

We believe that non-agency RMBS continue to offer investors the potential for superior risk-adjusted returns owing to: 1) strong relative yield (on a loss-adjusted basis); 2) multiple sources of potential downside protection; and 3) several potential catalysts – both fundamental and technical – for upside price appreciation. We believe these factors, combined with our view that the non-agency RMBS market remains 15-20% undervalued, present a highly compelling investment opportunity.

## I. Introduction & Background

The residential mortgage-backed securities ("RMBS") market, estimated to be approximately \$6.7 trillion,<sup>1</sup> can be divided into two broad classes: "agency" RMBS and "non-agency" RMBS. Agency RMBS are estimated to account for approximately \$5.3 trillion<sup>1</sup> or 79% of the overall RMBS market and are securities issued and guaranteed by one of the three major agencies: Government National Mortgage Association ("Ginnie Mae"), Federal National Mortgage Association ("Frannie Mae"), or Federal Home Loan Mortgage Corporation ("Freddie Mac").

Non-agency RMBS, also referred to as "private label" RMBS, are estimated to account for the remaining approximately \$1.4 trillion<sup>1</sup> or 21% of the overall RMBS market. These securities are issued by banks, brokerage firms, and other private institutions and are not issued by or guaranteed by the agencies.

Mortgage loans are securitized in a non-agency as opposed to an agency MBS structure typically because the loans do not conform to the underwriting standards of the agencies. A major reason for this is simply loan size, not "quality". In most parts of the country, the current size limit for a single-family mortgage to conform to Fannie Mae and Freddie Mac requirements is \$417,000.<sup>2</sup> This maximum increases to \$729,750 for select "high cost areas" such as New York City and Los Angeles.<sup>2</sup> Loans that exceed the conforming balance are known as "jumbo" loans and are issued to highly credit-worthy or "prime" borrowers in many cases. Jumbo prime-backed RMBS are estimated to account for approximately \$375 billion<sup>1</sup> or 27% of non-agency RMBS.

Loans to borrowers who fail to meet the agency underwriting standards because of weaker credit histories and/or payment to income ratios and other borrower characteristics are designated Jay Menozzi, CFA Chief Investment Officer

UCM Partners, founded in 1992, is a private, SEC registered, minority-owned and operated investment advisory boutique focused on mortgage-backed securities.

UCM currently manages over \$1 billion for a diverse base of institutional and wealth management clients and offers a wide array of MBS products, ranging from indexbased passive and active strategies to absolute return hedge fund vehicles.

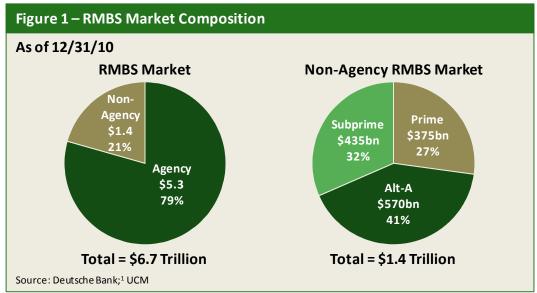
UCM's track record in dedicated MBS portfolio management extends over ten years, and our UCM Active Mortgage-Backed Securities Strategy achieved top decile annualized performance for the 3-, 5and 10-year periods ending December 31, 2010.<sup>3</sup> Past performance is no guarantee of future results.

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"subprime" loans. Subprime-backed RMBS are estimated to account for approximately \$435 billion<sup>1</sup> or 32% of non-agency RMBS.

Loans designated as "Alt-A" comprise everything in between jumbo prime and subprime and include high original loan to value ratios, somewhat weak credit characteristics, and incomplete documentation (perhaps due to self employment of the borrower, etc.). Alt-A-backed RMBS are estimated to account for approximately \$570 billion<sup>1</sup> or 41% of non-agency RMBS. Figure 1 below illustrates the breakdown of the RMBS market.



Note: Prime and Alt-A respectively include \$43 billion and \$128 billion of Option ARMs based on UCM estimates.

## II. RMBS Collateralization & Credit-Enhancement Structure

A key distinguishing feature of RMBS (both agency and non-agency) relative to most other asset classes is that they are secured or "collateralized" by what is typically a diverse array of numerous underlying mortgage loans. Additionally, RMBS are often structured to offer differing degrees of credit enhancement, creating a capital structure in which investors can identify securities that meet their unique risk-adjusted return objectives.

## Collateralization

The typical non-agency mortgage-backed security is collateralized by pools of hundreds to thousands of mortgage loans, each of which are in turn secured by 1-4 family residential real estate. One MBS deal will typically have multiple tranches, each of which is securitized by groups, or pools, of the loans, and in turn cross-collateralized by other pools of loans. As a result, when currently compared to most other asset classes, mortgage-backed securities typically offer both greater immediate diversification and the opportunity for superior downside protection inherent in a secured instrument.

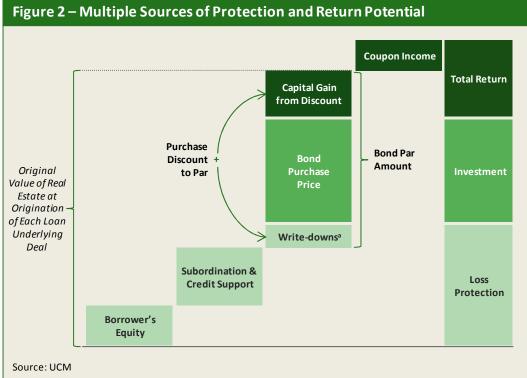
#### Credit-Enhancement Structure

Typical structuring of these securities includes structural seniority of certain cash flows through a senior/subordinated tranching structure and overcollateralization. This provides a hierarchy of credit enhancement and differentiated expected risk/return profiles, affording investors the opportunity to choose from a menu of securities from lower risk with more credit enhancement/senior cash



flow/slower projected returns, to higher risk with less credit enhancement/subordinated cash flows/higher projected returns. As a result of this credit tranching, incremental defaults may have no impact on the senior classes of RMBS securities, while having a direct negative impact on the subordinated classes.

Figure 2 below illustrates how senior non-agency RMBS tranches currently enjoy a substantial margin of safety afforded by collateralization, credit-enhancement as well as deeply discounted pricing that also offers significant upside return potential. The bottom row, delineated in light green, represents these three primary sources of downside protection. In the event of default and subsequent foreclosure, the underlying residential real estate is liquidated and borrowers absorb the first losses with their equity eliminated before RMBS investors forego any principal payments. If the borrower's equity is insufficient to cover any shortfall, the security's credit enhancement features provide additional protection to senior tranches as subordinated classes are the first to forego principal. Thus, investors in senior RMBS tranches are typically protected from losses of anywhere from 5% to 50% of the underlying loan collateral (i.e., after the equity), depending on the security's structure and the loan type. Securities collateralized with subprime loans are typically structured with more credit enhancement, while prime deals are typically structured with less. In cases where losses reach the point of impairing the principal of senior tranches, investors are further protected to the extent of any discount from par at which the security was acquired.



<sup>a</sup> In this example "Write-downs" represent loan collateral losses (in excess of the protection provided by the security's credit enhancement features) that are absorbed by the bondholder, but more than offset by the discount at which the security was acquired. Any remaining discount that is recouped provides incremental return (i.e., capital gain).

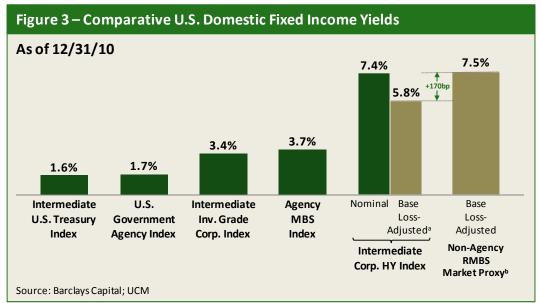


The protection provided by discounted pricing is meaningful given much of the non-agency RMBS secondary market currently trades at a significant discount to par. As a basis for interpretation, approximately 95% of our non-agency RMBS-focused absolute return strategy ("UCM Non-Agency RMBS Strategy" or "UCM Strategy") portfolio trades at a discount to par, and 85% trades at a discount to par of 10% or more. The average price of non-agency RMBS securities in the UCM Strategy as of December 31<sup>st</sup>, 2010 was 62, or 62% of par.

Purchase price discounts are also a source of potentially significant upside returns and can enhance the yield realized from interest payments as shown in the top row of Figure 2 delineated in dark green. Coupon income is augmented by capital gains when the purchase discount exceeds write-downs of principal (with such write-downs only occurring when loan collateral losses exceed credit support as described above). In addition, coupon payments on discounted securities yield higher returns than on securities purchased at par.

## III. Yield Comparison: Nominal & Loss-Adjusted Yields

At the most fundamental level, non-agency RMBS are attractive because they currently offer a higher yield than the nominal yields offered by most other U.S. domestic fixed income asset classes for securities of approximately similar duration (based on U.S. indices and non-agency RMBS data provided by Barclays Capital's) as shown in Figure 3 below.



Note: All yields reflect nominal yields based on Barclays Capital U.S. Indices as of 12/31/10 except where otherwise noted. Indices are not available for direct investment.

- <sup>a</sup> Intermediate Corp. HY Index Base Loss-Adjusted Yield based on Barclays Capital U.S. Intermediate Corporate High Yield Index adjusted to reflect a 3.0% default rate and 50% recovery rate.
- <sup>b</sup> Non-Agency RMBS Market Proxy Base Loss-Adjusted Yields represent a weighted average of Barclays Capital Non-Agency RMBS base loss-adjusted yields for prime (27%), Alt-A (41%), and subprime (32%) securities.<sup>4</sup>

#### Nominal versus Loss-Adjusted Yields

The yield comparison to other asset classes is even more compelling when taking into account that the non-agency RMBS market yields shown above are "loss-adjusted", already reflecting the impact of assumed economic losses, while yields for other asset classes, including corporate high yield securities



and corporate investment-grade bonds, are typically quoted on a nominal basis. Said differently, corporate high yield ("high yield") and corporate investment grade yield quotes assume no losses whatsoever – all coupon payments received on time and 100% of principal returned at maturity - while the yields for non-agency RMBS already take into account expected losses. This difference in market convention can easily cause investors to misinterpret relative yields. For instance, as shown in Figure 3 above and explained further below, high yield and non-agency RMBS yields may appear similar at first glance, but that is only the case when comparing the *nominal* yield for high yield to the *loss-adjusted* yield for non-agency RMBS. Non-agency RMBS actually enjoy a material yield advantage when the two asset classes are evaluated on a more comparable basis.

Simply stated, loss-adjusted yields for non-agency RMBS are generally derived by forecasting loan performance and resulting future cash flows. At UCM, we rigorously evaluate a wide array of macro and loan-specific drivers of underlying loan performance such as home prices, unemployment rates, loan-to-value ratios, propensity to prepay, loan purpose and even individual borrower FICO scores, among numerous others. We then employ our proprietary UCM Loan-Level Collateral Model ("UCM Model" or "Model") to project expected cash flows and hypothetical losses based on loan-level analysis for each RMBS deal, enabling the calculation of loss-adjusted yield. A more detailed explanation of the UCM Model and our loss-adjustment methodology is provided in Appendix A.

## Reality of Default in Corporate Credit

Corporate defaults and subsequent losses to bondholders are generally accepted as a reality of the high yield bond market, so it is essential to evaluate high yield on a loss-adjusted basis to achieve greater comparability to non-agency RMBS and correctly interpret relative yield. It is important to note that corporate credit losses are not unique to the high yield sector. Enron, WorldCom, Texaco are just a few examples of investment grade corporate issuers that have saddled investors with losses over the past 20 years.

According to Merrill Lynch<sup>5</sup>, the high yield corporate default rate has averaged 5.0% (LTM basis) over the last three business cycles since 1985 (through December 2010). The default rate peaked at 12.8% in June 1991, 10.9% in January 2002, and 13.6% in November 2009 and reached cyclical lows of 2.2% in May 1989, 1.2% March 1995, and 1.0% in December  $2007^5$ . Over the same timeframe, recovery rates have averaged 43.3%, ranging from 23.8% to 64.4%.<sup>5</sup>

Assuming a relatively modest 3.0% default rate and healthy 50% recovery rate, the estimated lossadjusted yield for a highly diversified portfolio representing the broad corporate high yield bond market would approximate 5.8% as shown in Figure 3. So, while the yield offered by high yield may initially appear similar to non-agency RMBS when looked at on a nominal basis, an approximate 170 basis point yield discount is revealed when evaluated on a more comparable loss-adjusted basis.

#### Base Case versus Stress Case Loss-Adjusted Yields

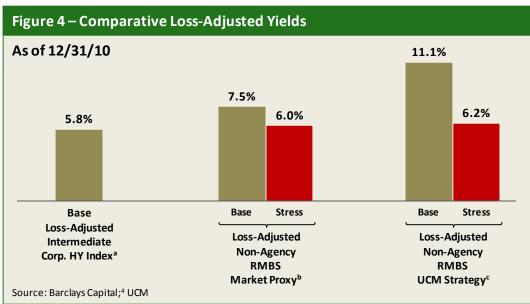
Once loss adjustments are introduced into the cash flow projections that drive the yield calculation, it is essential to also stress the assumptions underlying those adjustments. Note that the intent here is not to quantify interest rate sensitivity, as measured by duration, but to stress scenarios which affect the ultimate principal and interest cash flows generated by a security.

UCM's analysis of each non-agency RMBS begins with our expected outcome for cash flows, based on what we view as the most likely economic scenario, from which we calculate our "base case" loss-adjusted yield. From there, we derive a "stress case" loss-adjusted yield by stressing our base case in two ways. First, we stress the economic scenario to consider less favorable or "worst case" economic



outcomes. Second, we stress the sensitivity of our Model to this downside economic scenario to capture potential modeling error. The stress case economic scenario is also designed to reflect exogenous risks (e.g., changes in loan modification programs, foreclosure moratoriums, etc.) as well as to expose any structural vulnerabilities of a specific security. Details of the assumptions underlying our base and stress case scenarios are provided in Appendix A in conjunction with further description of the Model.

Figure 4 below compares base case loss-adjusted yields across high yield and the non-agency RMBS for both the market proxy shown above, as well as for our UCM Non-Agency RMBS Strategy. The significant base case yield advantage of our UCM Strategy over the market proxy illustrates the relative value opportunities that exist across non-agency RMBS sectors as well as security selection within each sector. In addition, it is not necessary to go "down in credit" to achieve this yield advantage. Our portfolio is constructed predominantly of securities consisting of senior cash flows, which is the position in the capital structure that we believe continues to offer superior risk-adjusted returns.



<sup>a</sup> Intermediate Corp. HY Index Base Loss-Adjusted Yield based on Barclays Capital U.S. Intermediate Corporate High Yield Index adjusted to reflect a 3.0% default rate and 50% recovery rate.

<sup>b</sup> Non-Agency RMBS Market Proxy Base and Stress Loss-Adjusted Yields represent a weighted average of Barclays Capital Non-Agency RMBS loss-adjusted yields for prime (27%), Alt-A (41%), and subprime (32%) securities<sup>4</sup>.

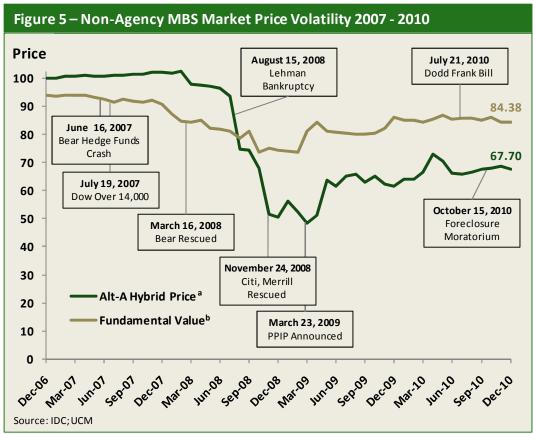
<sup>c</sup> Non-Agency RMBS UCM Strategy Base and Stress Loss-Adjusted Yields reflect the expected loss-adjusted yields of UCM Non-Agency RMBS Strategy RMBS holdings as of 12/31/10 based upon UCM assumptions.

Figure 4 also introduces the stress case loss-adjusted yields for both the non-agency RMBS market proxy and the UCM Strategy. While deriving a stress case loss-adjusted yield for the high yield market is beyond the scope of this paper, it is interesting to note that stress case loss-adjusted yields for both the market proxy and our UCM Strategy remain positive to the *base case* loss-adjusted yield for high yield. This is particularly noteworthy given the relatively favorable economic backdrop implied by the high yield default and recovery assumptions noted above versus the fairly draconian non-agency RMBS stress case scenario (see Appendix A for key assumptions employed in our stress case scenario). Additionally, the stress case loss-adjusted yields shown above represent a significant yield advantage over the *nominal* yields of all other asset classes shown earlier in Figure 3 as well as to funding costs, assuming LIBOR plus 200 bps, or approximately 2.25% at the time of this writing.



# IV. History of Credit Dislocation in the Mortgage Market

The higher relative yields currently offered by the non-agency RMBS market are the result of not only the incremental credit risk inherent in these securities, but also the drastic dislocation that occurred in the mortgage-backed securities market during the 2007-2009 downturn. Figure 5 below highlights key events impacting the RMBS market since the last market peak in 2007 and the resulting decline in non-agency RMBS valuations relative to our view of fundamental value.



Note: Price reflects month-end price for each month represented.

<sup>a</sup> Alt-A Hybrid Price based on MLMI 2005-A4 1A security, provided by IDC pricing service.

<sup>b</sup> Fundamental Value based on MLMI 2005-A4 1A security cash flows (actual historical and UCM loss projections thereafter), discounted at the yield of agency RMBS plus the yield spread between AAA- and CCC- rated corporate bonds.

Historically, non-agency RMBS were viewed as similar to agency RMBS and traded at only modest price concessions that compensated investors for liquidity and convexity risks but not for credit differentiation. Fundamental credit analysis was deemphasized based on the overall strong performance of residential mortgage-backed securities, and the perceived strength of the underlying collateral owing to an expectation of continued steadily rising real estate values. However, the strong uptick in delinquencies in 2007 followed closely by unprecedented rating agency downgrade activity radically transformed a largely AAA-rated market into what has become a primarily non-investment grade market. This triggered an avalanche of selling, and prices of most non-agency securities declined dramatically, which was further exacerbated by forced sales by highly leveraged investors including hedge funds, banks, insurance companies, among other financial sector participants. As a result, agency and non-agency RMBS not only became decoupled from one another, but non-agency RMBS as a group



fell much further in price than would be predicted by fundamental valuation as shown above.

This decoupling and dislocation persists offers exciting opportunities for investors capable of evaluating the specific loans underlying non-agency RMBS on a case-by-case basis to realize very attractive risk-adjusted returns. Despite strong price performance over the past 18 months, prices remain significantly depressed relative to fundamental value and yields remain correspondingly high as the logical rotation from previous holders to new, long-term holders has been slow to occur.

## V. Risk Mitigating Features of Non-Agency RMBS Investments

Non-agency RMBS offer several risk-mitigating features that collectively limit downside risk. In addition to the credit enhancement structure discussed in Section II, such features include: 1) the diversification inherent in non-agency RMBS; 2) better quantitative modeling; 3) favorable liquidity of the underlying collateral; 4) low correlation to changes in interest rates; 5) "credit burnout" among borrowers; and 6) intervention of the federal government in support of the real estate market.

## Diversification

While diversification was alluded to above, it merits closer inspection. Specifically, the large number of mortgages collateralizing non-agency RMBS are statistically significant with hundreds or even thousands of residential mortgages underlying a given security. They are diverse in terms of region, loan type, and borrower types as well. As a result, while virtually all regions experienced a decline in home prices during the recent episode, they are not perfectly correlated and are not all impacted in the same ways and to the same extent by national employment rates, real estate valuation, defaults and prepayment trends. Conversely, in the case of corporate bonds, a high degree of diversification can only be achieved through diversified portfolios, CDOs and other structures.

## Better Quantitative Modeling

The large number of loans backing non-agency RMBS also allow for higher quality quantitative analyses given that it enables borrower behavior to be modeled with greater statistical confidence. This contrasts with the obvious challenges associated with corporate bonds, where the risks are uniquely issuer specific and can be very difficult to quantify (e.g., execution risk, loss of key personnel/intellectual property, obsolescence, corporate fraud, etc.).

## Favorable Collateral Liquidity

In addition to diversification, non-agency RMBS offer expected downside protection as a result of the liquidity of the real estate securing the underlying mortgages. This is true on an absolute basis and relative to corporate securities. On an absolute basis, the market for residential real estate is broad, well established and well regulated. In addition, real estate is relatively easy to value and these values are backed by an appraisal industry. There is a consistent demand stimulation and price discovery generated by the more than 1.85 million residential real estate brokers in the United States. While the residential real estate market has its ups and downs, residential homes are essentially a commodity, while corporate assets are highly unique, limiting their potential value to other corporations.

Relative to investment grade and non-investment grade corporate fixed income securities, the current advantages offered by the underlying collateral of non-agency RMBS are significant. Specifically, the uniformity, liquidity and sales processes for corporate assets are notably inferior to residential real estate. Intuitively, this is easy to understand, as corporate assets are diverse in nature with no readily available secondary market in most cases. This inferiority results in potentially smaller and lengthier

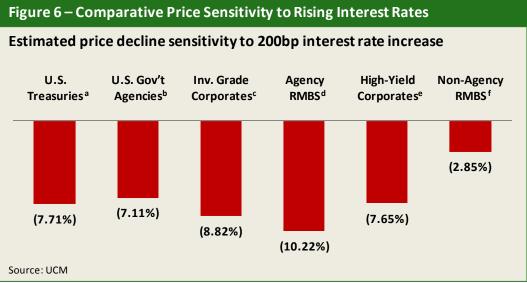


recoveries (i.e., greater loss severities per default) in the event of liquidation.

It is also worth noting that regarding default and liquidation, homeowners are much less strategic than corporations in their actions. While corporate issuers will typically strive to do what is economically rational, homeowners are often emotionally committed to avoiding default, even in instances when default is economically rational. As noted above and factored into our loss-adjusted yields, some financially-minded borrowers will inevitably choose to strategically default, but homeowners as a group exhibit a much lower propensity to do so than corporate decision-makers. This is analogous to mortgage prepayments, for which homeowners do not always exercise their prepayment option economically. This non-economic behavior of homeowners provides potential downside protection to RMBS investors.

#### Low Correlation to Interest Rate Changes

Non-agency RMBS currently exhibit little correlation to changes in interest rates, in contrast to the other fixed income asset classes considered here, all of which exhibit a large negative correlation to interest rates as shown in Figure 6 below. In addition, a large portion of the non-agency MBS sector is comprised of securities with floating rate coupons, which have very low effective duration (i.e., interest rate sensitivity). We believe these factors will afford non-agency RMBS investors significant downside protection relative to other fixed income asset classes should interest rates rise rapidly from today's historically low levels. Many market participants believe that the combination of current monetary and fiscal policies may lead to rising rates and falling prices and returns for most fixed income securities in the coming quarters.



Note: As of 12/31/10. Price declines are based on instantaneous 200 basis point rise in interest rates. Price changes were calculated by UCM using Bloomberg analytics.

- <sup>a</sup> U.S. Treasury 2 3/8% due 2/15 used as proxy for Intermediate U.S. Treasury Index.
- $^{\rm b}~$  Fannie Mae 1.5% due 12/12/16 used as proxy for U.S. Government Agency Index.
- <sup>c</sup> GECC 4.35% due 2/15/16 used as proxy for Intermediate Investment Grade Corporate Bond Index.
- <sup>d</sup> FNMA 30 year 5% passthrough used as proxy for Agency MBS Index; assumes LIBOR OAS tightening of 25bp.
- <sup>e</sup> Ford 7% due 4/15/15 used as proxy for Intermediate Corporate High Yield Index.
- <sup>f</sup> Non-Agency RMBS based on equal weighting of two securities: SASC-0321 2A (2B1) and IMM-0304 2A (2A1), assuming 100 basis points of spread tightening. Prepayments are UCM Model driven, slowed down in response to higher rates.



## Credit Burnout

As the outstanding pools of residential real estate loans age, we are seeing signs of credit burnout which is improving the delinquency rate of non-agency RMBS. Essentially, borrowers who have been able to and/or chosen to continue to make their monthly mortgage payments are more likely to continue to do so. The turmoil and economic stress of the past three years have taken their toll on borrowers. However, as delinquent borrowers have defaulted out of pools of loans, the remaining borrowers become more positively selected.

#### Supportive Federal Intervention in Real Estate Market

Another downside protection present in non-agency RMBS that is now largely absent in corporate securities is the commitment of the federal government to intervene in support of the real estate market. The federal government's orientation is rooted in the generally accepted belief that residential real estate is an important driver of the U.S. economy, with a positive correlation to nearly every other industry in the U.S. The \$700 billion Troubled Asset Relief Program ("TARP"), the Home Affordable Modification Program ("HAMP"), and the placement of Fannie Mae and Freddie Mac into federal conservatorship provide compelling evidence of the federal government's commitment to the recovery and support of the residential real estate market.

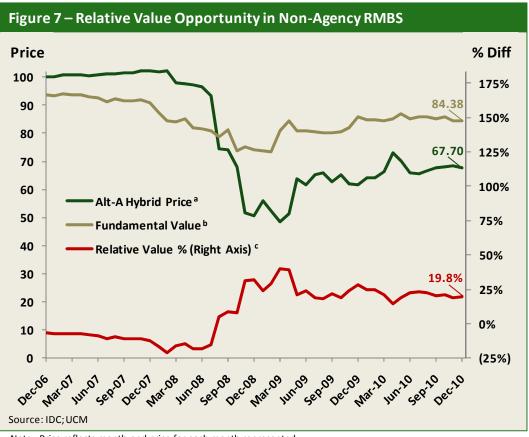
# VI. Potential Total Return Upside versus Base Case Yield

While the downside for non-agency RMBS seems well guarded against by virtue of the aforementioned trends and factors, there exist a number of elements which offer the opportunity for significant upside to total return relative to our base case loss-adjusted yield assumptions. These include: 1) current low prices of securities relative to their fundamental value, which should result in price convergence; 2) an ongoing supply/demand imbalance which should catalyze said price convergence; 3) potential improvement in fundamental value resulting from upside surprises in the residential real estate market; 4) structural inefficiencies present in the non-agency RMBS market; and 5) noise in the marketplace, of which the latter two items can provide opportunities for active trading profits.

## Cheapness to Fundamental Value

We believe that the non-agency RMBS market is, on the whole, undervalued by 15% to 20%. As shown in Figure 7 below, applying a corporate high yield discount rate to loss-adjusted RMBS cash flows shows that the true value of non agency RMBS is still above the current price.





Note: Price reflects month-end price for each month represented

<sup>a</sup> Alt-A Hybrid Price based on MLMI 2005-A4 1A security, provided by IDC pricing service.

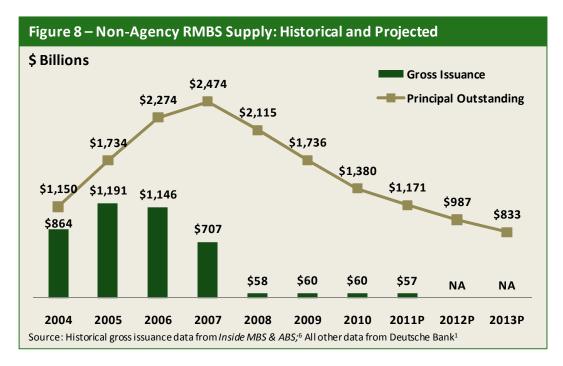
<sup>b</sup> Fundamental Value based on MLMI 2005-A4 1A security cash flows (actual historical and UCM loss projections thereafter), discounted at the yield of agency RMBS plus the yield spread between AAA- and CCC- rated corporate bonds.

## Supply/Demand Dynamics

We expect supply and demand dynamics to exert a positive influence on non-agency RMBS prices over the near-to-medium term. Outstanding supply is declining as runoff (i.e., amortization, pre-payments, and foreclosures) continues to outpace modest new issuance levels. Figure 8 below, showing historical and projected non-agency RMBS gross issuance and amounts outstanding, highlights not only the declining supply (expected to decline to pre-2004 levels in 2012) due to the current dearth of new issuance, but also the significant remaining size of this market even after this supply decline.

<sup>&</sup>lt;sup>c</sup> Relative Value represents the difference between Fundamental Value and Alt-A Hybrid Price expressed as a percentage of the Alt-A Hybrid price.





On the demand side, the Public-Private Investment Program (PPIP), launched by the U.S. Treasury in 2009 to purchase non-agency RMBS by funding investment managers with capital and non-recourse loans, has proven to be a critical and stabilizing element of the non-agency RMBS market. Initially capitalized with \$29.4 billion,<sup>7</sup> PPIP announced that as of December 31, 2010, only \$20.4 billion or 69% has been invested. The remaining \$9.0 billion to be invested represents a material source of continuing demand for non-agency RMBS. Additionally, we continue to see a growing number of new funds announced and launched with strategies similar to our UCM Non-Agency RMBS Strategy that will invest primarily in this asset class, potentially overshadowing the PPIP funds demand.

## Improvements to Fundamentals from Real Estate Recovery

Despite improvements in valuations over the past 18 months, current non-agency RMBS valuations continue to reflect fairly pessimistic real estate fundamentals, including continued downward pressure on home prices, rising default rates, and generally low consumer and home owner sentiment. Positive surprises to these fundamentals are certainly possible, and if they come to fruition, incremental price appreciation is likely. There are a number of possible sources for this upside potential. It is a widely held belief that the economy, which is driven by consumer spending, cannot fully recover until real estate recovers. This results in an ongoing incentive for the federal government to support the real estate market.

With the potential for sweeping regulatory and fiscal change resulting from last fall's elections, the political climate could become more conducive to a "market clearing" approach to the real estate market acknowledging that properties ultimately must be in stronger hands. This would be accomplished by accelerating foreclosures rather than slowing the process through moratoriums. Other support from the federal government might include programs to make affordable capital for real estate lending more readily available and accessible to investors and the creation of a PPIP-like program investing directly in residential real estate.



## Structural Inefficiencies in the Non-Agency RMBS Market

Non-agency RMBS trade in an over the counter market that tends to be fairly opaque at times in terms of price discovery. The market is also characterized by a large number of issues, which tend to be fragmented into small blocks which then get dispersed amongst investors. There are no widely accepted market indices which, if they existed, would provide index pricing, along with a persistent level of demand for index issues. Another characteristic of the market is that the current credit uncertainty creates a range of opinions as to the underlying fundamental value of credit-sensitive bonds.

Most customer selling in the non-agency RMBS market takes place through Bid-Wanted-In-Competition (a.k.a. BWIC or "bidlist") auctions, administered by dealers. Active participation in customer bidlists and synthesis of the results provides invaluable price information. Broad dealer coverage at both the Primary Dealer and Regional Dealer levels ensures access to dealer inventories including offering levels. Maintaining an active trading approach enables a manager to consistently obtain relevant market color on a large share of transactions in the RMBS, home equity asset-backed securities, and commercial mortgage-backed securities sectors. Compiling such information in a market price knowledge base, including price observations and trade lot size information across the entire securitized debt market on a daily basis, allows the manager to enhance already attractive returns by generating active trading profits which capitalize on market inefficiencies.

#### Noise in the Marketplace

The current fundamental cheapness of the non-agency RMBS market is driven to a significant degree by dislocation resulting from the dramatic de-leveraging of the global banking system and forced sales by hedge funds, municipal and corporate pension funds and other institutional investors since 2007. Rethinking of asset allocation targets and perceived risk tolerance has kept many investors on the sidelines. More recent developments in the marketplace that are creating near-term uncertainty include post election politics, a possible delay in foreclosures, and the continuing debate on put-backs of loans to issuing financial institutions. In general, this noise creates an air of uncertainty, which in and of itself creates more near term opportunities for buying non-agency RMBS cheaply relative to fundamental value and enhancing total return through active trading. And while the noise in the marketplace is centered on a variety of important and fundamental issues, we have found most of them to be either immaterial or a net positive development with respect to the upside potential on non-agency RMBS.

For instance, while the non-agency RMBS foreclosure delay issue seems to loom large, the impact on cash flows has not been material. For example, if we were to assume that all foreclosures are delayed by an additional 18 months, holding yield and all other assumptions constant, our Model suggests the price of a representative senior non-agency RMBS would only decline by approximately 1%, while the price of a subordinated bond in the same deal would actually increase (see Appendix A for a detailed description of our Model and methodology). Another recent topic in the news is put-backs to the originator due to defects in the loan origination process. Put-backs, should they materialize, are actually a net positive to investors, since loans that would have otherwise defaulted will be replaced at 100% of the original principal, strengthening underlying cash flows and credit enhancement.



# VII. Summary & Conclusion

We believe that non-agency RMBS currently offer investors compelling opportunities to realize superior risk-adjusted returns relative to other fixed income asset classes including U.S. Treasury and government agency securities, agency RMBS, and corporate investment grade and high yield bonds. The case for non-agency RMBS has three primary arguments: first, strong relative yield, second, multiple potential sources of downside protection, and third, prospects for significant upside appreciation. We believe that any one argument alone should provide sufficient impetus for investors to look more carefully at non-agency RMBS. However, taken together, they constitute a highly compelling case for the superior value of non-agency RMBS relative to other fixed income asset classes.

Regarding the first argument, we emphasize the higher quoted yields for non-agency RMBS relative to other fixed income sectors, noting that non-agency RMBS are quoted on a loss-adjusted basis while most other bonds are quoted on a nominal basis. Thus, the realized yield spread over corporate credit is likely to be even larger as losses occur, which is to be expected, particularly in high yield. Additionally, even the downside stress case loss adjusted yield for non-agency RMBS remains positive in comparison to the nominal yield of most other fixed income asset classes and is also positive to funding costs, assuming LIBOR plus 200 bps, or approximately 2.25% at the time of this writing.

With respect to downside protection, there are several factors which we believe buttress non-agency RMBS against both losses on the underlying collateral and downward price movement in the secondary market. These factors include: 1) structural credit enhancement; 2) diversification inherent in RMBS structure; 3) better quantitative modeling; 4) favorable liquidity of residential real estate backing the mortgage collateral; 5) low correlation to interest rate changes; 6) evidence of credit burnout among borrowers; and, finally, 7) the ongoing efforts of the federal government to revive the residential real estate market. The low correlation to interest rate changes may ultimately be an important factor. With the economy improving, albeit slowly, and accommodative monetary and fiscal policy, we believe there is risk of a significant upward move from what are currently exceptionally low interest rates relative to historical levels. Because of the strong inverse correlation of most fixed income securities' prices to interest rate changes, we believe that non-agency RMBS will fare much better in a rising interest rate environment.

Finally, we point to several additional factors which suggest the potential for significant upside in nonagency RMBS relative to other fixed income asset classes. We believe that prices in the non-agency RMBS market remain 15% to 20% below fundamental value in many cases, and we expect prices to continue to steadily converge to fundamental value over the near term. Supply/demand dynamics should catalyze price convergence due to the dearth of new issuance, the runoff of outstanding supply, and elimination of distressed selling in the secondary market, combined with growing demand from PPIP funds and other sources. The prospects for an improving real estate market, which would increase fundamental valuations, are supported in part by the potential for more effective government intervention in the wake of the recent elections. Finally, market inefficiencies and confusion present the opportunity to further enhance returns through active trading. We believe that all of these factors, when combined with currently attractive loss-adjusted yields and other risk-mitigating features, should result in strong relative and absolute total rates of return for non-agency RMBS investors over the foreseeable future.



## VIII. APPENDIX A: UCM Loan-Level Collateral Model & Loss-Adjustment Methodology

The UCM Loan-Level Collateral Model projects hypothetical losses based on loan-level analysis for each RMBS deal. Projecting losses involves projecting defaults and loss severities, as well as voluntary prepayments, on the collateral backing a non-agency RMBS. We have determined that borrower's equity, as represented by the loan-to-value ("LTV") parameter, is a key variable driving borrower behavior with respect to defaults and prepayments, as well as loss severity in the event of a default. Our Model uses geographically-specific home price appreciation ("HPA") data to derive a loan's current LTV and to project it out into the future.

The UCM Model segregates delinquent from current (i.e., non-delinquent) loans, projecting pipeline defaults on delinquent loans based on a proprietary delinquency transition matrix which is servicerdependent. For current loans, our Model projects both "voluntary" and "involuntary" defaults. Voluntary defaults, also referred to as "strategic" defaults, are based on the borrower's *willingness* to pay, while involuntary defaults are based on his *ability* to pay. For all delinquent, voluntary, and involuntary defaults, the Model calculates a severity estimate which is loan-specific and based on projected LTV. Finally, for loans which are not expected to default, the UCM Model projects voluntary prepayments based on coupon, LTV and loan size.

#### Current and Projected Loan-to-Value

Current LTV on a particular loan is calculated by dividing the current loan balance by the estimated current property value. We calculate the estimated current property value by deriving the appraised value at origination (i.e., original loan balance divided by original LTV), adjusting for appraisal quality (based on parameters such as loan purpose), then applying a geographically-based appreciation factor for the time horizon since origination. We use a hierarchy of home price appreciation data series starting with the S&P/Case-Schiller 20 City Composite Indices, followed by the OFHEO MSA-Level Indices, and finally OFHEO State-Level Indices.

Once current LTV is derived as described above, we project it out into the future based on projected HPA. This is also based on a regional model which is driven by a combination of proprietary research and compilation of dealer research. Currently the average HPA estimate across all geographic regions reflected in our base case loss-adjusted yield scenario has home prices falling 10% from current levels, then reverting to historical HPA rates, which is at the low end of the current range of dealer consensus. Our stress case scenario assumes a 20% decline in real estate values from today's levels on average (10% lower average prices than in our base case) before reverting to historical HPA rates.

## Voluntary Default Model

Our voluntary default model is a function of both credit score and current LTV ratio. Credit score determines a borrower's opportunity cost, in terms of damage to his future creditworthiness, of voluntarily defaulting. Current LTV determines the borrower's economic incentive to voluntarily default. In our view, voluntary defaults are inversely proportional to credit score and directly proportional to LTV.

## Involuntary Default Model

Involuntary defaults arise from homeowners' inability to pay their mortgage. This is typically caused by job loss, illness, etc. Current involuntary default rates are not materially different than historical levels, once adjusted for higher unemployment rates. Therefore, we use traditional loss curves for our involuntary default model. The model is, however, a function of changes in the unemployment rate as



an indicator of probabilistic changes in homeowners' ability to pay their mortgage. Our base case assumes current unemployment rates persist through 2011 and then revert to historical levels. Our stress case scenario assumes an increase in the unemployment rate from the current level to 12% before reverting to historical levels.

#### Severity Model

The UCM Model projects loss severity on a "defaulted-loan-level" basis. That is, the severity model is applied to each actual loan that has a non-zero probability of default. Severity is calculated by starting with the projected value of the underlying residential real estate at the point of default. (Recall that LTV is projected into the future from the starting point of current LTV, combined with a regional estimate of future HPA.) The projected real estate value is then discounted by several factors, including real estate commissions, and a discount to reflect a distressed sale. This discount is a weighted average of a foreclosure discount and a short sale discount (which is less), the breakdown of which is based on the recent servicer behavior. In addition, liquidation proceeds are further reduced by certain fixed costs (which causes severities to be higher for lower loan balances), and servicer advances of principal, interest, taxes, and insurance payments. Finally, loan balance minus the liquidation proceeds equals the loss. The loss divided by the loan balance is the severity.

#### Voluntary Prepayment Model

Our Model projects voluntary prepayments on loans which are not assumed to default based on incentive and ability to refinance. Refinancing incentive is determined by comparing the loan's coupon to the available refinancing rate. Ability to refinance is based on current LTV, among other things. It is important to distinguish whether or not the loan would qualify for refinancing into an Agency pool, as those rates are much lower and the availability of credit is much greater. Current LTV, loan size, geographic location, and occupancy type (i.e., owner occupied vs. investor property) help to determine whether or not a loan conforms to agency underwriting standards. As mentioned above in Section II, much of the non-agency RMBS secondary market currently trades at a significant discount to par and it is important to note that voluntary prepayments exert a positive influence on yields for RMBS trading at a discount to par because of the early return of principal at par. Therefore, our stress case assumes a further slowing of prepayments to 50% of the base case assumption.



## SOURCES & ENDNOTE

- 1. "The Outlook for 2011 in MBS and Securitized Products," Deutsche Bank, December 15, 2010.
- 2. Fannie Mae.
- 3. Informa Investment Solutions PSN Manager database as of December 31, 2010. Ranking is based on gross performance (before deduction of fees) across forty-eight similar mortgage-backed securities products offered by twenty-six investment advisors that comprise the PSN Mortgage universe. The ranking may not be representative of any one client's experience.
- 4. "Cross-product Relative Value," Barclays Capital Securitization Research, January 4, 2011.
- 5. BofA Merrill Lynch HY Default Forecasting Model, January 10, 2011.
- 6. Inside MBS & ABS, January 7, 2011.
- 7. Excludes \$4.1 billion in total purchasing power within UST/TCW Senior Mortgage Securities Fund, L.P., which was wound-up and liquidated during 1Q 2010.

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UCM Partners, L.P. 52 Vanderbilt Avenue Suite 401 New York, NY 10017 212-797-2688 www.ucmpartners.com