

High Yield Today compared to recessionary periods



2016 1Q Newsletter

“Recession is when a neighbor loses his job. Depression is when you lose yours”

-Ronald Reagan (1911-2004), 40th US President

Are HY spreads signaling a recession?

Historically, high yield spreads have widened leading up to recessionary periods. Consequently, many economists pay close attention to high yield spreads when making their forecasts. Historically, however, there have also been periods when high yield spreads have widened and a recession did not ensue. Consequently, many economists' forecasts have been wrong. Over the past year and a half, high yield spreads have widened considerably, reaching as high as 887 basis points in mid-February of this year. Some pundits argue that this widening is a recessionary warning—we are not so sure.

While we will certainly provide some food for thought, the primary objective of this newsletter is not to predict the near-term economic environment—candidly, we just don't know. Instead, our objective is to contrast the current high yield environment with recessionary periods of the past to see if there are any parallels to draw, and if so, determine what we can learn from them. In preview, we find more differences than similarities between the market today and the market during recessions. This is not to say the US is immune from a near term recession or even that a recession is unlikely, we simply believe that current high yield spreads are wide for reasons other than an impending economic slowdown.

Economic cycles

The economy ebbs and flows through periods of expansion and recession. Chart 1 highlights such cycles over the past 100 years as defined by the National Bureau of Economic Research. Chart 2 shows the same data but for the past 30 years only, which approximates the age of the US high yield corporate bond market. The high yield market, therefore, has endured three recessions in its history: 1990-91, 2001, and 2008-09. We will explore these periods and contrast them to today's environment to see what can be learned.

Chart 1: Economic cycles over the last century

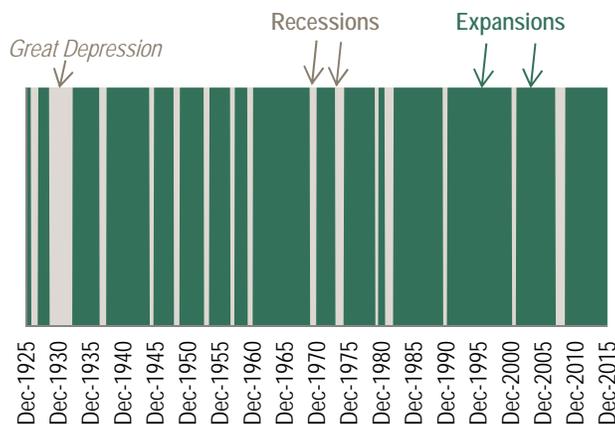
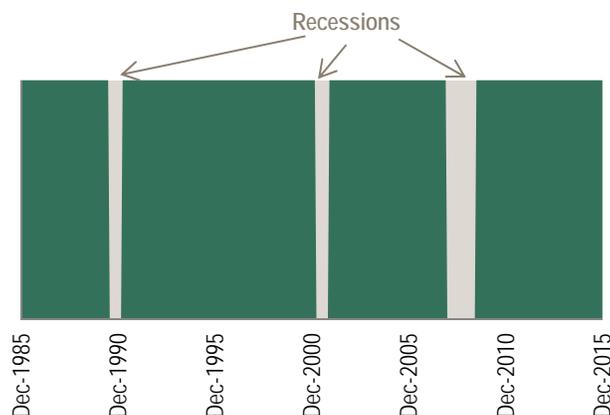


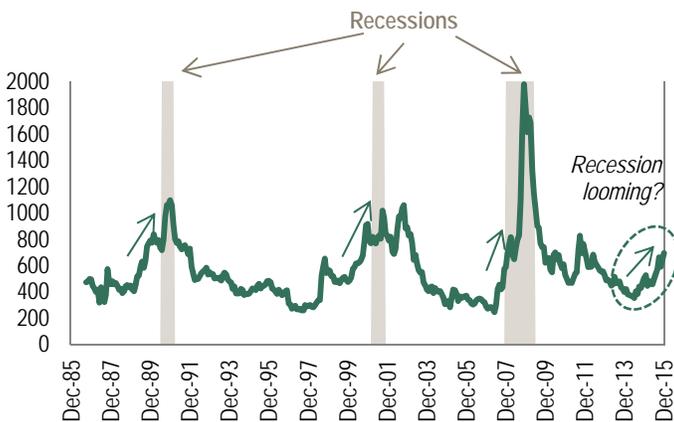
Chart 2: Economic cycles since the HY Market's Inception



Prior recessions: Depth

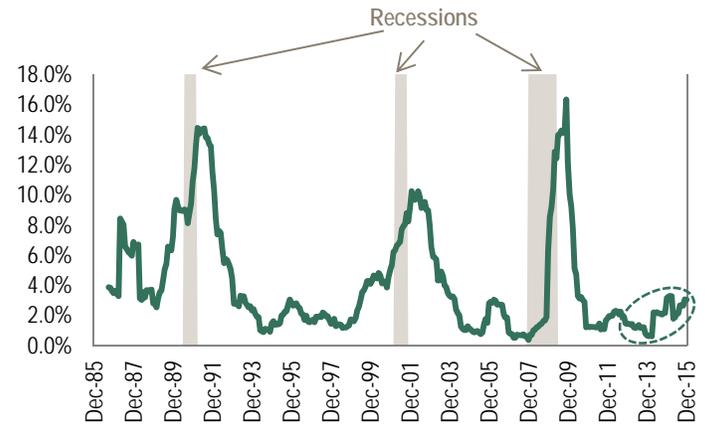
Chart 3 depicts spreads for the high yield market going back to the mid 1980s. Spreads began widening prior to recessionary periods, as alluded to in the opening paragraph. Spreads widened by 330 basis points in the 18 months prior to the 1990-91 recession, 294 basis points prior to the 2001 recession, and 328 basis points prior to the 2009-10 recession (note this is the widening *prior to* the recession; spreads widened further during the recession itself). So how much have spreads widened in the past 18 months? Answer: 342 basis points. There have been two prior instances where spreads widened by more than 300 basis points and a recession did not ensue: 1998 and 2011. Both of these years were influenced by major events as opposed to the end of the credit cycle: in 1998, the Russian Ruble crisis and demise of Long Term Capital Management; in 2011, the European sovereign debt and US debt ceiling crises. As it pertains to the US economy, each of these events proved relatively contained and transient—a theme that appears consistent with the current environment.

Chart 3: HY spreads historically (basis points)



As shown in Chart 4, high yield defaults increased considerably leading up to the 1998-99 and 2001 recessions, and then continued to rise through the recession. The 2008-09 recession was different; however, as defaults remained benign until spiking rapidly after we entered a recession. In each case, the default rate peaked above 10% shortly after the recession ended. Recently, we have observed an uptick in defaults but the increase started from an all-time low and the current default rate remains below the historical average (3.0% vs. 4.1%).

Chart 4: HY default rate¹

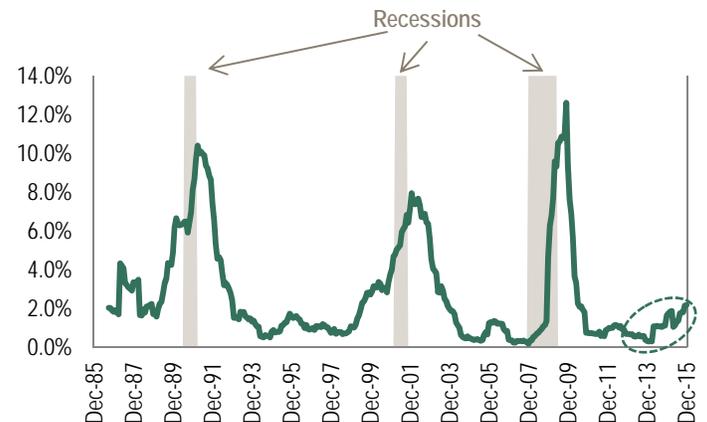


Recovery rates represent the amount (as a % of par value) that bondholders salvage when a bond defaults—higher is better. Recovery rates have been inversely correlated with default rates (-0.71), which means that when defaults have spiked recovery rates tumbled creating a negative double whammy for high yield bond investors. The total loss rate combines the default rate with the recovery rate. It represents the loss to an investor from a bond default after adjusting for the amount recovered.

$$\text{Total loss rate} = \text{default rate} * (1 - \text{recovery rate})$$

Chart 5 shows the total loss rate for the overall high yield market historically. Similar to default rates, loss rates increased prior to the 1990-91 and 2001 recessions but remained in check leading up to the 2008-09 recession (and then spiked during the recession). Recently, the loss rate on the high yield market has tick up, but at 2.2% it remains below the historical average of 2.7%.

Chart 5: HY total loss rate (defaults adjusted for recovery)¹

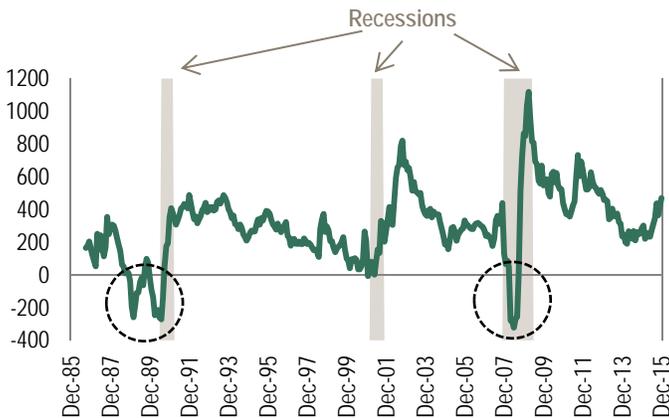


¹ Includes distressed exchanges, an alternative to bankruptcy where creditors agree to reduce the original obligation of the borrower.

Past performance is not a guarantee or a reliable indicator of future results.

Chart 6 combines the three previous charts to create what we view as one of the most important metrics for high yield investors—excess spreads. The excess spread represents the spread minus the loss rate; i.e. the spread that is leftover after adjusting for future credit losses. When spreads are higher than the loss rate, the excess spread is positive (good for HY investors); when spreads are lower than the loss rate, the excess spread is negative (bad for HY investors); when they are the same, the excess spread is zero. Excess spreads were negative in the late 1980s and during the 2008 financial crisis (circled in Chart 6), and were close to zero in the 2001 recession. In all other periods the excess spread was positive; i.e. investors were more than compensated for future losses. Excess spreads have averaged 300 basis points historically, and were 470 basis points as of year-end 2015².

Chart 6: HY excess spreads (spreads adjusted for loss rate)²



Excess spreads compensate investors for the uncertainties and liquidity of the asset class. This is one of the key benefits for long term high yield investors that want to capture this excess return over time. Why is it elevated today? Uncertainty in the current environment, heightened liquidity concerns, and increased regulatory issues are likely culprits. To us, persistently positive excess spreads represents compelling opportunity for long-term investors.

A notable shortcoming of Chart 6 is that it assumes perfect foresight (current spread minus the loss rate for the upcoming year²). Because *future* losses are inherently uncertain we like to view this metric from a different vantage point: What would the default/loss rate have to be over the next twelve months such that the excess spread today would be zero (or less). As of December 31, 2015 the spread on the high yield market was

² The excess spread in 2015 assumes a default rate of 375 basis points (sell side estimates) and a 40% recovery rate (historical average) for a total loss rate of 225 basis points $[375 * (1-.4)]$

about 695 basis points, so the loss rate in the upcoming year would need to exceed this level to make the excess spread negative. This would imply a default rate of more than 11.6% if we assume a recovery rate of 40%.

$$6.95\% - [(1-0.4) * 11.6\%] = 0$$

If we assume recoveries are worse than average, say 22% which is the all-time low, it would take a default rate of 8.9% or higher for the excess spread to turn negative.

$$6.95\% - [(1-0.22) * 8.9\%] = 0$$

Let's get even more conservative. If we continue with our assumption that recoveries will be at an all-time low, but we believe we should be compensated for more than just credit risk (e.g. liquidity risk). Perhaps the historical average excess spread represents a reasonable proxy for the amount of compensation the market requires above and beyond the assumption of credit risk. To realize 300 basis points of excess spread, assuming a punitive 22% recovery rate, it would take a default rate of 5.1% or higher.

$$6.95\% - [(1-0.22) * 5.1\%] = 3.0\%$$

A default rate of 5% or more in 2016 is conceivable, though rather pessimistic in our view. We believe a default rate of 9-12%, however, is unlikely absent a major, broad-based recession. This brings us to our next section...

Prior recessions: Breadth

The prior section examined the severity (i.e. depth) of the high yield market in previous recessions, and demonstrated that today's market is much less severe in terms of overall default and loss rates. The primary reason for this, in our view, is that the "severity" of current environment is contained to commodity-tied sectors, whereas a standard recession has farther reach. Chart 7 depicts the number of sectors with spreads greater than 750, 1000, 1250, and 1500 basis points for recessionary periods compared to today³. Note that we are using BofA Merrill Lynch level 3 sector classifications, which is composed of 18 sectors. In 2001, 2/3 of the sectors had spreads above 750 basis points and in 2009, all 18 sectors had spreads above 750 basis points. Today, there are only 3: energy, basic industry, and transportation. The basic industry sector includes metals & mining and the transportation sector includes oil tankers—both are exposed to commodity prices (as is energy, of course).

³ We did not include the 1990-91 recessionary period due to a lack of reliable data.

Past performance is not a guarantee or a reliable indicator of future results.

Chart 7: Number of sectors with wide spreads⁴

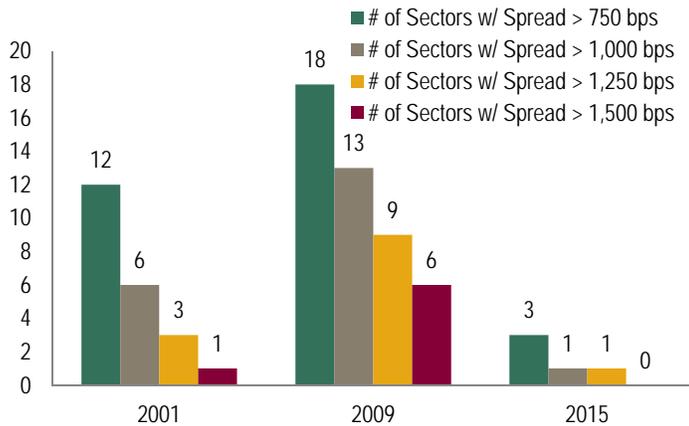
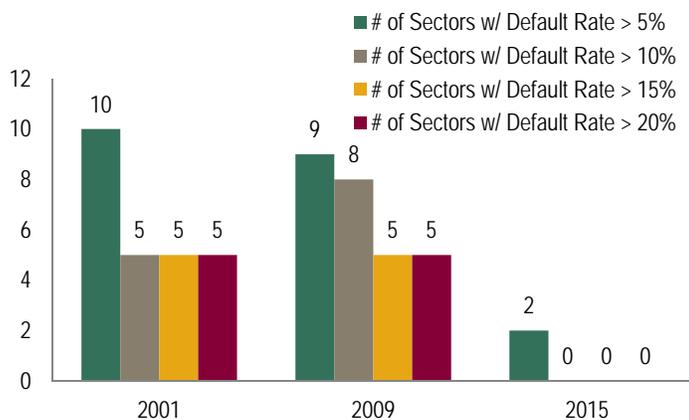


Chart 8 shows the number of sectors with high default rates during these same periods. The default rate in 2001 and 2009 was higher and more broadly distributed than it is today. In fact, no sector today has a default rate above 10% (a notable caveat is that metals & mining falls within the basic industry sector...viewed in isolation, this sub-industry has a default rate of 17.6% as of December 31, 2015).

Chart 8: Number of sectors with high default rates



Recession indicators

We do not claim to be economists—we are credit pickers. We do, however, pay close attention to the macroeconomic environment, read scores of economic research, and meet with insightful economists. We count Nancy Lazar of Cornerstone Macro among our favorites. Nancy and her team identify 11 signals that have been efficacious predictors of recessions historically. Currently none of the signals, except the increase in

⁴ For 2001 and 2009, we used the average of the beginning and end of year. For 2015 we used end of year (i.e. current).

HY bond yields, indicate the probability of a near term recession is greater than 50%:

Signal	Indicate Recession?
1 Loan Delinquencies	No
2 Energy Inflation	No
3 Wage Growth	No
4 Output Gap	No
5 Investment as % of GDP	No
6 10 Yr Treasury Change	No
7 Treasury Yield Curve	No
8 Fed Funds Rate and Change	No
9 Mortgage Rate Change	No
10 Real Personal Income	No
11 HY Bond Yield Change	YES

Source: Cornerstone Macro

Summary

Historically, high yield spreads have widened prior to recessions but we are not convinced that the recent spread widening signals an imminent economic slowdown. The current environment is less severe than recessionary periods in the past and remains contained to commodity-tied market segments. Characteristics of today's high yield environment appear analogous to the event-driven markets of 1998 or 2011 and not that of a recession. Recessionary market signals currently indicate a rather benign economic environment as we look forward. The sole exception is the spread on the high yield market, which appears to be pricing in a recession; today could represent an interesting entry point for high yield investors in the event a recession is averted.

Hotchkis & Wiley High Yield Research

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Data sources: Charts 1, 2: National Bureau of Economic Research (NBER); Chart 3: Credit Suisse (9/86-11/96), BofA Merrill Lynch (12/96-12/15), NBER; Charts 4, 5: JPMorgan, NBER; Chart 6: Credit Suisse (9/86-11/96), BofA ML (12/96-12/15), JPM, NBER; Chart 7: BofA ML, Bloomberg; and Chart 8: JPM.

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