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CAMBRIDGE ASSOCIATES LLC

U.S. MARKET COMMENTARY

HIGH-YIELD BONDS: BE SELECTIVE

January 2008

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High-Yield Bonds: Be Selective

"The relation between different kinds of investments and the risk of loss is entirely too indefinite, and too variable with changing conditions, to permit of sound mathematical formulation. This is particularly true because investment losses are not distributed fairly evenly in point of time, but tend to be concentrated at intervals."—Benjamin Graham and David Dodd, *Security Analysis*, 1940, 2nd edition.

"We think the conditions in the US in terms of indebtedness, over consumption and leverage and the resulting instability may mean that the lessons of the last 50 years are not relevant. The lesson of buying all the dips is so ingrained in so many ways that it makes us very nervous that we could be at a more secular turning point about what works and what doesn't."—Greg Jensen, Bob Elliot, and Jason Rotenberg, *Bridgewater Daily Observations*, January 24, 2008.

"If our analysis is correct, the implication of another recession on the scale of 1990-1991 is a peak default rate not seen since the Great Depression."—Martin Fridson and Kevin Covey, *Distressed Debt Investor*, November 1, 2007.

Given the uptick in high-yield bond yields, both in absolute terms and relative to those of U.S. Treasuries, some clients have asked when we would consider it appropriate to reconsider an allocation to high yield, on which we have been bearish since late 2003. Unfortunately, the extreme nature of the current market environment, coupled with the excesses of the past several years, makes this a very difficult question to answer. For example, while we have data on two distinct high-yield cycles, it can plausibly be argued that both cycles (in the early 1990s and 2002–03) occurred *within the context* of a broad credit bubble that has only now begun to unwind. Thus, we are more skeptical than usual of the usefulness of historical data, although certain insights can of course be gleaned from examination of past cycles. Our concerns are exacerbated by the fact that recent issuance has not only been enormous, but also skewed toward the lowest-quality credits.

The greatest cause of uncertainty relates to whether central bankers and policymakers will be successful in thwarting the impact of an economic slowdown. While we have no particular insights into the likely direction of the economy, recent market activity indicates investors believe macroeconomic conditions will continue to deteriorate. The Fed has been signaling, as it did in 2002, that it will ease as much as is needed to reflate the credit bubble, while U.S. policymakers have proposed a $150 billion "stimulus" package. Still, while monetary and fiscal policy will undoubtedly be as aggressive as possible, we do not know (nor does anyone else) whether the stimulus will be successful in reflating the economy by restarting the credit-creation machine. Thus, it is certainly possible the coming default wave will be significantly larger and longer-lasting than those seen over the past two decades.

Our conclusion is that it is not only too early to reallocate funds to the broad high-yield asset class, but that it is also too early to know *when it will be time to do so*. However, the extreme nature of the current environment is also likely to result in fertile profit opportunities for experienced and talented managers. In short, given that future defaults and recovery rates may be far different than those realized in past cycles, investors interested in committing funds to the sector should be especially careful to select managers with appropriate experience and requisite skill. (We admit this may be easier said than done!)

Singing the National Anthem

One market observer, in response to a number of reports that the credit crisis was in this or that "inning," recently quipped that the game has not even begun; rather, we are still engaged in singing the national anthem before the first ball is pitched. While a bit extreme, this reflects the uncertainty that surrounds credit markets in general, and underscores the difficulty in making predictions about when high yield will become attractive. Our opinion is that we are early in the second act of a three act play. The first act played out in the second half of 2007, as market participants began to come to grips with the nature and extent of the global credit crisis. The second act, which has just begun, is the period during which tighter credit conditions in the financial sector bleed into the real economy, and the third and final act is when the credit cycle fully turns as defaults rise across all types of credits. The third act, of course, is also when investors should consider allocating funds to high yield in general.

Recent issuance trends, meanwhile, suggest the timing of the cycle could be markedly different than in the past, with defaults starting sooner and perhaps extending over a longer period. For the 20 years from 1977 (when our issuance data begin) through 1996, total high-yield issuance was $459 billion. In the 11 years since, issuance totaled $1.3 *trillion*, with an increasing percentage made up by the lowest-rated credits, particularly in recent years (Table A). Indeed, prior to 2004 the percentage of issuance made up by CCC-rated credits—the worst rating available, of which nearly half have historically defaulted over the first five years after issuance—never topped 11%. In the four years since, CCC-rated credits have made up 19.7%, 18.6%, 17.8%, and 32.0% of total annual issuance (Table B). Further, total issuance for this period as a whole was $607 billion, more than was issued in the *21 years* from 1977 through 1997. In short, record issuance levels have coincided with a sharp upward spike in the percentage of the worst credits; as a result, CCC issuance for the past four years ($134 billion) was more than double the total for the prior *two decades* ($63 billion).

This matters, of course, because the worse the credit rating, the more likely the issuer will eventually default. Indeed, for all the grief the ratings agencies have taken of late (much of it well deserved), it is worth noting that corporate debt ratings do correlate very well to future default rates. For example, BB-rated issues tend to default at about a 20% rate over their first ten years of life, compared to 37% for issues rated B, and nearly 60% for CCC issues (Table C). Therefore, even were the global economy not facing serious headwinds, default rates (which touched a 26-year low of 0.9% in 2007 according to Standard & Poor's) would nevertheless be set to soar based on the very poor quality of recent issuance. In fact, given that the difference in default rates has historically been more pronounced earlier in a bond's life—three-year default rates are a mere 7.7% for BB-rated debt, 16.1% for issues rated B, and 36.9% for those rated CCC—defaults could soar sooner than most investors expect. Recovery rates also tend to be lower for defaulted debt that started out with a lower rating (Table D). A contracting credit environment, meanwhile, will simply exacerbate these problems.

Still, we are not the only ones to see this default wave coming. Indeed, one recent estimate put the amount of capital currently available to invest in a broad array of distressed situations, including but not limited to high-yield bonds, at more than $600 billion.[1] For comparison, as of September 30, the distressed[2] and defaulted corporate debt market (including bonds and loans) alone totaled an estimated $613.7 billion, according to data provided by the NYU Salomon Center's Defaulted Corporate Bond and Defaulted Corporate Bank Loans databases. In short, it appears there will be plenty of supply to meet demand (although demand will likely rise as more opportunities become available).

Further, investors have been conditioned by the two recent cycles to act quickly when spreads widen to distressed levels. In the first cycle, spreads first rose above 800 bps in November 1989, peaked at 1,286 bps in December 1990, and did not drop below 800 bps until March 1991. By contrast, the 2002 cycle arguably came and went in a mere six months, with spreads first breaching 800 bps in July 2002, peaking at 1,001 bps in September, and dropping below 800 bps in January 2003. It is also worth noting that returns for the second cycle were heavily skewed toward the riskiest credits, which may also influence investor behavior this time around. For the nine months ended in July 2003, CCC-rated bonds returned 56.7%, compared to 17.0% and 25.7% for higher-quality BB- and B-rated bonds, respectively. Thus, much like equity investors have been trained to "buy on the dips," many high-yield investors are likely eager to pounce on the market, potentially with a focus on the worst credits, if and when spreads widen a bit more.

Nevertheless, even if investors do seek to capitalize on spreads early in the cycle based on the compressed timeframe of the 2002–03 cycle, supply could easily swamp demand due to the recent explosion in issuance. For example, if the ratio of distressed securities were to rise to its 2002 high of 35% (a very plausible scenario, in our opinion), the supply of distressed securities would increase by more than *$1 trillion.* Thus, our expectation is that there will be plenty of supply to go around, and as noted earlier, talented managers should have well-stocked waters in which to fish.

The Valuations Puzzle

While we feel it is too early to make a call as to when high yield will be attractive *in aggregate*, there must be a price at which investment becomes attractive (assuming prices do not eventually go to zero). Thus, despite the level of uncertainty about future defaults, the macroeconomic environment, investor appetite for distressed securities, etc., we still believe it is worth "doing the math" with regard to valuations, particularly relative to history. However, as noted above, the following analysis should be considered in the context of the current environment, as we believe there is a strong chance this cycle will play out in a manner quite different from those of the past.

Current valuations of high-yield bonds are well within their normal historical range. Indeed, the spread between the Lehman Brothers High-Yield Bond Index and ten-year Treasuries crossed its long-term

[1] Mick Solimene, managing director at Macquarie Securities, *HedgeWorld,* January 16, 2008.
[2] We define distressed as any bond with a spread of 1,000 basis points (bps) or more over ten-year U.S. Treasuries.

(post-1986) mean in November, and while spreads have since widened further, they remain far below prior peaks (Table E). Spreads on CCC-rated issues have widened the most; however, as discussed above, historical default rates for these issues are far greater than for other high-yield buckets, and spreads relative to other high-yield categories remain low (Table F). CCC spreads relative to Treasuries (959 bps as of January 31) remain *far* below peak levels of the past two cycles, when they topped out at 2,809 bps and 2,364 bps, respectively. Further, absolute yields, which peaked above 36% in 1990 and 28% in 2001, stand at a relatively meager 13.4% today. Even the ratio of CCC yields to Treasuries, which to some degree discounts the low level of Treasury yields, is currently 3.70, far below its 1991 and 2001 peaks of 4.45 and 6.50, respectively.

Spreads on better-quality high-yield bonds, on the other hand, are not so far removed from previous highs. Still, in our opinion spreads remain low, particularly in light of the macroeconomic risks mentioned earlier. Spreads of 491 bps and 613 bps for BB- and B-rated issues are above their respective means of 321 bps and 509 bps, for example, but remain below their 2002 peaks of 651 bps and 1,043 bps. Just as default rates were far below average for the past several years due to an extraordinarily benign global macroeconomic environment, we should expect defaults to soar well *above* historical averages in coming years as the credit crunch intensifies.

Along similar lines, investors should note that while spreads for high yield are above their long-term mean, this is not *necessarily* an indicator of value. As noted above, the market today is more skewed toward lower-quality credits, which suggests spreads *should* be higher than historical averages. In addition, investors should remember that buyers were not rewarded for acting quickly when spreads began to widen during the previous two cycles. Rather, the best returns were reserved for those who waited until spreads blew out to extreme levels (e.g., the 1,200+ bp spreads seen in late 1990, and the roughly 1,000 bp spreads available in September 2002). Nevertheless, such market action is consistent with other asset markets, in which prices tend to overshoot “fair value” on the way up, and fall far below it when markets turn down. Indeed, this history lesson may actually be more valid than ever in the current environment. Put simply, we expect patient investors to be presented with an extraordinary buying opportunity in the broad high-yield market *at some point*, but it is unlikely to occur until yields and spreads have blown out to previously unthinkable levels.

Conclusion

The past several years have seen an explosion in high-yield debt issuance, along with a concurrent drop in quality. Such activity was consistent with the dramatic increase in risk tolerance among investors during this period, aided and abetted by “friendly” central bankers, agency issues (e.g., hedge fund managers who essentially get paid to swing for the fences, with little cost for failure), and a general belief that the business cycle had been tamed and the world had become a safer place in which to invest. We now know that much of this “new era” thinking was illusory, and that many of the activities that ostensibly benefited from it (such as high-yield bonds) were in fact large contributors to economic activity themselves. In short, much of global economic growth over the past few years was *driven by* buoyant asset markets that then benefited from said growth. While this created a “virtuous cycle” dynamic on the way up, it has now turned to a vicious cycle as investors de-lever and reassess risk. The degree to which this vicious cycle will persist and spread is largely dependent on how successful central banks and policymakers are in their efforts to stem the downturn, as well as the degree to which large pools of capital (e.g., sovereign wealth funds) continue to be willing to bail out troubled financial firms. Regardless, we believe the coming wave of defaults will be bigger and longer-lasting than those experienced in the two previous cycles on which we have data.

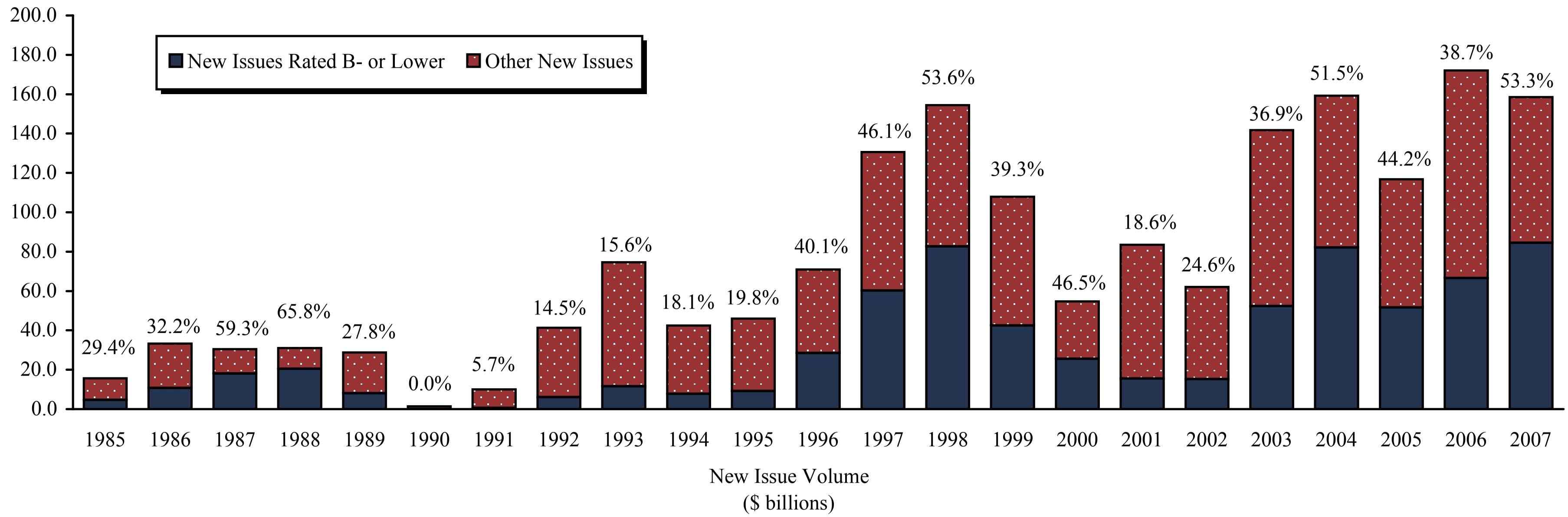
Our best advice for investors looking to enter high yield is to seek out and fund an experienced high-yield or distressed manager, or place funds with a multi-strategy manager with the latitude and expertise to participate in the coming cycle. As stated at the outset, the extreme level of uncertainty today precludes us from making a call as to when high yield will become attractive *as an asset class*. Rather, we believe it makes more sense to allocate funds to those able to participate in select areas of the market that may offer value as the credit crisis plays out.

Table A

PAR VALUE OF HIGH-YIELD NEW ISSUES AND PERCENTAGE RATED B- OR LOWER

1985–2007

($ billions)



	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
New Issues Rated B- or Lower	4.6	10.7	18.1	20.5	8.0	0.0	0.6	6.0	11.6	7.7	9.1	28.5	60.2	82.7	42.5	25.5	15.6	15.2	52.3	82.0	51.6	66.5	84.4
Other New Issues	11.0	22.5	12.4	10.6	20.7	1.4	9.4	35.4	63.0	34.7	36.9	42.5	70.4	71.7	65.5	29.3	68.0	46.8	89.5	77.2	65.2	105.6	74.1
Total New Issues	15.6	33.3	30.5	31.1	28.7	1.4	10.0	41.4	74.6	42.4	46.0	71.0	130.7	154.4	108.0	54.8	83.6	62.0	141.8	159.2	116.8	172.1	158.5

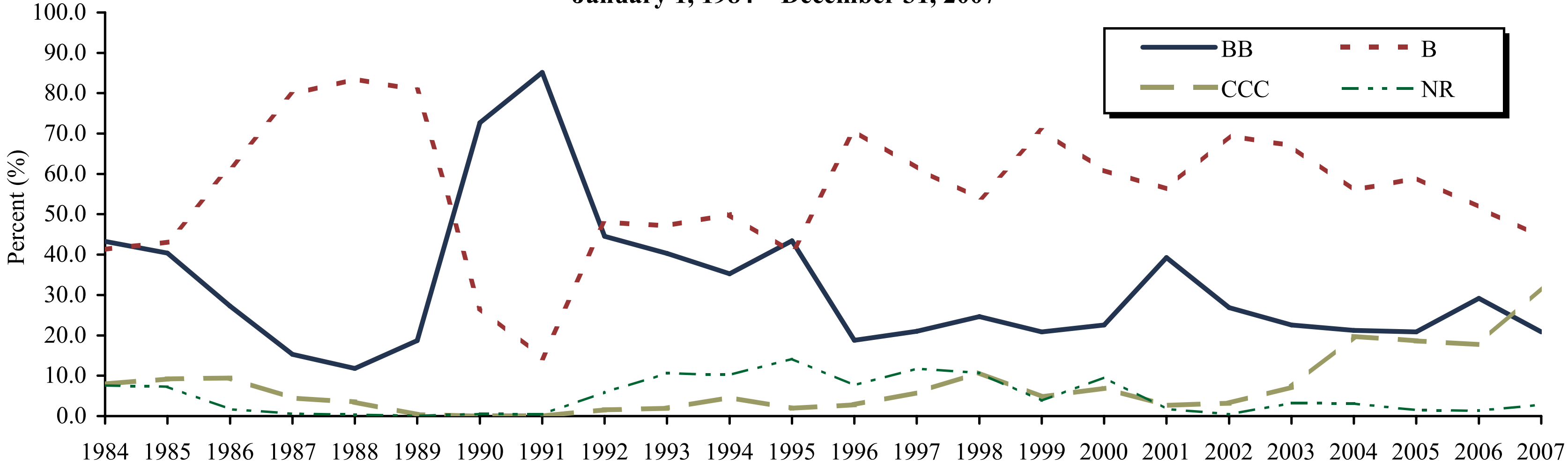
Sources: Bloomberg L.P. and Merrill Lynch & Company.

Notes: Analysis is based on Standard & Poor's ratings. New issue volume has included Rule 144A high-yield new issues. Other new issues include those rated higher than B-. Figures may not total due to rounding. Data for 2007 are through December 31.

Table B

HIGH-YIELD NEW ISSUE QUALITY DISTRIBUTION

January 1, 1984 – December 31, 2007



Percent of Issues (%)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
BB*	43.3	40.4	27.2	15.3	11.8	18.7	72.7	85.1	44.5	40.3	35.3	43.4	18.8	21.0	24.6	20.8	22.6	39.3	26.9	22.6	21.3	20.9	29.2	20.9
B	41.2	43.1	61.6	79.7	83.5	80.8	26.8	14.4	48.0	47.2	49.9	40.5	70.7	61.4	53.9	70.7	61.0	56.3	69.5	67.0	55.9	59.0	51.7	44.4
CCC	7.9	9.2	9.5	4.5	3.5	0.4	0.0	0.0	1.6	2.0	4.6	1.9	2.8	5.8	10.8	4.7	6.9	2.7	3.2	7.2	19.7	18.6	17.8	32.0
NR	7.6	7.3	1.7	0.6	0.4	0.1	0.5	0.4	5.9	10.6	10.2	14.2	7.7	11.8	10.7	3.8	9.6	1.8	0.5	3.2	3.1	1.5	1.3	2.8

Source: Merrill Lynch & Co.

Notes: Percentages may not total 100% due to rounding. NR represents not rated.
* BB rating includes issues that are rated BBB or BB by Standard & Poor's, or Ba1 or lower by Moody's.
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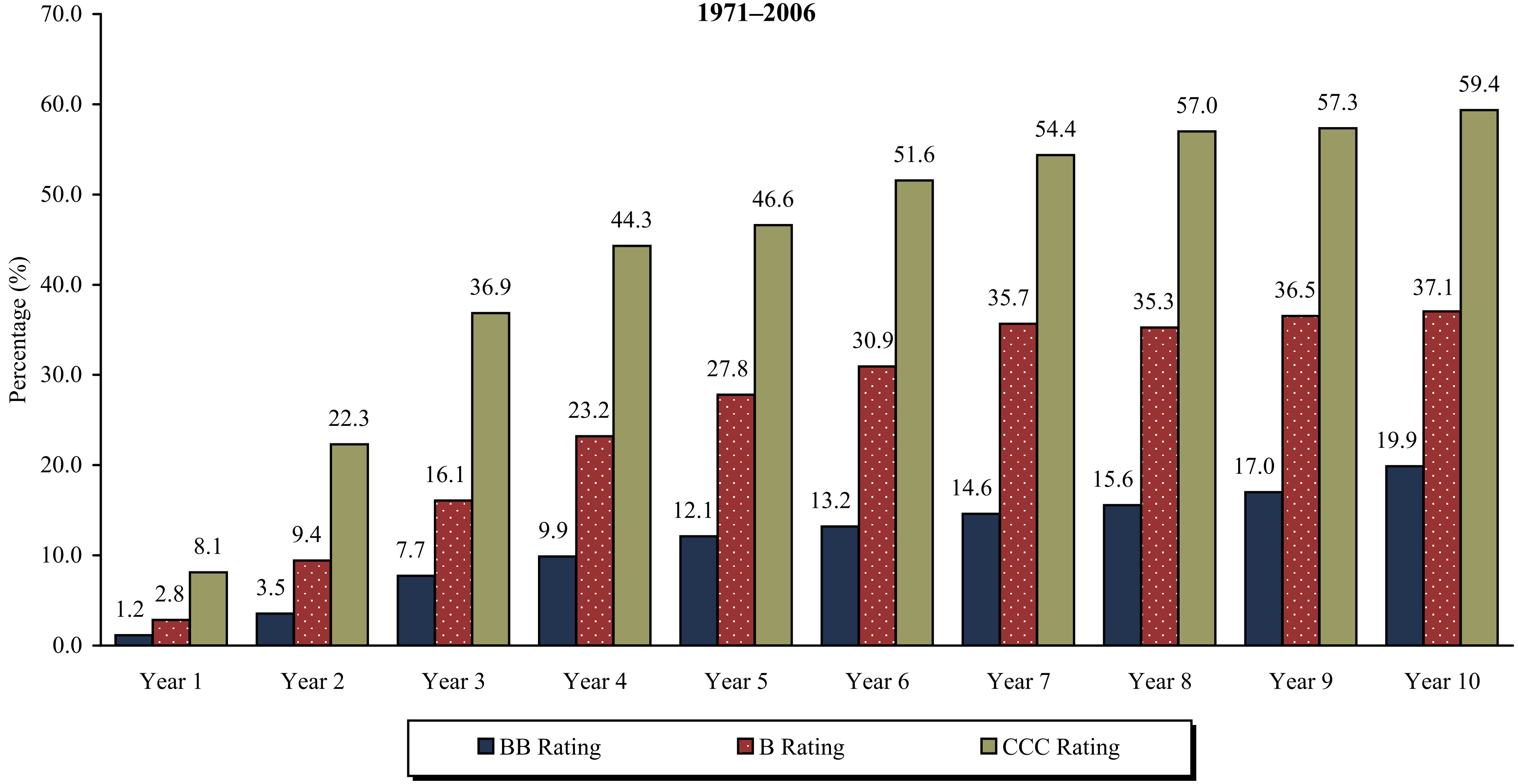
Table C

MORTALITY RATES (%) BY ORIGINAL RATING OF ALL RATED CORPORATE BONDS

1971–2006



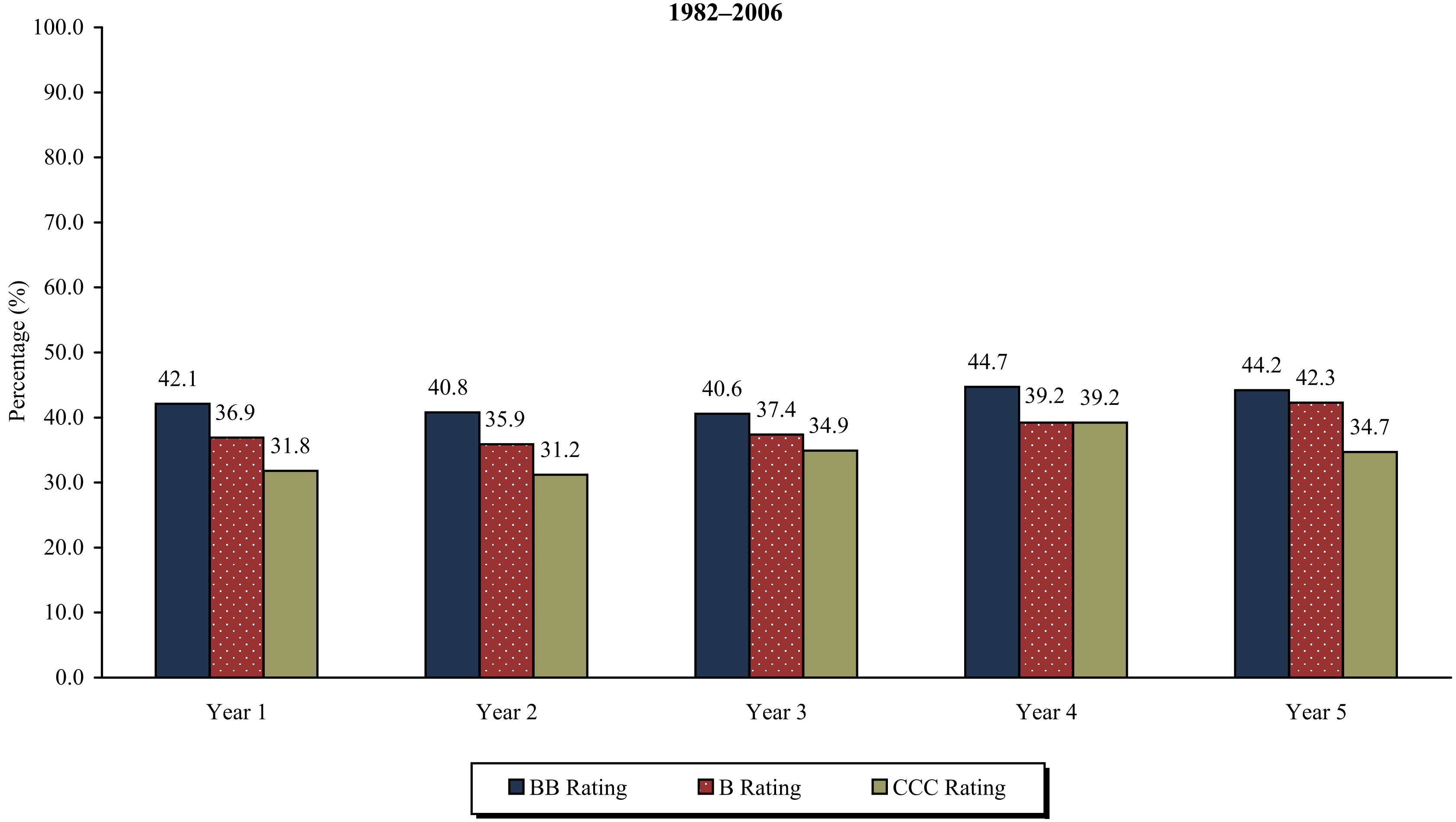
Sources: Edward I. Altman-NYU Salomon Center and Standard & Poor's.

Notes: Corporate bonds are rated by S&P at issuance. These data are based on 1,955 issues.

Table D

AVERAGE RECOVERY RATES BY YEAR PRIOR TO DEFAULT

1982–2006



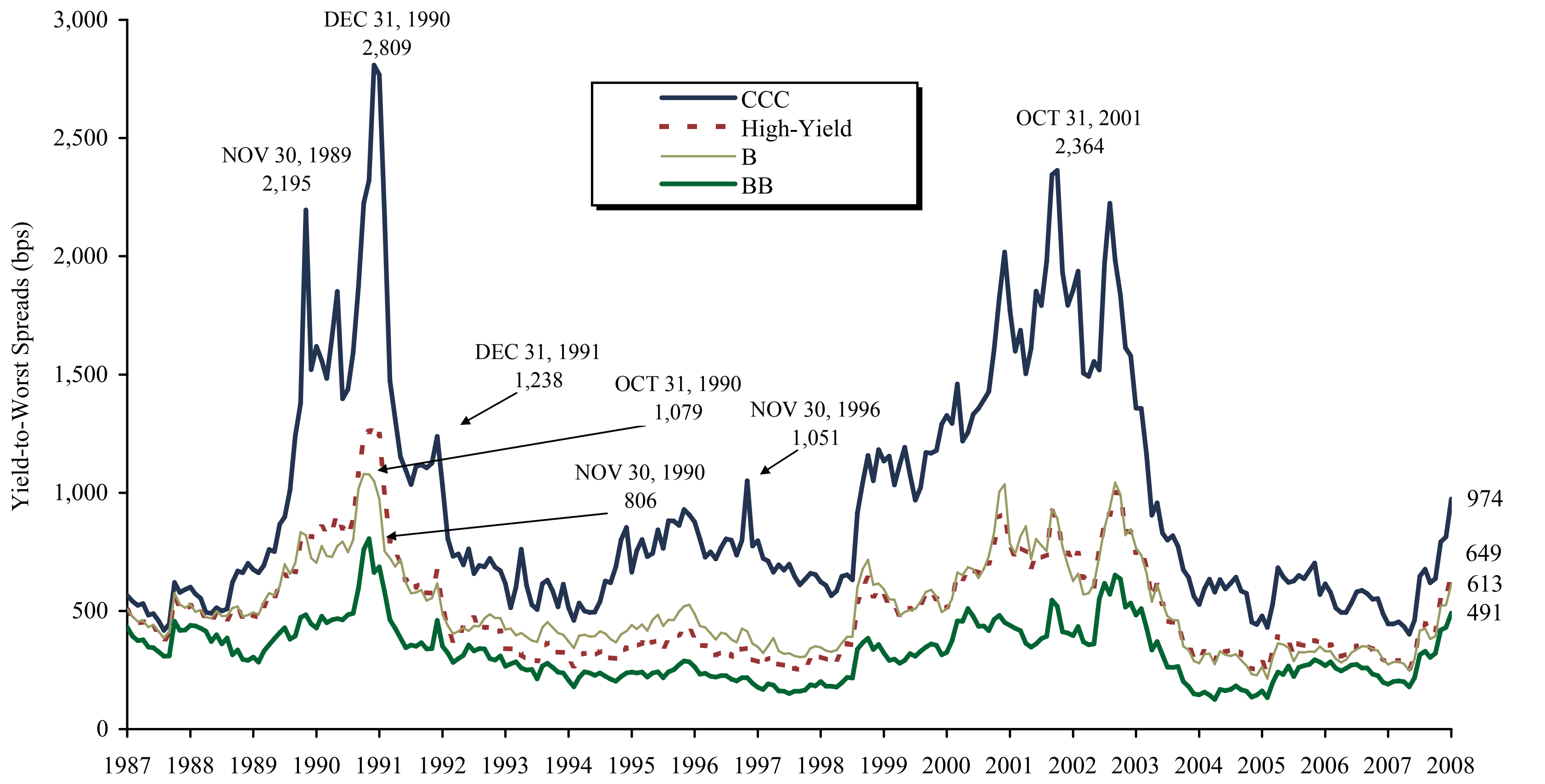
Source: Moody's Investors Service.

Notes: Issuer-weighted, based on 30-day post-default market prices. Recovery rates shown are for senior unsecured bonds.

Table E

YIELD SPREADS FOR SELECTED HIGH-YIELD BOND RATING CATEGORIES RELATIVE TO TEN-YEAR TREASURIES

January 31, 1987 – January 28, 2008



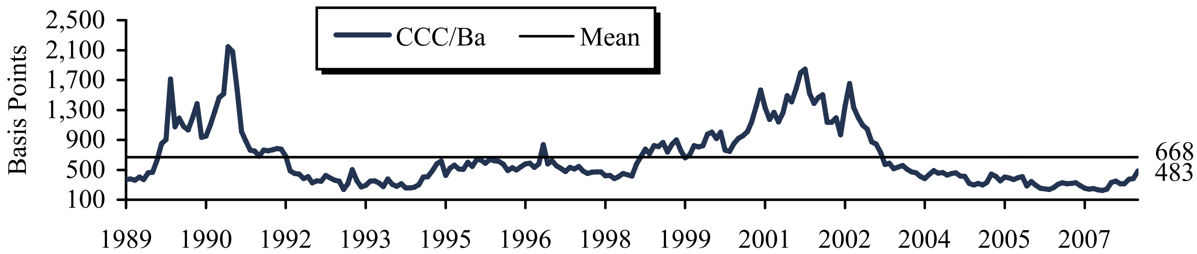
Sources: Lehman Brothers High-Yield Bond Department and Thomson Datastream.

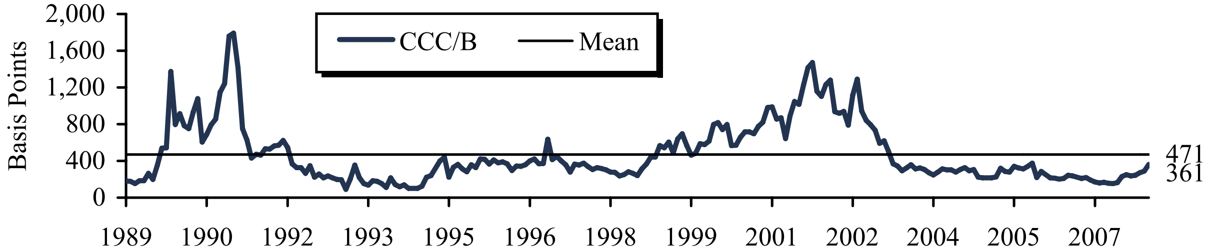
Notes: Yield spreads are based on the difference between the weighted-average yield-to-worst (the lower of yield-to-maturity and yield-to-call) for each high-yield rating category and the yield-to-maturity for ten-year Treasury securities. Quality ratings are shown in the equivalent S&P rating category.

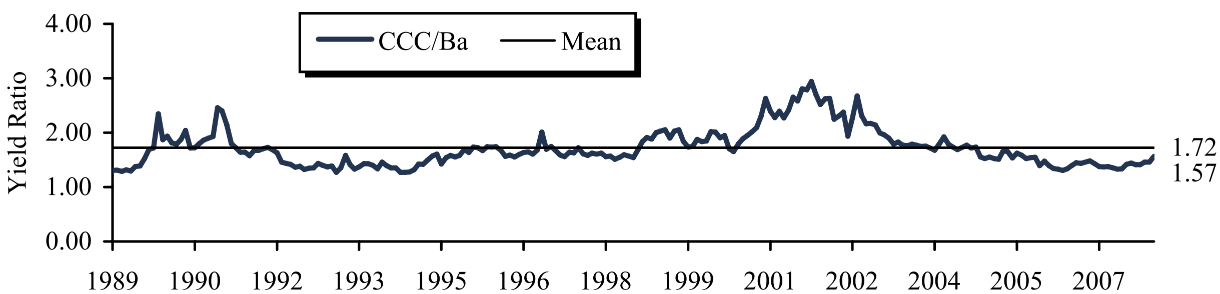
Exhibit F

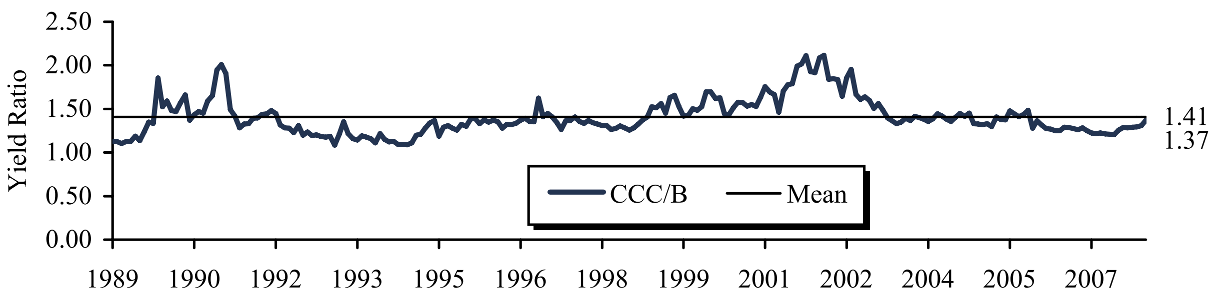
CREDIT SPREADS AND RATIOS AMONG HIGH-YIELD CREDIT TIERS

January 31, 1989 – January 28, 2008









Source: Lehman Brothers, Inc.

Note: Yield ratios are based on the ratio of the weighted-average yield-to-worst (the lower of yield-to-maturity and yield-to-call) for each rating category.