FQ INSIGHT:

High Yield Bonds as a Government Bond Alternative in a Rising Rate Environment

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In an environment where investors are concerned that government bond yields "can only go up" many investors are looking for investment substitutes. The question is what are investors looking for? Is it more yield? Safety? Diversification? While some investors are looking for all of these things, we believe that most institutional investors own government bonds primarily for diversification, particularly diversification with stocks which make up the bulk of their capital and risk allocations. While bonds have been a significant source of returns in the last ten years, the return has been dominanted by capital gains rather than income. So bonds have given institutional investors an unexpected gift.

Since few expect government bonds to continue this performance streak, the question is where should investors turn now? Many are turning to alternatives and hedge funds, but tail-risk hedging properties are suspect. Others are turning back to equities, however most funds have over 90% of their risk allocated to equities or equity like strategies, is this wise?

If investors are primarily concerned with minimizing the effects of a back-up in government bond yields while maintaining diversification with equities, then there is a good alternative in a growth-oriented environment. Based on our time period study from January 1988 through June 2013, high yield bonds offer similar diversification with equities and even tends to offer slightly better downside protection against bull market corrections than government bonds in growth-oriented market environments. In addition, their return per unit of risk is better in such an environment while high yield has slightly lower volatility than comparable government bonds. These positive characteristics are limited to the growth-oriented phases of the business cycle. Once we enter a period where economic contraction is likely and interest rates fall, high yield acts like equity. But that's not the kind of environment we're concerned with currently. We shall see below why we believe that high yield bonds are a legitimate alternative to government bonds in a rising rate environment.

The Conventional Alternative: High Yield Bonds

There was a time when high yield bonds were unconventional. They were considered excessively risky, and taken individually, they are. However, when combined into diversified portfolios we believe they can be as safe as any other investment of equivalent volatility. The high yield market has developed in size, liquidity and acceptance since the 1980's. Indices have been created that have derivatives such as total return swaps, ETFs and options on those ETFs which allows investors many ways to access the high yield market aside from owning the bonds directly. By definition high yield bonds offer more income than government bonds. It is little appreciated that high yield bonds may offer similar diversification with equities as government bonds do, and may even offer more downside protection against a bull market correction in a low volatility environment. Most investors have a small allocation to high yield because of their perceived risk. Yet, it is very possible that in the current environment government bonds are riskier than high yield bonds.

For high yield indices, the prospects are largely tied to the risk appetite of investors. Risk seeking behavior typically arises when prospects for corporations in general are improving. At First Quadrant, we have an indicator called the Market Risk Index (MRI) that measures the level of risk appetite among investors. The MRI is a combination of four factors. Two are sentiment indicators and two fundamental indicators: (1) the VIX, (2) credit spreads, (3) the JP Morgan Global PMI, and (4) global monetary policy. Details on how the MRI works can be read in Peters (2009). The MRI has 5 risk levels, but for this exercise we will consider only two, when risk is considered higher or lower than median. This divides the sample roughly in two. As we show in Peters (2009) these two regimes can last for extended periods of time, generally for years, since they are related to the business cycle periods of growth and contraction. So when the MRI is signaling Low Risk, this is usually a period of low market and economic uncertainty and generally good prospects for most corporations, at least at the macro level. The reverse is true during periods of economic and market uncertainty when the MRI reads High Risk. Table 1 shows some statistics on the IBOXX High Yield index and a continuous maturity 10 year T-Note in the two regimes.

TABLE 1: STATISTICS
(January 1988 - June 2013)

IBOXX High Yield Index

	Return	Risk	Correlation with MSCI World	Correlation with 10 Yr T-Note
High Risk	4.03%	11.65%	63.77%	-15.08%
Low Risk	5.92%	4.48%	32.67%	39.58%

US 10 Year T-Note

	Return	Risk	Correlation with MSCI World
High Risk	4.14%	8.06%	-19.04%
Low Risk	3.38%	6.80%	15.26%

We can see that during high risk periods high yield bonds act like equities and during low volatility periods they act like bonds. In fact, during the low risk period they are almost as good a diversifier with equities as government bonds. In addition, we can see that in the low risk state high yield offers significantly better returns at lower volatility than the 10 year treasury.

How they perform as a proxy tail risk hedge for equities is in Tables 2 and 3:

TABLE 2: CORRELATION WITH MSCI WORLD EQUITY WITH A DECLINE OF 1 STANDARD DEVIATION OR MORE
(January 1988 - June 2013)

	High Yield	10 Yr T-Note
High Risk	63.10%	1.32%
Low Risk	-32.17%	26.14%

TABLE 3: RETURNS WHEN MSCI WORLD EQUITY HAS A DECLINE OF 1 STANDARD DEVIATION OR MORE
(January 1988 - June 2013)

	MSCI World	High Yield	10 Yr T-Note
High Risk	-7.91%	-3.16%	1.01%
Low Risk	-4.18%	-0.59%	-0.53%

We can see that in the high risk environment, high yield has no tail-risk hedging properties. This is to be expected since in a high risk environment high yield acts like an equity. However, in the low risk environment high yield actually offers better tail-risk hedging than government bonds from a correlation perspective while offering the same diversification with equities as we saw in Table 1. Likely this is because during a bull market correction investors sell their equities and buy corporate bonds for their greater safety though the investment remains in the corporate environment. From a return perspective, high yield and treasuries are very similar tail-risk hedgers in low risk while high yield is clearly inferior to treasuries in high risk.

But how do high yield bonds perform in a rising interest rate environment? Table 4 shows that in general, even in most high risk periods (2008 being a notable exception), high yield bonds (represented by the IBOXX High Yield Index) outperform government bonds when government bond yields rise. This is likely because government bonds typically rise because of improving economic news, so the credit spread between corporate and Treasury bond yields compresses during these periods. The returns below are excess returns to 90-day US T-Bills and encompass periods where 10 year US T-Note yields rose 50 basis points or more.

TABLE 4: RISING RATE ENVIRONMENTS
(January 1988 - June 2013)

Period	10 Yr Rate Chg	MRI Regime	High Yield	US 10 YR T-Note	Global Bonds
2/88 - 2/89	1.2	High	1.68	-5.09	-0.58
11/89 - 4/90	1.2	High	-6.63	-7.29	-6.38
9/93 - 11/94	2.5	Low	-3.93	-13.66	-8.77
12/95 - 8/96	1.4	Low	1.04	-8.86	-0.40
12/96 - 3/97	0.9	High	0.40	-5.72	-1.31
9/98 - 1/00	2.2	High	-2.65	-14.30	-6.81
3/01 - 5/01	0.5	High	-2.95	-3.75	-2.33
5/03 - 5/04	1.3	High to Low	10.96	-6.98	-2.65
7/05 - 6/06	1.2	Low	0.13	-8.80	-5.11
12/06 - 6/07	0.6	Low	0.88	-4.64	-5.00
4/08 - 10/08	0.6	High	-22.56	-3.30	0.48
1/09 - 12/09	1.6	High	55.73	-9.63	-4.55
8/10 - 3/11	1.0	High	6.93	-6.27	-4.55
8/12 - 6/13	1.0	High to Low	2.16	-7.27	-4.80

We can also note that a diversified portfolio of global bonds in local currency ("Global Bonds" above represented by the Citi World Government Bond Index or WGBI) are also a good diversifier to US bonds though not as strong as high yield bonds.

The conclusion is that in a low risk environment, high yield bonds tend to diversify equities in much the same way that government bonds do, but also tend to outperform government bonds when yields back up. In the current environment with the imminent end of Fed bond purchases (Quantitative Easing or QE) and the potential for rising inflationary pressures, high yield bonds are a viable alternative to government bonds. However, when signs are pointing to increasing market and economic uncertainty, investors should return to government bonds since the rising rate environment will likely be over and high yield bonds can become risky.

Summary

High yield bonds are a potential alternative to government bonds during a rising interest rate environment and could offer better overall returns to investors. While the returns are not high enough to help funds achieve their total return targets, the higher returns with good levels of diversification offer investors a viable and conventional alternative to government bonds. Since high yield has been an asset class for over 30 years, there is plenty of data and managers with long track records to choose from if an active approach is desired. In addition, high yield bonds will work in either a conventional asset allocation or in a risk parity framework. While investors can't replace all of their government bond exposure with high yield, we believe the benefits to replacing some in a growth environment are too good to ignore.

References

Peters, E. "Using Volatility Regimes: The FQ Market Risk Index," FQ Perspectives, September 2009

Data Sources: Datastream for securities and currencies.
MRI: First Quadrant Research

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