Michael J. Collins, CFA
Senior Investment Officer and
Credit Strategist
Prudential Fixed Income
Management

The “Sweet Spot” Is Still Sweet Today

January 2010

What a rally we saw in the high yield market in 2009!

Historically, the US high yield market has generated total returns and volatility that have fallen in between investment grade bonds and stocks. This intuitively makes sense: because high yield issuers are below-investment grade and thus riskier credits, their bonds should theoretically provide more return, and exhibit more volatility, than investment grade bonds. At the same time, because of their stated coupon payments and expectation of principal repayment at maturity, high yield bonds should theoretically provide less return, and exhibit less volatility, than equities.

High Yield Bonds Far Outperformed Other Asset Classes in 2009

History did not repeat itself in 2009. In 2009, high yield bonds roared past both investment grade bonds and equities, chalking up blistering returns of +58% (Figure 1). This bettered their previous best year on record, 1991, by a whopping 19%. Equities also had a better-than-average year -- +26.5% -- although they generated less than half the return of high yield bonds.

Figure 1.
High Yield Bonds Roared Past Equities and Investment Grade Bonds in 2009

2009 Return and Volatility

2009 Volatility
2009 Return
Barclays Agg: +5.93% Return
Barclays High Yield: +58.21% Return
S&P 500: +26.46% Return

As of 12/31/09. Sources: Barclays Capital for Aggregate and High Yield Index; Bloomberg for S&P 500 with dividend re-investment. Volatility is calculated as the annualized standard deviation of monthly returns. Past performance may not be indicative of future results. PAG 266

There was a good reason for the surge in high yield bonds in 2009: it was a “normalization” of the panic-like selling of the sector during the credit crisis in 2008. That crisis deeply affected the high yield market, where companies tend to be more highly levered than the general equity market. Two large classes of investors in particular were heavily invested in high yield bonds and loans during the depths of the crisis: hedge funds and structured investment vehicles. Both used leverage to purchase the loans and bonds of high yield companies.
Many hedge funds, in fact, had gained exposure to the high yield market through total return swaps, which are essentially baskets of loans purchased with leverage of as much as 5:1. Unfortunately, when loan prices fell more than 20% -- something that had never happened before -- it essentially wiped out the hedge funds’ equity, triggering margin calls en masse. The resulting forced selling flooded the market and drove prices down.

The high correlation between loans and high yield bonds -- approximately 50% of loan issuers also have high yield bonds outstanding -- led to a pummeling of both high yield loans and bonds in 2008: high yield bonds were down -26% that year (by far the worst year for high yield bonds ever) while loans were down -29%. Equities also performed poorly. However, by the time 2008 mercifully ended, equities were merely “priced for a recession” while riskier credit-related instruments such as high yield bonds were “priced for a depression”.

This mispricing between equity and credit at the beginning of 2009 meant one of two outcomes: either the US would fall into a depression, and equities (priced for a recession) would fall further, or the US would suffer merely a recession, and credit instruments (priced for a depression) would rally. Fortunately, the latter prevailed. Indeed, just as the “recession-only” outcome began to materialize early in 2009, the credit markets saw a large influx of equity investors hoping to grab what they expected to be equity-like returns from historically-cheap credit instruments.

**High Yield Bonds Have Now Outperformed Equities and Other Bonds for 20 Years**

In generating their returns in 2009, high yield bond spreads narrowed sharply, from an average of +1725 bps at year-end 2008 to +657 bps at year-end 2009, a 62% decline. The average price of a high yield bond rose from $61 to $95 during the same period. High yield bonds outperformed so dramatically in 2009, in fact, that their 20-year average annual returns are now ahead of both investment grade bonds and equities: an average annual 8.70% per year versus 7.01% for investment grade bonds and 8.15% for equities (Figure 2). The volatility of high yield bonds, as measured by the annualized standard deviation of their monthly returns, remains in between investment grade bonds and equities.

**Figure 2.**

**High Yield Bonds Have Outperformed Stocks and High Grade Bonds Over the Long Term**

*20-Year Historical Risk/Return Through December 31, 2009*

Sources: Barclays Capital for Barclay’s Aggregate and Barclays HY Index; Bloomberg for S&P 500 with dividend re-investment. Volatility is calculated as the annualized standard deviation of monthly returns. Past performance may not be indicative of future results.
The Lowest-Rated High Yield Bonds Drove the Rally in 2009

As the rising tide lifted virtually all boats in the high yield market in 2009, the lowest rated bonds and lowest quality industries and issuers (the ones hurt the most in 2008) led the rally. CCC-rated bonds returned 130% from their bottoms in mid-December 2008 through year-end 2009. Bonds that started the year priced below $80 (most of the lowest-rated, riskiest issues) were up 154% in 2009. Figures 3.1 and 3.2 below illustrate this:

Source of Figure 3.1: Barclays Capital for Barclays High Yield Unconstrained Indices. Volatility is calculated as the annualized standard deviation of monthly returns. Past performance may not be indicative of future results. Source of Figure 3.2: Source: Merrill Lynch High Yield Constrained Index. PAG 266

A Tale of Three Issuers

Figure 4 below, titled “A Tale of Three Issuers”, illustrates this point more clearly. In this graph, we plot the price performance of the high yield bonds of three different high yield issuers: a higher quality high yield issuer in a defensive industry (L-3 Communications), a higher quality high yield issuer in a cyclical industry (Freeport McMoRan), and a lower quality, CCC-rated issuer associated with an LBO (Freescale Semiconductor). Let’s understand each of these companies first:

Higher Quality High Yield Defensive Issuer

L-3 Communications, based in New York City, is the largest high yield aerospace/defense company in the US, with approximately $15 billion in annual revenue. The company generates approximately 75% of its revenue from Department of Defense contracts. Because of its steady revenue sources, we consider L-3 Communications to be a higher quality high yield “defensive” issuer. The company’s senior subordinated bonds are currently rated Ba2 with a stable outlook at Moody’s and BB+ with a stable outlook at S&P. In late 2009, L-3 issued senior unsecured notes that were rated Baa2 by Moody’s and BBB– by S&P, as the company attempted to improve its capital structure. In conjunction with the issuance, management stated for the first time its aspirations to be an investment grade entity. The company is forecast to generate approximately $1.2 billion in free cash flow in 2010. L-3’s leverage is modest at this point in the credit cycle, at 2.5x on a gross basis and 1.8x on a net basis. (All information as of December 31, 2009)

Higher Quality High Yield Cyclical Issuer

Freeport McMoRan, based in Phoenix, Arizona, is one of the largest mining companies in the world, with operations in North America, South America, Indonesia, and the Congo. Given the cyclical nature of the mining business, we consider Freeport to be a higher quality “cyclical” high yield issuer. Freeport's bond ratings are Ba2 at Moody's and BBB- at S&P. Freeport purchased Phelps Dodge, a major copper producer, in March 2007 for nearly $26 billion, which caused its debt to balloon to over $13 billion and pro forma net leverage to increase
to nearly 3x. Freeport has repaid nearly $6.5 billion of debt since the acquisition, funded with cash flows and equity issuance. Its recent financial performance has improved, with LTM (Last Twelve Months) net leverage of 0.9x at September 30, 2009, primarily due to rising copper and gold prices. (All information as of December 31, 2009)

Lower Quality High Yield Cyclical Issuer

Freescale Semiconductor, based in Austin, Texas, is one of the world’s largest semiconductor companies, specializing in the design and manufacture of embedded processors. A private equity consortium took Freescale private in December 2006 for $16.5 billion: $9.5 billion raised in the high yield market (bonds and loans) along with $7.0 billion in cash equity. The rating of Freescale's bonds was Ba3 at the time of the LBO, but since then, Freescale has been downgraded several times and is currently rated CCC. The company’s high exposure to the cyclical automotive and consumer markets caused its revenues and earnings to underperform markedly. At the time of the original deal, Freescale was levered 4.7x, but given the sharp deterioration of its main end markets in 4Q08 and 1H09, leverage rose to an astronomical 39x during 2009. While we believe Freescale has adequate liquidity over the near-term, and while the company's results should improve with the recovery in autos and telecom equipment, we expect the company to remain at least 10x leveraged for the foreseeable future. (All information as of December 31, 2009)

Look at how each of these issuers has performed over the past 18 months:

**Figure 4.**

High Yield Bond Performance Diverged Sharply As the Cycle Progressed

*High Yield Bond Prices: A Tale of Three Issuers*  
August 31, 2008 to December 31, 2009

From August through October 2008 (Stage 1, above), massive deleveraging defined the US economy and financial markets, with forced selling driving virtually all prices down across the board. The Lehman bankruptcy in September 2008 resulted in near-panic conditions, particularly in the US high yield market. As is so often the case, the beginning of the recovery in high yield bonds began soon thereafter. In November and early December 2008 (Stage 2), the market began to stabilize and even took initial steps towards recovery. Initially, only the higher quality, more defensive credits participated. Later, beginning in mid-December 2008 and throughout the first quarter of 2009 (Stage 3), the recovery broadened further to include cyclical higher quality high yield bonds as well. The riskiest high yield bonds, on the other hand, were still in a freefall during this time. In March 2009 (Stage 4), the situation reversed. The deleveraging cycle was ending, with distressed selling largely over. A handful of the large money center banks reported they had been profitable from an operating perspective in the first two months of the year, and there was growing evidence the economy was starting to recover. This was enough to result in a tsunami-like reach for yield from newly confident investors, many of whom rushed headlong into the riskiest sectors of the credit markets.
The opening of these demand floodgates drove the performance of the lowest-rated CCC credits throughout 2009, despite credit fundamentals that are clearly lacking for some. We have become increasingly doubtful that 2009’s rally in CCC-rated bonds is sustainable for much longer. Virtually all of these weaker credits require a strong economic recovery to remain viable, and a strong economic recovery is still not assured.

**Despite Poor Economy, Liquidity Has Improved and Credit Fundamentals Are Stabilizing**

Despite a still-murky economic picture, the liquidity positions of many high yield companies have already improved dramatically, and credit quality is beginning to improve. While there are certainly companies that continue to struggle mightily, credit fundamentals are stabilizing for a sizeable portion of the high yield market.

The improvement in liquidity thus far has been driven almost exclusively by the aggressive actions companies are taking to shore up their balance sheets. Reducing capital expenditures, paying down debt, and curtailing share buyback programs have been survival tactics for many companies. With the worst of the cycle apparently behind them now, their draconian cost-cutting measures are resulting in healthier bottom-lines despite very little (if any) top-line revenue growth. Most noteworthy for bond investors: free cash flow has improved for many high yield companies, suggesting that debt service will be more easily met in 2010.

High yield companies have also benefitted from low interest rates, tighter spreads, and strong demand for their securities, which has enabled them to tap financing to term out their short-term or maturing debt, providing them with valuable liquidity cushions as they await the turnaround in the economy and their businesses. In general, activities at corporations still remain more “bondholder-friendly” than “shareholder-friendly”. Many companies are now issuing equity to pay down debt, for example, another reason credit has generally done better than equity in 2009. However, we are starting to see the bondholder-shareholder pendulum begin swinging back towards more shareholder-friendly activity, and we expect this to continue as the cycle matures.

**High Yield Default Rates Have Begun to Decline, a Trend We Expect to Continue**

We are by no means suggesting that high yield companies are out of the woods just yet. Companies are still exceptionally focused on survival rather than on expansion and new growth. Fundamentals remain challenging for many companies and industries, with full recoveries in revenues and/or EBITDA likely years away. Some high yield companies will remain over-leveraged for the foreseeable future. Nevertheless, the ample liquidity that these companies now enjoy, along with their stabilizing fundamentals, have put these companies in much improved financial positions and are the two key reasons why we believe high yield default rates will begin to fall sharply in 2010. In fact, this is already underway. The average number of defaults per month dropped from the mid-teens early in 2009 to the mid-single digits by the end of 2009. We expect this positive trend to continue over the next few years. Much of the new high yield issuance has been of better quality than in prior years, possibly setting up a favorable default cycle in three to five years.

**Where Is the Best Value Within the High Yield Market Today?**

Within this context, there are some areas within the high yield market where we see better value than others. It is tempting to dismiss the CCC-rated tier altogether, given its massive rally so far this year, and indeed, Figure 5.1 below adds weight to this argument: It shows that current spreads for higher quality BB-rated credits are still trading well above their historical average of +369 bps, suggesting plenty of room for further spread compression towards and through the mean. Current spreads for CCC-rated credits (Figure 5.2), on the other hand, are already well inside of their historical average of +1338 bps, suggesting little further room for spread narrowing, particularly if economic recovery is sluggish.
BB-Rated Tier Has Historically Been the “Sweet Spot” of the High Yield Market

Current spread levels are only one of the reasons for our bias towards higher quality high yield bonds. The second reason is that empirical data show that BB-rated bonds have historically been the “sweet spot” of the high yield market. As you can see in Figure 6 below, over the 20 years ending December 31, 2009, BB-rated high yield bonds provided the highest annualized returns in the high yield market (average annualized 8.8%) with the lowest annualized volatility (7.1%). Over the same 20 years, CCC-rated bonds, despite their much-heftier ex-ante yields, provided a lower return than BB-rated bonds, or 7.9% on an average annualized basis. Furthermore, those returns have come with a meaningful trade-off: high, equity-like volatility, more than twice the volatility of BB-rated bonds on an annualized basis.

BB-Rated HY Bonds Have Provided the Highest Annualized Returns Over The Past 20 Years

20-year Returns and Volatility, By Quality

Through December 31, 2009

There is no question that the CCC sector of the high yield market produces dramatic returns from time to time. 1991 was one such year. 2003 was another. 2009 was a third. Yet, over longer periods of time, the highest-yielding high yield securities have ultimately produced the lowest returns, with the highest volatility. This is attributed to the high incidence of principal-eroding defaults that these lower-rated issuers have historically suffered, which have tended to more than wipe out their inherent yield and coupon advantage. In contrast, the lowest yielding high yield bonds have re-paid their principal often enough to more than overcome their inherent yield and coupon disadvantage. BB-rated bonds have also outperformed BBB corporate bonds, with only a modest increase in volatility. BB-rated bonds, in fact, have outperformed all ratings categories of corporate bonds – from AAA to CCC – over the past 20 years.
A Bond’s External Rating Is Not a Good Indicator of Where It Will Trade

While these graphs certainly provide good historical perspective, forming a “buy BBs and sell CCCs” conclusion from them may be overly simplistic. A more useful analysis may be to evaluate the market-observed spreads at which each individual high yield bond is currently trading, regardless of its external credit rating. Figure 7 below provides just such an analysis. In creating this chart, we took the 1,624 bonds in the Barclay’s High Yield Index on December 31, 2009 and placed each bond into one of five “spread categories” based on the actual spread the bond was trading at in the market on December 31. We then looked at each bond’s external credit rating and, for each spread category, grouped the bonds into ratings segments as well.

Figure 7.
A Bond’s External Rating Is Not A Good Determinant
Of Where It Will Trade Over Treasuries
Current Spread Distribution by Quality
As of December 31, 2009

As you can see, the largest category in the high yield market comprises bonds currently trading at spreads of between +400-600 bps over US Treasuries. This category includes bonds rated BB all the way down to CCC by the ratings agencies. We can infer from these market-observed spreads that investors consider the externally-rated CCC-rated bonds in this category as fundamentally strong as the externally-rated BB credits in the same category. Despite the differences in the external credit ratings, investors, having presumably done their due diligence, are willing to receive essentially the same risk premium for the BB-rated bonds in this category as they are for the CCC-rated bonds. We can further infer that investors probably also consider the externally-rated CCC-bonds in this +400-600 bps spread category to have lower default risk than the higher-rated BB bonds trading in higher spread categories.

There are two conclusions to draw from this table. First, given the idiosyncratic complexity of high yield issuers, it is overly simplistic – and we believe unwise from an investment standpoint – to limit a potential universe of high yield securities to “just” BB-rated bonds, or “just” CCC-rated bonds. Doing so will likely introduce inadvertent risk into portfolios as well as limit potential returns. It is for this reason that the high yield portfolios we manage at Prudential Fixed Income Management currently include a mix of bonds across the high yield ratings spectrum, including select CCC-rated bonds, provided of course client investment guidelines permit.

The second conclusion is that fundamental credit research on individual issuers in the high yield market is critical. Every high yield bond selected for a portfolio must be carefully researched and carefully chosen. For
example, there are bonds of certain homebuilders and financial institutions in the BB category that trade at approximately +600 bps over US Treasuries. We believe these securities are volatile with potentially significant downside risk. Conversely, there are certain CCC-rated technology companies (e.g., Sensata and Sungard) that trade at similar spreads but offer good value in light of their improving fundamentals and upgrade potential. As the table above makes clear, a bond’s external rating does not necessarily dictate where it will trade in the market.

### Conclusion

- **US high yield bonds have outperformed both equities and investment grade bonds over the past 20 years.**
- **The US high yield market had overwhelmingly strong performance in 2009, with the lowest-quality tier performing best.**
- **Despite eye-popping performance in 2009, there are still attractive opportunities remaining in certain areas of the US high yield market.**
- **Within the US high yield market, investors have not been paid over the long-term for taking on the incremental risk of the lowest quality bonds, although these bonds can play useful roles in high yield portfolios, particularly following intensive credit research.**
- **Instead, the higher quality tier of the high yield market has historically been the “sweet spot”: the highest returns with the lowest volatility.**
- **Current spread levels today seem to suggest that higher quality high yield bonds are particularly attractive today.**