SUBPRIME MORTGAGE OPPORTUNITIES

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VERITABLE

Introduction

The collapse of the subprime mortgage market last summer sent a series of shockwaves through the global financial system. The resulting turmoil has affected financial institutions from the United States to China, as growing fears about loose lending standards across asset classes put a freeze on the capital markets. But how did this great debacle come into existence? Over the last several years, Wall Street increasingly used the black magic of "securitization" to give home loans to hundreds of thousands of individuals with poor credit history or incomplete documentation. These risky mortgages were packaged and repackaged into bonds that were sold globally to a variety of institutions. Although most failed to understand the complex assets they were buying, investors were assured that the diversification gained through bundling together tens of thousands of mortgages would protect them from any substantial losses. But when the smoke cleared and the contents of the witch's brew were revealed, it became crystal clear that Wall Street's alchemy produced little more than fool's gold.

In total, $2.4 trillion in face value of high-risk mortgages remain outstanding.[1] Bonds linked to these pools of loans have seen their credit ratings slashed. They stand trapped on the books of an array of institutions including international and U.S. banks, mortgage companies, insurance companies, pension funds, mutual funds, and hedge funds. Many such groups are mandated to sell any debt instrument that is downgraded below the investment grade level. Others face mounting liquidity pressures as the global credit crunch compels cash strapped institutions to raise capital by selling assets. Layering fear and uncertainty atop these already formidable motivations suggests that a flood of mortgage related bonds are set to hit the market, in many cases without regard to price or underlying fundamentals. While several investment managers target the distressed debt arena, few have the expertise necessary to understand and price these complicated structures. In fact, the capital on hand looking to purchase mortgage related assets is dwarfed by the supply poised to inundate the market. Those firms with a history of employing a credit intensive and comprehensive approach to the mortgage backed security market face a compelling opportunity to purchase bonds with a highly attractive risk/reward profile.

An Overview of the Securitization Process

The securitization process begins with the origination of a home loan by a mortgage broker. In many instances this broker has only a loose affiliation with the issuing entity actually providing capital to finance the loan. He or she typically works with many different lenders, each enticing the broker to use their funds by offering up front fees that are earned upon completion of the lending process. This misalignment of interests motivates the broker to choose the group that offers the highest commission dollars, regardless of the characteristics of the loan they sell to the borrower. And because the broker's compensation is completely front-end loaded he or she has little incentive to make sure that the borrower's financial information is accurate or that the loan is in fact affordable. Instead the broker focuses on selling a loan, any loan, and moving on to the next borrower.

TYPES OF MORTGAGES

Conforming Mortgage: A loan that follows government guidelines for maximum loan amount, borrower credit and income requirements, down payment, and suitable properties.

Prime/Jumbo Mortgage Loan: A mortgage loan that generally conforms to traditional 'A' credit guidelines with a loan balance that exceeds a conforming mortgage requirement.

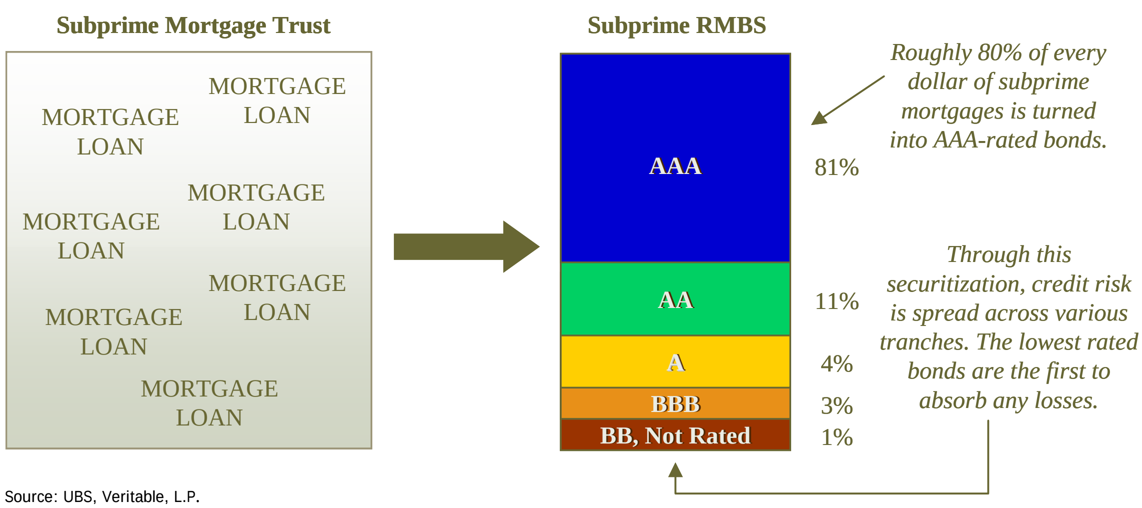
Alt-A Loan: An "alternative documentation" loan; a mortgage that generally conforms to traditional prime credit guidelines, although the LTV, loan documentation, occupancy status, or property type, etc. may cause the loan not to qualify under standard underwriting programs.

Subprime Loan: A first or junior lien loan made to a borrower who has a history of delinquency or other credit problems. The loan may also fail to qualify under standard underwriting programs because of the LTV, loan documentation, occupancy status, or property type issues.

Source: Veritable, L.P.

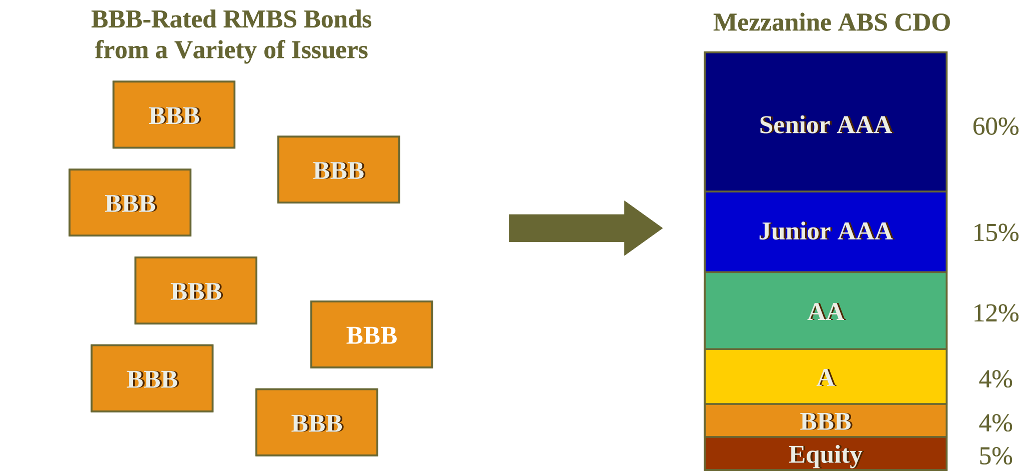
Similarly, the mortgage issuer (also called the originator) funds large numbers of loans with the assistance of a variety of mortgage brokers. The issuer pools thousands of individual mortgages together and sells them into a bankruptcy remote trust, typically recognizing a gain in the process. These trusts usually contain just one type of mortgage–Subprime, Alt-A, or Prime/Jumbo. The originator then works with ratings agencies such as Moody's and Standard and Poor's to create a group of tiered bonds that are backed by the residential mortgage trust. Collectively, these bonds are referred to as residential mortgage backed securities (RMBS). But the bonds do not equally share the risk of the losses in the trust and do not pay the same level of interest. Instead the credit risk is "tranched" into several different classes, each with a distinct rating and seniority in the event that there are defaults. As the losses from the collective pool grow, those bonds that were afforded the lowest rating (and subsequently carry the highest coupon rate) are the first to see an impairment of their principal balance. They absorb each dollar of loss that comes out of the full mortgage pool until their principal balance is reduced to zero. To the extent that there are further losses, the next lowest class of bonds then begins to shed principal, and so on up the rest of the capital structure. After the mortgage issuer creates a trust, the RMBS bonds linked to it are sold around the world. The issuer retains little to no equity in the trust and as a result has no financial interest in the future performance of the borrowers in the pool.

OVERVIEW OF SECURITIZATION PROCESS



Source: UBS, Veritable, L.P.

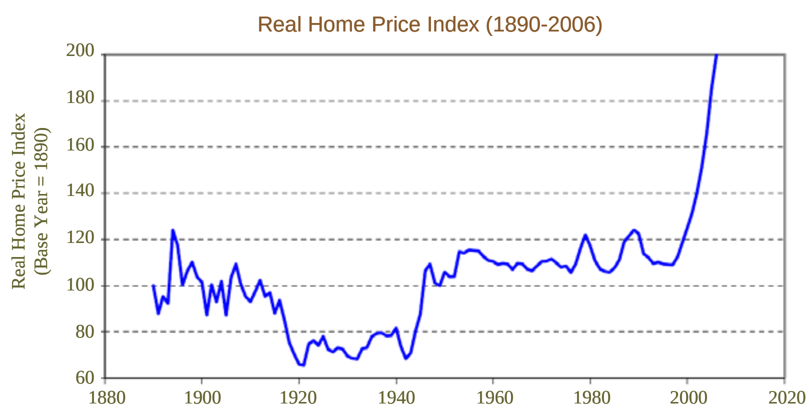
In many instances the bonds were sold into Asset-Backed Security Collateralized Debt Obligations (ABS CDOs), which represent a second layer of securitization. In these deals, bonds from a variety of mortgage issuers are bundled together to form another tranched series of debt obligations. In one specific structure, called a mezzanine ABS CDO, the collateral consisted of almost entirely BBB-rated bonds from subprime RMBS deals. The CDO issuer again works with the ratings agencies to assign different levels of risk to each class of bonds that are subsequently widely dispersed to a variety of credit investors. Both the rating agency and the issuer earn lucrative fees along the way. In some instances there was also a third layer of securitization, called a CDO-squared, where bonds from several ABS CDOs were combined to create yet another complicated debt vehicle. Throughout this convoluted process, the borrower becomes further and further removed from the various entities that actually own his loan.



Source: Veritable, L.P.

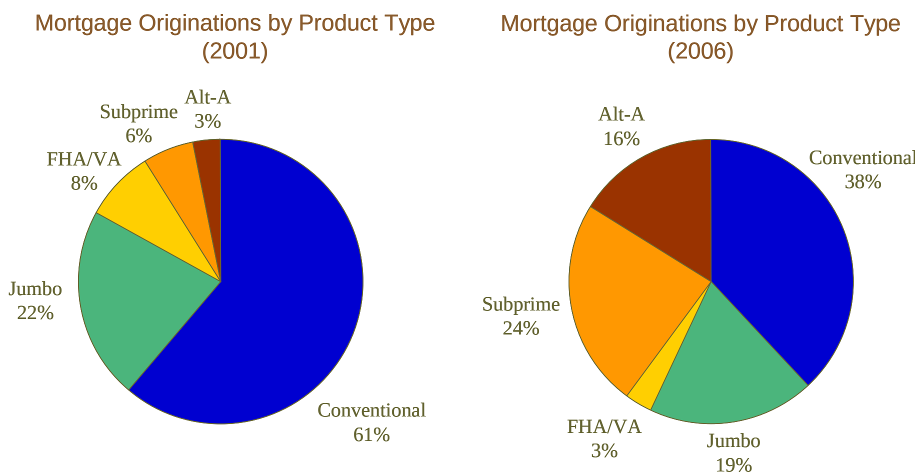
Seeds of a Crisis

Beginning in 2000, substantial interest rate cuts by the Federal Reserve set the stage for an unprecedented boom in mortgage originations. Reduced borrowing costs allowed homeowners to refinance their existing home loans into new, lower rate mortgages. This availability of cheap debt also opened the door for many first time buyers who were previously unable to qualify for financing. Not wanting to feel left out, speculators still licking their wounds from the burst of the technology bubble, turned to the real estate market as the next great source of outsized returns. Opportunists bought second and even third homes for investment purposes. With so many Americans setting their sights on a brand new house, prices began to surge. Everyone seemed to benefit. Those that already owned property saw their home equity balances balloon and through the magic of cash out refinancing, turned their increasing home values into cold, hard cash. This type of activity became very pronounced in the subprime mortgage market, where home loans are made to borrowers with poor or limited credit history. As home prices continued to climb, many borrowers refinanced multiple times, creating a virtual second source of income that funded a variety of consumer purchases such as new cars, vacations, and flat screen televisions.



Source: Robert J. Shiller, Irrational Exuberance, 2nd edition

Since the securitization process allowed originators to earn fees and book gains by quickly selling newly issued loans into the booming RMBS market, financial institutions flocked to the mortgage business. The more mortgages they sold, the more cash they earned, trusting there would be few consequences if the hastily underwritten loans turned sour. Many set up large operations and infrastructure to fund the origination of subprime and Alt-A loans. New lenders entered the business as well, setting up thinly capitalized corporations that existed solely for the purpose of creating subprime mortgages. So much capital flooded the market that by 2006, subprime and Alt-A mortgages made up an extraordinary portion of the overall origination pool. By the summer of 2007 approximately $1.2 trillion of subprime mortgages and $1.2 trillion of Alt-A mortgages were outstanding.[2]



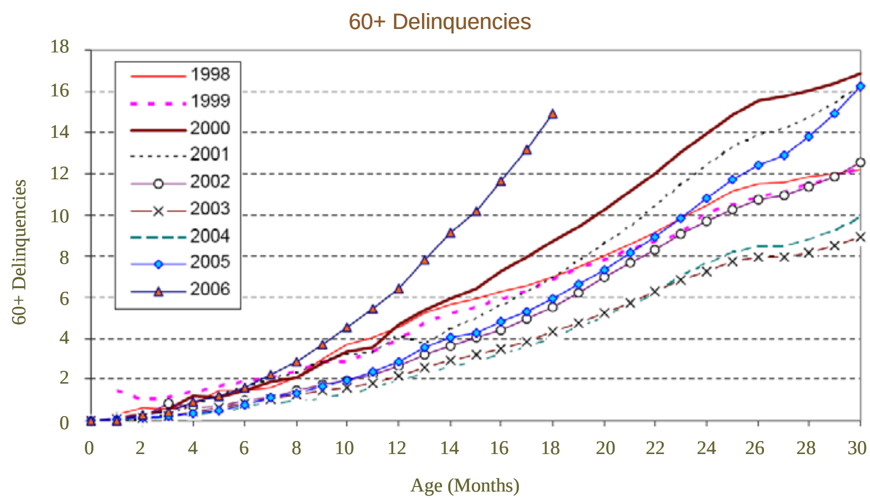
Source: UBS, Veritable, L.P.

Because the originators were able to offload the risk of borrower defaults through securitizations, they had little incentive to maintain strict underwriting criteria. As a result, lending standards slackened. By 2006, roughly 50% of all adjustable rate mortgages made to subprime borrowers did not have the full documentation (such as proof of income) that is typically required to obtain a conventional mortgage.[3] And more than half of these loans were made to borrowers who had less than 10% equity in their homes.[4] In short, thousands of borrowers with poor credit history who did nothing more than state their income level were able to purchase a home with no money down.

The typical loan was structured as a “2/28” adjustable rate mortgage (ARM). This format carries a below market “teaser rate” that is fixed for the first two years and then floats off of a reference rate for the following 28 years, at which point the balance is fully paid down. When the two-year teaser period expires, the borrower’s new monthly mortgage payment is often substantially higher–frequently increasing by more than 25 percent. But despite this potentially large rate increase looming in the not so distant future, underwriters were only required to approve borrowers at the introductory rate. In addition, the qualification standards were much less stringent than for a government-sponsored loan. For example, most conventional mortgages carry a debt-to-income ratio of approximately 33%. This means that roughly one third of the borrower’s gross income is available to service their monthly mortgage expense. With subprime loans originated in 2006 the average debt-to-income ratio was roughly 45%, implying that the loan was unaffordable even at the teaser rate[5]. And because the borrowers could barely qualify for the loan at that preliminary level, the originators did not require them to include tax or insurance costs in monthly installments that could be escrowed until the annual bill comes due. If the borrower did not fully anticipate these added costs it can constitute an additional financial blow.

The Meltdown Begins…

As long as home prices stayed on their upward trajectory borrowers could refinance their loans before the unaffordable rate adjustment occurred. Conventional wisdom dictated that home prices do not fall, but, after a five-year period that witnessed an approximate 75% nationwide increase in home prices, as measured by the S&P Case-Shiller Index, the music finally stopped. In 2006 home price appreciation (HPA) was virtually non-existent. This left consumers who relied on cash received from repeatedly tapping their home equity bank stretching to pay bills, including their mortgage payments. The incredibly lax lending standards, particularly for those loans made in late 2006 and early 2007, began to impact credit performance as payment delinquencies skyrocketed.



Source: Loan Performance, UBS, "MBS: Locating Value in the Midst of the Subprime Crisis", Securitized Products Seminar, September 2007

Particularly troublesome were the early payment defaults (EPDs), or loans that default within six months of origination. In many cases, borrowers never made a single mortgage payment. Because of language in the securitization agreement, the original issuers were required to buy EPDs back from the trust at par. As delinquencies began to mount, the thinly capitalized originators who never intended to retain mortgages on their balance sheets were forced to purchase more and more non-performing loans. Eventually the cash outlays became too great, as the large and small lenders alike either voluntarily exited the business or were pushed into bankruptcy. The result was a major contraction of lending capacity in the subprime mortgage market, leaving many borrowers that had hoped to refinance before their teaser period expired trapped with swiftly increasing mortgage payments and no one to turn to for help.

The Current State of the Market

Delinquencies and defaults among subprime loans originated during 2006 and early 2007 continue to accelerate, with no signs of abatement. Inventories of unsold homes are expanding at a rapid pace as tight credit conditions and a practical subprime shutdown have removed the marginal buyer from the housing market. Growing supply coupled with weak demand has led to a 12% drop peak to trough in nationwide home prices as measured by the S&P Case-Shiller Index. Despite the best efforts of the United States government to ease the debt burden on struggling homeowners, there has been no plan put in place that effectively reverses the downward spiral of declining home prices and rising foreclosures.

In fact, the number of nationwide foreclosure filings was up 75% in 2007 as 2,203,295 default notices, auction sale notices, and bank repossessions were recorded.[6]

Investors owning securities linked to the performance of subprime mortgages have not been immune to the strain of the homeowners they funded. In some pools more than a quarter of borrowers are at least sixty days behind on their mortgage payments. The deteriorating fundamental picture has caused prices for RMBS bonds to collapse. The 2007-1 ABX Index tracks the twenty largest subprime RMBS deals completed in the last six months of 2006. As of late March 2008, the AAA ABX Index now trades for $0.63 on the dollar while BBB series fetches under $0.10.[7] Even AA bonds, which were built to sustain cumulative losses of as much as 20% of a pool, are trading at $0.22–a level that suggests a high likelihood of principal defaults.[8]

The alarming delinquency trends combined with escalating criticism from a wide swath of regulators and institutional investors has prompted the ratings agencies to take broad action against subprime mortgage linked securities. As of January 31, 2008, Standard and Poor's has placed 69% of the 2006 vintage AAA rated subprime RMBS bonds on ratings watch negative. Many of the subordinated debt classes have seen their original ratings cut to below investment grade level. Particularly hard hit were the mezzanine ABS CDOs, or those deals where the collateral is primarily BBB rated bonds from subprime RMBS deals. In some cases the AAA bonds from those vehicles have been downgraded to a CCC+ rating or below, where Fitch believes that "default is a real possibility." Many of these AAA bonds trade for as little as $0.10 while lower rated tranches have been deemed worthless.[9] In some instances downgrades of the BBB RMBS collateral have been so severe that an "Events of Default" has been triggered. This can lead to either a forced liquidation of the entire structure or an acceleration of payments to the senior most class of bonds. In most "Event of Default" scenarios bonds below the AAA level will never receive another interest or principal payment.

Once a highly lucrative source of revenue, Wall Street's CDO binge is now taking a big bite out of profits. Thanks to their role in arranging and distributing CDOs, many investment banks retained a substantial interest in deals they underwrote. This was particularly true for 2007 issues as credit concerns were already softening demand for subprime linked assets. In fact, when the deal machine ground to a halt last summer, Wall Street was long several hundred billion dollars of subprime related debt. The subsequent collapse in price of these securities has pushed several bellwether financial institutions to take massive hits to their balance sheets as they marked impaired CDO assets to market. Over $230 billion of losses have been reported thus far, with the potential for more to come.[10] Management teams responsible for steering these opaque institutions have been highly criticized for their lax risk management practices and poor oversight. Several high-powered executives have even been shown the door including Charles Prince, the former CEO of Citigroup, and Stan O'Neal, who held the top post at Merrill Lynch. As their successors step in to right the ship many are looking to purge the balance sheet of any remnants of the subprime debacle.

Potential Opportunities for Investment

The complex features of mortgage-backed securities and collateralized debt obligations leave the majority of institutional investors poorly equipped to evaluate their investment merits. In the past, the natural buyer of fixed income investments relied heavily on the ratings agencies to make their credit decisions for them, assuming that the historically biased models employed by these groups would properly identify any embedded risks. One assumption critical to the accuracy of their projections was the conventional wisdom that real estate is a local market. The agencies believed that because the mortgage pools contained loans from different parts of the country, any hiccup in regional real estate prices would affect only a small piece of the trust. But as is often the case in bubble environments, cheap credit flowed freely across geographic boundaries, linking together previously disparate real estate districts and increasing home prices across the nation. And when the once abundant financing all but disappeared, the now unified housing market cracked, punishing residential values throughout the United States.

Because none of the rating agencies anticipated the wide spread crisis we face today, all are scrambling to retool their quantitative systems to reflect the increased correlation across markets. This is not an easy task. Each RMBS deal contains thousands of individual mortgage loans and each CDO holds approximately one hundred RMBS bonds. This means that a CDO bond investor has exposure to hundreds of thousands of individual borrowers. Meanwhile, each RMBS bond has a unique cash flow waterfall that dictates the priority of payments in both normal and stressed scenarios. In addition, CDOs have their own structural features that are even more complex and diverse than RMBS vehicles, often differing substantially from issuer to issuer and even across deals arranged by the same sponsor. Those investors with a history of using a credit intensive approach to evaluate these structures should have an advantage when evaluating RMBS and CDO bonds if and when they flood the market.

Many mortgages originated at the end of 2006 and in early 2007 never made it through the full securitization process. When demand for non-agency RMBS bonds vanished, these loans were marooned on the books of the issuers and the banks that supplied their capital. As the credit crisis continues to spread, many of these institutions will be looking to offload any subprime related risk that they can–including unsecuritized mortgage pools. A handful of investment firms are partnering with top-tier servicing platforms to purchase these whole loans. The transactions are typically privately negotiated and allow for an exclusive due diligence period during which time the buyer can thoroughly evaluate the pools on a detailed, loan-by-loan basis. The purchaser often has access to the full underwriting file including the original loan documents and subsequent mortgage service records. They also have the ability to decide how and when loan terms should be modified to make payments more affordable for stretched borrowers. Should the loan reach the foreclosure stage, the whole loan owner can fully control the liquidation of the property.

While a compelling investment case can be made for both RMBS bonds and whole loan pools, great rewards do not come without some degree of risk and there are still numerous pitfalls that one must avoid. The sheer complexity of the asset class combined with some of the operational challenges of validating and then servicing thousands of mortgages speaks both to the magnitude of the opportunity and the degree of caution with which one should proceed into this broken asset class. Indeed, volatility in the market remains high and those without a thorough understanding of the specific risks scattered across the investment landscape might find themselves among the casualties of this unprecedented meltdown.

To the extent that you have any questions or comments regarding this article, please contact Kendra Corbett at 610-640-9551.

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ENDNOTES

[1] Lehman Brothers, Fixed Income Research U.S. Securitized Products *"Securitized Products Outlook 2008: Bumpy Road to Recovery"*, December 13, 2007.

[2] Lehman Brothers, *"Securitized Products Outlook 2008: Bumpy Road to Recovery"*.

[3] Karen Weaver, Deutsche Bank *"Perspectives on U.S. Housing"*, presentation delivered at the 2007 CDO and Credit Opportunity Fund Conference, New York, NY, October 3, 2007.

[4] Weaver

[5] Weaver

[6] RealtyTrac, Inc., www.RealtyTrac.com, 2008.

[7] Markit Group Limited, www.markit.com, 2008.

[8] Markit Group Limited.

[9] Research meetings and discussions among the author, Veritable, L.P. Research Team members, independent investment managers and other industry peers beginning January 2007.

[10] Bloomberg Finance L.P., 2007.

BIBLIOGRAPHY

Bloomberg Finance L.P., 2007-2008.

Fabozzi, Frank J. Fixed Income Analysis for the Chartered Financial Analyst Program. Sponsored by Association for Investment Management and Research (AIMR). New Hope, PA: Frank J. Fabozzi Associates, 2000.

Goodman, Laurie, UBS. *"MBS: Locating Value in the Midst of the Subprime Crisis."* Presentation delivered at the Securitized Products Seminar. September 2007.

Lucas, Douglas J., Laurie S. Goodman and Frank J. Fabozzi. Collateralized Debt Obligations: Structures and Analysis. Second ed. New York: John Wiley & Sons, Inc., 2006.

Markit Group Limited, "www.markit.com", 2008.

RealtyTrac, Inc., "www.RealtyTrac.com", 2008.

Research meetings and discussions among the author, Veritable, L.P. Research Team members, independent investment managers and other industry peers beginning January 2007.

Standard & Poor's, "www.standardandpoors.com", 2007-2008.

Weaver, Karen, Deutsche Bank. *"Perspectives on U.S. Housing."* Presentation delivered at the 2007 CDO and Credit Opportunity Fund Conference, New York. 3 October, 2007.

Zimmerman, Thomas, UBS. *"After the Subprime Meltdown, What Now?"* Presentation delivered at the Securitized Products Seminar. September 2007.

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