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High-Yield Bonds and Their Correlation to Equities

Overview: In a well-crafted portfolio, fixed income should play very specific roles: to serve as a liquid reserve in the event of emergencies and to reduce overall portfolio risk to be within the investor's ability, willingness or need to take risk. Unfortunately, investors are often tempted to stray from the prudent approach by seeking high-yield bonds, especially when interest rates are historically low. The following discusses why it may not be in investors' best interests to add high-yield bonds to their portfolios.

“Well-informed investors avoid the no-win consequences of high-yield fixed income investing.”
— David Swensen, *Unconventional Success*

High-yield bonds (also called junk bonds) are bonds with credit ratings below BBB (S&P) or Baa3 (Moody's). Thus, an immediate concern is increased risk of default by the bond issuer. Other risks are more subtle, particularly those related to high-yield bonds' correlation with stocks (equities).

In mathematics, “correlation” is the measure of linear relationship between two variables — or how similarly or differently two items react to events. Values can range from +1.00 for perfect positive correlation to -1.00 for perfect negative correlation. In investing, an example of strong positive correlation would be two oil companies that are likely to benefit or suffer similarly to rising/falling oil prices. An example of strong negative correlation would be an oil company that benefits from rising oil prices versus an airline company that benefits from falling oil prices.

Ensuring that your fixed income holdings enjoy some negative correlation to your equity holdings helps reduce overall portfolio risk. As described above, this is one of the key roles fixed income should play in your portfolio.

In general, correlation between high-yield bonds and equity does often appear to be on the low side. But the problem is that the correlation between high-yield bonds and equities has demonstrated a nasty tendency to spike upward just when it is most important for it to remain low — for example, when equities are experiencing negative returns. Again, this is because much of the return of high-yield bonds is a result of risk premiums associated with equities, not debt.

Consider the table below, illustrating monthly correlation between the S&P 500 Index and the CSFB High Yield Index. Longer-term correlation between high-yield corporate bonds and equity (as proxied by the S&P 500 Index) was relatively low, only to spike significantly upward during a tumultuous 2008. Stretching for high-yield returns in fixed income holdings appears to erode the ability to reduce overall portfolio risk. While this illustration depicts corporate bonds, we feel the lesson likely applies similarly for high-yield municipal bonds compared to equity.

Monthly Correlations Between Fixed Income and Equity		
Fixed Income Index or Fund	Time Period(s)*	Correlation with S&P 500
CSFB High Yield Index	1986–2007	+0.50
	2008 YTD	+0.88
Vanguard Short-Term Treasury Fund	2008 YTD	-0.61
Vanguard TIPS Fund	2008 YTD	-0.18

*Multi-year periods are since inception of fund or index. Year-to-date (YTD) periods are January through September 2008 (most recent end of quarter as of document publication).

In contrast, the correlation between high-quality fixed income holdings and equity can be expected to remain low during times of poor equity performance. This is illustrated in the table above by the negative monthly correlations between the S&P 500 Index and the Vanguard Short-Term Treasury Fund as well as the Vanguard Treasury Inflation-Protected Securities Fund (demonstrating strong diversification benefits inherent in holding TIPS).

Summary

When constructing an investment portfolio, investors often allocate a portion of their portfolio to bonds as a way to diversify and reduce overall portfolio risk. To maximize bonds' diversification benefits, their credit quality must be considered. Avoiding the temptation of the higher yields on lower-rated bonds is vital to reap the most fixed income benefit out of your bond portfolio, especially at times when markets turn rough and stability is most desired.

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