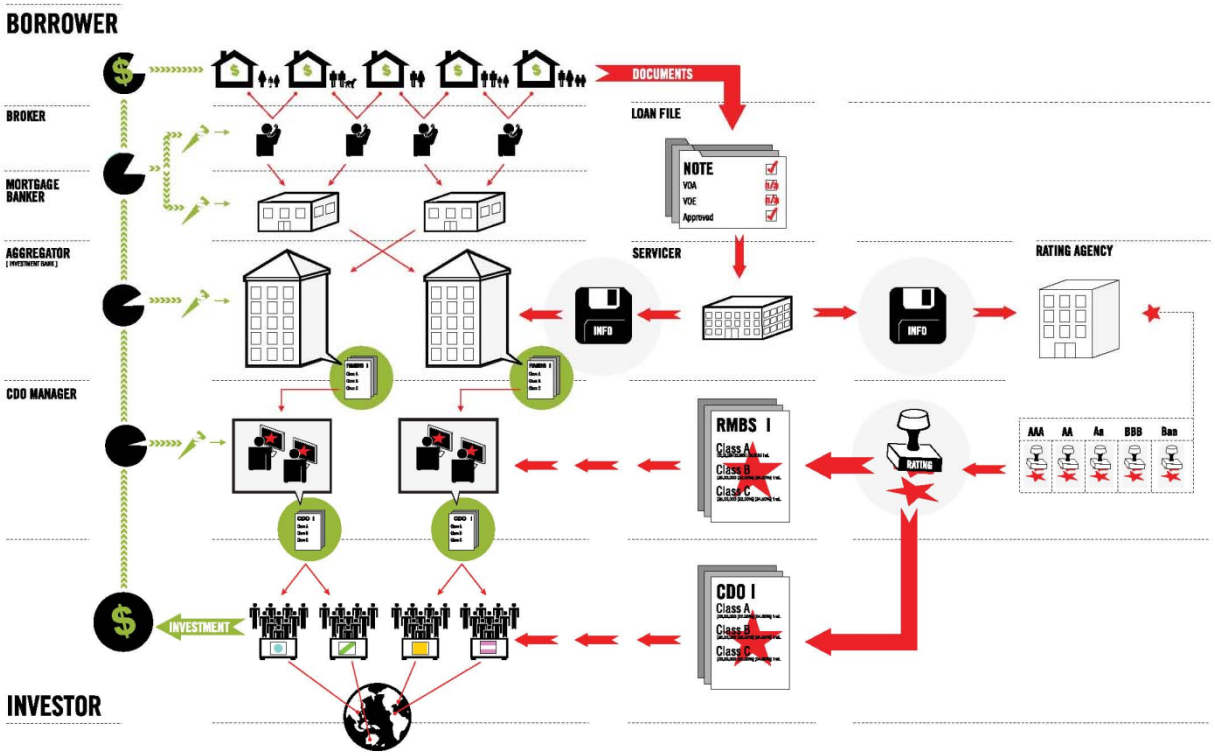
there is and was insufficient information for investors to formulate an independent judgment of the risks and value of the investment. As markets began to decline in late 2007, investors in all of these instruments and investors in the institutions that held or issued these instruments were unable to assess the level of risk they bore.

This lack of information quickly became a lack of confidence and led to a massive deleveraging of our financial system. This deleveraging further depressed the value of these complex securities and led to real declines in economic value as the economy entered a severe recession. In addition, regulators lacked the ability to assess the level of risk in regulated entities, perhaps delaying corrective action or other steps that could have reduced risk levels earlier.

Limitations of Securitization Revealed

To understand how the current market structure could lead to undisciplined lending and obfuscation of risk it is useful to look at a simplified schematic of the market. [4]

Figure 5.



In the simplest terms, what went wrong in the subprime mortgage in particular and the securitization market in general is that the people responsible for making loans had too

[4] Adapted from Six Degrees of Separation, August 2007, by Andrew Davidson http://www.securitization.net/pdf/content/ADC_SixDegrees_1Aug07.pdf

little financial interest in the performance of those loans and the people with financial interest in the loans had too little involvement in the how the loans were made.

The secondary market for non-agency mortgages, including subprime mortgages, has many participants and a great separation of the origination process from the investment process. Each participant has a specialized role. Specialization serves the market well, as it allows each function to be performed efficiently. Specialization, however also means that risk creation and risk taking are separated.

In simplified form the process can be described as involving:

A borrower—who wants a loan for home purchase or refinance

A broker—who works with the borrower and lenders to arrange a loan

A mortgage banker—who funds the loan and then sells the loan

An aggregator—(often a broker-dealer) who buys loans and then packages the loans into a securitization, whose bonds are sold to investors.

A CDO manager—who buys a portfolio of mortgage-backed securities and issues debt

An investor—who buys the CDO debt

Two additional participants are also involved:

A servicer—who keeps the loan documents and collects the payments from the borrower

A rating agency—that places a rating on the mortgage securities and on the CDO debt

This chart is obviously a simplification of a more complex process. For example, CDOs were not the only purchasers of risk in the subprime market. They were however a dominant player, with some estimating that they bought about 70% of the lower rated classes of subprime mortgage securitizations. What is clear even from this simplified process is that contact between the provider of risk capital and the borrower was very attenuated.

A central problem with the securitization market, especially for subprime loans was that no one was the gate keeper, shutting the door on uneconomic loans. The ultimate CDO bond investor placed his trust in the first loss investor, the rating agencies and the CDO manager, and in each case that trust was misplaced.

Ideally mortgage transactions are generally structured so that someone close to the origination process would take the first slice of credit risk and thus insure that loans were originated properly. In the subprime market, however it was possible to originate loans and sell them at such a high price, that even if the mortgage banker or aggregator retained a first loss piece (or residual) the transaction could be profitable even if the loans did not

perform well. Furthermore, the terms of the residuals were set so that the owner of the residual might receive a substantial portion of their cash flows before the full extent of losses were known.

Rating agencies set criteria to establish credit enhancement levels that ultimately led to ratings on bonds. The rating agencies generally rely on historical statistical analysis to set ratings. The rating agencies also depend on numeric descriptions of loans like loan-to-value ratios and debt-to-income ratios to make their determinations. Rating agencies usually do not review loans files or "re-underwrite" loans. Rating agencies also do not share in the economic costs of loan defaults. The rating agencies methodology allowed for the inclusion of loans of dubious quality into subprime and alt-A mortgage pools, including low documentation loans for borrowers with poor payment histories, without the offsetting requirement of high down payments.

To help assure investors of the reliability of information about the risks of purchased loans, the mortgage market has developed the practice of requiring "representations and warranties" on purchased loans. These reps and warrants as they are called, are designed to insure that the loans sold meet the guidelines of the purchasers. This is because mortgage market participants have long recognized that there is substantial risk in acquiring loans originated by someone else. An essential component in having valuable reps and warrants is that the provider of those promises has sufficient capital to back up their obligations to repurchase loans subsequently determined to be inconsistent with the reps and warrants. A financial guarantee from an insolvent provider has no value.

Representations and warranties are the glue that holds the process together; if the glue is weak the system can collapse.

The rating agencies also established criteria for Collateralized Debt Obligations that allowed CDO managers to produce very highly leveraged portfolios of subprime mortgage securities. The basic mechanism for this was a model that predicted the performance of subprime mortgage pools were not likely to be highly correlated. That is defaults in one pool were not likely to occur at the same time as defaults in another pool. This assumption was at best optimistic and most likely just wrong.

In the CDO market the rating agencies have a unique position. In most of their other ratings business, a company or a transaction exists or is likely to occur and the rating agency reviews that company or transaction and establishes ratings. In the CDO market, the criteria of the rating agency determine whether or not the transaction will occur. A CDO is like a financial institution. It buys assets and issues debt. If the rating agency establishes criteria that allow the institution to borrow money at a low enough rate or at high enough leverage, then the CDO can purchase assets more competitively than other financial institutions. If the CDO has a higher cost of debt or lower leverage, than it will be at a disadvantage to other buyers and will not be brought into existence. If the CDO is created, the rating agency is compensated for its ratings. If the CDO is not created, there is no compensation. My view is that there are very few institutions that can remain objective given such a compensation scheme.

CDO bond investors also relied upon the CDO manager to guide them in the dangerous waters of mortgage investing. Here again investors were not well served by the compensation scheme. In many cases CDO managers receive fees that are independent of the performance of the deals they manage. While CDO managers sometimes keep an equity interest in the transactions they manage, the deals are often structured in such a way that that the deal can return the initial equity investment even if some of the bonds have losses. Moreover, many of the CDOs were managed by start-up firms with little or no capital.

Nevertheless, much of the responsibility should rest with the investors. CDO bond investors were not blind to the additional risks posed by CDO investing. CDOs generally provided higher yields than similarly rated bonds, and it is an extremely naïve, and to my mind, rare, investor who thinks they get higher returns without incremental risk. It is not unusual, however, for investors not to realize the magnitude of additional risk they bear for a modest incremental return. Ultimately it is investors who will bear the losses, and investors must bear the bulk of the burden in evaluating their investments. There were clear warning signs for several years as to the problems and risk of investing in subprime mortgages. Nevertheless, investors continued to participate in this sector as the risks grew and reward decreased.

As expressed herein, the primary problem facing securitization is a failure of industrial organization. The key risk allocators in the market, the CDO mangers, were too far from the origination process and, at best, they believed the originators and the rating agencies

were responsible for limiting risk. At the origination end, without the discipline of a skeptical buyer, abuses grew. The buyer was not sufficiently concerned with the process of loan origination and the broker was not subject to sufficient constraints.

Current conditions of the mortgage-backed securities market

More than two years after the announcement of the collapse of the Bear Stearns High Grade Structured Credit Enhanced Leverage Fund the mortgage market remains in a distressed state. Little of the mortgage market is functioning without the direct involvement of the US government, and access to financing for mortgage originators and investors is still limited.

Fortunately there are the beginning signs of stabilization of home prices, but rising unemployment threatens the recovery. In the secondary market for mortgage-backed securities there has been considerable recovery in price in some sectors, but overall demand is being propped up by large purchases of MBS by the Federal Reserve Bank.

In addition, we find that many of our clients are primarily focused on accounting and regulatory concerns related to legacy positions, and less effort is focused on the economic analysis of current and future opportunities. That situation may be changing as over the past few months we have seen some firms begin to focus on longer term goals.

The effectiveness of government action

I have not performed an independent analysis of the effectiveness of Government actions, so by comments are limited to my impressions.

Government involvement has been beneficial in a number of significant respects. Without Government involvement in Fannie Mae, Freddie Mac, and FHA lending programs, virtually all mortgage lending could have stalled. What lending would have existed would have been for only the absolute highest quality borrowers and at restrictive rates. In addition Government programs to provide liquidity have also been beneficial to the market as private lending was reduced to extremely low levels. Government and Federal Reserve purchases of MBS have kept mortgage rates low. This has probably helped to bolster home prices.

On the other hand the start/stop nature of the buying programs under TARP and PPIP has probably been a net negative for the market. Market participants have held back on investments in anticipation of government programs that either did not materialize or were substantially smaller in scope than expected.

Furthermore government efforts to influence loan modifications, while beneficial for some home owners, and possibly even investors, have created confusion and distrust. Investors are more reluctant to commit capital when the rules are uncertain. In my opinion there has been excessive focus on loan modifications as a solution to the current crisis. Loan modifications make sense for a certain portion of borrowers whose income has been temporarily disrupted or have sufficient income to support a modestly reduce loan amount and the willingness to make those payments. However for many borrowers, loan modifications cannot produce sustainable outcomes. In addition, loan modifications must deal with the complexities of multiple liens and complex ownership structures of

mortgage loans. Short sales, short payoffs and relocation assistance for borrowers are other alternatives that should be given greater weight in policy development.

The extensive government involvement in the mortgage market has likely produced significant positive benefits to the economy. However unwinding the government role will be quite complex and could be disruptive to the recovery. Government programs need to be reduced and legislative and regulatory uncertainties need to be addressed to attract private capital back into these markets.

Legislative and regulatory recommendations

I believe that the problems in the securitization market were essentially due to a failure of industrial organization. Solutions should address these industrial organization failures. While some may seek to limit the risks in the economy, I believe a better solution is to make sure the risks are borne by parties who have the capacity to manage the risks or the capital to bear those risks. In practical terms, this means that ultimately bond investors, as the creators of leverage, must be responsible for limiting leverage to economically sustainable levels that do not create excessive risk to their stakeholders. Moreover, lenders should not allow equity investors to have tremendous upside with little exposure to downside risk. Equity investors who have sufficient capital at risk are more likely to act prudently. Consequently, all the information needed to assess and manage risks must be adequately disclosed and investors should have assurances that the information they rely upon is accurate and timely. Likewise when the government acts as a guarantor, whether explicitly or implicitly, it must insure that it is not encouraging excessive risk taking and must have access to critical information on the risks borne by regulated entities.

In this light, I would like to comment on the Administration proposals on Securitization in the white paper: "Financial Regulatory Reform: A New Foundation."[5] Recommendations 1 and 2 cover similar ground:

> **1.** ***Federal banking agencies should promulgate regulations that require originators or sponsors to retain an economic interest in a material portion of the credit risk of securitized credit exposures.***
>
> The federal banking agencies should promulgate regulations that require loan originators or sponsors to retain five percent of the credit risk of securitized exposures.

> **2.** ***Regulators should promulgate additional regulations to align compensation of market participants with longer term performance of the underlying loans.***
>
> Sponsors of securitizations should be required to provide assurances to investors, in the form of strong, standardized representations and warranties, regarding the risk associated with the origination and underwriting practices for the securitized loans underlying ABS.

Clearly excessive leverage and lack of economic discipline was at the heart of the problems with securitization. As described above the market failed to adequately protect investors from weakened underwriting standards. Additional capital requirements certainly should be part of the solution. However, such requirements need to be constructed carefully. Too little capital and it will not have any effect; too much and it will inhibit lending and lead to higher mortgage costs. The current recommendation for retention of 5% of the credit risk does not seem to strike that balance appropriately.

When a loan is originated there are several kinds of credit related risks that are created. In addition to systematic risks related to future events such as changes in home prices and

[5] http://www.financialstability.gov/docs/regs/FinalReport_web.pdf pages 44-46.

idiosyncratic risks such as changes in the income of the borrower, there are also operational risks related to the quality of the underwriting and servicing. An example of an underwriting risk is whether or not the borrower's income and current value of their home were verified appropriately. Originators are well positioned to reduce the operational risks associated with underwriting and fight fraud, but they may be less well positioned to bear the long term systematic and idiosyncratic risks associated with mortgage lending. Investors are well positioned to bear systemic risks and diversify idiosyncratic risks, but are not able to assess the risks of poor underwriting and servicing. The securitization process should ensure that there is sufficient motivation and capital for originators to manage and bear the risks of underwriting and sufficient information made available to investors to assess the risks they take on.

The current form of representations and warranties is flawed in that it does not provide a direct obligation from the originator to the investor. Instead representations and warranties pass through a chain of ownership and are often limited by "knowledge" and capital. In addition current remedies are tied to damages and in a rising home price market calculated damages may be limited. Thus a period of rising home prices can mask declining credit quality and rising violations of representations and warranties.

Therefore, incentives and penalties should be established to limit unacceptable behavior such as fraud, misrepresentations, predatory lending. If the goal is to prevent fraud, abuse and misrepresentations rather than to limit risk transfer then there needs to be a better system to enforce the rights of borrowers and investors than simply requiring a originators to retain a set percentage of credit risk.

I have proposed[6] a "securitization certificate" which would travel with the loan and would be accompanied by appropriate assurances of financial responsibility. The certificate would replace representations and warranties, which travel through the chain of buyers and sellers and are often unenforced or weakened by the successive loan transfers. The certificate could also serve to protect borrowers from fraudulent origination practices in the place of assignee liability. Furthermore the certificate should be structured so that there are penalties for violations regardless of whether or not the investor or the borrower has experienced financial loss. The record of violations of these origination responsibilities should publically available.

I have constructed a simple model of monitoring fraudulent loans[7]. Some preliminary results are shown in Table 1. These simulations show the impact of increasing the required capital for a seller and of instituting a fine for fraudulent loans beyond the losses incurred. These results show that under the model assumptions, without a fine for fraud, sellers benefit from originating fraudulent loans. The best results are obtained when the seller faces fines for fraud and has sufficient capital to pay those fines. The table below shows the profitability of the seller and buyer for various levels of fraudulent loans. In the example below, the profits of the seller increase from .75 with no fraudulent loans to .77 with 10% fraudulent loans, even when the originator retains 5% capital against 5% of the credit risk. On the other hand, the sellers profit falls from .75 to .44 with 10% fraudulent loans even though the retained capital is only 1%, but there is a penalty for fraudulent

[6] http://www.ad-co.com/newsletters/2008/Feb2008/Credit_Feb08.pdf and "Securitization: After the Fall," Anthony Sanders and Andrew Davidson, forthcoming.
[7] The IMF has produced a similar analysis and reached similar conclusions. http://www.imf.org/external/pubs/ft/gfsr/2009/02/pdf/chap2.pdf

loans. Thus the use of appropriate incentives can reduce capital costs, while increasing loan quality.

Table 1.

	% fraudulent loans				
	0%	5%	10%	20%	33%
No fraud fine 1% capital					
Seller	0.75	0.76	0.82	1.04	1.43
Buyer	0.25	0.19	0.08	-0.19	-0.56
No fine with 5% capital					
Seller	0.75	0.76	0.77	0.79	0.83
Buyer	0.25	0.19	0.13	0.01	-0.16
Fraud fine with 1% capital					
Seller	0.75	0.71	0.44	0.25	0.75
Buyer	0.20	0.19	0.20	0.25	-0.25
Fraud fine with 5% capital					
Seller	0.75	0.71	0.34	-0.19	-0.90
Buyer	0.20	0.19	0.30	0.60	0.85

Under this analysis the Treasury proposals would not have a direct effect on fraud. In fact, there is substantial risk the recommended approach of requiring minimum capital requirements for originators to bear credit risk would lead to either higher mortgage rates or increased risk taking. A better solution is to create new mechanisms to monitor and

enforce the representations and warranties of originators. With adequate disclosure of risks and a workable mechanism for enforcing quality controls the securitization market can more effectively price and manage risk.

Recommendation 3 addresses the information available to investors:

> **3. The SEC should continue its efforts to increase the transparency and standardization of securitization markets and be given clear authority to require robust reporting by issuers of asset backed securities (ABS).**

Increased transparency and standardization of securitization markets would likely to better functioning markets. In this area, Treasury charges the SEC and "industry" with these goals. I believe there needs to be consideration of a variety of institutional structures to achieve these goals. Standardization of the market can come from many sources. Possible candidates include the SEC, the American Securitization Forum, the Rating Agencies and the GSEs, Fannie Mae and Freddie Mac.

I believe the best institutions to standardize a market are those which have an economic interest in standardization and disclosure. Of all of these entities the GSEs have the best record of standardizing the market; this was especially true before their retained portfolios grew to dominate their income. (As I will discuss below, reform of the GSEs is essential for restoring securitization.) I believe a revived Fannie Mae and Freddie Mac, limited primarily to securitization, structured as member-owned cooperatives, could be an important force for standardization and disclosure.

While the other candidates could achieve this goal they each face significant obstacles.

The SEC operates primarily through regulation and therefore may not be able to adapt to changing markets. While the ASF has made substantial strides in this direction, the ASF lacks enforcement power for its recommendations and has conflicting constituencies. The rating agencies have not shown the will or the power to force standardization, and such a role may be incompatible with their stated independence.

Recommendations 4 and 5 address the role of rating agencies in securitization.

> **4. The SEC should continue its efforts to strengthen the regulation of credit rating agencies, including measures to require that firms have robust policies and procedures that manage and disclose conflicts of interest, differentiate between structured and other products, and otherwise promote the integrity of the ratings process.**
>
> **5. Regulators should reduce their use of credit ratings in regulations and supervisory practices, wherever possible.**

In general I believe that the conflicts of interest facing rating agencies and their rating criteria were well known and easily discovered prior to the financial crisis. Thus I do not believe that greater regulatory authority over rating agencies will offer substantial benefits. In fact, increasing competition in ratings or altering the compensation structure of rating agencies may not serve to increase the accuracy of ratings, since most users of ratings issuers as well as investors are generally motivated to seek higher ratings. (Only if the regulatory reliance on rating agencies is reduced will these structural changes be effective.) To the extent there is reliance on rating agencies in the determination of the capital requirement for financial institutions, a safety and soundness regulators for financial institutions, such the FFIEC or its successor, should have regulatory authority over the rating agencies.

Rather than focus on better regulation, I support the second aspect of Treasury's recommendations on rating agencies (recommendation 5) and believe it would be better for safety and soundness regulators to reduce their reliance on ratings and allow the rating agencies to continue their role of providing credit opinions that can be used to supplement credit analysis performed by investors. To reduce reliance on ratings, regulators, and others will need alternative measures of credit and other risks. I believe that the appropriate alternative to ratings is analytical measures of risk. Analytical measures can be adopted, refined, and reviewed by regulators. In addition regulators should insist that regulated entities have sufficient internal capacity to assess the credit and other risks of their investments. In this way regulators would have greater focus on model assumptions and model validation and reduced dependence on the judgment of rating agencies. The use of quantitative risk measures also requires that investors and regulators have access to sufficient information about investments to perform the necessary computations. Opaque investments that depend entirely upon rating agency opinions would be clearly identified. Quantitative measures can also be used to address the concerns raised in the report about concentrations of risk and differentiate structured products and direct corporate obligations.

I recently filed a letter with the National Association of Insurance Commissioners on the American Council of Life Insurers' proposal to use an expected loss measure as an alternative to ratings for non-agency MBS in determining risk based capital. Here I would like to present some of the key points in that letter:

> An analytical measure may be defined as a number, or a value, that is computed based on characteristics of a specific bond, its collateral and a variety of economic factors both historical and prospective. One such analytical measure is

the probability of default and another measure is the expected loss of that bond. While an analytical measure is a numeric value that is the result of computations, it should be noted that there may still be some judgmental factors that go into its production. In contrast, a rating is a letter grade, or other scale, assigned to a bond by a rating agency. While ratings have various attributes, generally having both objective and subjective inputs, there is not a particular mathematical definition of a rating.

Analytical measures may be useful for use by regulators because they have several characteristics not present in ratings.

1. An analytical measure can be designed for a specific purpose. Specific analytical measures can be designed with particular policy or risk management goals in mind. Ratings may reflect a variety of considerations. For example, there is some uncertainty as to whether ratings represent the first dollar of loss or the expected loss, or how expected loss is reflected in ratings.

2. Analytical measures can be updated at any frequency. Ratings are updated only when the rating agencies believe there has been sufficient change to justify an upgrade, downgrade or watch. Analytical measures can be computed any time new information is available and will show the drift in credit quality even if a bond remains within the same rating range.

3. Analytical measures can take into account price or other investor specific information. Ratings are computed for a bond and generally reflect the risk of non-payment of contractual cash flows. However, the risk to a particular investor of owning a bond will at least partially depend on the price that the bond is carried in the portfolio or the composition of the portfolio.

4. Regulators may contract directly with vendors to produce analytical results and may choose the timing of the calculations. On the other hand, ratings are generally purchased by the issuer at the time of issuance. Not only may this introduce conflicts of interest, but it also creates a greater focus on initial ratings

than on surveillance and updating of ratings. In addition, once a regulator allows the use of a particular rating agency it has no further involvement in the ratings process.

5. Analytical measures based on fundamental data may also be advantageous over purely market-based measures. As market conditions evolve values of bonds may change. These changes reflect economic fundamentals, but may also reflect supply/demand dynamics, liquidity and risk preferences. Measures fully dependent on market prices may create excessive volatility in regulatory measures, especially for companies with the ability to hold bonds to maturity.

Even if regulators use analytical measures of risk, ratings from rating agencies as independent opinions would still be valuable to investors and regulators due to the multifaceted nature of ratings and rating agency analysis can be used to validate the approaches and assumptions used to compute particular analytical measures.

Additional measures beyond the credit risk of individual securities such as stress tests, market value sensitivity and measures of illiquidity may also be appropriate in the regulatory structure. The use of analytical measures rather than ratings does not eliminate the potential for mistakes. In general, any rigid system can be gamed as financial innovation can often stay ahead of regulation. To reduce this problem regulation should be based on principles and evolve with the market. Regulators should always seek to build an a margin of safety as there is always a risk that the theory underlying the regulatory regime falls short and that some participants will find mechanisms to take advantage of the regulatory structure.

Finally, as discussed by the administration in the white paper, the future of securitization for mortgages requires the resolution of the status of Fannie/Freddie and role of FHA/GNMA. As stated above, I believe that continuation of Fannie Mae and Freddie Mac as member owned cooperatives would serve to establish standards, and provide a vehicle for the delivery of government guarantees if so desired. The TBA, or to be announced, market has been an important component in the success of the fixed rate mortgage market in the United States. Careful consideration should be given to the desirability of fixed rate mortgages and the mechanisms for maintaining that market in discussions of the future of the GSEs.