Nomura Fixed Income Research

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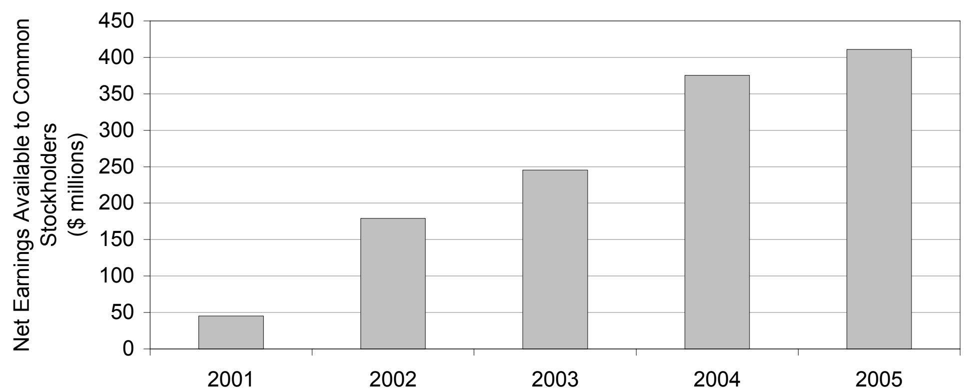
Sub-prime Surprise … Not!

18 April 2007

Claims of surprise — and even dismay — about developments in the sub-prime mortgage sector seem unfounded. Neither business professionals nor policymakers (including legislators, legislative staff, and regulators) can honestly claim to have been surprised. Actual surprise arguably could have come only from willful ignorance of market conditions over the past several years. Feigned surprise likely represents attempts to garner sympathy, to dodge responsibility, or both.

The cooling-off of the housing market and the performance deterioration of sub-prime loans were not only inevitable but also anticipated by many market participants. The legitimate question was never "if" the housing market would cool-off, but only "when." Likewise, no lender could ever reasonably have believed that it would be "safe" to make a zero down payment, stated-income, teaser-rate ARM to a borrower with a bad credit record.

Ignoring the Obvious: For many sub-prime mortgage loans originated over the past two years, lenders ignored the famous "Three C's" of mortgage lending: **c**haracter, **c**apacity, and **c**ollateral. They did so because the market environment allowed them to. By operating at high leverage, the lenders could book profits from origination activities without regard to the actual quality of the loans or the magnitude of the risks that they retained.



Source: New Century 10-K Filings

The companies could make enough money during the boom times that being able to survive a downturn was only a minor consideration. As long as the lenders could obtain funding through loan sales or securitization, they would keep on making loans as fast as possible. In essence, there was virtually no internal restraint on the kinds of loans that the sub-prime lenders could make.

Rapidly rising home prices kept the process running for several years. However, by 2005 and 2006, lending criteria and underwriting practices had become so lax that lenders originated many loans that

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subsequently defaulted during their first few months of existence (*i.e.*, early payment defaults or EPDs).

So, the next question must be: Why were loan purchasers (and securitization investors) willing to continue funding loans with declining credit quality? Unfortunately, there is no simple, satisfying answer. Part of the explanation is optimism. The period from 2002 through 2005 displayed a nearly ideal confluence of benign conditions for mortgage lending: a strong labor market, a stable economy, low interest rates, and rising home prices. Conditions were so good for so long that market participants began to discount the possibility that conditions would change. That was the fatal mistake. When conditions are perfect, any change can only make them worse.

The "Three C's" of mortgage lending are an idea as old as dirt. They are obvious. They are an example of an idea that is entirely self-evident and requires no proof. More than 200 years ago, Alexander Hamilton discussed such ideas in connection with the public debate over whether the country should adopt the Constitution. Writing under the pseudonym Publius, Hamilton addressed the people of New York as follows:

> IN DISQUISITIONS of every kind, there are certain primary truths, or first principles, upon which all subsequent reasonings must depend. *These contain an internal evidence which, antecedent to all reflection or combination, commands the assent of the mind.* Where it produces not this effect, it must proceed either from some defect or disorder in the organs of perception, or from the influence of some strong interest, or passion, or prejudice. Of this nature are the maxims in geometry, that "the whole is greater than its part; things equal to the same are equal to one another; two straight lines cannot enclose a space; and all right angles are equal to each other." Of the same nature are these other maxims in ethics and politics, that there cannot be an effect without a cause; that the means ought to be proportioned to the end; that every power ought to be commensurate with its object; that there ought to be no limitation of a power destined to effect a purpose which is itself incapable of limitation. *And there are other truths in the two latter sciences which, if they cannot pretend to rank in the class of axioms, are yet such direct inferences from them, and so obvious in themselves, and so agreeable to the natural and unsophisticated dictates of common-sense, that they challenge the assent of a sound and unbiased mind, with a degree of force and conviction almost equally irresistible.*
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> *But in the sciences of morals and politics, men are found far less tractable. To a certain degree, it is right and useful that this should be the case. Caution and investigation are a necessary armor against error and imposition. But this untractableness may be carried too far, and may degenerate into obstinacy, perverseness, or disingenuity. Though it cannot be pretended that the principles of moral and political knowledge have, in general, the same degree of certainty with those of the mathematics, yet they have much better claims in this respect than, to judge from the conduct of men in particular situations, we should be disposed to allow them. The obscurity is much oftener in the passions and prejudices of the reasoner than in the subject. Men, upon too many occasions, do not give their own understandings fair play; but, yielding to some untoward bias, they entangle themselves in words and confound themselves in subtleties.*[1]

Foreswearing the Three C's never makes sense and never can make sense. This is not simply a case of 20/20 hindsight. It is a fair recognition (and acceptance) of the fact that there are business cycles, real estate cycles, and credit cycles. And it is fair recognition and acceptance of the fact that bubbles happen. Both the mortgage industry and mortgage investors would do well to remember the Three C's when the sector enters the next boom phase.

<u>Ignoring the Warnings</u>: Beyond the obviousness of the Three C's, many voices in the market expressed concern about mounting vulnerabilities over the past two years. Some commentators addressed the weakening of underwriting standards. Some focused on the housing bubble. Some

[1] The Federalist Papers, No. 31 (emphasis added).

emphasized housing affordability. Some highlighted the tightening of credit spreads on triple-B tranches. In all cases they offered warnings and recommended caution – either explicitly or implicitly.

Appendices A through E contain examples of such material in Nomura research between September 2005 and March 2006 — more than a year ago. Other researchers and commentators expressed similar views. Even mainstream media sources, such as The Wall Street Journal and Dow Jones Newswires, covered the housing bubble and homeownership issues extensively over the past year. They beat their drums loud and often.

Some segments of the market simply ignored the warnings. Many sub-prime lenders and some Wall Street trading desks would not have been able to operate profitably if they had to address risk that home prices might stop rising. Accordingly, they created projections based on short-term data to justify their actions. The short-term data reflected strong loan performance during the boom phase of the cycle. They purposely chose to ignore or de-emphasize data about past busts.

And some quarters of the market listened. Almost immediately after the introduction of the first series of ABX.HE indices in January 2006, various hedge funds started taking the short side of sub-prime mortgage credit risk. Many of those players were "macro" funds that based their strategies on long-term views and insight about market cycles and bubbles.

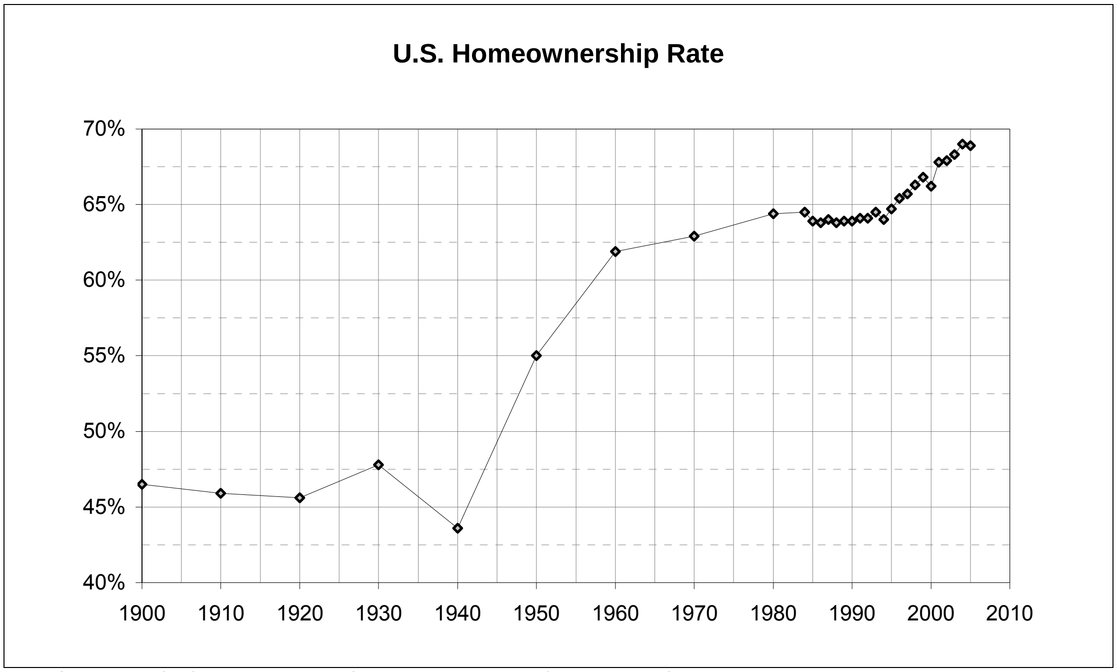
Clearly, there was ample warning. Therefore, even apart from the Three C's, neither business professionals nor policymakers can legitimately claim to have been surprised by performance deterioration in the sub-prime mortgage sector. Can they be disappointed? Sure. Surprised? No way.

Facing the Key Facts: The current situation in the sub-prime mortgage sector is a natural consequence of events. It is definitely not a national crisis and arguably not even a problem. It helps to remember a few key facts when contemplating possible action in response to the current situation:

- It's natural for some mortgage loans to default. If there were no mortgage defaults, it would mean that credit was too tight.
- Defaults on loans to sub-prime borrowers should happen more often than defaults on prime loans. That's the nature of sub-prime loans.
- Sub-prime lending was not invented in the last credit cycle. Its roots go back to the creation of the Federal Housing Administration FHA in 1934[2] and to the creation of the Federal National Mortgage Association (FNMA) in 1938.[3] FHA insurance and FNMA's "special assistance" function were the cornerstones of national housing policy for decades.
- The traditional instruments of national housing policy boosted U.S. homeownership above 65% in the mid-1990s, long before the latest cycle of sub-prime lending started around 2002-2003.

[2] Pub. L. No. 73-479, 48 Stat. 1246, 1252 (1934)

[3] On 10 February 1938 the Administrator of the FHA created FNMA as a subsidiary of the Reconstruction Finance Corporation.



Source: U.S. Census Bureau, Statistical Abstract of the United States 2007, Table 956 and various historical tables.

- In recent years, non-FHA sub-prime lending has grown at the expense of the FHA-insured sector.

- HUD and the FHA are the regulatory agencies with the primary responsibility for executing national housing policy. The Office of Thrift Supervision (OTS) and the Office of Federal Housing Enterprise Oversight (OFHEO) have secondary responsibility. Other financial regulators are not primarily responsible for national housing policy and they lack both the experience and the expertise to be effective in that area. Accordingly, other financial regulators, including the Federal Reserve, the SEC, the Office of the Comptroller of the Currency, and the FDIC, should not try to take the lead in the housing area. They should let the experts – HUD and the FHA – take the lead.

- Most defaulting sub-prime borrowers from the 2005 and 2006 vintages are fully or partially responsible for their predicaments. There are several categories of conduct through which borrowers got themselves into trouble:

    - First, many of the borrowers got stated income loans and lied about their incomes in order to borrow more than they could have had they been truthful. Regardless of whether they were "coached" to lie by unscrupulous mortgage brokers, the borrowers had to know that they were doing something wrong when they were lying.

    - Second, many of the borrowers gambled on the housing bubble by purchasing their homes with no down payments. They used piggyback second lien loans to obtain 100% financing on their homes. If the value of a home went up, the borrower would capture the gain; if the value of the home went down the borrower could simply walk away. These borrowers knowingly gambled that home prices would continue to rise and that interest rates would remain low indefinitely. They essentially obtained, for zero cost, call options on home prices. They simply lost on their bets.

    - Third, many borrowers used stated income loans or 100% financing to borrow excessively in order to purchase homes that were beyond their means. They wanted to embrace lifestyles that cost more than they could sustain. These borrowers also gambled and lost.

- Fourth, many borrowers repeatedly used cash-out refinancing loans as the value of their homes rose during the housing bubble. This group essentially used their homes as automated cash machines to support lifestyles that they could not afford with their regular incomes.

- Defaulted borrowers who (1) lied about their incomes, (2) bet on the housing bubble, or (3) chose to live beyond their means, are not innocent victims. If a rising level of foreclosures is a problem, then those borrowers are among those responsible.

- A portion of the sub-prime borrowers who bought homes in the past few years were not suited to home ownership. Many of them lacked both the resources and financial discipline to shoulder the responsibilities of homeownership. Loans to such borrowers may seem to perform well during favorable economic conditions. Under such conditions, the borrowers often can manage the expenses of homeownership – repairs, maintenance, taxes, and insurance, in addition to mortgage payments – by repeatedly extracting equity from their homes through cash-out refinancings. However, the process is doomed from the start because ideal conditions cannot persist indefinitely. Those borrowers arguably never should have become homeowners in the first place. For the system to regain a reasonable equilibrium, many of those borrowers will have to make the transition back to renting their homes. This group of borrowers probably numbers in the hundreds of thousands.

- Investors in triple-B-rated tranches of sub-prime mortgage ABS should not be surprised if those securities suffer losses. Securities rated triple-B naturally carry more credit risk than those rated triple-A. During the boom phase of the credit and real estate cycles, triple-B-rate sub-prime mortgage ABS should suffer virtually no losses. Conversely, those securities can become quite vulnerable during the bust phases of the cycles.

- Predatory lending is a real issue. It affects a relatively small proportion of all loans.

- The only innocent victims of predatory lending are borrowers who did not lie about their incomes, bet on the housing bubble, or choose to live beyond their means. Innocent victims of predatory lending also must have been ignorant about the terms of the loans that they were taking. They must have signed papers without understanding them.

- There is no universally accepted definition of predatory lending. In our view, predatory lending occurs only in two types of situations. The first type is where a lender lies to a borrower about the terms of a loan. The second type is where the terms of a loan are unconscionable.

- The sub-prime mortgage sector may need to confront the problem of finding replacement servicers for pools with high delinquency rates. The original servicer of a pool may resign or go out of business. The original servicing fee for the pool might not be sufficient to attract a successor servicer. If that happens, it may become necessary to raise the servicing fee. The impact would be borne by the holders of the subordinated interest in the pool. Similar kinds of situations have occurred in the manufactured housing and credit card securitization areas.

- The American system of government is the most nearly perfect form of government ever created. Nevertheless, the individual branches of government sometimes do questionable (or monumentally stupid) things. The judiciary produced the notorious *Dred Scott* and *Plessy v. Ferguson* decisions.[4] The executive branch gave America the Watergate scandal

[4] Dred Scott v. Stanford, 60 U.S. (19 How.) 393 (1856); Plessy v. Ferguson, 163 U.S. 537 (1896). For a libertarian view of the all-time 10 worst Supreme Court decisions see http://kipesquire.powerblogs.com/posts/1137871280.shtml. For another compilation see http://www.hereandok.com/WorstSupreme.html.

and WMD in Iraq. Congress has passed reams of well-intentioned but ill-conceived legislation such as the Sarbanes-Oxley Act, which costs American businesses tens of billions of dollars but produces scant benefits to investors.

What's Next?: The weakening performance of sub-prime mortgage loans raises questions in two areas. The first area relates to loans that already exist. Are there reasonable policy responses for dealing with defaulting loans? Should loan servicers change their servicing strategies or fine-tune their practices? The second area relates to whether lending practices should change so that lenders make loans differently in the future. Should credit standards be generally tighter or looser? Should certain loan products be discouraged or outlawed? Should the anti-predatory lending laws be changed or toughened?

Here is how we would answer several of the key questions in the first area:

- Taxpayers should not be asked to bail out borrowers who (1) lied about their incomes, (2) bet on the housing bubble, or (3) chose to live beyond their means. Those borrowers are culpable. Taxpayers should not have to pay to save them from their own irresponsible behavior.

- Policymakers should not impose a moratorium on foreclosures. A moratorium likely would produce a spike in foreclosure volumes as soon as the moratorium ends. The spike in volume probably would stress the capacity of the system to handle foreclosures properly and might reduce the servicers' ability to work with borrowers on alternatives to foreclosure. In addition, a moratorium could increase the severity of losses to lenders. In an environment of falling home prices, any delay liquidating properties can increase severities because the sale prices decline with the passage of time. Unpaid interest also increases as time goes by. Finally, the physical condition of properties is prone to deteriorate during a moratorium because defaulted borrowers refrain from spending money on necessary repairs and maintenance.

- Loan servicers should accelerate their processing of foreclosures and simultaneously pursue non-foreclosure default resolutions.

- Loan servicers should increase the use of short sales as a means of resolving loan defaults. A short sale occurs when a lender agrees to let a defaulted borrower sell his home and to accept the net proceeds of the sale as full satisfaction of the mortgage debt. Short sales may be especially effective when the true level of a borrower's income is not sufficient to fully bear the expenses of homeownership.

- Loan servicers should use modifications as an additional tool for resolving loan defaults. However, servicers should use loan modifications only when true level of the borrower's income can support the modified loan as well as the other expenses of homeownership. Servicers should not use loan modifications to keep a borrower in a home that is visibly disproportionate to his true level of income. Servicers should use loan modifications only when they have a high level of confidence that the modified loan will not re-default within two years. Additionally, contractual limitations on the use of those tools, which are present in some securitizations, must be respected.

- Innocent victims of predatory lending should be allowed to refinance their loans without payment of prepayment penalties.

- Innocent victims of predatory lending should be allowed to recover civil damages from entities and individuals who commit predatory lending. They should be allowed to recover damages from both mortgage brokers and lenders. They should be allowed to pursue class action lawsuits.

- True predatory lending is despicable[5] conduct and the penalty for committing it should be harsh. Predatory lending should be a crime punishable by imprisonment.

- Neither taxpayers nor lenders/investors should be required to pay so that an innocent borrower can remain in a house that is disproportionate to the true level of his income. A borrower with a $45,000/year income should not get subsidized to live in a house commensurate with a $60,000/year income simply because he is a victim of predatory lending.

For the second area, relating to whether lending practices should change in the future, some questions have reasonably clear answers. However, others require decisions over which reasonable people can differ. For some of those, we present various alternatives:

- The FHA single-family programs[6] should be slightly expanded so that they can recover some of the market share lost over the past several years. FHA loan limits should be slightly increased for high cost areas. The current loan limit in high cost areas is just $362,790. Additionally, Congress should give the FHA authority to charge variable insurance premiums based on the level of risk associated with a loan.

- A tightening of credit standards back to where they were five or ten years ago would lower the rate of homeownership, but probably only by less than two percentage points.

- Any legislative or regulatory decision to tighten lending standards could be implemented either directly or indirectly. Direct implementation would take the form of outlawing or banning certain types of loan products. Indirect implementation would take the form of making it excessively burdensome or expensive for lenders to offer those products. Direct implementation of policy decisions is preferable because it generally reduces unintended consequences.

- An example of direct implementation would be to outlaw all types of loans other than the traditional 30-year, fixed-rate, fully-amortizing mortgage loan with a maximum LTV of 80%, unless covered by mortgage insurance. That would be an extreme action. However, based on the fact that Congress took the extreme action of passing the Sarbanes-Oxley Act after the Enron debacle, it seems conceivable that Congress could take similarly extreme action in the mortgage area.

- Usury laws are another example of direct implementation. Such laws generally reflect a policy decision to protect borrowers from themselves. Usury laws act directly on the lending process by restricting the rate of interest on consumer loans.[7]

- An alternative to outlawing or restricting (directly or indirectly) certain loan products might be to create a licensing system for *borrowers* who want to use them. For example, a possible system might work as follows: Basic loan products such as fixed-rate fully amortizing loans would require no license. Riskier products such as ARMs, interest-only loans and negative amortization loans could require successively higher levels of licenses – roughly similar to the various classes of drivers licenses based on different types of vehicles (*i.e.*, car, bus, medium truck, heavy truck, hazardous material, etc.)

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[5] In California, the term "'despicable' connotes conduct that is so vile, base, contemptible, miserable, wretched or loathsome that it would be looked down upon and despised by ordinary decent people." *In re* First Alliance Mortgage, No. 04-55920 (9th Cir. 8 Dec 2006) (quoting Lackner v. North, 37 Cal Rptr. 3d 863, 881 (Cal Ct. App. 2006)). Lending activity that does not rise to the level of "despicable" should not count as predatory lending.

[6] National Housing Act § 203(b), 12 U.S.C. § 1709(b). The related regulations are in 24 C.F.R. Part 203.

[7] For example, in New York, the general usury rate is 16%. NY Banking Law § 14-a(1). Second degree criminal usury occurs in New York when a person charges interest at a rate above 25% without having the legal authorization to do so. NY Penal Law § 190.42.

- Policymakers should not impose unlimited assignee liability for predatory lending. However, if they do, they should create a safe harbor for assignees that have clear policies against purchasing predatory loans and that apply reasonable due diligence to screen the loans that they purchase.

- If federal policymakers create a federal anti-predatory lending law, the law should set a minimum standard but it should not preempt state laws that are more stringent.

- Stated income loans should be outlawed. Simply outlawing stated income loans to wage-earners would not work because any applicant who wants a stated income loan would simply claim to be self-employed. The lending industry should not encourage or support tax cheating by self-employed borrowers who want to claim greater income on their loan applications than they do on their tax returns.

- An indirect alternative to outlawing stated income loans would be to require all lenders to report borrowers' stated incomes to the IRS. The IRS could then match a borrower's stated income to his reported income and initiate audits when there is a difference. This alternative would likely bring the origination of stated income loans to a screeching halt.

- Lenders should not be made responsible for stupid decisions by their customers. Actually, the notion of making them responsible for their customers' stupid decisions is preposterous. What would be next? Making used car salespeople responsible when their customers don't pick the car that best meets their needs? Making clothing salespeople responsible when their customers pick ugly clothes? Making realtors responsible when their customers pick bad homes? Making fast food chains responsible when their customers get fat?

- Alternatively, policymakers could change the fundamental nature of the lender-borrower relationship by making the lender a fiduciary with an obligation to act in the borrower's best interest. Such an extreme action likely would cause a significant increase in the cost borrowing.

Conclusion: There is no sub-prime surprise. High delinquencies and defaults are an inevitable result of the kinds of loans made in 2005 and 2006. Ignoring the Three C's of lending could produce no other result. Moreover, the warnings were loud and clear. The warnings also were numerous and frequent. And they came from many diverse sources, including the general media.

The current flurry of activity to "do something" about the sub-prime mortgage situation is a day late and a dollar short. Policymakers and market participants who don't like the current situation should have acted sooner by taking obvious preventive measures. Both policymakers and market participants share responsibility for the current situation by having ignored the warnings and having failed to act sooner.

Unfortunately, some policymakers are trying to exploit the current situation by pandering to defaulted borrowers. That conduct is counter-productive. Policymakers and market participants need to come to grips with reality. There likely will be an uncomfortably high level of foreclosures. Despite the best of intentions, rescue attempts on many loans probably will fail. And, lastly and most importantly, policymakers should refrain from taking drastic, ill-conceived actions that ultimately do more harm than good by unduly reducing the availability of mortgage credit to American families.

— E N D —

Appendix A

Update on U.S. Fixed Income Market Conditions (9/7/05):

Residential mortgage-backed securities (MBS) continued to display strong credit performance in 2005. For the second quarter of the year, S&P reported an upgrade to downgrade ratio of roughly 306:45 for residential MBS backed by prime-quality mortgage loans. Although the number of residential MBS downgrades has increased notably, the ratio of upgrades to downgrades remains strongly positive. Against the backdrop of a strong rating performance for MBS, concerns are growing about the possible impact of "bubble" conditions in the U.S. residential real estate market. Those concerns are amplified and aggravated by the growing use of so-called "affordability" mortgage products such as interest-only mortgage loans, adjustable rate mortgage loans, and loans that allow for "negative amortization." For example, the June 18 issue of *The Economist* reported the following statistics, which reflect the growing risk in new mortgage loans:

- 23% of homes purchased in 2004 were purchased for investment,
- 14% of homes purchased in 2004 were second homes,
- 42% of first-time homebuyers and 25% of all homebuyers made no down-payment on their home purchases in 2004,
- more than 60% of new mortgage loans in California were interest-only loans or included negative amortization features, and
- adjustable rate mortgage loans (ARM) account for 50% of new loan production in the states that have had the greatest home price increases.

We believe that the most probable resolution of the bubble conditions in the U.S. residential real estate market will be an extended period of stagnant home prices. However, disruption of the favorable economic environment has the *potential* to trigger sudden price declines. Even though the likelihood of such a disruption is less than 50%, market participants should not ignore the potential downside. Price declines of more than 30% are possible in the areas that have experienced the greatest degree of price appreciation in recent years.

Appendix B

Report from Boca Raton 2005: Coverage of Selected Sessions of ABS East, p. 11 (9/20/2005):

Affordability Products: One investor panelist is trying to limit his exposure to interest-only loans and to silent (piggyback) second mortgage loans. The investor is also wary of sub-prime loans with no documentation or limited documentation of the borrowers' incomes. The alt-A mortgage loan sector has established a limited but measurable record of success with stated income loans but the sub-prime sector has not.

Another investor panelist expresses skepticism about affordability products and questions whether the market prices them correctly. She is concerned that lenders determine whether a borrower is qualified based solely on the level of the initial payments on a loan without regard to increases that are likely to occur. The panelist applies caps to the level of affordability collateral that she will accept in deals that she purchases, including a 10% cap on interest-only loans.

A third investor deals with affordability products by requesting additional information about them.

Appendix C

Report from Boca Raton 2005: Coverage of Selected Sessions of ABS East, p. 15-16 (9/20/2005):

The HEL ABS sector has grown 21% in 2005 compared to 2004. The rate of homeownership in the U.S. continues to climb. Home price appreciation remains strong. Affordability products account for a growing share of production.

On the other hand, loan-to-value ratios (LTVs) and debt-to-income ratios (DTIs) are rising. The proportion of loans with full documentation of the borrowers' income and assets is dropping. Margins on adjustable rate mortgage loans (ARMs) are tightening. The share of interest-only loans is rising. Consumer credit scores (FICO scores) are rising somewhat, particularly on the ARM side. The top 10 HEL ABS issuers account for about 60% of total issuance. Broker-dealer securitization programs account for about 30% to 35% of total HEL ABS issuance. Spreads are tight by 5-year historical standards, particularly on single-A and triple-B tranches.

One panelist observes that today's mortgage borrower can get a better deal on a mortgage than ever before. Margins on sub-prime loans have compressed to get closer to the margins on prime loans, luring some prime-quality borrowers to go to sub-prime lenders.

Another panelist feels that margins have gotten too low. Part of the problem is how the lenders allow loan applicants to lock interest rates at no charge. The push for market share is driving irrational pricing; lenders are not adequately pricing for the risk of their businesses.

One of the new affordability products is 40-year mortgage loans. Some 40-year mortgage loan products are fully-amortizing and some provide for amortization on a 40-year schedule but have balloon payments after 30 years. Forty-year loans are a direct substitute for interest-only loans. They are very popular in areas with high home prices. The 40-year products have supplanted much of one major originator's interest-only production. Another panelist feels that the incremental risk on a 40-year loan is only slightly greater than that of a basic 30-year loan. A third panelist agrees that 40-year loans are supplanting interest-only loans.

Fitch believes that the default probability of 40-year loans is about 5% higher than comparable 30-year loans. Another panelist feels that there is a slight decrease in risk on an interest-only loan compared to a 40-year loan.

Fitch observes that underwriting standards have become looser in recent months. That has occurred in the context of other developments with mixed implications for credit quality. First, FICO scores have improved. However, although FICO scores are effective at sorting borrowers by *relative* risk, they do not give a strong measure of *absolute* risk. Also, the market lacks historical data for regression analysis on the performance of affordability products and limited documentation loans. Accordingly, it is not possible to tell whether the improvement in FICO scores fully offsets the other factors. Also, even though FICO scores have gone up, so have LTVs and DTIs. Many reported DTIs are higher than 45%. Moreover, because DTIs are calculated on starting rates, the "true" DTI of many loans is higher than 50% or 55%.

Appendix D

Report from Arizona 2006: Coverage of Selected Sessions of ABS West 2006, pp. 8-9 (2/15/06):

One panelist explains that consumers always are the key driver behind the economy. A softening housing market would produce a decline in consumer spending because of both the wealth effect and the reduced employment in the housing and construction sectors. Other factors, such as energy prices, the threat of terrorist attacks, and the housing bubble, are also important, but somewhat less than consumers. Real estate is a regional market and, therefore, there should not be a national real estate crisis. According to the Office of Federal Housing Enterprise Oversight (OFHEO), Phoenix had home price appreciation of 34%, which was the highest of any metropolitan statistical area (MSA).[8] According to PMI, there is a 26% chance of home price declines in the next two years.[9] The most affordable places in the U.S. are North Dakota and South Dakota. The least affordable are California, Massachusetts, and Florida.[10] The bottom line is that some places are expensive and some are not. Although there are regional bubbles, there is not a national one.

A second panelist notes that the outlook for the subordinate and mezzanine segments of the sub-prime mortgage space is "path dependent." The key factors are employment and interest rates. A third driver is housing prices, which have been fueled in certain markets by mortgage affordability products. Employment is strong. There appears to be little risk on the jobs front. On the other hand, there appears to be greater risk from the potential for rising interest rates. Interest rates are rising already, which is a problem. Either the Federal Reserve or foreign investors could push rates higher. Sub-prime lenders are finding it difficult to make money because of the rising rates. At the same time, housing demand is marginally declining. There is potential for slowing growth of home price appreciation and, consequently, slowing consumer spending.

There is pricing pressures in the sub-prime mortgage sector. Sub-prime mortgage lenders are struggling to make profitable loans in the current environment. Consolidation among sub-prime mortgage lenders is likely. If sub-prime lenders let their underwriting standards or business practices slip then investors – especially triple-B investors – may pull away from the market. That could cause spreads to widen and place further stress on lenders' profitability.

Rising home prices over the past few years have been the key element of the wealth effect. Government measurements of disposable income do include capital gains and, therefore, underestimate consumers' spending ability.

For the housing bubble to burst, the economy would first have to slip into decline. Absent a deteriorating economy, the bubble should not burst. Another view is that there is a strong possibility that today's benign conditions might not persist. Investors in triple-B securities should carefully scrutinize deals to differentiate which triple-B tranches could withstand deterioration from those that could not.

A panelist from a bond insurer feels that the market is mis-pricing risk at the triple-B for sub-prime mortgage ABS. Today's spreads are too tight to justify the risk. Another panelist agrees, stating that pricing all over the fixed income landscape seemingly dismisses the potential for problems. In the area of triple-B-rated sub-prime mortgage ABS, strong demand from CDOs is the main factor keeping spreads at their tight levels.

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[8] Office of Federal Housing Enterprise Oversight, *House Price Appreciation Slows from Record-Setting Pace, But Remains Strong – OFHEO House Price Index Shows 12 Percent Annual Increase*, press release, at 2 (1 Dec 2005) <http://www.ofheo.gov/News.asp?FormMode=Releases&ID=258>.

[9] PMI Mortgage Insurance Co., *Local Economic Patterns and MSA Indicators*, Economic & Real Estate Trends at 3 (Winter 2006) <http://www.pmigroup.com/lenders/media_lenders/pmi_eret06v1s.pdf>.

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Appendix E

Fixed Income Market Update March 2006, pp. 5-6 (3/6/06):

Residential MBS: Residential mortgage-backed securities (MBS) continued to display strong credit performance in 2005. According to Moody's, the upgrade rate was 6.8%, while the downgrade rate was just 0.9%. Although that performance is impressive, it is somewhat less so than the prior year's: in 2004 the upgrade rate had been 8.8% and the downgrade rate had been just 0.1%. Against the backdrop of a strong credit performance for MBS, concerns are growing about the possible impact of "bubble" conditions in the U.S. residential real estate market. Those concerns are amplified and aggravated by the continued use of "affordability" mortgage products such as interest-only mortgage loans, adjustable rate mortgage loans, and loans that allow for "negative amortization." In many areas, more than a third of all newly originated residential mortgage loans include affordability features.

We expect that the U.S. real estate bubble will end with a reasonably soft landing: a long period of flat home prices. However, we also feel that adverse scenarios are possible, though much less likely. In a highly adverse scenario, price declines could be a much as 30% in areas that have had the "hottest" real estate markets in recent years.

Losses on a residential mortgage loan should occur only when two conditions exist at the same time: (1) the borrower becomes unable to meet his monthly payment obligations and (2) the value of the property securing the loan is less than the amount necessary cover interest, principal, and related expenses. Thus, even if home prices decline significantly, losses on mortgage loans need not increase proportionately if borrowers continue to be able to afford their monthly payments. If home prices decline, losses on mortgage loans would become more sensitive to conditions in the labor market because borrowers who lose their jobs would be more likely to default on their loans. Over a somewhat longer-term horizon, losses on mortgage loans would become increasingly sensitive to interest rates as borrowers on adjustable-rate loans potentially face the impact of rising rates.

— END of APPENDICES —

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