WHITE PAPER

Alternative Strategies in a Rising Rate Environment

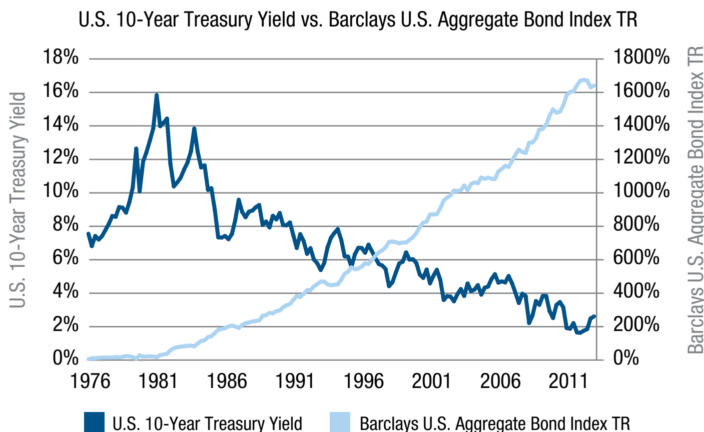
An "alternative" to fixed income

By: David Schassler, Director of Manager Research

OVERVIEW

Rising bond prices and falling yields have been the status quo for U.S. Treasury holders over the past 30 plus years, as investors have enjoyed equity-like returns on debt obligations backed by the full taxation authority of the world's largest economy. In 1981, the yield on U.S. three-month Treasury bills and U.S. 10-year Treasury notes exceeded 14% and 15%, respectively. In more recent periods, the U.S. three-month Treasury bill has been yielding near 0%, and the yield on the U.S. 10-year Treasury note has been as low as 1.6%. The illustration below demonstrates the impact that declining Treasury yields have had on bond prices and the limited future downward mobility of interest rates.

How low can interest rates go?



Source: Bloomberg. Data as of October 31, 2013.
Past performance is no guarantee of future results.

The Federal Reserve has succeeded in suppressing the entire yield curve to stimulate economic activity through the combined effort of an ultra-low Federal Funds target rate and an aggressive asset purchase program. As the economy shows signs of meaningful progress, the Federal Reserve has stated that it intends to withdraw accommodative policy action and allow an eventual normalization of interest rates across the yield curve. The table in the top right column demonstrates the impact that rising interest rates would have on bond prices.

Rising interest rates may dramatically alter the perception of risk within fixed income

Impact of Interest Rate Changes on Bond Values

Bond Duration (Years)	Change in Interest Rates: +1%	+2%	+3%	+4%	+5%
1	-1%	-2%	-3%	-4%	-5%
2	-2%	-4%	-6%	-8%	-10%
3	-3%	-6%	-9%	-12%	-15%
4	-4%	-8%	-12%	-16%	-20%
5	-5%	-10%	-15%	-20%	-25%
6	-6%	-12%	-18%	-24%	-30%
7	-7%	-14%	-21%	-28%	-35%
8	-8%	-16%	-24%	-32%	-40%
9	-9%	-18%	-27%	-36%	-45%
10	-10%	-20%	-30%	-40%	-50%

Source: Van Eck. Hypothetical example for illustrative purposes and does not represent performance of any particular investment.

An allocation to alternative strategies within a portfolio can potentially position an investor to benefit from rising interest rates, while reducing exposure to fixed income duration. At Van Eck Global, we broadly define liquid alternative strategies as untraditional investment disciplines, implemented through traditional asset classes that seek to provide an untraditional stream of returns.

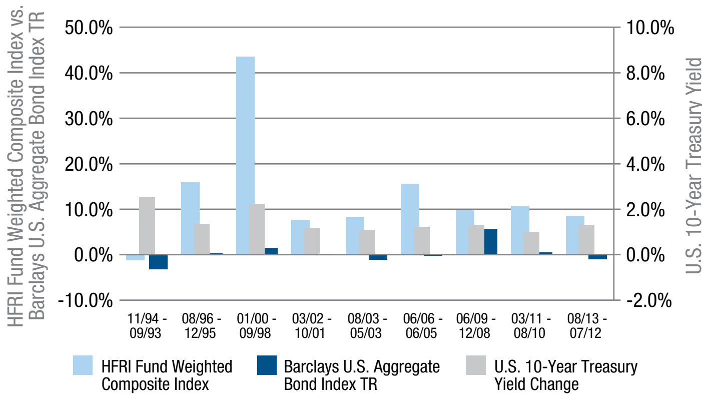
The long-term trend in interest rates has been negative for decades. However, there have been a few upward spikes in interest rates that we can view in relation to the aggregate performance of alternative strategies and fixed income. The following chart isolates periods in time, since 1990, when the yield on the U.S. 10-year Treasury note increased by 1% or more. During each of these periods, alternative strategies outperformed fixed income and delivered strong, absolute performance in all but one period. It is important to note that prior to 2008, fixed income investors were able to minimize losses during periods of rising interest rates due to higher absolute yields. In the current low-yield environment, it will be challenging for fixed income to produce positive returns if or when interest rates do rise.

Duration is a measure of a bond's price sensitivity to a change in interest rates. Duration is expressed as a number of years and reflects the expected percentage price change of a bond for a 100 basis point change in interest rates.

Please note that the information herein represents the opinion of Van Eck Global and these opinions may change at any time and from time to time.

Alternative strategies, in aggregate, have historically performed well in rising rate environments

HFRI vs. Barclays U.S. Aggregate TR returns during rising interest rates: 01/1990-10/2013



Sources: Bloomberg, FactSet. Data as of October 31, 2013.
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The matrix below illustrates the relationship of alternative investment strategies and fixed income to the change in yield of the U.S. 10-year Treasury note. A positive correlation with rising interest rates further supports the position that alternatives have historically benefited from increasing yields.

A positive relationship exists between Treasury yields and the aggregated returns of alternative strategies

Correlation to the Change in Yield of the U.S. 10-Year Treasury Note: 01/1990-10/2013

	Change in Yield of the U.S. 10-Year Treasury	HFRI Fund Weighted Composite Index	Barclays U.S. Aggregate Bond Index TR
Change in Yield of the U.S. 10-Year Treasury	1		
HFRI Fund Weighted Composite Index	0.18	1	
Barclays U.S. Aggregate Bond Index TR	-0.81	0.07	1

Sources: Bloomberg, FactSet. Data as of October 31, 2013.
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STRATEGIES THAT MAY BENEFIT FROM HIGHER INTEREST RATES

Alternative strategies have benefited from increasing yields because of a variety of fundamental relationships that exist within financial markets. In this section, we outline the impact of higher absolute yields on the U.S. three-month Treasury bill (otherwise known as the risk-free rate), on long/short equity, merger arbitrage, managed futures, and multi-strategy funds. The risk-free rate was selected as a proxy for interest rates because it is theoretically embedded within many asset pricing models and has broad implications across financial securities and investment strategies.

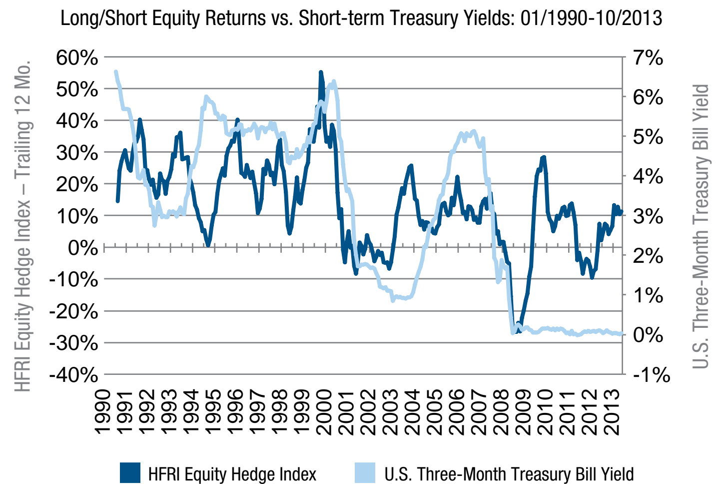
- **Long/short equity** is an approach where the manager takes long positions on stocks that are perceived as undervalued and short positions on stocks that are perceived as overvalued, while maintaining net long exposure to the equity markets. The ability of the manager to generate alpha is generally a result of a blend of security selection, market exposure, and leverage, and will vary depending on the specific investment approach.

An additional source of returns that impacts long/short equity strategies is the level of short-term interest rates. When a portfolio manager sells a security short, with the intent of purchasing it back in the future at a lower price, the transaction creates a cash position equivalent to the market value at the time of the sale. This cash position earns interest at the risk-free rate minus fees charged by the bank to borrow and service the transaction.

Over the past 50 plus years, the average yield on three-month Treasury bills has been 4.70%, versus near 0% today. Therefore, the yield on short-term cash lending has historically provided a meaningful boost to long/short equity returns. As we move to a more normalized interest rate environment, we expect these strategies to capture once again the additional benefit of compounding interest rates.

The chart below illustrates the relationship between long/short equity strategies (as represented by the HFRI Equity Hedge Index) and the risk-free rate. The relationship over the past few years has dislocated primarily due to aggressive monetary stimulus.

Long/Short Equity Returns vs. Short-term Treasury Yields: 01/1990-10/2013



Source: Bloomberg. Data as of October 31, 2013.
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- **Merger arbitrage** broadly defines the process of forecasting the probability, and timing, of the completion of announced mergers and acquisitions (M&A). The initial announcement of a merger or acquisition will typically cause the stock price of the target to reflect the offer price and discount it for the likelihood and time frame for the deal to close. Arbitrageurs seek to build a diversified portfolio of deals that they believe will close in a reasonable time period based on research of the deal-specific hurdles.

The potential profit, commonly referred to as "the spread," is composed of the risk premium plus the risk-free rate. The risk premium exists to compensate investors for assuming the deal-specific risks associated with a pending transaction. Therefore, an increase in the risk-free rate is expected to result in a wider spread and a more favorable return to investors.

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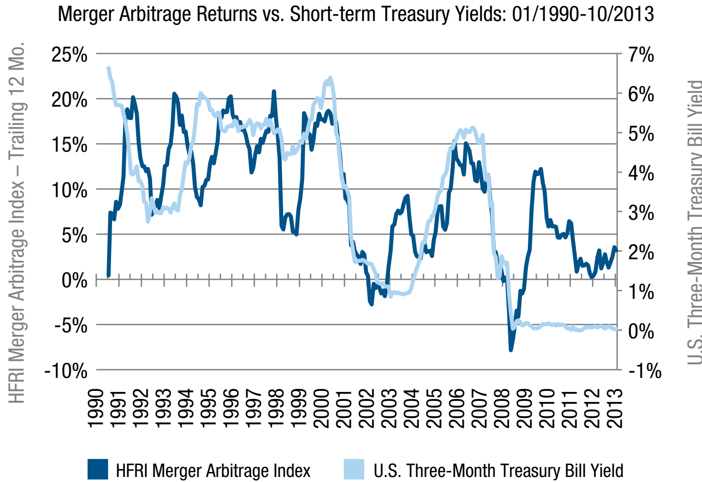
The chart below demonstrates the relationship between the returns of merger arbitrage strategies (as represented by the HFRI Merger Arbitrage Index) and the risk-free rate. Going forward, rising short-term interest rates could provide significant tailwinds for merger arbitrage strategies.

Merger arbitrage strategies can potentially benefit from higher absolute short-term yields



Source: Bloomberg. Data as of October 31, 2013.
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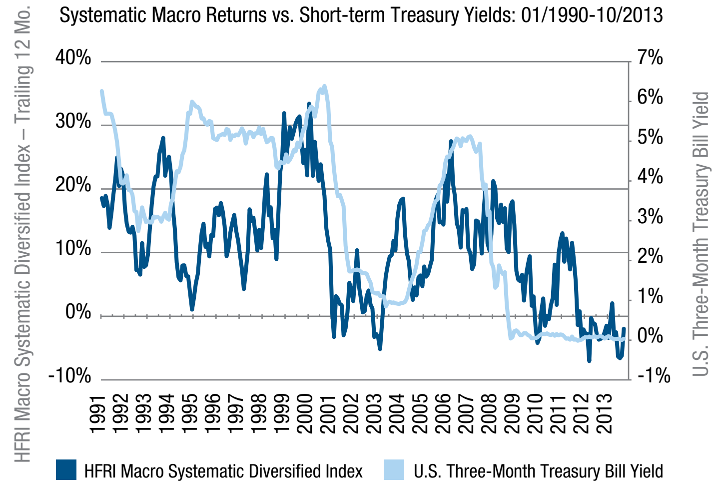
- **Managed futures and global macro** strategies both seek to generate performance through various fundamental and quantitative investment processes. These strategies generally invest directionally across all asset classes and liquid financial instruments. The flexible nature of these mandates often results in unique return profiles across investment strategies within the same category, but most are well positioned to benefit from rising interest rates.

Managed futures and global macro funds typically execute their investment strategies primarily through derivative instruments. It is common practice for a managed futures fund to post minimal collateral on futures contracts, while investing the remaining 85% or more of the fund's assets in U.S. three-month Treasury bills. Therefore, the performance of these strategies is directly impacted by the level of short-term interest rates.

Similar to long/short equity strategies, the yield on cash lending has historically represented a significant portion of the returns for many managed futures and global macro strategies. As the economy strengthens and interest rates revert to historical averages, there may be substantial return advantages to derivative-based strategies. The chart in the top right column highlights the relationship between the return of the HFRI Macro Systematic Diversified Index and the yield of the U.S. three-month Treasury bill.

Managed futures and global macro strategies can potentially benefit from higher absolute short-term yields



Source: Bloomberg. Data as of October 31, 2013.
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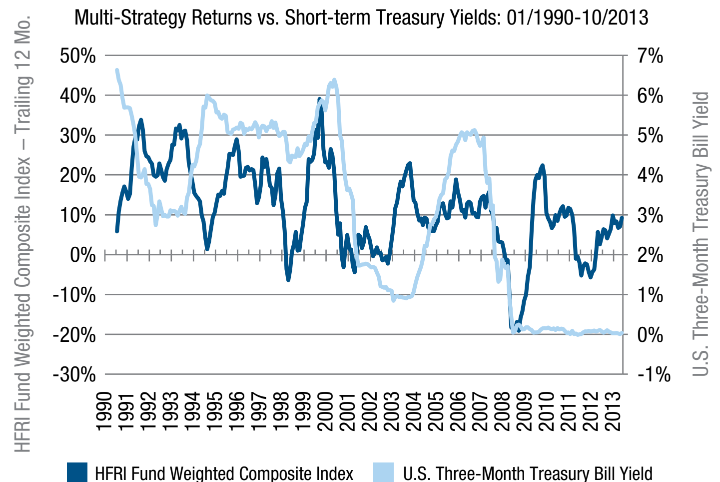
- **Multi-strategy funds and multi-strategy funds-of-funds** offer investors a single vehicle to access various investment disciplines. These funds are uniquely positioned as a fixed income alternative because of the low volatility risk profile that results from strategy-level diversification, and in the case of a fund-of-funds, manager-level diversification. Similar to single strategy offerings, many multi-strategy funds have the ability to potentially benefit from higher interest rates by engaging in long/short equity, merger arbitrage, and global macro strategies. What makes multi-strategy funds unique is that they generally are more diversified and, therefore, less exposed to idiosyncratic risks such as equity market directionality, merger deal activity, and the persistence of trends across financial markets. The chart below demonstrates the historical relationship between multi-strategy funds (as represented by the HFRI Fund Weighted Composite Index) and the risk-free rate.

Multi-strategy funds can potentially benefit from higher absolute short-term yields



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CONCLUSION

Interest rates have fallen below levels that many economists and professional investors would have thought were probable, or even possible. At this point, some will argue that the inflection point of ultra-low interest rates has been reached, and others will take the position that interest rates will re-test their lows. Regardless of which position you take, the eventual normalization of interest rates across the yield curve is hard to refute.

We have outlined in the preceding information the connections between interest rates and alternative strategies, and the fundamental inputs that have historically maintained these relationships. We have also provided examples of several strategies that would not only reduce overall portfolio fixed income duration, but also to potentially profit from any future rise in interest rates.

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Investment risk may be magnified with the use of alternative strategies. When using hedging strategies, investors should not expect significant outperformance during market rallies. Long/short equity strategies seek to invest in securities and use short sales or options on stocks or indexes to hedge risk. Merger arbitrage strategies simultaneously buy and sell the stocks of two merging companies in seeking to create a riskless profit. Managed futures strategies use long/short trend following and momentum techniques to create investable trends. A multi-strategy fund-of-funds includes strategies that use various combinations of, but not limited to, the aforementioned strategies. Bonds and bond funds may decrease as interest rates rise.

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The Barclays U.S. Aggregate Bond TR Index is composed of mortgage-backed and asset-backed securities and government/credit bonds. The S&P® 500 Index consists of 500 widely held common stocks covering industrial, utility, financial, and transportation sectors. The HFRI Fund Weighted Composite (WC) Index is a global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net of all fees performance in U.S. dollars, and have a minimum of $50 million under management, or a 12-month track record of active performance. HFRI Merger Arbitrage Index is a subset of the HFRI Fund Weighted Composite Index. HFRI Macro Systematic Diversified Index is a subset of the HFRI Fund Weighted Composite Index.

The correlation coefficient is a measure that determines the degree to which two variables' movements are associated, and will vary from -1.0 to 1.0. -1.0 indicates perfect negative correlation, and 1.0 indicates perfect positive correlation. Correlation describes a complementary or parallel relationship between two investments

Duration is a measure of a bond's price sensitivity to a change in interest rates. Duration is expressed as a number of years and reflects the expected percentage price change of a bond for a 100 basis point change in interest rates.

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