NOMURA

Report from Las Vegas 2007

Coverage of Selected Sessions of ASF 2007

5 February 2007

Concern about the sub-prime mortgage sector was the key theme at last week's ASF 2007 securitization conference in Las Vegas. Many panelists expressed strongly negative views about the outlook for the sector. A key focus of concern is that sub-prime mortgage ABS tranches at the triple-B level may suffer downgrades or losses. If that happens, trouble could spread to the CDO area, which has taken on vast amounts of synthetic exposure to sub-prime mortgage ABS. In the view of many panelists, the main underlying causes are slowing home price appreciation and soft lending standards over the past year. Some panelists further identify loans to first-time homebuyers, simultaneous second-lien loans, and stated-income loans as the specific culprits along the underwriting dimension.

However, other panelists expressed optimistic views. They point to the strong labor market, solid corporate profits, moderate interest rates, and steady GDP growth as factors that should dampen the ultimate impact of a weak vintage. The signals of performance deterioration are just beginning to show themselves and they have not yet produced a significant amount of realized losses.

The frustration felt by many conference delegates seems to come from uncertainty. Looking toward the horizon, one sees the telltale signs of a *possible* storm. It could blow over and amount to nothing. Or, it could develop into a tornado. For now, there is no way to know which way the situation will develop.

More than 6,000 delegates reportedly attended the conference, making it the largest U.S. securitization conference ever. Among the attendees, representatives from CDO managers and hedge funds were present in greater proportions than ever before.

The following summaries reflect remarks of the panelists who participated in selected sessions at the conference. For the most part, the summaries have been drawn from notes taken during the sessions by Nomura employees. The summaries have not been reviewed or approved by the panelists. While we have tried to capture panelists' remarks accurately, we apologize in advance for any inaccuracies and omissions. In addition, we wish to acknowledge the excellent work of the American Securitization Forum in organizing and hosting the conference.

The summaries below do not necessarily reflect the views of Nomura Securities International or any of its subsidiaries or affiliates.

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Sessions Covered

Sunday, 28 January 2007

3:20pm – FICO® Scores and Borrower Credit Metrics

Consumer awareness of FICO scores has increased significantly over the past year. About half of the attendees at the session have looked up their own FICO scores during the past six months.

A FICO score is a summary of the information in a consumer's credit report. The range is 300 to 850. The likelihood of a consumer "going bad" is lower for consumers with high scores. FICO scores are a risk ranking tool. The odds of going bad may be different for different products (auto loans vs. credit card accounts) at the same score level.

FICO scores are based on credit bureau information such as timeliness of a consumer's payments, inquiries about his credit, collection actions against him, and other data from public records. The calculation of FICO scores does not include a consumer's age, address, employment status, income (or debt-to-income ratio), or sex. The scoring algorithm excludes some of those items because they are not available and others because using them would be illegal under federal regulations.

For the general population, the relative importance of the five main data categories in calculating a consumer's credit score are as follows:

FICO Score Components	
Category	**Weight**
Payment History	35%
Outstanding Debt	30%
Length of Credit History	15%
Pursuit of New Credit	10%
Credit Mix	10%

Within the payment history category, one of the key factors is the length of time since a consumer's most recent major delinquency. Under outstanding debt, a key factor is the ratio of a consumer's total balances to the total limits on his revolving credit lines (*i.e.*, the "utilization" of his credit lines). The scoring system avoids penalizing a consumer's score for multiple credit inquiries clustered together in time as a result of rate shopping by the consumer.

In order to calculate a FICO score on a consumer, the consumer's credit file must (1) not indicate that the consumer is deceased, (2) include at least one trade line that has been open for at least six months, and (3) include at least one trade line that has been updated within the past six months.

Fair Isaac recently introduced the FICO Expansion Score, which provides credit scores on consumers who do not have credit bureau files. [Note: FICO Expansion Scores are based on "non-traditional" forms of data collected by a new Fair Isaac subsidiary called Fair Isaac Credit Services, Inc. In essence, the new subsidiary is a kind of credit bureau itself.]

<u>FICO Score Dynamics</u>: FICO scoring systems have gone through five redevelopments over the past 20 years. The score distribution has changed over time because Fair Isaac calibrates the scoring models based on odds (*i.e.*, the odds of an account "going bad") rather than on the distribution of scores in the population. From an odds perspective, the odds-to-score relationship has remained reasonably stable over time. Fair Isaac is in the process of another redevelopment that should be finished in 2007 or 2008.

<u>Measuring Predictive Power</u>: The FICO scoring models achieve strong rank ordering of risk by score over a time horizon of 18 to 24 months for new real estate loans, auto loans, and bank cards. The strong performance of the scores also holds for older accounts. The FICO Expansion Score successfully rank orders risk over a 12-month time horizon for consumers who don't have credit files at the credit bureaus.

<u>Use of Credit Scores in the Bond Rating Process</u>: FICO scores are an important factor for rating agency analysis but they are not the sole measure of borrower credit quality. Rating agency models use FICO scores as a key input. In the mortgage area, FICO scores must be combined with loan-to-value ratios (LTVs) to determine "base default rates." DBRS likes to get both FICO scores and issuer credit grades on the borrowers. The most interesting situations are where a borrower's FICO score and the credit grade to which he is assigned by a lender appear to disagree.

FICO scores have been used less widely for rating purposes in the auto ABS sector. However, for new loan-level models, FICO scores are important.

For FICO scores above 700, default frequencies are similarly low in different product areas. However, for scores below 600, the default frequencies differ among different products.

In the credit card area, rating agencies have used FICO scores qualitatively and have not used FICO scores as an explicit input in quantitative rating models.

4:25pm – CDO Surveillance Workshop

CDO issuance was about $300 billion last year. That makes CDO surveillance important.

<u>CDO Market Overview</u>: CDOs of ABS now represent the major portion of most dealers' pipelines. CDOs of mezzanine ABS (*i.e.* CDO of ABS rated in the triple-B and single-A generic rating categories) represent about 40% of the market. CDOs of high-grade ABS remain present, but account for a much smaller share of the total market. CLOs represent a declining share. Commercial real estate (CRE) CDOs represent a growing share, while CDOs backed by trust preferred securities (TruPS) remain a niche product.

<u>CDO Performance</u>: CDOs are idiosyncratic; they are not homogenous. Rating agency credit surveillance of CDOs requires customized modeling of each deal. Additionally, qualitative factors, such as managers' abilities contribute to the ratings analysis. In 2006, both upgrades and downgrades of CDOs increased. For the CDO market as a whole, the upgrade to downgrade ratio (by Moody's) improved from 0.3 to 1.2. ABS CDOs had 56 downgrades and 38 upgrades. Synthetic corporate CDOs took 22 downgrades and 8 upgrades. Corporate cash CDOs had the most upgrades at 132.

Trustee's View: Investors want more transparency around the underlying collateral and want to receive commentary from CDO managers. There are several competing products for handling the internal covenant tests inside CDOs.

Tools for Cash Flow Modeling: Intex is the standard tool for CDO cash flow modeling at dealers and investors. In addition, other vendors offer plug-in tools to facilitate stress testing. *i*CDO and Wall Street Analytics are tools that compete with Intex, but they do not have the same degree of market penetration. However, they allow for greater customization in some areas. Moody's recently acquired Wall Street Analytics.

Rating Agency Surveillance: Rating agencies maintain lines of communication with CDO managers as part of the regular CDO surveillance process.

Surveillance by Trustees: Different types of CDOs present different surveillance challenges. The key is the nature of the underlying assets. Commercial real estate assets require different surveillance skills than syndicated loans or ABS. Compared to static pools, tradable pools require the extra effort of updating. Investors want to transfer data by "ftp" in addition to "pdf" files.

Market value CDOs present wholly different surveillance issues because of the need for frequent, independent valuations of the collateral. If a deal is backed by illiquid assets, valuation can be a major challenge.

Different kinds of trigger tests (*i.e.*, performance covenants) are important in different kinds of CDOs. For example, an interest coverage (IC) test is critically important in a CDO that has a low level of excess spread. Conversely, an overcollateralization (OC) test is the most important in a CDO that has a high level of excess spread because there may be greater risk of deterioration on high-yield collateral. In all cases, the best approach for surveillance is to directly monitor the underlying collateral. However, modeling cash flows also is necessary for spotting possible OC erosion if principal cash flows could be applied to cover coupon on the CDO securities.

Deal Amendments: Major amendments usually require investor approval. Some amendments can be done without investor approval if the manager obtains a legal opinion that such an amendment is not material (*e.g.*, merely correcting an error in the documents). All amendments require rating agency approvals. Amendments typically provide for notice to investors before they happen. Some amendments merely correct errors in the documents and do not require investor approval. In most cases, a CDO manager succeeds in getting approval for requested amendments.

Events of Default: Typical events of default for a CDO include payment defaults on the senior tranche and under-collateralization (*i.e.*, collateral coverage below 100%) of the senior tranche. If there is an event of default, the deal may permit investors to vote to liquidate the deal. However, indentures for some older deals prohibit liquidation if the proceeds would not be sufficient to repay all outstanding securities of such a deal.

Optional Redemption by Equity Holders: Optional redemptions by equity holders are rare but have occurred. There were several redemptions in 2000, but few in the subsequent years. There was one notable case where the equity holders redeemed an ABS CDO within a year of its initial issuance.

Availability of Documentation: The CDO community is pushing for standardization of trustee reports for CDOs.

Triggerless Deals: The pros and cons of triggerless CDOs (*i.e.*, CDOs that have neither an OC test nor an IC test) are similar to the pros and cons of mortgage deals that use the "six pack" structure.[1]

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[1] A typical MBS backed by prime-quality mortgage loans uses the so-called six pack structure which does not include performance tests or a mechanism for changing the distribution waterfall if the deal performs poorly. In

One panelist observes that whether a triggerless structure in a deal helps or hurts investors ultimately depends on the timing of losses.

Monday, 29 January 2007

8:00am – Welcome Address

Key ASF initiatives for 2007 will include three items. The "Securitization Institute" is intended to be a formal educational program that will include 13 educational modules. The students who complete the program will receive a certificate and will be able to receive professional education credits. The second key initiative is "American Securitization" magazine. The ASF intends to publish it twice yearly, in connection with the ASF's two major conferences. The third key initiative is expected to be commissioning an independent economic study to investigate the impact of securitization on the U.S. economy. In particular, the study should examine the impact of securitization on the availability and cost of credit for consumers.

Next year's ASF winter conference – ASF 2008 – is scheduled for Feb 3-6, 2008 at the Venetian Hotel in Las Vegas.

8:20am – Keynote Address[2]

Times are good. Markets are favorable and the economy is strong. Homeownership in the U.S. has grown over the past 10 years. There are several federal programs designed to boost homeownership by allowing loans with 0% down payments. But, there may be clouds forming on the horizon. At what point do loan products designed to help first time owners create too much systemic risk?

Several years ago, the New York State Banking Department urged investment banks to test whether loans included in securitizations had been originated in compliance with applicable laws. The Bond Market Association opposed the Banking Department's view.[3] In the meantime, the sub-prime mortgage market has grown rapidly. Events have ultimately shown that many loans were originated that arguably never should have been made. Some of the troubled sub-prime loans may have been the result of predatory lending practices. Circumstances have conspired to make U.S. consumers view their homes as ATM machines.

Perhaps the market has become too sanguine about mortgage credit quality. Lenders arguably have not been fully effective at measuring and managing the credit risk of the loans that they originate. Despite the strong credit performance track record of U.S. residential mortgage loans, the question remains whether the key driver of that performance was good lending practices and good analysis by lenders or merely good economic conditions.

According to some economists and mortgage professionals, a moderate decline in home prices should not cause difficulties for financial institutions or for the general economy.

The "American Dream" is alive and well. The combination of low interest rates (for most of the past decade) and the introduction of new mortgage products have made the American Dream available to a greater share of families. Securitization contributes to the process by liberating lenders from balance sheet constraints and by spreading risks.

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contrast, most ABS backed by sub-prime mortgage loan use the "OC" structure, which has performance tests and an alternate waterfall if a deal performs poorly.

[2] The prepared text of the keynote address is available at http://www.bondmarket.com/story.asp?id=2777.

[3] Letter to The Honorable Elizabeth McCaul, Superintendent of Banks, State of New York (1 Aug 2000) http://www.bondmarkets.com/story.asp?id=1302.

A possible outcome of a cooling housing market could be minimal dislocation of the mortgage and securitization markets. However, worse scenarios also are possible. Securitization professionals should consider the risk that investors lose confidence in residential mortgage securities and reduce their participation in the secondary mortgage market. Such a loss of confidence could occur if investors feel that disclosure has been inadequate, if they suffer losses from issuer or servicer fraud, or if they become subject to assignee liability for predatory lending practices. Of note, some sub-prime lenders have committed servicing fraud to avoid repurchasing loans that suffered early payment defaults (*i.e.*, the lenders made payments on behalf of the borrowers in order to avoid reporting the loan as delinquent).

The securitization industry needs to embrace practices that give investors the fullest possible disclosure so that they do not reduce their allocations to securitized products.

9:05am – Opening Panel/Macro Market Overview

Interest Rate Outlook: One panelist expects the yield on the 10-year Treasury Note to be within 25 basis points of its current level a year from now. He thinks the yield curve will steepen. Most respondents to a pre-conference survey expect the yield on the 10-year Treasury Note to be between 4.5% and 5.0% a year from now.

Consumer Credit Risk: We are still near historic lows for the pricing of consumer credit risk, even though spreads on the triple-B and triple-B-minus sub-indices of the ABX.HE have recently widened. Also, although delinquencies and early payment defaults have been rising, the economy remains strong and corporate profits are solid. The bottom line is that volatility and uncertainty seem greater now than before. Overall, the market arguably is under-pricing risk. The survey results show that most respondents feel that risk is under-priced.

Threats to the U.S. Securitization Market: The overall corporate market is healthy and corporate credit is generally strong. The main risk is the reassertion of fundamental credit risk – the deterioration of the sub-prime mortgage sector. The ABX.HE.BBB- is trading in the range of 90 to 91, which reflects a pessimistic view of sub-prime mortgage credit. It is unclear whether a contagion would spread to other areas if there is major deterioration in sub-prime mortgage credit. The CDO sector has major exposure to sub-prime mortgage credit and arguably is very vulnerable. Survey respondents agree that the greatest threats to the market are deterioration of sub-prime mortgage credit and the lack of credit discipline by sub-prime mortgage lenders.

Confidence: A key question is whether investment bankers, rating agencies, and investors use sufficiently accurate tools for measuring credit risk. A tough issue for today's mortgage sector is "fraud for purchase," where a home buyer gives false or exaggerated information in order to qualify for a loan.

Key Innovation/Growth Area: CDO technology is hot because it can be applied to most product areas. CDOs should be viewed as a technology rather than as a distinct product area. Also, banks will increasingly use securitization for balance sheet relief on their low yielding assets.

Non-U.S. Securitization: Securitization activity in Europe should continue to grow quickly. There is no single sub-sector that dominates growth in Europe. However, European issuers can borrow cheaply on an unsecured basis and this may constrain growth. There is the potential for tremendous growth of securitization activity in Asia.

Mortgage Outlook: Mortgage originations likely will decline by 10% to 15% in 2007. The decline in originations is likely to be most pronounced in the sub-prime mortgage area. In the prime mortgage area the proportion of new ARM originations likely will decline. It is hard to generalize about home prices because they are a local phenomenon. For the U.S. as a whole, home prices likely will be flat or have low single digit growth. Survey respondents feel that home prices likely will be flat or decline slightly (0% to -5%).

Threats to Jumbo MBS Sector: Stress in the sub-prime mortgage sector may reveal unscrupulous practices among sub-prime lenders, which could undermine confidence in the prime MBS market. Survey respondents feel that credit deterioration is the main threat.

HEL ABS Spreads: A panelist expects spreads on triple-A-rated sub-prime mortgage ABS to be roughly flat through 2007. Survey respondents expect spreads on triple-A-rated sub-prime mortgage ABS to be flat or to widen slightly.

CDO Issuance for 2007: Including synthetic super-senior trades, total CDO volume could exceed $1 trillion in 2007. Many leveraged loans and commercial real estate "B notes" end up in CDOs. This has helped to keep asset values going up. Survey respondents expect CDO issuance to grow in 2007.

Hedge Funds: Hedge funds have a positive effect on the securitization market. They play a key role in the synthetic market by providing liquidity as buyers of protection. If it were not for the hedge funds, other parties in the securitization market could not synthetically sell protection. The volume of synthetic trades in mezzanine sub-prime mortgage ABS is much larger than the volume of actual securities. CDOs have distributed the risk broadly. Most survey respondents believe that hedge funds exert a positive influence on the securitization market.

Regulation AB: One panelist feels that Regulation AB[4] has been very positive for securitization investors. Most survey respondents feel that Reg AB's impact has been neutral or mildly positive. A significant minority feel that Reg AB's impact has been negative.

Regulatory Issues: Option ARMs and credit card fees may become the subject of heightened regulatory scrutiny.[5] Regulators may increase their pressure on derivatives dealers to improve the process of confirming derivatives transactions.[6] Survey respondents expect Basel II[7] and the potential for additional regulation of mortgage lending practices to be the key regulatory issues for 2007.

The Next Big Thing: The technology of synthetics is a bigger development than anything involving a single asset class. Infrastructure deals outside the U.S. have great potential for growth. Survey respondents feel that the use of securitization for acquisition finance is another main area for growth potential.

10:20am – Role of Hedge Funds in the Securitization Market

Strategies: One panelist states that hedge funds are "all over" the securitization market. They structure and invest in CDOs, they employ long-short strategies, and they invest in subordinate and equity tranches. A second panelist notes that hedge funds are active investors when securitization is used as an acquisition tool and in patent royalty securitizations.

Supply: Hedge funds that are CDO managers have strong demand for triple-B-rated sub-prime mortgage ABS and their demand drives spreads tighter. On the opposite side of the market, other

[4] Regulation AB is the SEC regulation covering disclosure standards and sales practices for ABS and MBS. 17 C.F.R. § 229.1101 *et seq*. (2006), Release 33-8518, 70 Fed. Reg. 1506 (7 Jan 2005).

[5] Option ARMs already have received a large dose of regulatory attention. *See* Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, Office of Thrift Supervision, National Credit Union Administration, *Interagency Guidance on Nontraditional Mortgage Risks*, 71 Fed. Reg. 58609 (4 Oct 2006).

[6] *See, e.g.*, letter to Mr. Timothy Geithner, President of the Federal Reserve Bank of New York, from leading credit derivatives dealers (4 Oct 2005) http://www.newyorkfed.org/newsevents/news/markets/2005/industryletter.pdf.

[7] Office of the Comptroller of the Currency, Federal Reserve System, Federal Deposit Insurance Corporation, and Office of Thrift Supervision, *Risk-Based Capital Standards: Advanced Capital Adequacy Framework*, 71 Fed. Reg. 55830 (25 Sep 2006) (notice of proposed rulemaking).

hedge funds are buyers of credit protection (through CDS on sub-prime mortgage ABS) and they have the effect of pushing spreads wider. Hedge funds have helped generate tiering among issuers of sub-prime mortgage ABS.

Risk and Leverage: Hedge funds arguably have reduced price volatility by supplying a reservoir of demand. Hedge funds generally use leverage responsibly. However, if broker-dealers pull the repo lines to hedge funds (*i.e.*, terminate financing arrangements that allow hedge funds to operate with leverage), there could be a wave of selling by the hedge funds.

Another panelist feels that there is too much leverage in the financing of residuals. However, hedge funds are gradually replacing their overnight financing facilities with long-term financing and so-called "permanent capital" facilities. Some hedge funds get long-term financing through bank facilities and others issue CDOs. Some hedge funds do not use leverage on their securitization portfolios.

Hedge Fund Demand: Hedge funds are a key source of demand for subordinate ABS tranches and ABS residuals (*i.e.*, equity). However, hedge funds do not comprise a monolithic block; they do not all move together and different hedge funds often appear taking opposite positions. Accordingly, there is should not be significant systemic risk to the ABS market from the possibility that demand from hedge funds suddenly dries up.

Effect of Macro Hedge Funds: The entry of the macro hedge funds into the securitization space has been a windfall for dealers. Some of the macro hedge funds did not fully appreciate the data and modeling burdens of securitizations. Those hedge funds may not be able to differentiate "the bad" from "the worse."

Dealers brought macro hedge funds into the securitization area to be buyers of protection. The dealers wanted to get the macro hedge funds to fill that role so that they could feed the demand from CDOs for synthetic triple-B sub-prime mortgage risk.

Convergence of Private Equity and Alternative Assets: The structure of the hedge fund industry is shifting to more closely resemble the private equity sector. Hedge funds are employing longer lockups (the investment period during which an investor cannot redeem his investment) and larger "side pockets" for illiquid investments that get marked only infrequently.

Residuals: One panelist feels strongly that triple-B sub-prime mortgage ABS are lousy investments because they exhibit cliff risk. Small changes in the performance of the underlying mortgage loans can produce large differences in the ultimate investment performance of the securities. He recommends trading up in quality. In contrast, he perceives value in residuals from certain deals, such as those from deals backed by MTA (option ARM) loans. He is highly critical of the rating agencies and cites the poor performance of the manufactured housing ABS area as an example of an area where the rating agencies misjudged a whole sector.

Bid Lists: In many cases, only a few items from an extensive bid list end up trading. This reveals that bid lists are sometimes merely fishing expeditions.

ABX.HE: Hedge funds are active on both sides of the ABX.HE index. Some are protection buyers and some are protection sellers. So far, the market has been thin and subject to volatility from small changes in volume. The expected introduction of tranche trading on the ABX.HE sub-indices is widely anticipated and may give rise to correlation trading in the ABS area.

11:25am – Consumer Credit Trends

Mortgage Affordability Products: The borrower on a 5/1 interest-only adjustable-rate mortgage loan (ARM) can suffer a payment shock of up to 55%. The regulatory agencies have ordered lenders to apply their borrower qualification tests using the fully-indexed interest rate on certain types of loans (interest-only loans and loans that allow for negative amortization, such as option ARMs).[8] The new requirements can reduce a borrower's qualifying loan amount by up to 45%.

The share of ARM originations is dropping, but it remains high in the Pacific states (still nearly 50%). The ARM share in the Midwest was lower initially and has dropped to around 20%. Thus, ARM resets pose a greater risk for loans to borrowers on the West Coast than for loans to borrowers in the Midwest. The share of interest-only loans has been growing. Interest-only loans account for more than 50% of the purchase money loans on the West Coast. The prevalence of interest-only loans is rising in the markets with the lowest affordability.

Delinquencies have been rising on sub-prime ARMs but not yet on sub-prime fixed-rate mortgage loans (FRMs). There has been a slight increase in prime ARM delinquencies.

Macro Factors Influencing Affordability: Strong household income and a strong labor market support the notion that the housing market should continue to gain ground in 2007, with single-digit growth likely.

Interest-only loans and loans with negative amortization features became much more prevalent starting in 2004. Those products account for larger shares of new loan originations in states with the lowest affordability.

Unemployment or curtailment of income is the main cause of mortgage loan delinquencies. This suggests that a strong labor market should keep mortgage loan delinquencies low. The second and third main causes of delinquencies are illness and excessive obligation. Excessive obligation was the cause of delinquencies in 11% of cases in 2004 but that proportion has gown to 13% more recently. Interest-only products experience higher rates of delinquency than other mortgage products.

Risks of the Sub-prime Obligor: Median home price statistics tend to exaggerate price declines. The lower end of the housing market remains strong. Sales of cheaper homes remain solid while sales of "trade-up homes" are declining. According the Case-Shiller index, home prices are still rising, but at a somewhat slower rate than they have been recently.[9]

A high proportion of delinquencies are centered in Southern California, where the proportion of affordability loans and sub-prime loans is very high. Delinquencies also are high in Florida. On the other hand, the worst delinquency rates are in the rust belt states, while the overall delinquency rate for California is reasonably modest.

Example: Even though Las Vegas has a very strong job market, delinquencies are high because sub-prime mortgage originations to Las Vegas borrowers were high in recent years.

One panelist expects sub-prime delinquencies to peak in 2008 when the greatest share of sub-prime ARMs reach their reset dates.

[8] Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, Office of Thrift Supervision, National Credit Union Administration, *Interagency Guidance on Nontraditional Mortgage Risks*, 71 Fed. Reg. 58609 (4 Oct 2006).

[9] This assertion seems wrong. According to data on Bloomberg (ticker SPCS <index>), the S&P/Case-Shiller Composite 20-City Home Price Index peaked at a value of 206.53 for July 2006 and declined over each of the following months to a value of 204.41 for November 2006.

Downside Scenario: Under S&P's analysis, a bursting real estate bubble would lead to defaults on the single-B-rated tranches of prime jumbo MBS, on the single-B-rated tranches of alt-A MBS, and on the double-B tranches of 2005 vintage alt-A MBS. The subordinate tranches of some sub-prime mortgage ABS would suffer downgrades but should not default.[10]

Commercial Bank Exposure: U.S. commercial banks have greatly increased their exposures to the housing sector over the past five years. Difficulties in the housing sector could lead to problems for commercial banks.

Borrower Credit Risk: The household debt ratio for homeowners has been rising over recent years. The typical household is more stretched then ever before to meet its mortgage obligations. Likewise, debt-to-income and debt-to-asset ratios also have risen over the past five years. However, another way to look at the data is to consider all financial obligations – both mortgage payments and rent – which produces a less pessimistic view.[11]

Pricing of Credit Risk: The current level of spreads for sub-prime mortgage ABS rated at the triple-B and double-B levels arguably does not provide fair compensation for the credit risk.

Outlook: One panelist has a positive outlook for consumers but cautions about the ARM resets over the next two years. Another panelist is upbeat on the economy but is concerned about consumers. A third panelist generally agrees but seems slightly more optimistic, emphasizing that corporate balance sheets are stronger than in the past and that the economy has solid foundations for strength. ARM resets should not be too much of a problem because borrowers will refinance. The fourth panelist emphasizes that refinancing will dampen the harmful effects of ARM resets. The greater amount of ARM debt means that the Federal Reserve has greater power when it changes rates as a policy tool.

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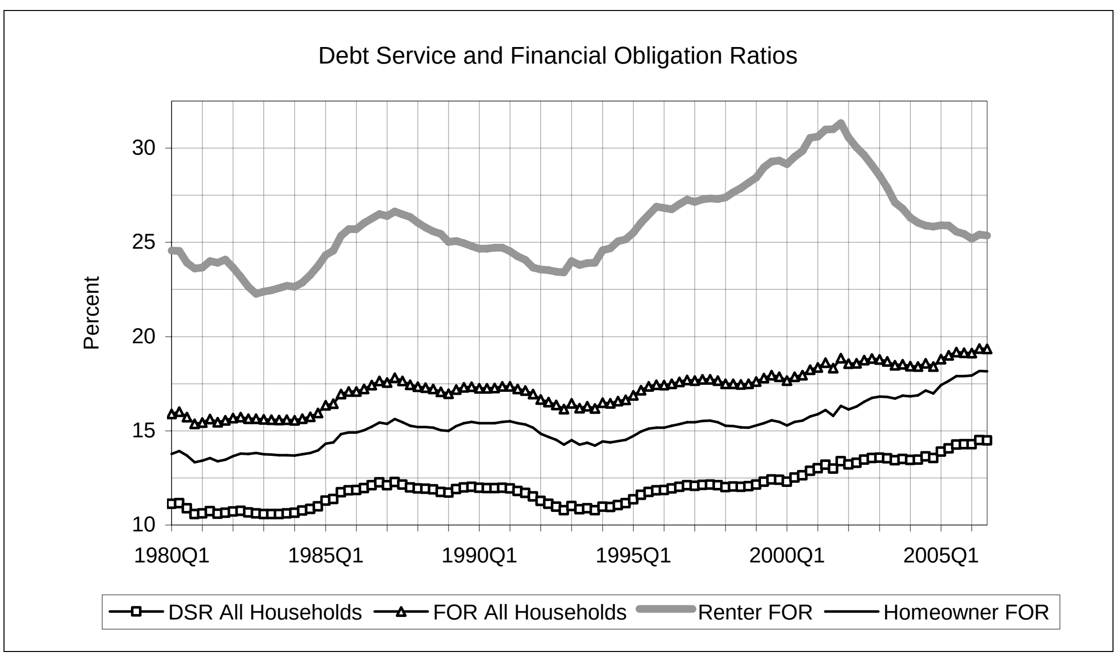
[10] According to an S&P teleconference on 12 Dec 2006, double-B-rated tranches of sub-prime mortgage ABS deals that include interest rate swaps ***would*** default in 2008. *See* Stock, M., *A More Stressful Test of a Housing Market Decline on U.S. RMBS*, S&P teleconference presentation (12 Dec 2006); *see also* Stock, M. et al., *A More Stressful Test of a Housing Market Decline on U.S. RMBS*, S&P research report (15 May 2006).

[11] The Federal Reserve publishes household debt service ratios and "financial obligation ratios" at http://www.federalreserve.gov/Releases/housedebt/. The financial obligation ratios include rental payments on tenant-occupied property.



Source: Federal Reserve

1:25pm – Current State of the RMBS Market: Industry Structure and the Macroeconomic Environment

Home Price Outlook: One panelist expects home prices to be flat over the next five years for the U.S. as a whole. He expects home prices to be flat or to decline slightly (around 1% per year) in California. He expects home prices to rise slightly in Florida. He expects home prices in the Northeast to be roughly flat.

A second panelist expects U.S. home price appreciation to be in the range of 2% to 3% over the next five years. He expects California home prices to decline at a rate of 5% for the next few years and then to rebound, producing a flat home prices in California over a five-year time horizon.

One panelist states that the rate of home price appreciation is merely a secondary driver of mortgage loan credit performance. He contends that interest rates, the strength of the labor market, and innovation in the mortgage market have stronger influences on credit performance.

Borrowers may start to behave differently than they have in the past in deciding whether or not to default on their loans. One panelist feels that employment is more important than home price appreciation (HPA) for prime-quality borrowers but that HPA is the dominant factor for sub-prime borrowers and borrowers with little or no equity in their homes. Another panelist agrees and also notes that regulatory constraints on originations of new mortgage loans may prevent some borrowers from refinancing when the interest rates on their loans adjust upward. A third panelist agrees that HPA is the key driver for defaults by sub-prime borrowers. He notes interest rate adjustments on some sub-prime loans may cause the borrowers to have debt-to-income ratios (DTIs) of 70% or more.

Scary Topics: The overall bond market is very solid right now. There is potential for dislocation if foreign countries start selling their dollar holdings or if there is an oil shock.

Some have suggested that a slowdown in housing can create a feedback loop in the labor market as the construction, mortgage lending, and real estate industries contract. Panelists feel that the impact of such a feedback loop would be minimal. However, some panelists acknowledge that overheated home prices could make renting a better strategy than owning a home in some markets.

Data and liquidity have been key drivers of the market. The abundance of data helped the market become comfortable with mortgage risk and promoted a willingness to experiment with affordability products. There is a huge abundance of capital entering the market and CDOs account for an important share of it. The data should allow securitization professionals to study the performance of loans to borrowers in geographic areas that have experienced home price declines. The catch is that areas of home price declines are strongly correlated with areas of high unemployment. The data does not provide a clear way to separate the effects of negative HPA from the effects of a weak regional labor market.

Another panelist feels that new product innovation has been a key driver. He cites disintermediation as an additional factor – lenders today do not have to retain credit exposure on the loans that they originate. Therefore, the pendulum may have swung too far toward accepting irrationally risky products. Here too, though, the (over)abundance of capital arguably is the real culprit behind why the market accepts risky products.

Power is shifting back into the hands of investors. Mortgage brokers are losing the power to control which products dominate. Investors are becoming unwilling to accept certain loan products. Another panelist notes that regulatory intervention also may be a positive influence.

Comparing Today to 1997-1998: The Russian and Asian debt crises triggered a liquidity crunch. Credit performance of the loans remained strong during that period, but prepayments were faster than expected and residuals were overvalued. More recently, too many marginal loans were made to borrowers who should not have become homeowners. The lenders in today's environment who are likely to survive are the ones with stronger access to capital. Thinly capitalized lenders have greater risk of demise.

Another panelist notes that access to liquidity and capital are the common features among the companies that survived 1997-98 and those that will survive the current environment. Today's environment has an excess of lending capacity, some of which needs to be flushed out of the system. The competitive environment today encourages origination of weak loans with high interest rates rather than less-risky loans with lower interest rates.

Vertical integration by Wall Street firms produces very good pricing. But, it remains to be seen whether Wall Street can keep origination costs low enough to sustain profitability. The key question is whether Wall Street firms can run origination operations as effectively and efficiently as the traditional mortgage bankers.

One panelist feels that the rating agencies have a conflict of interest that prevents them from being tough on weak structures. He asserts that the rating agencies have an interest in seeing double-B-rated and triple-B-rated sub-prime mortgage ABS go into rated CDOs, on which the rating agencies earn substantial fees.

<u>Tail Risk</u>: One panelist strongly criticizes the rating agencies for "allowing" structures in sub-prime mortgage deals that provide for releasing cash to residual tranches during the peak of the loss curve (*i.e.*, during the stage in the life of the loans when the greatest proportion of total losses occurs). The 2004 vintage may be considered the best-ever vintage of sub-prime mortgage loans. Nonetheless, a substantial majority of the triple-B-rated tranches from 2004 deals likely will be downgraded. Panelists assert that deal structures should not allow for the release of cash flow to residuals if doing so would cause a downgrade of any rated tranches, assuming normal (base case) collateral performance. Years ago, the bond insurers required overcollateralization step-up mechanisms to protect themselves from tail risk. However, that was one of the factors that prompted issuers to shift to senior-subordinate structures instead of using bond insurance.

2:30pm – New CDO Products/Structures

<u>Triggerless ABS CDOs</u>: Triggerless ABS CDOs represents a return to a simpler product. Such deals are being executed in smaller size than deals with triggers. The triggerless deals complete their ramp-up investments in just two to three months. About half of the new deals coming to market are triggerless. The triggerless feature is attractive to the equity class of a CDO. The trade-off is that subordination levels must be higher and there is lower base-case internal rate of return (IRR) to the equity.

<u>Credit Default Swaps (CDS) vs. Cash Assets</u>: CDOs backed by mezzanine ABS usually source the risk synthetically (*i.e.*, instead of buying actual triple-B-rated sub-prime mortgage ABS, the CDOs sell protection through credit default swaps on those securities). Synthetic deals (*i.e.*, CDOs that sell protection through CDS) are starting to borrow features from cash deals (*i.e.*, those that invest in actual securities). The nature of subordination is different in a purely synthetic structure from a purely cash structure. In synthetics, the subordination is initially fixed and can only decline as it is consumed by credit losses. Conversely, in cash deals, the credit enhancement can adjust dynamically over time. Liquidity is poor for both very strong and very weak sub-prime mortgage ABS from older vintages. Liquidity is stronger for mid-quality credits from those vintages because different market participants are willing to take the opposite sides of the market.

<u>Credit Opportunity Funds</u>: Credit opportunity funds closely resemble market value CDOs of several years ago. The pools tend to consist of illiquid positions in obscure names. An investor must place a large measure of trust in the manager. One panelist asserts that there are notable relative value opportunities in the lower portion of the capital structure of such funds. Another panelist focuses on the reliability of pricing (marks) for determining compliance with covenants. He also cautions against oversized positions in illiquid securities and urges debt investors to focus closely on a fund's equity distribution mechanism to make sure that the equity does not clean out the deal.

Commodity CDOs (CCOs): CCOs allow packaging of deep out-of-the-money put options and distributing them to fixed income investors, who would not otherwise participate in commodity risk.

Muni CDOs: The first CDO of below investment grade municipal debt was executed in 2006. This was an important development because the assets are relatively stable despite their seemingly low ratings.[12] The CDO receives a premium for both the credit risk and the illiquidity of the underlying municipal securities.

Convergence of Cash and Synthetics: There were two key drivers for the rapid increase in synthetic ABS investment activity by CDOs. The first was the standardization of CDS documentation, championed by ISDA (the International Swaps and Derivatives Association). The second was the introduction of the pay-as-you-go mechanism into the widely used "Dealer Form" of confirmation for ABS CDS. Those factors allow synthetic ABS to achieve a reasonably close match to the economics of their reference securities.

Correlation and the Indices: One panelist is skeptical about the idea of adapting the correlation models used in the area of corporate CDS to the ABS CDS area. He believes that measuring or trading ABS correlation will not really come about until there is very active trading in the tranched indices.

CPDOs and CCOs: Both CPDOs and CCOs are methods of repackaging volatility as credit risk (CPDO stands for constant proportion debt obligation and CCO stands for collateralized commodity obligation).[13] In both cases, the credit risk of the underlying assets (if there is any credit risk at all) is secondary to the risk of spread/price movements. Both CPDOs and CCOs require accurate modeling for analysis.

CPDOs vs. Credit DPCs: A CPDO is a leveraged deal that adjusts for volatility. A credit DPC (derivative products company) is a full blown business.[14] A CPDO suits an investor who wants to take volatility risk. A credit DPC is a business that can take all kinds of credit risks.

CDS on Loans (LCDS): In June, ISDA introduced a template for CDS on syndicated loans. The new template differs from CDS on ABS in that it has no pay-as-you-go feature and it is not cancellable if the loan that it references is paid-off. The only credit events are bankruptcy and failure to pay. The template for CDS on syndicated loans in the U.S. differs from the form used in Europe. In Europe, the CDS would terminate if the reference loan is cancelled. In addition, restructuring typically is a credit event in a European loan CDS. Some LCDS use a fixed recovery assumption (e.g. 70%) for settlement following a credit event.

New Risks and Events: Sub-prime mortgage loans are an area that presents risks for the CDO area. The outlook is somewhat pessimistic for sub-prime mortgage ABS rated at the double-B and triple-B rating levels. If many of those securities experience downgrades (or defaults), the stress will carry over to the CDO area.

ERISA creates an impediment to investment in below-investment grade (or equity) securities by ERISA plans. Recent legislation helps reduce the impediment to allow greater participation by ERISA plans.

[12] *See, e.g.*, Richman, N. et al., *Mapping of Moody's U.S. Municipal Bond Rating Scale to Moody's Corporate Rating Scale and Assignment of Corporate Equivalent Ratings to Municipal Obligations*, Moody's special report (Jun 2006)

[13] For background on CPDOs, *see* Chandler, C., *CPDOs Have Arrived in Global Derivatives Market*, S&P special report (1 Nov 2006).

[14] For background on CDPCs, *see* Tzani, R. and J. Chen, *Credit Derivative Product Companies*, Moody's rating methodology (6 Mar 2006).

Under a new treaty with Ireland, there is a loan origination safe harbor (from U.S. tax law) for certain entities that have at least 50% of their debt and at least 50% of their equity owned by U.S. entities.

Transparency: There is a technological cycle in financial markets. Today, services like Intex, Wall Street Analytics, and Trepp succeed in providing transparency to structured finance deals, which helps liquidity in the market. However, the convergence of cash and synthetic ABS in new CDOs is straining the ability of available technology to sustain transparency. Participants in the CDO market should continually invest in technology to preserve transparency.

Repackaging CDO Equity and Notes: Now there are CDO equity funds. In the U.S., there are master limited partnerships that invest in CDO equity. The market for such vehicles has increased markedly over the past year. They supply a reservoir of demand for CDO equity.

3:45pm – CDS of RMBS and HEL ABS: The New Frontier

Although Wall Street firms use the ABX.HE indices for hedging, mortgage originators have not yet embraced it as a hedging tool.

One panelist asserts that the parties on the short side of CDS trades (*i.e.*, buyers of credit protection) may not fully understand that the structures of their ABS reference securities are built to withstand reasonably high levels of losses.

It remains tough to monetize a gain on an old CDS; novations and assignments (*i.e.*, ways of trading out of a position) are sometimes hard to do.

Wall Street designed the ABX.HE to be a barometer of the market and to have easy trading for hedgers and speculators. Trading levels of the ABX.HE indices have been driven primarily by technical factors. Several other panelists agree. Because each series is limited to 20 deals, the ABX.HE indices arguably do not reflect the broad sub-prime mortgage ABS market. Moreover, the indices arguably have not lived up to the expectations of the dealer community. The panelist feels that, in retrospect, the index products should have used more broadly diversified reference pools – the reference pools should have included more than 20 deals. The problem with having only 20 deals is that the index products are vulnerable to idiosyncratic performance in the underlying deals. There is unbalanced interest in the index products from the long and short sides of the market.

Real money accounts are not active on the long side of the ABX.HE indices. Just dealers use it on the long side. Dealers hope that the anticipated tranching of the indices will give rise to correlation trading in ABS.

According to one panelist, the deals in ABX.HE.06-1 are better than the deals in ABX.HE.06-2 and ABX.HE.07-1. Another panelist feels that ABX.HE.06-1 indices are trading wide to their fair values. Based on loan characteristics, ABX.HE.07-1 arguably should be slightly stronger than ABX.HE.06-2. A scenario of HPA less than +3% to +4% could cause many deals to fail their triggers and to produce extension of the triple-B and triple-B-minus tranches of deals. All other things being equal, the panelist expects the performance of the 2006 vintage to be about 40% worse than the 2003 vintage. In a flat HPA scenario he expects cumulative losses of around 8.5% for the deals in the ABX.HE.06-2 series and of around 10% for the deals in the ABX.HE.07-1 series.

The long side of the market is very full because CDOs continue to seek triple-B exposure to sub-prime mortgage ABS. The only players on the short side of the market seem to be speculators. There are not "natural" short players. In the absence of true hedgers entering the marketplace, the shorts may dry up if the speculators lose interest. True hedgers may be frustrated by current spread volatility, which seems too disconnected from fundamentals.

Tranching of the ABX.HE Indices: Trading in standardized tranches of the ABX.HE indices is expected to start on February 14.[15] Initially there may be only limited activity in trading of the tranches of the index. Some players will stay on the sidelines to observe whether meaningful "correlation trading" emerges. Another panelist compares the tranching of the ABX.HE indices to ABS CDOs. A third panelist expects that hedge funds that have taken the short side of ABX.HE positions also will take the short side of ABX.HE tranches. There could even be a surge in short interest, which would produce widening of spreads. The introduction of the tranches on the ABX.HE should affect ABS CDO pricing and ultimately should produce tiering among CDOs.

Panelists are skeptical that corporate-style correlation models will develop to guide pricing and trading of ABS CDOs based on trading of tranched ABX.HE indices.[16] A related question is whether liquidity in ABS CDOs and tranched ABX.HE indices will be constrained by the absence of a standard model for valuation. In the corporate market, most trades are done on a "delta hedged"[17] basis and there is a standard method for calculating the hedge ratio. Another panelist hopes that the tranched ABX.HE will improve liquidity on single-name CDS of ABS by pushing spreads to levels that are more appropriate.

One panelist posits that the introduction of tranches on the ABX.HE indices could cause CDO liability spreads to widen over the next year.

Another panelist expresses concern about the alt-B mortgage area. He believes that the problems of the ordinary sub-prime mortgage space likely will be amplified in the alt-B area.

There is a measure of incongruity between how ABS structures actually work and how the rating agencies analyze them. One panelist feels that losses are more back-loaded than the rating agencies seem to feel them to be. He asserts that rating agencies tend to presume that deals fail their trigger tests, while the greater risk to certain rated classes can come from passing the tests. He further notes that there are notable performance differences among issuers that cannot be attributed to quantifiable loan characteristics (*i.e.*, unquantifiable differences in origination practices can produce consistent differences in the performance of securitized assets). Another panelist feels that there is insufficient disclosure of "soft" (*i.e.*, unquantifiable) information about origination and underwriting practices.

4:50pm – Relative Value Opportunities in Non-Mortgage ABS

Ford and GMAC: Are the wide spreads available on auto ABS from Ford and GMAC justified? One panelist strongly favors auto ABS from both Ford and GMAC because of their wide spreads. Around the end of 2006, GMAC priced 2-year tranches around S+12 and L+6 (CARAT 2006-2), which represent significant spread pick-ups compared to deals from other issuers of prime auto loan ABS. The auto lease sector has been a backwater of the ABS world, but it is poised to re-emerge in 2007.

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[15] The tranched ABX.HE indices will be called "TABX." Each initial TABX sub-index will have a reference portfolio composed of the 40 reference obligations of the related sub-indices from the 06-2 and 07-1 series of the ABX.HE. In addition, each initial TABX sub-index will have a specified "attachment point" and "detachment point," similar to a CDO tranche. Thus, the 12%-20% tranche of a TABX sub-index would incur no loss until the losses on the reference portfolio reached 12%, after which it would suffer losses on a dollar-for-dollar basis with the reference portfolio, until being completely wiped out when losses on the reference portfolio reach 20%. So, the "TABX.HE.07-1.06-2.BBB.3-7" has a reference portfolio consisting of the 20 reference obligations of the ABX.HE.07-1.BBB and the 20 reference obligations of the ABX.HE.06-2.BBB. In addition, as shown by the "3-7" at the end of the name, the tranche has an attachment point of 3% and a detachment point of 7%. For more information about the TABX indices see http://www.markit.com/information/affiliations/tabx.

[16] Trading of the tranched ABX.HE indices will allow market participants to calculate the "implied correlation" among the securities that compose the reference portfolio. In the area of CDOs backed by corporate obligations, implied correlation has become a widely accepted tool for pricing and trading CDO tranches. For more information about implied correlation *see* Whetten, M. and M. Adelson, *Correlation Primer*, Nomura fixed income research (6 Aug 2004); Whetten, M. and W. Jin, *Correlation Redux*, Nomura fixed income research (17 Oct 2005).

[17] Delta hedging refers to hedging against the risk of adverse spread movements. For a discussion of delta hedging in the context of single-tranche synthetic CDOs *see* Whetten, M. and M. Adelson, "*The Bespoke [bispóuk]" – A Guide to Single-Tranche Synthetic CDOs*, Nomura fixed income research (17 Nov 2004).

The PBGC issue is largely gone (*i.e.*, new auto lease ABS are structured so that the Pension Benefit Guaranty Corporation cannot seize the leased vehicles if an automaker collapses).

A second panelist notes that there was a GM deal around the middle of last year that offered very wide spreads. It had a high exposure to borrowers in the Mid-west and investors were concerned about that geographic concentration.

Another panelist notes that spread widening on ABS from Ford and GMAC partly reflects a sentiment that both companies will be increasingly dependent on securitization financing. He believes that both companies' auto ABS are fairly priced and that the toughest issue is in the area of floorplan deals. On the other hand, according to a different panelist, the companies demonstrated their ability to get funding from sources other than securitization by executing whole loan sales.

Comparison to HEL ABS: One panelist highlights the historically strong credit performance of auto loan ABS. In contrast to the sub-prime mortgage ABS sector, triple-B-rated tranches of prime quality auto loan deals have never experienced problems. The market reflects this in the much tighter spreads on triple-B-rated auto loan ABS compared to sub-prime mortgage ABS.

Floorplan ABS: Virtually all auto floorplan ABS offer a spread pick-up compared to ordinary auto loan ABS. One panelist recommends that investors favor floorplan ABS from Ford, GM, and Navistar because of the spread pick-up and low likelihood that the companies will be liquidated even if they go into bankruptcy. If such a company goes into bankruptcy, it likely would get a debtor-in-possession (DIP) financing and it likely would redeem its outstanding dealer floorplan ABS with no loss to investors.

A second panelist has a less sanguine view. He feels that the market's view of auto loan ABS was shaped primarily in an environment when the auto makers had strong, investment grade ratings. Now the companies are much weaker credits and it arguably is not reasonable to simply carry on the views from the earlier environment into current conditions.

Harley Davidson Motorcycle Trust 2005-3: S&P watchlisted the subordinated tranche of Harley 2005-3 because the underlying pool experienced higher-than-expected losses, causing the deal to breach its loss trigger test. However, the deal is building additional credit enhancement in its reserve account from excess spread. The watchlisting action caused consternation among investors. A problem is that the bond is on Intex but it is not updated.

Another panelist notes that Harley saturated the market for top quality borrowers and that it had to loosen its standards in order to sustain sales/production volumes.

A third panelist notes that investors tend to hunker down when a bond experiences stress rather than selling right away because of the loss they would suffer on an immediate sale. It is interesting that investors who hold the Harley 2005-3 deal have not pushed Intex to update its data on the deal.

Navistar: Navistar has not filed financial statements in two years and was recently delisted from the NYSE. However, the company has consistently filed monthly reports for its ABS deals. Moody's withdrew its rating on Navistar's dealer floorplan ABS because of the absence of information and the linkage of the floorplan deals to the company's corporate credit. Another panelist feels that it is a "big red flag" that the company has not managed to comply with its filing obligations. Investors face the risk of possible servicing transfer. A third panelist feels that the absence of information justifies a significant price concession. A fourth panelist disagrees, arguing that the senior tranches of the Navistar floorplan deals are a "screaming buy" at a discount margin of 22 basis points. The second panelist argues that there is potential for substantial deterioration that is not fully counter-balanced by the 22 basis points.

U.K. and Australian RMBS and other Dollar Denominated Foreign ABS: One panelist asserts that spreads are very tight on U.K. conforming RMBS; a lot of the "juice" is out of the product. However, he contends that there are opportunities for investors in non-conforming U.K. RMBS.[18] There is a strong rental housing market in the U.K., driven partly by immigration and partly by people getting married at older ages. Non-conforming U.K. RMBS offer spreads of L+9 and have potential to tighten relative to conforming U.K. RMBS.

Curve Inversion: One investor uses Treasury securities to get duration in his portfolio. He notes that it is hard to find spread and yield in the current environment. Another panelist has a very negative outlook on credit. He feels that capital is too readily available and that pricing and spreads do not reflect fundamental risks. He does not have strictly quantitative basis for his view but he feels it very firmly. He feels that triple-B and double-B tranches of sub-prime mortgage deals present a package of risks that is very hard to quantify. He feels that residuals from sub-prime mortgage deals are easier to value, by comparison. He feels that ABS CDOs are the toughest of all to value, because they represent aggregations of double-B and triple-B sub-prime mortgage risk. He asserts that most ABS CDO managers do not really perform thorough analysis of their ABS positions but instead purchase the securities based on qualitative, macro views.

Off-the-Run Sectors: The aircraft ABS sector is overbought right now. Likewise, the manufactured housing (MH) ABS sector has become overpriced. Once the word gets out that a sector offers opportunity, a flood of capital rushes into it and drives prices up.

Consumer Credit – Sub-prime Mortgages: The key question is whether the deterioration in the sub-prime mortgage area will spill over into other areas, particularly the credit card area. If the Federal Reserve eases credit, contagion is unlikely. However, if the Fed does not ease credit, sub-prime mortgage borrowers may not be able to refinance their loans when the interest rates reset and then a spillover would be quite possible. A second panelist partly agrees but observes that no one can really know.

Credit quality is hard to measure and predict. Both the rating agencies and other groups of market participants have misjudged the credit quality of key areas of the securitization market. For example, FirstPlus' high (125%) LTV deals traded in the 40s and matured at par. Traders failed to see the fundamental value in the securities. Conversely, GE's home equity deals were in high demand, but all of them got into trouble. This arguably reflects herd behavior instead of careful analysis by investors.

Tuesday, 30 January 2007

8:00am – Rating RMBS: Methods and Criteria

Rating Models and Product Categories: S&P uses the LEVELS® loan-level scoring model. LEVELS uses up to 80 data items each loan in a securitization pool. The model does not rely on a loan's characterization as "prime," "alt-A," or "sub-prime." S&P uses its SPIRE™ tool for cash flow modeling (SPIRE stands for Standard & Poor's Interest Rate Evaluator). LEVELS version 6.0 is expected to be introduced in the second quarter of 2007. That version is enhanced so that it can handle second-lien loans and high LTV (125%) loans. However, even the new version will not handle HELOCs or scratch-and-dent loans.

Moody's treats some of the differences between prime and sub-prime loans outside of its models. Time since a borrower's bankruptcy, the extent of a lender's due diligence, and requirements for reserves and escrows are examples of items that differentiate the prime and sub-prime sectors.

[18] In the context of U.K. mortgage loans, the term "non-conforming" refers to loans that generally would be considered "sub-prime" or "alternative" (as in "alt-A") in the U.S. mortgage market.

Moody's emphasizes "simulations" of 1,250 scenarios in its mortgage rating model.[19] With respect to the capital structure of mortgage securitizations (*i.e.*, the allocation of cash flow among the tranches within a deal), Moody's focuses on a small number of selected scenarios. However, Moody's expects later this year to greatly expand the number of cash flow scenarios that it considers for each deal.

Fitch's ResiLogic model is now it beta testing.[20] In developing the model, Fitch found that the model could achieve greater predictive power if it received loan categorization (*i.e.*, prime, alt-A, or sub-prime) as a model input. In Fitch's methodology the qualitative categorization becomes an input to the quantitative model.

DBRS makes its model publicly available, including the source code.[21] The DBRS model does not use the identity of an issuer as an input to its model but it does use historical performance of an originator's pools for post-model adjustments in the rating process.

Challenges: Moody's intends to focus on the prevalence of early payment defaults (EPDs), loan repurchases, and proper disclosure of simultaneous second liens among issuers.[22]

The flood of easy money in the system over the past few years has led to a loosening of credit standards. The share of stated-income borrowers has grown steadily over the past several years. This has led DBRS to increase its emphasis on outside-the-model adjustments in its rating process.

New Features, New Fields, Response to Changes: S&P is examining early payment defaults but it does not currently plan to include an issuer's rate of EPDs as a model input. S&P focuses heavily on an issuer's operations including quality control and fraud prevention, and therefore it reserves the right to reach decisions based on factors outside the model.

Another panelist notes that it is striking that while mortgage loan originators routinely brag about their advanced technology they cannot deliver debt-to-income figures for borrowers and cannot even agree on how to calculate a DTI ratio. A third panelist shares the second panelist's sentiment about DTI ratios.

Moody's asserts that a factor-based loss projection model cannot be as effective as a simulation-based model that captures the impact of prepayments and changes in the labor market. Moody's credit enhancement levels have risen over the past few years. The change reflects both migration in the characteristics of securitized loans and the evolution of the economy. Also, borrower DTIs are messy because originators have different methods of calculating DTI. Moreover, even at a single originator, the method of calculating DTI sometimes changes over time.

Weak Triggers: Triggers tests in sub-prime mortgage securitizations deals are not ideal. They arguably make deals vulnerable to losses in the tails (*i.e.*, late in a deal's life). However, issuers and not the rating agencies determine the triggers in the deals. Moody's has proposed alternative triggers for deals: a "pipeline" trigger and an "adjusted cumulative loss" trigger. The pipeline trigger would be harder to calculate. The adjusted cumulative loss trigger could address risk more accurately than existing cumulative loss triggers in cases of rapid prepayments.

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[19] *See*, Siegel, J., *Moody's Mortgage Metrics: A Model Analysis of Residential Mortgage Pools*, Moody's special report (1 Apr 2003).

[20] Hunt, B. et al., *ResiLogic: U.S. Residential Mortgage Loss Model*, Fitch residential mortgage criteria report (4 Oct 2006).

[21] *See* http://www.dbrs.com/rmbsmodel.

[22] *See, e.g.*, Rocco, J., *Early Defaults Rise in Mortgage Securitizations*, Moody's special report (18 Jan 2007); Debash, C., W. Frankowicz, and D. Kothari, *2006 Review and 2007 Outlook: Home Equity ABS — 2006 Was Tough – Will 2007 Be Even More Challenging?*, Moody's special report (22 Jan 2007); Fellows, E., K. Gabay, and K. Ramallo, *2006 Review and 2007 Outlook: Alternative-A RMBS — Still Riding the Affordability Product Wave*, Moody's special report (19 Jan 2007).

A second panelist notes that triggers were designed to protect the senior tranches of deals and they are working as originally intended. Now the buyers of the subordinate tranches want the benefit of the protection as well. Some market participants have proposed later step-down dates in the deals as a way to address perceived weaknesses.

Model Transparency for HELOCs: Moody's uses its mortgage model (Moody's Mortgage Metrics) to analyze HELOCs and recently published an updated methodology report.[23] Sometimes outside-the-model adjustments are necessary if an issuer has a short history in the product.

S&P is not sufficiently satisfied with the HELOC data set to apply its LEVELS model to HELOC deals. However, S&P has published its methodology for rating deals backed by HELOCs.[24] Compared to S&P's approach for rating other mortgage-related securitizations, its approach for rating HELOC deals is less dependent on a quantitative rating model.

Model Over-Reliance: Too often when investors call a rating agency with questions about a mortgage deal, a rating analyst simply says that the model handled all issues in the deal. DBRS asserts that its analysts always are able to discuss the issues. S&P asserts that its published criteria provide thorough answers to questions about how its model handles particular issues or factors. Moody's asserts that its analysts should never answer questions simply with the statement that the model handled all the issues. Moody's tries to promote knowledge of its methodology by holding investor briefings and by having one-on-one meetings.

What Went Wrong with the 2006 Sub-prime Vintage: Moody's asserts that its evaluation of the 2006 sub-prime mortgage vintage was more accurate than its competitors'. One problematic dimension of the 2006 sub-prime vintage was stated-income wage earners. Another was first-time homebuyers.

9:05am – RMBS Market Research Perspectives

The focus of the session will be on the sub-prime mortgage sector. Key topics will be (1) collateral, (2) analysis, (3) investment strategy, and (4) outlook. Arguably the most important question is "what happened to the 2006 vintage?" Market participants have ascribed the poor performance of the 2006 vintage to various causes including first-time homebuyers, simultaneous second-lien loans, and loans to stated-income borrowers.

Collateral: Before 2006, most panelists would have predicted that a scenario of flat home prices would have produced a delayed reaction of poor performance several years in the future. The current performance deterioration of 2006 vintage makes it necessary to consider whether current performance is an aberration or the natural result of the underwriting cycle (the multi-year trend of loosening underwriting standards). Issuers are being forced to retreat from the loose standards that they applied in 2006 but they do not want to lose market share by doing so. Risky attributes, including first-time homebuyers, simultaneous second-lien loans, and stated-income loans, combined to create a "toxic cocktail" in the 2006 vintage.

Early payment defaults (EPDs) remain something of a mystery. Who are the people who buy a home and then immediately default on making payments? It seems to defy logic.

Another panelist argues that it is important to put the 2006 vintage in perspective. Older vintages got a performance boost from rapid prepayments. The 2006 vintage carries the burden of a high proportion of purchase loans to first-time home buyers. Additionally, there was excessive home builder inventory and the builders offered rebates averaging 3%. That produced effective LTVs that are higher than the reported LTVs of the many 2006 loans.

[23] Riggi, M., *Moody's Rating Methodology: Home Equity Line of Credit ("HELOC") Securitizations*, Moody's rating methodology (2 Oct 2006).

[24] Beauchamp, K., M. Stock, and M. Solar, *Standard & Poor's Revises Criteria for Rating U.S. HELOC Transactions*, S&P special report (1 Aug 2005).

A third panelists notes that the 2006 vintage is the first vintage of sub-prime mortgage loans that has not had the benefit of rapid home price appreciation right from the start. A fourth panelist argues that the key signal is affordability – the relation of borrowers' incomes to home prices. Even into 2006, homebuyers assumed that the value of their homes would rise. When the value of the homes did not rise, the homebuyers got squeezed because they could not extract additional cash from their homes. For the loans with very small down payments, the borrowers can simply "exercise the put option" on their homes (*i.e.*, default and walk away, letting the lender take the home). In essence, the sub-prime mortgage sector relied on strong home price appreciation in order to thrive. Additionally, easy credit was a driver of rapid home price appreciation and the contraction of sub-prime mortgage credit may contribute to a vicious cycle of a slower (or negative) rate of home price appreciation.

The housing market has had long cycles in the past. From the 1989 peak of California home prices, it took roughly 10 years for prices to come back.[25]

Analysis: Different vintages have displayed varying prepayment speeds over time. Prepayments have been a key driver of strong credit performance of some vintages, such as the 2004 vintage.

The 2006 vintage is displaying choppy prepayments and no ramp. First-time home buyers probably are concentrated in the wholesale origination channel. Refinancing borrowers are learning how to manage their FICO scores so that they can qualify for prime quality loans.[26] Borrowers also play "DTI arbitrage" by shopping among lenders for loan programs that allow them to meet DTI criteria for desirable loan offerings.

Another panelist expects that losses would be three times higher in a flat home price environment than in an environment of 10% home price appreciation.

Senior tranches of sub-prime mortgage ABS are very well protected. The outcomes for mezzanine and subordinate tranches will be affected not only by the performance of the assets backing a deal but also by the presence of swaps and derivatives in the deals.

Investment Strategy: The deals referenced by the ABX.HE indices include a disproportionate share of poor performers: those in the bottom quartile of performance for their vintage. The panelist expects the price for the ABX.HE.BBB-.06-2 to decline to low to mid-80s. The indices provide a good way for market participants to take short positions in credit risk (*i.e.*, by buying protection). Some market participants are put off by the negative carry on a short position. An alternative is to favor the top quartile of the deal population and to take long positions only in those deals.

The causes of stress in the sub-prime mortgage market appear to be confined within the sub-prime sector. The recommended strategy is to focus on tiering and to go short on deals backed by loans that never should have been made in the first place. There is no indication that lenders have really tightened their standards because the MBAA (Mortgage Bankers Association of America) purchase

[25] According to data from the Office of Federal Housing Enterprise Oversight, the home price index for California reached an interim peak level of 230.19 for 1990Q3. The index subsequently declined and did not surpass that level again until 1998Q4. In the intervening period, the index reached its lowest value of 199.53 in 1995Q1. The index has been rising steadily since 1999Q4 and reached a value of 651.32 for 2006Q3. The base period for the index (*i.e.*, index=100) is 1980Q1.

[26] *See e.g.* Weston, L., YOUR CREDIT SCORE: HOW TO FIX, IMPROVE, AND PROTECT THE 3-DIGIT NUMBER THAT SHAPES YOUR FINANCIAL FUTURE, FT Press (2d ed. 2007); Varner, K., THE INSIDER'S GUIDE TO CREDIT REPAIR, Career Press (2005); Hendricks, E., CREDIT SCORES & CREDIT REPORTS: HOW THE SYSTEM REALLY WORKS, WHAT YOU CAN DO, Privacy Times (2004).

index remains near all time highs.[27] Purchase activity remains particularly high in California, where affordability is very low.

A second panelist concurs that there has been no meaningful tightening of credit. Sub-prime lending represents about 25% of today's mortgage lending market while it formerly accounted for just 7%. How can the industry shrink to adjust to the realities of the credit situation? A crisis is developing and it likely will come to a head within six months. He agrees that the recommended strategy for investors should be to go short on weak deals. He also agrees that problems are concentrated to the sub-prime sector and to a lesser degree the alt-A sector. Performance of prime quality loans remains strong.

A third panelist also agrees. He notes the mortgage lending industry is hoping for home price appreciation to bail it out. He asserts that the sub-prime lending industry ought to contract by 30% but that lenders are not willing to shrink their businesses.

The fourth panelist takes a more optimistic view. He contends that high rates of delinquencies do not necessarily result in correspondingly higher losses. Losses take 12 to 18 months to manifest themselves. Accordingly, severity of loss upon default is a key issue. Several factors suggest that loss severities may not be very bad. For example, the homes securing sub-prime loans tend to be moderately priced, and their values may be more stable than the values of larger, more expensive homes. Additionally, servicers are processing foreclosures more quickly, which should reduce the cost of repaying servicer advances. Another panelist disagrees. He feels that the key driver of loss severity is home price appreciation and that current delinquencies are the best overall predictor of ultimate credit performance.

Servicing: There has been some shift in attitude toward addressing delinquencies faster. However, it is harder for lenders to support a growing servicing infrastructure (to handle rising delinquencies) when profitability from originations may be declining. The market should differentiate among lenders based on their prospects for surviving a contraction in the market.

All the mortgage servicers have autodialers. Autodialers do not differentiate a good servicer from a poor one. Differences in servicing efficacy appear in the area of how quickly different shops can process defaulted loans through the loss mitigation and foreclosure processes. Differences also

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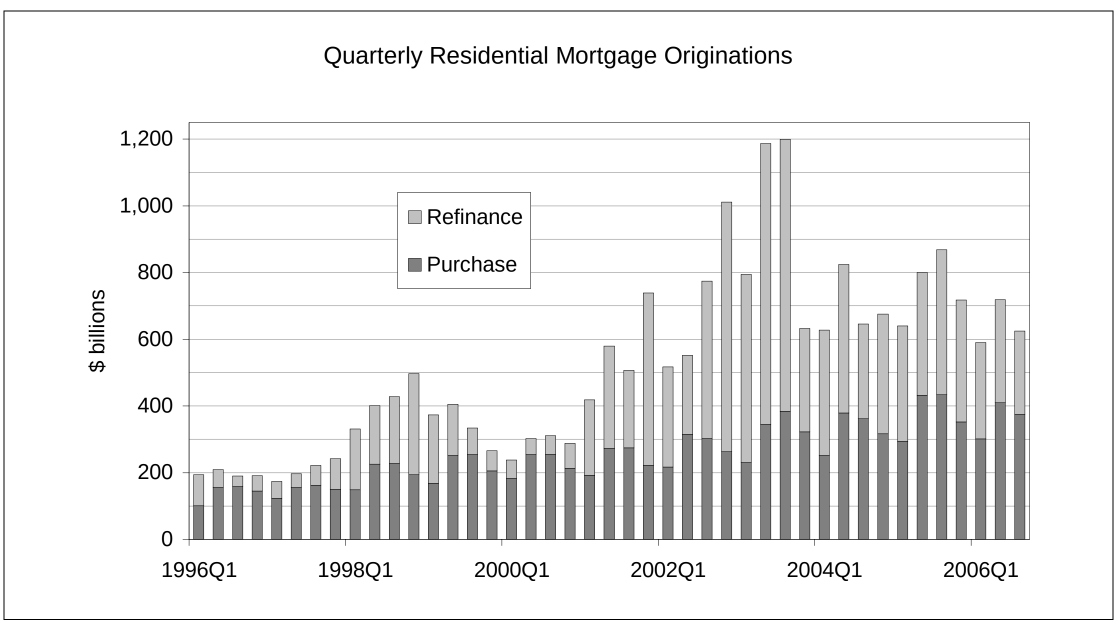

Source: Mortgage Bankers Association of America appear based on whether they can simultaneously pursue foreclosure and loss mitigation strategies. Servicing fees may not be sufficient to fully cover servicing costs on the 2006 vintage.

Older Vintages: The 2005 vintage arguably is the most attractive. The 2003 and 2004 vintages have performed well. However, the strong performance has produced an adversely selected tail that may cause downgrades on the subordinated tranches of deals from those vintages.

Another view is that spreads could tighten at the top of the credit spectrum, but continue to soften at the bottom of the credit spectrum. Regulatory action that restricts the availability of sub-prime mortgage credit could hurt performance by preventing some borrowers from refinancing when their loans reach their reset dates.

Outlook: One panelist feels that spreads will not widen as much as they should based on fundamentals. He believes the cause is the voracious demand for triple-B risk from the CDO sector. Another panelist reiterates that tiering is the key issue. CDO managers cannot achieve their required arbitrage in the high quality names; they can only get it by buying the weakest names.

10:20am – Regulation AB Update[28]

Reporting and Item 1122: The ASF has filed an interpretive request with the SEC regarding Item 1122 of Regulation AB, which covers the servicer assessment and attestation process. The initial proposal for Regulation AB contemplated a single responsible party for the servicing assessment. The industry commented that a single responsible party approach might not be the best one. The industry wanted the option to have vendors[29] provide individual assessments of their own operations. The final version of Regulation AB required individual assessments by each servicing entity.

Certain kinds of vendors, such as trustees and lock-box providers, have very limited roles, although they touch many of the assets in a deal. Foreclosure attorneys generally touch less than 5% of the assets in a deal (*i.e.*, they fall below the reporting threshold). However, the problem with relying on the 5% threshold is the need to monitor the activity level of each such vendor.

Item 1122 assessments and attestations cover a whole year, not just a specific date. They also cover a whole servicing platform, not just the servicing activities for a single deal. Reg AB replaced the USAP[30] with the specified servicing criteria. A servicing assessment must cover all points in the criteria.

The SEC Staff is leaning toward the conclusion that there is room to allow a primary servicer to accept responsibility for reporting on an assessment of a vendor's functions.[31] This would be allowed when (i) the vendor's role is limited or scripted, (ii) the vendor exercises no discretion, and (iii) the vendor does not fall within the definition of servicer in Item 1101. Primary servicers would not be required to certify on vendors but would be permitted to do so as an option. To do so, a primary servicer would have to have policies and procedures designed to monitor the vendor's functions and to provide a reasonable assurance that the vendor's functions comply with the criteria. Item 1122 is disclosure driven, so the overall assessment would have to disclose the primary servicer's assumption of responsibility for assessment of vendor functions and would have to disclose any failure of the vendor's functions to comply with the servicing criteria.

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[28] Regulation AB is the SEC regulation covering disclosure standards and sales practices for ABS and MBS. 17 C.F.R. § 229.1101 *et seq.* (2005), Release 33-8518, 70 Fed. Reg. 1506 (7 Jan 2005).

[29] Vendors include entities that provide limited servicers to a primary servicer. An example of a vendor is a lock-box provider.

[30] Mortgage Bankers Association of America, *Uniform Single Attestation Program for Mortgage Bankers* (1 Jan 1995) http://www.campusmba.org/pdf/usap.pdf.

[31] The day after the conference ended, the SEC Staff released telephone interpretation #17.06 under Regulation AB addressing the issue of vendor assessments under Item 1122, http://www.sec.gov/interps/telephone/cftelinterps_regab.pdf.

Another panelist notes that, for the current reporting cycle, there may have been non-compliance for part of the year because primary servicers did not know whether they would be allowed to rely on assessments by vendors. It is likely that many primary servicers will have to report exceptions on their servicing assessments for 2006.

The importance of exceptions to investors probably will vary across sectors. Holders of credit card ABS likely will not be concerned about routine exceptions to servicing activities reported by financially strong, regulated banks. On the other hand, exceptions reported by thinly capitalized, sub-prime mortgage lenders might be alarming to investors. The introduction of the annual servicing assessment may allow investors to differentiate situations where poor performance comes from poor underwriting from those where it results from poor servicing.

A reporting ABS issuer must disclose whether the assessment of any aspect of the servicing function is missing from its annual filing. If any required assessment is missing, the filing technically would violate the requirements of 1934 Act § 15(d). The SEC Staff plans to do targeted reviews of 1934 Act Form 10-K filings by securitization issuers. The Staff does not inform a registrant if it is reviewing the registrant's filings. The only way the registrant finds out about a Staff review of its 1934 Act filings is if it gets a comment letter.

<u>Static Pool Data & Web Sites</u>: The rule allowing ABS issuers to disclose static pool data on their own web sites is a temporary rule. It is scheduled to expire at the end of 2009.[32] The sunset on the rule implicitly contemplates that the EDGAR system will be able to accommodate filings of static pool data before 2010. The Staff plans to focus on static pool disclosures in the near future.

<u>Swap Provider Financial Disclosure</u>: Reg AB requires disclosure of swap provider financial data if the maximum probable exposure on a swap is more than 10% of the size of the related deal and it requires audited financial if the maximum probable exposure exceeds 20%.[33] The SEC's rules allow incorporating by reference to the financials of the parent corporation of a swap provider but the SEC has interpreted this as requiring that that financials of the swap provider be separately stated in its parent's financial statements. The industry asked for relief from that requirement if the parent guarantees the swap provider's obligations. The parent's financials would have to reflect the guarantee in a footnote. The industry also asked that the required footnote description of the guarantee be minimal and that the rules for guarantees of finance subsidiaries be applied in the case of a special purpose derivative products subsidiary. Item 3-10(b) of Regulation S-X[34] does not apply because the guaranty of a security issued by a finance subsidiary is itself a security, whereas the guaranty of a derivative obligation is not a security and does not carry all the attendant protections under the 1933 Act and other securities laws.

<u>Disclosure of Bond Insurer Financials</u>: If a bond insurer is required to restate or to correct its financial statements, and an ABS issuer therefore becomes unable to include the bond insurer's financial statements in its required 1934 Act filings, the issuer would not normally be disqualified from using Form S-3 solely because of the bond insurer's problems.

<u>Investor Reaction</u>: Investors like the greater comparability of new deals that Regulation AB has produced. The disclosure of FICO scores on credit card portfolios is important. The move toward loan-level disclosures also has been a benefit for investors. Even though much of the same information has been available for a long time, there is now somewhat greater assurance in the quality of the information because there was no associated liability under the securities law before Reg AB.

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[32] Regulation S-T, Item 312, 17 C.F.R. § 232.312 (2006), SEC Release 33-8518, 70 Fed. Reg. 1506, 1617 (7 Jan 2005).

[33] Regulation AB, Item 1115, 17 C.F.R. § 229.1115 (2006), SEC Release 33-8518, 70 Fed. Reg. 1506, 1611-11 (7 Jan 2005).

[34] 17 C.F.R. § 210.3-10 (2006).

11:25am – Loan-Level Data and Disclosure Issues

Investors and other market participants use loan-level data for pricing securities. Originators and broker-dealers also use loan-level data for their credit and prepayment models. Without loan-level data it arguably is impossible to effectively separate risks and sell them to investors who have appetites for different levels of risk.

Quantitative valuation systems can use up to four "curves:" prepayments, delinquencies, default, and severity. The models use loan-level data and generate a projection of aggregated pool performance that can then feed into cash flow and pricing models.

Loan-level data consists of two parts. One part reflects the original characteristics of each loan. The second part reflects the performance of each loan as it evolves over time.

Some issuers make loan-level data available on their websites. Some make the data available to investors upon request.

Sometimes the first-loss holders (*i.e.*, the investors who hold the most subordinate tranche of a deal) ask for additional information, such as (i) the lender's projected losses for the loans, (ii) property addresses for getting valuations, and (iii) borrower social security numbers for updating FICO scores. Some ABS deals make reports from third-party credit risk managers available to investors.

Regulation AB permits – but does not require – disclosure of loan-level data. Issuers that do not service their own loans need to get loan-level data from servicers in order to create their deal-level static pool disclosures.

Restricted Data: Personally identifiable financial information (PIFI) about consumers is confidential and should not be disclosed. Items include the borrowers name, address, property address, and social security number. The Gramm-Leach-Bliley Act[35] (GLBA) arguably allows disclosure of PIFI data to investors in a deal, but any further dissemination of the data would be a violation of GLBA.[36]

The Fair Credit Reporting Act[37] arguably restricts the dissemination of information about a consumer's delinquencies.

About two years ago the SEC declared that it was permissible to give investors loan-level data.[38] Before that, industry participants thought that disclosure of such information was not permitted.

Regulation FD[39] requires that information given to an investor after an offering must either be filed with the SEC (and therefore made publicly available) or given under a confidentiality agreement.[40]

An issuer should try to avoid filing loan-level data with the SEC so that it does not become the subject of SOX certification.[41] An issuer also should avoid having an obligation to deliver loan-level data so that it does not become a servicing function subject to the Reg AB certification requirement.

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[35] Gramm-Leach-Bliley Financial Services Modernization Act §§ 501-510, 15 U.S.C. §§ 6801-09, Pub. L. No. 106-102, 113 Stat. 1338 (1999).

[36] 15 U.S.C. § 6802(e)(1)(C) permits disclosure of non-public personal information in connection with "a proposed or actual securitization, secondary market sale (including sales of servicing rights), or similar transaction related to a transaction of the consumer."

[37] 15 U.S.C. § 1681 *et seq.*

[38] SEC Release 33-8518, 70 Fed. Reg. 1506, 1556 (7 Jan 2005).

[39] 17 C.F.R. Part 243 (2006).

[40] 17 C.F.R. § 243.100(b)(2)(ii) (2006).

[41] Sarbanes-Oxley Act of 2002 § 404, 15 U.S.C. § 7262, Pub. L. No. 107-204, 116 Stat. 745 (also known as the Public Company Accounting Reform and Investor Protection Act of 2002).

Loan-level data is not generally available in a uniform format across asset classes. The mortgage sector has the benefit of data in a standard format from LoanPerformance.com. Remittance reports are not in standardized formats and an issuer can change its format from month to month. Issuers use different standards for reporting delinquencies (OTS vs. MBA).[42] Issuers have different practices with respect to reporting about borrowers in bankruptcies.

Market Survey of Loan-Level Data Availability: One panelist tried to get loan-level data on sub-prime mortgage deals from Countrywide, Option One, and New Century. He tried to get data about the deals both at their inceptions and on an updated basis. He surveyed both the issuers' websites and third-party sources including trustee websites, Bloomberg, Intex, and ABSNet. He found that he was able to get prospectuses, remittance reports, CUSIP information, and loan level data for Countrywide and Option One. He could not get loan-level data about the New Century deal because he would have had to register for access to a website. Overall, he is favorably impressed with the availability of data. He feels that issuers responded to the call from investors to make loan-level data available and that the adoption of Reg AB was only a secondary factor. However, although the available data provides information about borrowers' payments, the data generally does not include information about prepayment penalties and certain other items. In addition, although loan-level data is reasonably available for mortgage deals, the availability is much worse for non-mortgage products.

LoanPerformance attempts to standardize delinquency reporting so that users can see delinquencies in terms of either the MBA or OTS calculation methods. Loan-level data arguably is not sufficient by itself to measure risk in the current market environment. Instead, loan-level data can be combined with other data to make it more useful. LoanPerformance merged into First American partly to gain access to First American's real estate data. The challenges of the current environment are not in what is visible in currently available loan-level data but rather in what is not visible. For example: the growth of junior lien financing on previously originated loans generally is not visible. LoanPerformance hopes to make that data visible by combining its data with First American's.

Challenges: Some major issuers do not report their loan-level-data to LoanPerformance. Other issuers report data on some of their securitization programs but not on all.

Along with updated information about junior liens (*e.g.*, from First American or other sources) investors eventually might start to demand updated FICO scores and updated AVMs (automated appraisals) as part of updated loan-level data. A potential legal issue is that issuers may not want to accept potential liability for updated FICO scores and AVMs.

[Note: Investors potentially should be concerned about loan-level data that they obtain from any source other than the issuer of the related deal. Information from third-parties may not be as reliable as issuer information because the third-party may have no liability for errors or omissions in the information.]

Wednesday, 31 January 2007

8:00am – Structured Life Insurance

Life insurance securitizations come in two forms: embedded value deals and risk transfer deals. Embedded value deals include redundant reserve securitization such as XXX and AXXX deals[43] as well as closed block transactions. Risk transfer deals transfer extreme mortality risk.

[42] *See generally*, Ernst, Y., *Contradictions in Terms: Variations in Terminology in the Mortgage Market*, Moody's special report (9 Jun 2000).

[43] See generally, Cummins, J.D., Securitization of Life Insurance Assets and Liabilities, Wharton Financial Institutions Center, Working Paper No. 04-03, at pp. 39-40 (3 Jan 2004) http://fic.wharton.upenn.edu/fic/papers/04/0403.pdf; Valuation of Life Insurance Reserves, Regulation No. 147, 11 NYCRR 98 http://www.ins.state.ny.us/acrobat/r147text.pdf (implementation of Regulation XXX in New York).

Issuers execute embedded value deals to free up equity capital by replacing it with debt financing. Additionally, compared to other alternatives for financing "redundant" reserves, XXX and AXXX securitizations reduce an insurer's exposure to other life companies. The main risk in an embedded value deal is the assumption that business is undervalued. Also, there is slight uncertainty about whether regulators would be able to reach the assets of the special purpose entity if the insurer became insolvent.

Executing a XXX (or AXXX) transaction is complicated. An issuer must recognize that the two component transactions – the reinsurance transaction and the capital markets transaction – really are two separate deals.

Marketing of insurance securitizations often includes a sell-side actuarial report stating that "the assumptions appear reasonable." Investors should check for any bias. Also, investors must be mindful that there is no way to correct incorrect initial assumptions half way through a XXX or AXXX securitization.

Life Settlements and Mortality: Pricing of life settlement deals generally uses the 2001 VBT mortality table.[44] That table arguably overstates mortality in the early years and understates mortality in the later years. The table was designed for life industry reserving and not for pricing life settlement transactions.

For purposes of pricing life settlement deals, it is critical to correctly estimate the mid-point of the life expectancy curve. In fact, if the estimate of the mid-point is wrong, other errors in the shape of the curve have little consequence. The 2001 VBT may produce life expectancies that are too short, resulting in problems for the deals. The panelist argues that the 2001 VBT curve needs to be adjusted. Underestimating life expectancy can produce much lower internal rates of return on a life settlement.

The market for projecting life expectancies has been very inefficient. Competing providers of life expectancies often produced life expectancies that varied by as much as 40%. The range has contracted to about 20%. Coventry First sued certain life expectancy providers for consistently underestimating life expectancies. Underestimation of life expectancies produced big losses for some investors.

Legal & Regulatory: An insurer cannot sell its redundant reserves in a XXX or AXXX deal. Instead, it gets reinsurance to meet its reserve requirements and the captive reinsurer raises reserves by issuing securities. The laws of (at least) two jurisdictions are important in such transactions: (1) the law of the jurisdiction where the insurer is based and (2) the law of the jurisdiction where the captive reinsurer is based. The regulators in both jurisdictions must agree to allow the transaction to happen.

A potentially major legal issue for the life settlement area is disclosure. Policyholders may become angry and demand regulatory action when they learn how large the brokers' commissions have been on life settlements. Separately, the NAIC and individual state regulators are generally opposed to deals where a broker solicits or encourages a person to get a policy solely for the purpose of selling it in a life settlement.

9:05am – Aircraft Lease ABS Sector Review

The aircraft ABS sector includes sub-sectors for regional jets and aircraft engines.

One panelist is from a business that focuses on narrow-body aircraft, particularly Boeing 737 models and Airbus A320 models.

[44] *See* http://www.actuary.org/life/cso_0702.asp.

The aircraft sector is cyclical and volatile. Now it seems to be on the upswing part of its cycle. After 9/11 there was a dramatic downturn in the aviation business because of a downturn in traffic. The slow period ultimately gave rise to pent-up demand. The strength of the world economy is expanding the global middle-class, which increases demand for leisure travel. The growth of low-cost airlines also boosts the total demand for travel and for aircraft.

The global inventory of commercial aircraft is around 17,000 aircraft. Of those, about 8,500 are based in the U.S. The U.S. fleet is old; the planes have an average age around 14 years. This suggests that there may soon be strong demand for new planes in the U.S. to replace the oldest aircraft that need to be retired. There is a large volume of new money entering the aircraft sector as investors from all around the globe are expressing interest. It is a good time to be an aircraft lessor because of the ready availability of capital.

Another panelist notes that values of aircraft ABS have stabilized and cash flows are steady. Lessees are able to make their payments.

Another panelist expects that the market is better prepared today for the next turn of the cycle than it was before the previous downturn.

Manufacturers have orders to keep their production lines busy for the next three years. Today's aircraft securitizations have less leverage than the older, pre-9/11 deals.

After 9/11 Moody's changed the way it models aircraft deals. The new approach produces lower advance rates. New deals tend to have lower proportions of "undesirable" aircraft models than did the older deals.

One panelist remarks that some ABS investors are using the aircraft sector as the place to temporarily park capital that they are withdrawing from the residential real estate sector. He notes that senior tranches of aircraft deals can offer yields of up to 10%. Other panelists agree that aircraft ABS are cheap compared to other asset classes.

Some newer aircraft ABS are structured with interest-only periods and reinvestment mechanisms. Such structures do not simply have liquidating portfolios of aircraft but rather actively managed portfolios.

<u>Aircraft Engine Transactions</u>: There have been two engine leasing deals. One of them was called Blade (Bloomberg ticker BLADE 2006-1A). The deals primarily involve spare engines. Because engines are continually rebuilt, they have very long operating lives. However, the airframes on which they fit eventually reach retirement and the engines can become obsolete. Overall, the economic life of an engine can be 15 to 20 years longer than the economic life of its associated airframe. The economic life of an airframe is over when its operating costs (including maintenance) start to exceed the revenue that it generates.

One panelist notes that there have been deals backed by spare parts other than engines.

<u>Outlook</u>: One panelist feels that the aircraft sector and the underlying airline industry will remain strong as long as worldwide GDP remains strong. Airlines added roughly 4.5% capacity last year. They continue to add additional capacity in expectation of further growth. Airlines ordered roughly 2,000 aircraft last year for future delivery. Demand for air travel should remain strong as long as the cost of air travel remains low. However, the cost of fuel is a key factor and that is a source uncertainty.

Another panelist concurs in the bullish view of the aircraft sector. He focuses on event risk and the possibility of another event like 9/11. Another wildcard is what would happen to existing orders if there is a downturn.

[Note: The panel eventually reached the issue of "event risk," but almost as an afterthought. Military conflict can cause extensive destruction of civilian aircraft and produce uninsured losses. Interestingly, no commercial aircraft at Beirut airport were destroyed during last summer's war in Lebanon, although several were parked there when Israeli Air Force jets bombed the runways. Middle East Airlines later used one of the airport's long taxiways to evacuate four Airbus A321s and one A330. In this vein, it is somewhat ironic that the location of ASF 2007 was just 10 miles to the southwest of Nellis AFB, where the USAF keeps 125 aircraft including F-15 Eagles, F-16 Fighting Falcons, A-10 Warthogs, and brand new F-22A Raptors.[45]]

10:20am – Commercial Real Estate CDOs

Commercial real estate (CRE) CDO volume was around $37 billion in 2006, compared to $21 billion in 2005. Static deals used subordinate CMBS tranches and REIT debt. Managed deals have become a larger sub-sector and include a wider array of underlying collateral. Panelists project that total CRE CDO issuance could be $55 billion for 2007.

A survey of CMSA members indicated that most CMBS investors intend to increase their allocations to CRE CDOs.

One panelist highlights the recent Kimberlite transaction (Bloomberg ticker KIMBR 2006-1A), which employed synthetic technology. CRE CDOs offer wider spreads than regular CMBS. The panelist speculates that the wider spreads may reflect a premium for complexity.

Another panelist notes that there are important differences among managers of CRE CDOs. Those that come from CMBS backgrounds have greater sensitivity to real estate issues and to investors' expectations about information flow over the life a deal than do managers that come from leveraged loan backgrounds.

A third panelist speculates that CDS on real estate loans may soon be included in CRE CDOs.

Another panelist suggests that novice investors in the CRE CDO area should start in the area of static deals. Later they can advance to managed deals. In considering a managed deal, an investor should focus on the manager's track record, abilities, and bench strength. However, another panelist disagrees, asserting that investing in a static deal requires an investor to have a deep understanding of the underlying real estate, while investing in a managed deal permits the investor to rely on the manager's expertise to a large degree.

CRE CDOs have opened up securitization to moderate-sized floating rate commercial real estate loans. Before CRE CDOs, only large floating rate loans got securitized.

One panelist observes that the U.S. CMBS community has policed itself very effectively to assure that CMBS activity focuses on institutional-quality commercial mortgage loans. He suggests that the dispersion of commercial loan quality in the overall economy ultimately may cap the total proportion of CRE activity that can achieve financing through CMBS. Outside the U.S., the proportion of CRE activity that can be financed through CMBS is somewhat lower.

In analyzing CRE CDOs, Fitch uses a simulation-based analysis for deals backed by rated securities (*i.e.*, "CUSIP" collateral) and it uses its CMBS methodology for rating deals backed directly by loans.

Outlook: One panelist expects 2007 to be a busy year for CRE CDOs; that it will be another year of record issuance and that managed deals will account for a larger share of the total. However, he is concerned that managed deals are essentially carry trades.

[45] *See* http://www.nellis.af.mil/library/factsheets/index.asp.

A second panelist notes that the commercial real estate market is strong and likely will remain strong for the next two years. The tougher question is what will the CRE market's condition be in three or four years? CRE CDOs have not been tested in a down market and three or four years from now they may experience a tough test. Whole loan product may slow down next year.

A third view is that the 2006-07 vintage would not have been able to withstand the stresses of the 2002-2003 period. The panelist urges investors to push for quality so that the CRE CDO area does not suffer the fate of the residential sub-prime mortgage sector.

— E N D —

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