

# INVESTMENT UPDATE

“It’s all in the math,” or at least that’s what we bond types like to think when it comes to analyzing securities in our market. After all, bond prices are mathematically joined at the hip with interest rates—one goes up, the other goes down. Sure, there’s credit work—looking at corporate issuers and digging into their business—but a lot of that is math, too: leverage ratios, return on equity, provisions for loan losses, and so on. But despite the analytic shelter that mathematics provides, we must, every few years, deal with the fact that the rest of the world doesn’t see things through the same coke-bottle lenses that we do.

How else to explain the current giveaway prices of so many apparently solid bonds?

There are many bonds trading not one or two points below fair value, but ten, twenty, even fifty points below where they would be priced if there wasn’t the degree of nervousness and uncertainty that currently defines the high-grade bond market. Corporate bonds issued by high-quality borrowers continue to trade at an average discount to par value of ten points. Commercial mortgage-backed securities (CMBS) are even worse; the average CMBS is currently priced in the Barclays Index at 67 cents on the dollar, which is equivalent to a yield to maturity of more than 13%, despite their average rating of “AAA.” But at the top of the heap of mispriced bonds are those that fall under the general heading “non-Agency mortgage-backed securities.”

As their name implies, these bonds were issued not by the mortgage Agencies (FNMA, FHLMC or GNMA), but by private companies, who packaged the raw mortgage loans into securities that could be bought and sold in the institutional bond market. Often (but not always) the issuer of the bonds was also the originator of the loans; thus, we see many “private label” MBS with names like CMS (Countrywide), WFMBS (Wells Fargo), BALTA (Bear Stearns) and GMAC. There are many different structures and types of mortgage loans used as collateral for these securities, making it necessary to carefully examine the bonds before making an investment decision.

Because they don’t have the backing of a Government Agency, these bonds had to be structured in such a way that investors would be protected against an interruption or loss of principal and interest that could arise from homeowner impairment. In general, this protection has taken the form of an excess collateral pool (often referred to as the deal’s “credit enhancement”) and the issuance of subordinated bonds. The excess collateral pool is a monetary cushion that is established by the bond issuer and maintained by the

appointed trustee bank to step in and make timely principal and interest payments in the event that a property owner becomes delinquent on his monthly payment. Credit tranching simply allocates cash flows based on a senior/subordinate structure, directing losses to subordinate class-holders first.

Back in the good old days (like, 2006!) it was believed that a credit enhancement of 7% to 8% was adequate to protect the senior bondholders of non-Agency MBS backed by “prime” collateral. For decades, mortgage lending had proven to be a very safe business; homeowners historically had been shown to be very good creditors, willing to cut back on other expenses to stay in their homes. And despite the run-up in home prices, there hadn’t been a period where, nationwide, home prices fell more by than a couple of percent on a year-over-year basis. Most investors believed that, despite the fact that the US housing market was overpriced, any housing price decline would be fairly modest. Defaults might rise for subprime borrowers, but MBS backed by prime mortgage loans at an 80% or less loan-to-value ratio were believed to be pretty bullet-proof.

But when home prices started deflating, so did the quality of the loans. Now that home prices nationally are down 23% from their peak, that formerly “bullet-proof” 80% loan is looking pretty shaky. Add in a weak labor market and you’ve got a recipe for delinquency and foreclosure, and not just for subprime borrowers.

Now, from the bond holder’s standpoint, there are a couple of additional considerations. When a house is sold, even under a foreclosure, the existing mortgage loan is paid off; if that loan has been pooled into a MBS, the principal proceeds are “passed through” to the bondholder. When the proceeds of a foreclosure sale are less than the principal remaining on the loan, there is a principal shortfall; for Agency-backed MBS, this principal shortfall is covered by the issuer (FNMA, FHLMC or GNMA); for private-label MBS, the principal shortfall comes out of the excess collateral pool. Therefore, foreclosures have to be high *and* recoveries (the net proceeds from the sale of the property compared to the remaining loan balance) have to be low in order for senior bond investors to lose money. For a bond with a 10% collateral pool, you’d need to see foreclosures of 20% and recoveries of less than 50% (or, say, foreclosures of 30% and recoveries of less than 66%) before senior bondholders begin to lose principal.

This level of foreclosures is approximately eight times worse than we’re currently seeing for prime collateral, yet



senior, “first tranche” bonds backed by prime loans and solid structures are trading at 70, 60, even 50 cents on the dollar. And while it’s true that conditions will almost certainly continue to deteriorate for some months yet, it’s hard (and in some cases, nearly impossible) to paint a scenario ugly enough for senior bondholders to lose any principal, much less 30 to 50 percent of their principal. For a math nerd, that’s disturbing.

Perhaps an example is in order. The table shows the math involved for a sample non-Agency bond—originally issued in 2005 by the doomed Wall Street mortgage specialist Bear Stearns, this bond is known by the snappy moniker “BSARM 05-9 A1.” The collateral for this bond started out as approximately 2,000 adjustable-rate mortgages on single-family homes, with a heavy emphasis in California (48%). When these bonds were issued, the average homeowner in this pool had a FICO score of 745 with an average mortgage loan-to-value ratio of 71%; both of these numbers were considered excellent, but remember that these were calculated in September of 2005 at the absolute top of the US housing market.

Over the three and one-half years since they were issued, more than 30% of the principal value of loans in the deal have paid down, and the credit coverage for the A1 class, which began at a 8.5% of the deal, has improved slightly to 9.8%. But we’ve witnessed, over the past couple of months, a steady increase in delinquencies and foreclosures

	FICO	LTV	Moody's/S&P	Mkt Px	60+ Days	Cred Enhanc	Principal Losses @ Severity Level of:			
							100%	150%	200%	300%
BSARM 05-09 A0	745	70.5%	Aa3/AAA	\$70	2.2%	9.8%	0%	0%	0%	1%

among the loans in this pool. Currently, the total “60+ days delinquent” (which includes foreclosures) stands at 2.7%, an increase of 1.0% over the past six months. This figure is very close to the national average for 2005 prime ARMS.

To repeat, in order to lose principal, the cumulative losses have to, over time, exceed the credit enhancement. The cumulative losses on this bond are only 0.23%, so we are a long way from that happening. Yet, the quality of the loans in this deal is clearly deteriorating, and losses will continue to rise, perhaps at an accelerating rate. What we need to know is how much worse things must get before this bond starts to experience a loss of principal.

To run these tests, we have to put on our propeller caps and plop ourselves in front of a computer loaded with expensive analytic software. We then have to feed in scenarios for interest rates, mortgage prepayments, losses, timing, etc., and perform a stress test. In the case of this bond, we have to torture it severely before it begins to lose any principal at all. How severely? Our base case for 2005 prime collateral calls for total losses to rise nearly ten-fold, to approximately 2% (5% defaults and a 60% recovery of principal). Under this severe scenario, there is no loss of principal for senior

bond holders; neither are there losses if we increase the severity by 200%. For these Bear Stearns bonds we have to ramp up the losses by 300% of our base case in order to have even a 1% loss of principal. In other words, using BSARM 05-09 A1 as an example of a typical non-Agency bond, we find that a current market price of this bond of \$70 greatly exaggerates the danger of losses, even under very severe projections.

Investors should be jumping all over this stuff, right? It’s at giveaway prices, but nobody seems to care! Unfortunately, there is one more consideration, and it’s a big one: Ratings.

The bond ratings agencies have come under severe criticism from nearly all corners for botching their ratings analysis in the structured products market. CDOs and CLOs, packages of low-quality loans, bonds and other detritus, were awarded “AAA” ratings without appropriate stress-testing. Banks (both here and abroad) loaded up on these, as their ultra-high ratings allowed for minimum capital provisioning and maximum leverage, with disastrous results. Now, the ratings agencies (especially Moodys) are on the warpath, downgrading non-Agency MBS at a rapid pace. While they haven’t shared their methodology with investors, it appears that Moodys has taken the position that even under an extremely unlikely scenario, a one penny loss of principal will earn you a junk bond rating.

The result is that this sector, after being dragged down by its association with other, truly crummy mortgage products, is now being kicked in the ribs just as investors were getting a little comfortable with the underlying collateral. For many investors, losing investment grade ratings is the kiss of death, as most institutional clients either don’t allow junk bonds, or allow them in limited allocations, often with a specialty manager. Even those investors who have ratings flexibility don’t like to see wholesale downgrades of their holdings, fearing a further loss of marketability and increased price volatility.

Finally, it begs the question of what is meant by “default.” For decades, we’ve viewed default as the final step in the decline of a company’s credit quality; a condition that’s synonymous with bankruptcy. But that’s not the case here—now we’re looking at bonds that may return to investors, on a timely basis, 95, 97, maybe 99 percent of their principal value. We don’t have a word for that yet, but “default” doesn’t seem appropriate. And compared with dumping them at 50 to 70 cents on the dollar, maybe we should just call it “silly.”

