

VANDERBILT AVENUE ASSET MANAGEMENT



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Mortgage Subordinated Trust Securities

A typical non-agency mortgage deal consists of whole loan mortgages that are pooled together to create one security. This large security is then broken up into individual CMO (collateralized mortgage obligation) tranches. Ninety to 95% of the deal is rated AAA and the remaining 5% - 10% of the deal is rated AA – B. The lower rated tranches support the AAA portion of the deal in the event of a default in the underlying mortgage loans. Average defaults in whole loan mortgage deals have been approximately 0% to 1%. As a result, investors in higher rated subordinates (i.e. AA – BBB) are rewarded with wider spreads for taking on additional credit risk when in fact default risk has been minimal. Investors in the non-investment grade tranches (BB – B) receive the greatest incentive in the form of spread over Treasuries since their exposure to credit defaults is the greatest. Despite the obvious risks that these investors face, they have reaped the greatest rewards in performance during the last couple of years as the real estate market has continued to be strong.

Unfortunately, most investors have been unable to jump on the bandwagon that has been available to non-investment grade buyers. Concerned about guideline constraints and being sensitive to a potential loss to principal, most buyers have steered clear of all mortgage securities rated below BBB, even when the yield they were offered more than compensated them for the risk they would have incurred in purchasing these bonds.

In order to give all investors the opportunity to benefit from the wide spreads offered by these BB and B tranches, Wall Street investment banks have added a twist to the traditional notion of a subordinated CMO by creating *mortgage subordinated trusts*. A mortgage subordinated trust consists of a basket of non-investment grade mortgage securities. In some cases, this basket also contains a Treasury or an agency strip. In general, is only interested in mortgage subordinated trusts that are coupled with such a government strip security. This construct not only allows the trust to receive a AAA rating by one of the three most recognized rating agencies, but it also gives it full principal protection.

A mortgage subordinated trust is given a AAA rating because its credit risk is diversified and its principal is guaranteed at maturity. A typical trust may contain an average of six to twelve subordinated securities, all of which are composed of many mortgage loans. The monthly coupons and principal paydowns on these underlying securities serve as the monthly coupons on the mortgage subordinated trust. If any of the underlying securities has a loan in default the trust is impacted, but to a significantly lesser extent than if an investor owned the actual underlying bond. However, the repayment of the trust's principal is not impacted. As mentioned earlier, the trust contains a government agency or treasury strip whose face value matches the total size of the trust and matures on the same day as the trust does. Therefore, the principal of the AAA mortgage subordinated trust is *fully defeased* by the strip securities. As a result, even if every

single security that comprises the trust were to default, the investor would still receive his principal back on the maturity date as the treasury or agency strip would mature at that point.

In order to quantify the magnitude of the diversification inherent in a mortgage subordinated trust, one must understand how diversified each of the underlying deals are. A typical whole loan deal is approximately \$200 million to \$300 million in size and composed of loans that average approximately \$300,000 each. That means that each deal has about one thousand loans. These loans are spread out throughout the United States so that an economic or environmental catastrophe in any one state would not significantly impact the entire deal. Since a mortgage subordinated trust is comprised of six to twelve securities off of these types of deals, the trust's survival is actually supported by an average of six thousand to twelve thousand loans.

In analyzing mortgage subordinated trusts, we examine each of the underlying securities to be sure that they add to the entire trust's diversity. In addition, knowing that some of the loans will, through sheer probability, default, we only consider those yield tables that are adjusted to a default assumption. That is, we want to know, for example, what a mortgage subordinated trust would yield if 1% of the loans outstanding in each year defaulted. It is this *adjusted yield* that we consider the trust's yield to maturity. In general, the adjusted yield on AAA defeased mortgage subordinated trusts tends to range between 350 and 400 basis points over the ten year treasury.

In order to reap the full reward offered by mortgage subordinated trusts it is necessary to buy and hold these bonds for a long enough period of time. Unlike Treasuries and agencies, mortgage subordinates do not simply increase or decrease in price when interest rates move. If it were that simple, they would yield the same rate as a Treasury note plus the spread for a AAA rating. Instead their value is tied to prepayments and the performance of the residential real estate market.

In general, mortgage subordinates increase in value as they season. The longer an investor holds the bonds, the greater the potential reward. As the AAA tranches in a standard whole loan deal pay down principal, the subordinates and the deal as a whole shorten in average life and roll down the Treasury curve. In addition, with fewer AAA securities above them, the subordinated tranches support less of the entire deal. A shorter average life and fewer bonds to support result in tighter spreads to Treasuries and higher dollar prices for the subordinated securities. Since the mortgage subordinated trust is made up of subordinated securities, as these securities appreciate so does the trust. While waiting for the securities to appreciate, investors are compensated with an above average yield for a AAA rated asset.

In addition, time is an important factor for the treasury or agency strip within the structure. Since strips accrete over time and therefore naturally increase in price until they are worth par at maturity, the benefit to the investor increases the longer he owns the security. It is for these reasons that we recommend investors set aside a small portion of their assets to buy and hold a AAA rated Treasury or agency defeased mortgage subordinated trust security while having the remainder of their portfolio more actively managed.

Vanderbilt Research Team
