

C A M B R I D G E A S S O C I A T E S L L C

U.S. MARKET COMMENT:
U.S. HIGH-YIELD BONDS
HEAD FAKE OR BULL MARKET?

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U.S. High-Yield Bonds: Head Fake or Bull Market?

U.S. high-yield bonds returned 6.2% in November, marking the third largest single month gain for the Lehman Brothers High-Yield Bond Index since its inception, bested only by the 7.5% and 10.9% returns in January 2001 and February 1991. As a result, many investors are asking if today's stretched spreads and attractive risk/reward characteristics will ignite a breakout rally, similar to that of 1991 when high-yield bonds returned a record 46.2%. Indeed, there are many parallels between 1991 and today's environment: peaking default rates, relatively high yield spreads over treasury bonds of comparable maturity, and outperformance of the poorest credit quality issues relative to those of higher credit quality. Historically, such conditions have signaled an oversold market and an ideal entry point to opportunistically invest in high-yield bonds. However, before jumping in feet first, investors should temper their return expectations by considering the ways in which the current investment and economic environment differs from that experienced in 1991.

A Trip Down Memory Lane

In 1991, investors with a penchant for taking risk at the right price found the high-yield arena to be an ideal playing field for making opportunistic bets. After achieving an average annual compound return (AACR) of just 1.9% over the four-year period 1987-90, high-yield bonds rallied 46.2% in 1991 and continued to rally in 1992 and 1993, resulting in an AACR of 25.6% over the three-year period 1991-93. However, a rather ominous combination of conditions preceded this rally, including record-high yield spreads relative to treasuries of comparable maturities, a savings and loan crisis that forced marginal companies to tap the public bond market, and default rates that exposed the fat tails inherent in sub-investment-grade risk.

By year-end 1990, Bb-, B-, and Caa-rated bonds were trading at record spreads of 806 basis points (bps), 1,079 bps, and 2,809 bps over ten-year treasuries (see Table A). Although spreads had begun the year at slightly higher than average levels, a sharp economic recession and uncertainty surrounding the Gulf War sent spreads ballooning into record territory. Simultaneously, the par value of defaults as a percentage of principal outstanding touched 11%, or approximately twice the level reached in any single year between 1971 and 1989, while no new issues with ratings of B- or lower came to market all year. A complete absence of new low-rated high-yield issues symbolized the prevailing aversion to risk, and was in stark contrast to the previous four years when 42% to 59% of new issues were rated B- or lower (see Table B). These extremely tight credit conditions signaled an oversold market, as a sharp economic recovery and an expeditious victory in the Persian Gulf provided strong tailwinds for an extended high-yield rally.

The 2001 Head Fake

Many investors set their sights on stellar high-yield bond returns at the end of 2000, as high-yield valuations appeared similar to those prevailing at the end of 1990. For example, high-yield spreads were approaching 1990 levels, while default rates were predicted to peak at 9.5% in 2001. Over the preceding three-year period, 1998-2000, high-yield bonds achieved an AACR of -0.6%, thus resembling the subpar period of performance that preceded the 1991-93 rally. Investors placed over \$4.8 billion of net new cash into high-yield mutual funds in January 2001, a monthly net inflow that has yet to be matched. While high-yield bonds returned 5.3% in 2001, those that invested just after the January 2001 rally would have achieved a -2.1% return for the remainder of the year. Those with concentrated bets further down on the credit scale would have fared even worse: Caa-rated issues returned 12.6% in January 2001, but -14.8% between February 1, 2001 and December 31, 2001, and -13.2% year-to-date through November 30, 2002.

The poor performance between February 1, 2001 and September 30, 2002 has revealed that a growing economy and improving corporate health are necessary rather than ancillary conditions for a broad-based high-yield rally. Not only had the specter of a double-dip recession squelched the possibility of a high-yield breakout, but a stockpile of fallen angels¹ also weighed heavily on the market. In the post-Enron world, ratings agencies have been feverishly attempting to "beat the street"—uncovering corporate malfeasance before the marketplace does—and have issued a record level of downgrades relative to upgrades (10:1) in the process. In short, although technical factors pointed to a 1991-like rally at the end of 2000, market and economic conditions have since impeded the market's progress.

The Current Environment

Today, the same critical question remains: Are market and economic conditions poised for a sustained recovery that would support a strong high-yield rally? The strong performance in November indicates that the market interpreted the improving economic news and the unusually high number of downgrades relative to upgrades as a turning point for high-yield bonds. The ability to mount a lasting economic recovery notwithstanding, high-yield bonds are attractively valued according to several factors.

¹ Fallen angels are defined as investment-grade companies (as opposed to selected issues of investment-grade companies) downgraded to sub-investment grade by one or more of the ratings agencies.

Credit Spreads

The best time to invest in high-yield bonds has been when yield spreads were wide enough to absorb significant defaults and still provide investors with attractive returns. Alternatively, the least profitable time to invest has been during periods of robust economic growth and easy credit extension (e.g., 1998-99), when new issues tend to mushroom and extremely narrow spreads suggest remote probabilities of default. Therefore, an analysis of credit spreads should be followed by an analysis of default expectations to make sure that the former provides enough compensation for the latter.

Spreads on the Lehman Brothers High-Yield Bond Index peaked on January 31, 1991, at 1,247 bps, fell sharply to reach approximately 380 bps in early 1992, and remained in a relatively narrow range of 250 bps to 500 bps until the third quarter of 1998. Since the end of 1998, yield spreads have generally increased, peaking at 997 bps on October 31, 2002 and falling back to 840 bps over Treasuries after the November rally. Across all credit tiers, spreads today are well below December 31, 1990 peaks, but particularly for the lowest-rated credits. For example, at the end of November, the spread on Caa-rated issues was 1,614 bps, well below the December 31, 1990 peak of 2,809 bps, while the spread on Ba-rated issues was 516 bps, compared to its peak of 806 bps in November 1990. In addition, according to Seix Investment Advisors, approximately 28% of the outstanding high-yield issues are in distressed territory today—a significant portion, but well below the 60% of issues that reached the distressed level in 1990.² In short, yield spreads today provide a strong investment opportunity for those inclined to take risks, but the opportunities are less compelling than they were at the start of the 1991 bull market.

When taken in the context of today's low interest rate levels, yield spreads appear much more attractive. The ratio of high-yield bonds over treasury bonds reached an all-time high on September 30, 2002 for all credit sectors of the market. Caa-, B-, and Bb-rated issues offered yields 6.47, 3.87, and 2.79 times that of ten-year treasuries (see Table C). As yield spreads narrowed over the subsequent two months, these ratios fell to 4.82, 2.95, and 2.22 times respectively, but remain slightly above their November 1990 highs. However, in contrast to the early 1990s, yield ratios today increased primarily because of a decline in Treasury yields, as yields on high-yield bonds did not skyrocket at the same pace. While corporations certainly receive some incremental benefit from having a 4% risk-free rate today, compared to an 8% average rate in 1990-91, investors should evaluate issuers' overall health against the backdrop of a meddling economy, excess capacity, and an ice-cold IPO market, before assuming that today's corporations are significantly better off due to relatively lower risk-free rates.

² The high-yield market is commonly broken into two segments, non-distressed and distressed, with the latter commonly defined as issues trading more than 1,000 bps over prevailing ten-year Treasury rates.

Default Rates

The Moody's trailing 12-month default rate reached 18.3% of the par value outstanding as of September 30, 2002, just below the record-high 18.4% default rate reached on August 31, 2002 (see Table D). This level is well above the 11% default rate reached in 1990 and stems from the recent bankruptcies of formerly large players in the telecom, insurance, and cable sectors. For example, the average total value of defaulted high-yield bonds per issuer (excluding outliers such as WorldCom and other extremely large fallen angels) exceeded \$800 million in 2002, compared to an average of \$250 million per defaulted issuer between 1980 and 1997. However, recent bankruptcies have cleared out much of the dead wood in the telecom sector, which currently represents 7% of the high-yield market, down from a peak of 20% in August 2000. In addition, Moody's forecasts that the trailing 12-month default rate based on number of issues will fall from its current level of 9.2% to 8.5% by year-end 2002 and 7.1% by year-end 2003.

The best time to invest in high-yield bonds is when default levels are peaking and spreads for companies with solid fundamentals have widened due to contagion within economic sectors or widespread risk aversion. Over the relatively short history for which we have reliable data, high-yield bonds have tended to experience most of their defaults within the first four years of existence (see Table E). For example, CCC-rated issues (equivalent of Caa) have racked up nearly 80% of their 15-year cumulative default rate in the first four years after issuance, while high-yield bonds in general have accumulated nearly 60% of total defaults by year four. This trend is particularly interesting when one considers that \$125.5 billion of new high-yield bonds were issued in 1997, followed by \$151 billion in 1998 (still a record), before falling to \$100 billion in 1999. In other words, the steep increase in default rates has occurred approximately four years after the sharp increase in issuance levels, suggesting that defaults have peaked or are close to peaking.

Unfortunately, the November rally has taken much of the excess spread out of the market, and many analysts feel that high-yield bonds are approaching fair value. For example, as of November 30, 2002 the entire high-yield sector traded at approximately 800 bps over ten-year treasuries, which is just 9 bps above Merrill Lynch's 791 bps fair value estimate.³ Their fair value estimate, which is based on the prevailing default risk, secondary market liquidity, and monetary conditions, represents a contraction from the prior month's 836 bps fair value estimate, due to increasing high-yield bond mutual fund flows, growth in money supply aggregates, and a steepening Treasury yield curve.

³ Source: "Spreads Scream Back to Fair Value," Christopher Garman and Oleg Melentyev, Merrill Lynch, December 2, 2002.

It is quite difficult to determine if current yields compensate for defaults, since the latter is largely unknown ex-ante. Although investors can model these expectations, such theoretical analysis is only as accurate as the inputs, which typically include relatively uncertain expected default rates and recovery assumptions. However, given that economic visibility is limited, spreads of the most distressed issues are large but not extremely compelling, and the fate of certain sectors remains largely unknown, investors may want to invest with managers adept at credit and sector analysis, rather than invest in an index or index-like vehicle.

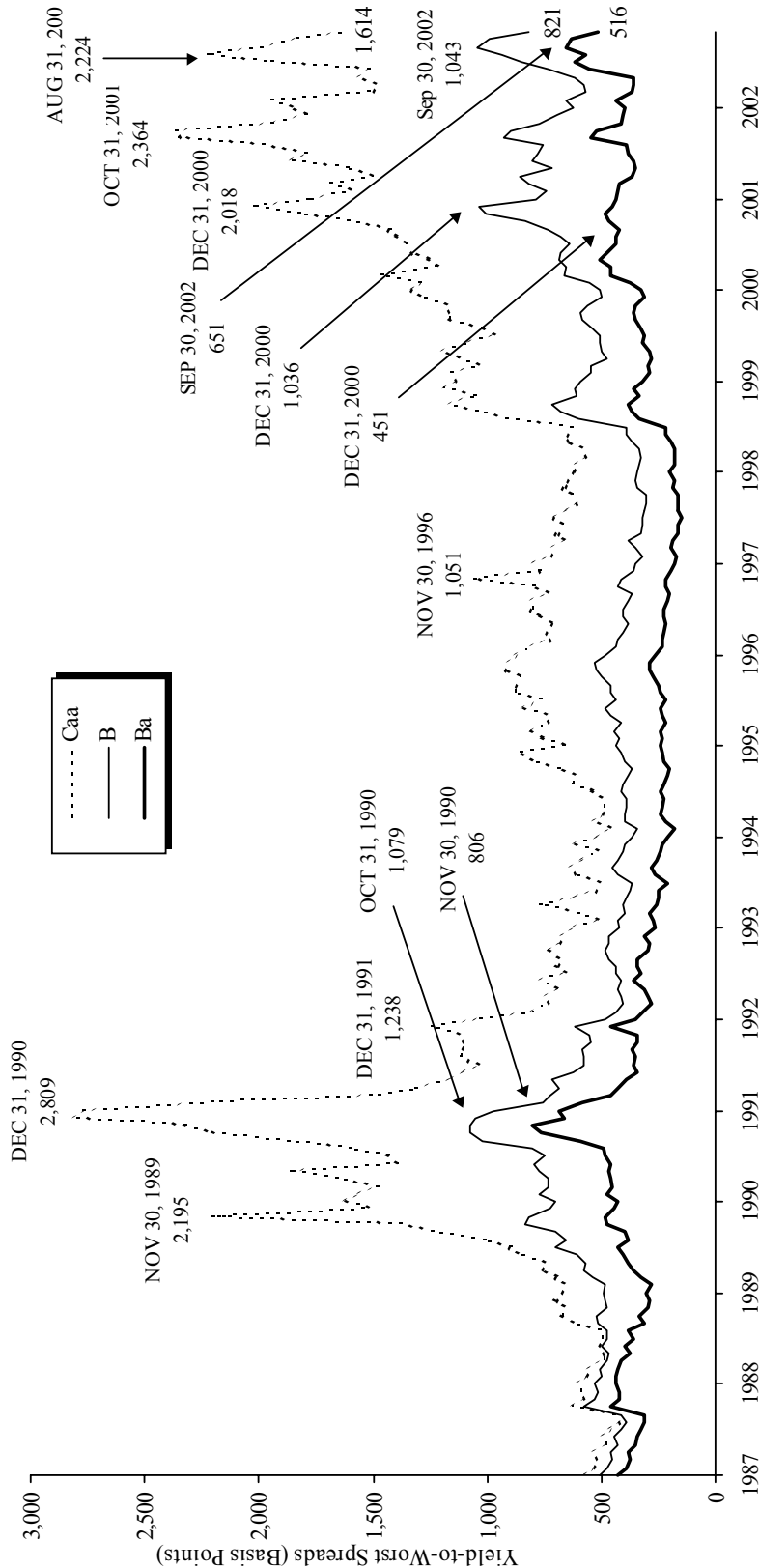
Conclusion

While credit spreads recently approached peak levels last seen in the late-1990s, they remained well below prior peaks. In addition, as high-yield bond returns surged and credit spreads tightened significantly in November, much of the excess risk premium generated by sharply rising default rates earlier in the year was eliminated. As a result, high-yield bonds are approaching fair value and, given the significant contraction in the spreads of the most distressed credits, investors are unlikely to see a 1991-like rally going forward. However, high-yield bonds continue to carry high absolute yields in a near yield-less investment landscape, while certain sectors and credits appear to offer compelling values. In addition, investors may want to consider the tendency of high-yield bonds to run from undervalued, to fairly valued, and well into overvalued territory. For example, despite the fact that the ratio of high-yield bond yields to Treasury yields fell several standard deviations to reach mean levels by year-end 1991, high-yield bonds continued their strong performance in 1992 and 1993, returning 15.7% and 17.1%. This performance occurred against the backdrop of a falling risk-free rate (ten-year Treasury yields fell from 6.7% to 5.8% over the two-year period), narrowing credit spreads, and U.S. equities returning 7.6% (1992) and 10.1% (1993). In short, investors implementing an allocation to high-yield bonds may want to consider hiring an active manager focused on a bottom-up analysis, and draw their return expectations from more reasonable historical comparisons (e.g., 1992-93).

Table A

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

January 31, 1987 - November 30, 2002



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

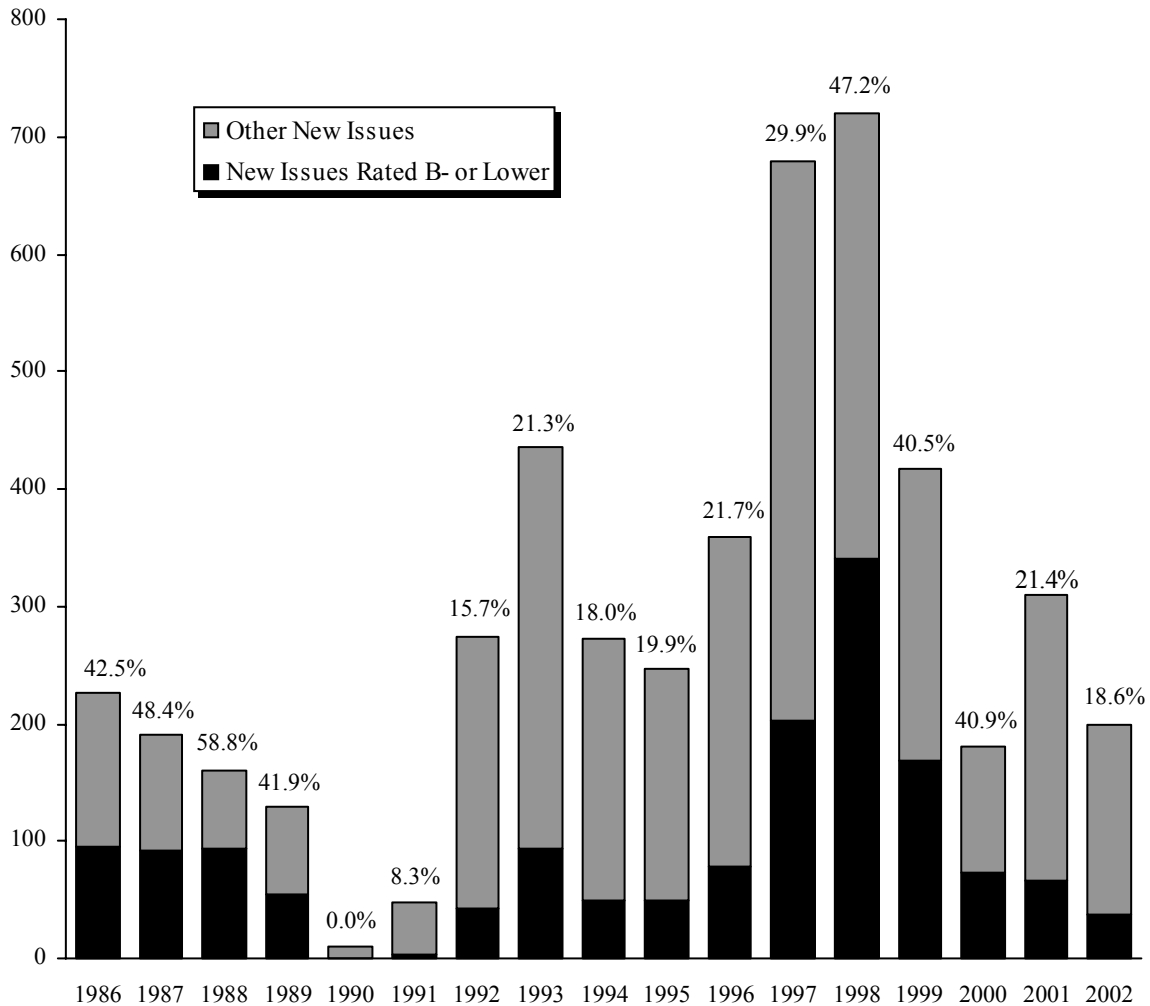
Note: Yield spreads are based on the difference between the weighted-average yield-to-worst (the lower of yield-to-maturity and yield-to-call) for each high-yield rating category and the yield-to-maturity for ten-year Treasury securities.

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Table B

**NUMBER OF HIGH-YIELD NEW ISSUES
AND PERCENTAGE RATED B- OR LOWER**

1986-2002



Number of Issues

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
New Issues Rated																	
B- or Lower	96	92	94	54	0	4	43	93	49	49	78	203	340	169	74	66	37
Other New Issues	130	98	66	75	10	44	231	343	223	197	281	476	380	248	107	243	162
Total New Issues	226	190	160	129	10	48	274	436	272	246	359	679	720	417	181	309	199

Source: Merrill Lynch High-Yield Research.

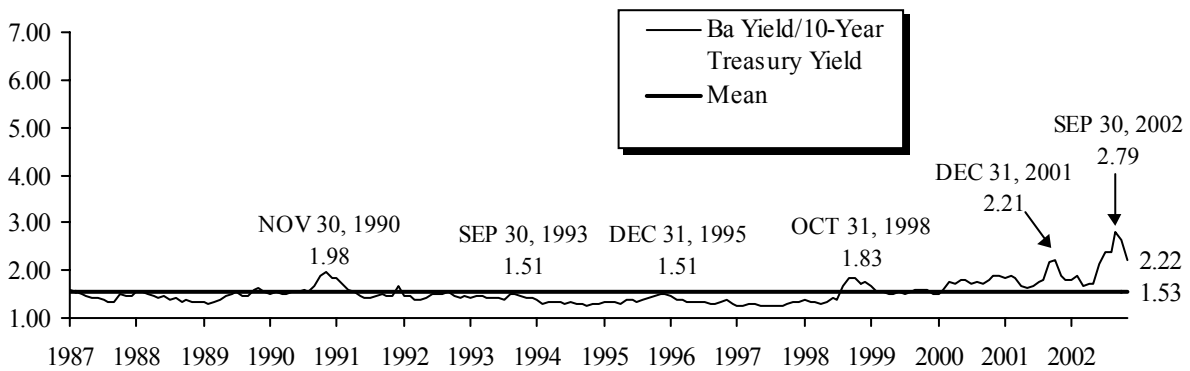
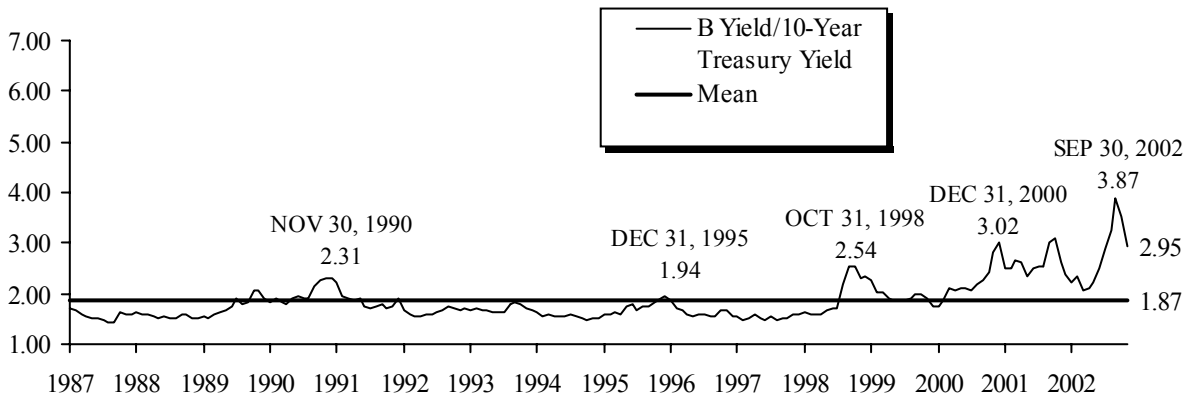
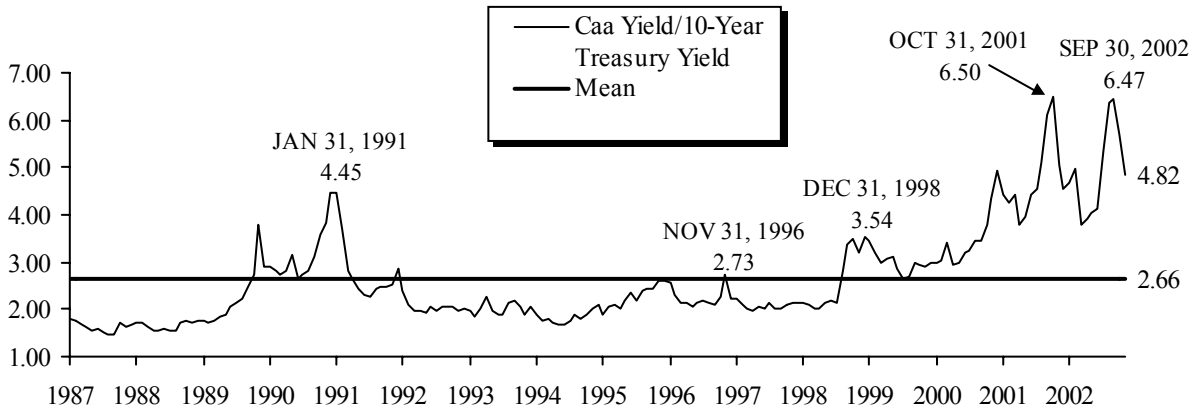
Notes: Analysis is based on Standard & Poor's ratings. Since 1992, number of new issue has included 144A high-yield new issues. Other new issues include those rated higher than B-. Data for 2002 are as of September 30.

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Table C

RATIO OF HIGH-YIELD BOND YIELDS TO YIELDS OF TEN-YEAR TREASURIES

January 31, 1987 - November 30, 2002



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

Note: Yield ratios are based on the ratio 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.

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Table D
HISTORICAL DEFAULT RATES

<u>Fitch's Historical Default Rates</u>				<u>Moody's Trailing 12-Months Default Rates</u>		
	Par Value Outstanding (\$ Millions)	Par Value Defaults (\$ Millions)	Default Rate (%)		Percentage of Principal Amount Outstanding (%)	Percentage of Issuers (%)
1971	---	---	---	1971	1.84	1.47
1972	---	---	---	1972	3.94	1.88
1973	---	---	---	1973	2.60	1.24
1974	---	---	---	1974	2.93	1.32
1975	---	---	---	1975	3.50	1.74
1976	---	---	---	1976	1.44	0.87
1977	---	---	---	1977	5.18	1.34
1978	---	---	---	1978	2.13	1.78
1979	---	---	---	1979	0.30	0.42
1980	13,612	213	1.6	1980	1.93	1.61
1981	16,179	27	0.2	1981	0.77	0.70
1982	20,890	427	2.0	1982	5.52	3.54
1983	26,811	172	0.6	1983	1.70	3.83
1984	36,377	374	1.0	1984	1.73	3.32
1985	54,085	1,479	2.7	1985	2.35	4.13
1986	82,819	2,503	3.0	1986	1.59	5.67
1987	116,287	5,148	4.4	1987	1.20	4.24
1988	150,278	3,057	2.0	1988	3.17	3.47
1989	181,823	7,928	4.4	1989	6.90	6.03
1990	195,254	17,056	8.7	1990	10.95	9.83
1991	211,690	17,130	8.1	1991	9.55	10.50
1992	224,620	4,100	1.8	1992	3.80	4.86
1993	229,590	1,930	0.8	1993	1.31	3.52
1994	223,200	3,140	1.4	1994	1.04	1.94
1995	216,050	3,650	1.7	1995	3.63	3.30
1996	233,530	3,360	1.4	1996	1.61	1.65
1997	275,320	4,050	1.5	1997	2.95	2.04
1998	397,580	7,500	1.9	1998	3.32	3.42
1999	521,166	22,473	4.3	1999	7.78	5.65
2000	550,492	27,892	5.1	2000	6.44	5.88
2001	604,093	78,183	12.9	2001	12.75*	10.50
2002	631,172	90,459	14.3	2002	18.25	9.23
Weighted Average 1980 to 2001			4.6	Average	4.17	3.78

Table D (continued)
HISTORICAL DEFAULT RATES

Fitch's Default Rates by Industry: 1980-2002

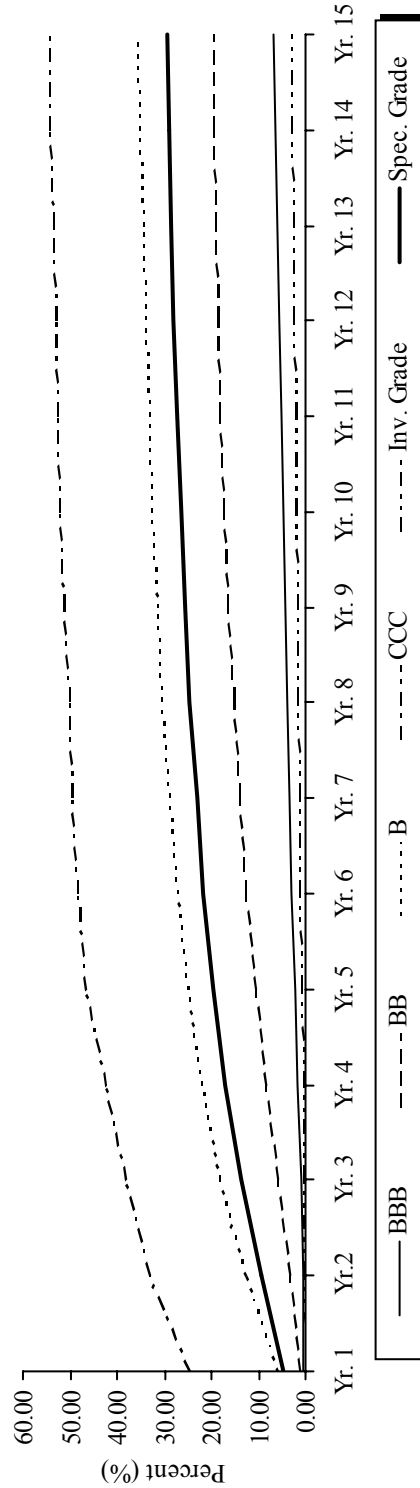
	<u>2002</u>	Average Annual <u>1980-2001</u>
Automotive	4.3	3.8
Banking & Finance	4.0	7.0
Broadcasting & Media	6.3	1.7
Building & Materials	1.3	7.0
Cable	34.3	0.3
Chemicals	4.8	2.9
Computers & Electronics	8.3	3.4
Consumer Products	3.1	4.0
Energy	1.4	3.8
Food, Beverage & Tobacco	5.4	4.8
Gaming, Lodging & Restaurants	1.8	2.9
Health Care & Pharmaceuticals	0.0	4.0
Industrial/ Manufacturing	5.4	2.8
Insurance	35.8	4.9
Leisure & Entertainment	1.3	6.8
Metals & Mining	19.3	4.6
Miscellaneous	1.2	2.8
Paper & Forest Products	5.6	2.2
Real Estate	0.0	2.7
Retail	11.8	6.6
Supermarkets & Drug Stores	2.9	7.9
Telecommunications	38.5	8.4
Textiles & Furniture	11.0	7.4
Transportation	7.3	5.2
Utilities	3.8	6.8
Total Market	14.3	4.6

Sources: Fitch, Merrill Lynch & Company, and Moody's Investors Services.

Notes: Data for 2002 are as of September 30. Par value outstanding market size excludes defaulted issues. Moody's defaults based on developed and emerging markets rated universe. Average figures for Moody's data are not weighted by amount outstanding each year.

* Excluding defaulted Argentine Government debt.

Table E
AVERAGE CUMULATIVE DEFAULT RATES
As of December 31, 2001



Static Pools Average Cumulative Default Rates (%)

	Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6	Yr. 7	Yr. 8	Yr. 9	Yr. 10	Yr. 11	Yr. 12	Yr. 13	Yr. 14	Yr. 15
AAA	0.00	0.00	0.03	0.07	0.10	0.18	0.27	0.41	0.46	0.52	0.52	0.52	0.52	0.52	0.52
AA	0.01	0.03	0.08	0.16	0.26	0.37	0.51	0.63	0.71	0.83	0.94	1.06	1.13	1.22	1.31
A	0.05	0.14	0.24	0.40	0.57	0.74	0.93	1.13	1.36	1.58	1.75	1.89	2.02	2.12	2.32
BBB	0.26	0.62	0.99	1.57	2.16	2.78	3.30	3.79	4.17	4.66	5.18	5.57	5.97	6.30	6.64
BB	1.22	3.49	6.14	8.50	10.59	12.65	14.10	15.30	16.49	17.40	18.20	18.69	19.20	19.37	19.52
B	5.96	12.68	18.25	22.28	25.06	27.18	29.09	30.56	31.63	32.61	33.40	34.08	34.66	35.20	35.76
CCC	24.72	33.06	38.40	42.60	46.87	48.48	49.62	50.02	51.28	52.22	52.76	53.07	53.45	54.38	54.38
Inv. Grade	0.10	0.24	0.39	0.63	0.88	1.14	1.38	1.62	1.84	2.08	2.30	2.48	2.65	2.79	2.98
Spec. Grade	4.72	9.46	13.67	16.93	19.48	21.54	23.19	24.48	25.61	26.56	27.33	27.91	28.44	28.84	29.17

Source: Standard & Poor's.

Table F

HIGH-YIELD MARKET TOTAL RETURNS AND YIELDS BY CREDIT RATING

January 1, 1987 - November 30, 2002

Index/ Subindex	Total Return (%)											Average Annual Compound Return (%)	Sharpe Ratio						
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	1987-2002		
Lehman Brothers High-Yield Bond Index	5.0	12.5	0.8	-9.6	46.2	15.7	17.1	-1.0	19.2	11.4	12.8	1.9	2.4	-5.9	5.3	-2.8	7.5	0.3	
Lehman Brothers Ba	6.1	13.8	7.8	0.1	25.0	12.1	15.9	-0.4	21.8	8.9	12.6	5.9	1.9	4.1	11.9	-3.1	8.8	0.6	
Lehman Brothers B	4.9	12.9	0.9	-8.6	43.3	15.9	16.9	0.2	16.6	13.6	12.7	1.3	2.7	-9.2	2.7	0.3	7.3	0.3	
Lehman Brothers Caa	3.9	9.3	-14.3	-22.6	83.2	22.9	20.0	-11.9	21.8	12.4	18.1	-7.0	1.6	-17.8	-4.0	-13.2	4.0	0.0	
Lehman Brothers Govt/Credit Bond Index	2.3	7.6	14.2	8.3	16.1	7.6	11.0	-3.5	19.2	2.9	9.8	9.5	-2.1	11.9	8.5	8.2	8.1	-0.6	
Index/ Subindex	Yield (%)																		
Lehman Brothers High-Yield Bond Index	13.9	14.0	16.1	20.9	11.3	9.8	9.1	11.3	9.8	9.4	8.7	10.5	11.5	14.2	12.5	12.6			
Lehman Brothers Ba	13.0	12.1	12.4	14.7	11.3	9.4	8.2	10.2	8.4	8.4	7.6	8.2	9.6	9.6	9.1	9.4			
Lehman Brothers B	14.0	14.0	15.2	18.6	12.9	11.4	9.8	12.0	10.8	10.1	9.3	10.8	11.4	15.5	12.0	12.4			
Lehman Brothers Caa	14.7	16.2	23.1	36.2	19.1	13.4	12.0	16.4	14.6	14.2	12.3	16.5	19.4	25.3	23.0	20.4			
Lehman Brothers Govt/Credit Bond Index	8.8	9.5	8.3	8.2	6.4	6.3	5.5	8.0	5.7	6.4	6.1	5.3	6.9	6.2	5.2	4.2			

Source: Lehman Brothers, Inc.

Notes: Yield calculations reflect the period-end weighted-average yield-to-worst (the lower of yield-to-maturity and yield-to-call). The Sharpe ratio is a measure of an index's average excess return per unit of absolute risk. The ratio is calculated by dividing the difference between the average index return and Treasury bill return by the index's standard deviation. Sharpe Ratios are based on monthly data. Data for 2002 are as of November 30.