

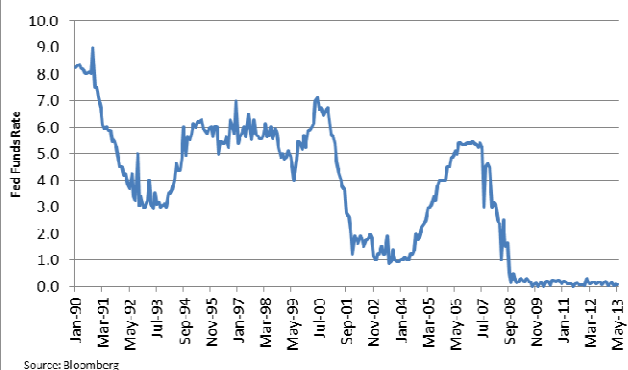
Alternative Investments in a Rising Rate Environment

July 2013

Market Environment

Following five years of accommodative monetary policy set by the Federal Reserve¹ to stimulate U.S. economic recovery, the largely anticipated announcement of the Federal Reserve's plan to scale back asset purchases signaled to the markets that we may be nearing a period of rising rates and eventually depending on the pace of economic growth even outright monetary tightening. Despite the equity markets' reaction to the end of the stimulus and the magnitude of the surge in yields, with the 10 Year Treasury currently at 2.66% vs. 1.76%² at year end, many investment managers believe that we are entering a period of normalization from years of artificially low interest rate levels. However, as the U.S. economic expansion continues on solid footing creating a potential for the Fed to raise interest rates sooner than expected, the historical behavior of hedge fund and real asset returns during periods of rising interest rates warrants closer analysis. Rising interest rate periods have typically been associated with an expanding economy, appreciation in real estate, commodities, timber and infrastructure. Also, these periods historically created opportunities for hedge fund managers to take advantage of the resulting market dislocations.

Figure 1 U.S. Fed Funds Rate (1990-2013)



Hedge Fund Strategies & Rising Interest Rates

As the Morgan Stanley Wealth Management Global Investment Committee ("GIC") mentioned in their most recent piece³, the announced tapering is akin to the first rate hike in a normal rate cycle. Looking back over the two decades beginning in 1990, equity markets displayed a tendency for immediate negative reactions to the Fed's rate increases. While we have

Figure 2 Initial Market Reaction to FOMC Rate Increases (1990-Present)*

Date	FOMC Action	S&P500	Barclays Aggregate Bond Index	HFRI Fund Weighted Composite Index	HFRI Equity Hedge Index	HFRI Event- Driven Index	HFRI Macro Index	HFRI Relative Value Index	BTOP50 Index
Feb-94	2/4/94: 25 bps increase	-2.71%	-1.74%	-0.55%	-0.40%	-0.49%	-6.40%	0.44%	-2.15%
Mar-94	3/22/94: 25 bps increase	-4.36%	-2.47%	-1.51%	-2.08%	-0.55%	-3.43%	0.33%	3.25%
Cumulative Performance		-6.95%	-4.17%	-2.05%	-2.47%	-1.04%	-9.61%	0.77%	1.03%
Date	FOMC Action	S&P500	Barclays Aggregate Bond Index	HFRI Fund Weighted Composite Index	HFRI Equity Hedge Index	HFRI Event- Driven Index	HFRI Macro Index	HFRI Relative Value Index	BTOP50 Index
Jul-99	6/30/99: 25 bps increase	-3.12%	-0.42%	0.52%	0.61%	0.81%	0.46%	0.83%	-1.63%
Aug-99	8/24/99: 25 bps increase	-0.50%	-0.05%	-0.01%	0.04%	-0.78%	-0.55%	0.80%	0.99%
Sep-99	----	-2.74%	1.16%	0.16%	0.35%	1.62%	1.08%	0.48%	-0.01%
Cumulative Performance		-6.25%	0.68%	0.67%	1.00%	1.64%	0.99%	2.12%	-0.67%
Date	FOMC Action	S&P500	Barclays Aggregate Bond Index	HFRI Fund Weighted Composite Index	HFRI Equity Hedge Index	HFRI Event- Driven Index	HFRI Macro Index	HFRI Relative Value Index	BTOP50 Index
Jul-04	6/30/04: 25 bps increase	-3.31%	0.99%	-0.96%	-1.88%	-0.93%	-0.33%	0.65%	-1.01%
Cumulative Performance		-3.31%	0.99%	-0.96%	-1.88%	-0.93%	-0.33%	0.65%	-1.01%

*"Initial Market Reaction" is defined as consecutive months of negative performance of the S&P 500 immediately following the first FOMC rate increase.

Sources: Bloomberg, HFR, as of 6/30/13

¹ The Board of Governors of the Federal Reserve System (the "Federal Reserve" or the "Fed")

² Bloomberg as of 7/8/2013

³ Morgan Stanley Wealth Management Global Investment Committee: "The Global Investment Committee Market Update", June 28, 2013

included all the Fed rate hike periods, the GIC has concluded that relevant historical parallels are the 1994 and 2004 periods. As can be seen in Figure 2 (labeled “Initial Market Reaction”), the three Fed rate increase announcements over the last 23 years were immediately followed by drawdowns in the equity markets, with the policy changes resulting in S&P 500 declines as high as 6.95% over the initial two month period.

In comparison, during the periods immediately following initial FOMC rate increases (Fig 2: “Initial Market Reaction”), hedge funds (HFRI Fund Weighted Composite Index) generally fared well relative to the equity markets (S&P 500) due to their defensively constructed portfolios that are designed to have low correlation to broad market movements. Given hedge fund flexibility in portfolio positioning, managers have the ability to short, switch into cash or arbitrage different parts of a capital structure to try and offset their beta exposures during declining equity markets. Hedge funds may also invest in opportunities that have idiosyncratic characteristics that exhibit lower sensitivity to market moves. When we analyzed the entire FOMC⁴ rate increase periods, the HFRI Fund Weighted Composite Index performance relative to the S&P 500 was mixed but the index performed well in absolute terms (Fig 3: “Longer Term Reaction”). In addition, The HFRI Fund Weighted Composite Index generally outperformed the fixed income market, represented by the Barclays Aggregate Bond Index, over the entire FOMC rate hike periods.

Figure 3 Longer Term Reaction to FOMC Rate Increases (1990-Present)*

Rate Increase Period: 2/1994 - 2/1995

	S&P500	Barclays Aggregate Bond Index	HFRI Fund Weighted Composite Index	HFRI Equity Hedge Index	HFRI Event- Driven	HFRI Macro Index	HFRI Relative Value Index	BTOP50 Index
Cumulative Performance	4.44%	0.01%	2.67%	2.24%	5.82%	-5.75%	3.90%	10.19%

Rate Increase Period: 7/1999 - 5/2000

	S&P500	Barclays Aggregate Bond Index	HFRI Fund Weighted Composite Index	HFRI Equity Hedge Index	HFRI Event- Driven	HFRI Macro Index	HFRI Relative Value Index	BTOP50 Index
Cumulative Performance	4.67%	2.43%	18.81%	28.29%	11.52%	8.03%	12.90%	-7.27%

Rate Increase Period: 7/2004 - 7/2006

	S&P500	Barclays Aggregate Bond Index	HFRI Fund Weighted Composite Index	HFRI Equity Hedge Index	HFRI Event- Driven	HFRI Macro Index	HFRI Relative Value Index	BTOP50 Index
Cumulative Performance	16.18%	7.37%	22.87%	22.21%	26.30%	15.88%	17.59%	9.48%

**“Longer Term Reaction” is defined as the entire FOMC rate increase periods: February 4, 1994 - February 1, 1995; June 30, 1999 - May 16, 2000; and June 30, 2004 - June 29, 2006.

Sources: Bloomberg, HFR, as of 6/30/13

The HFRI Relative Value Index, which has historically exhibited low correlation to the equity markets through strategies such as pairs trading and capital structure arbitrage, delivered positive returns in all three periods that immediately followed rate increase announcements (Fig 2: “Initial Market Reaction”). Relative value strategies are designed to hedge away beta factors in an attempt to isolate alpha and to result in minimal covariance to capital markets.

The event driven sector, represented by the HFRI Event Driven Index, is dependent upon opportunities that typically have lower sensitivity to movements of the broad markets, outperformed the S&P 500 by 2.38% in 2004 to 5.91% in 1994 during the initial months (Fig 2: “Initial Market Reaction”). Corporate events such as spinoffs, mergers, or product announcements, and distressed debt investments which are dependent upon the bankruptcy process, are some of the unique event driven strategies that are less dependent on market moves and may potentially offer less correlated returns.

Within the long/short equity sector, managers also delivered solid performance during the Initial Market Reaction time periods with the HFRI Equity Hedge outperforming equity markets (Fig 2: “Initial Market Reaction”). Long short equity managers are typically 20% to 60% net long and have the ability to execute short strategies that can hedge against substantial market declines. Since this strategy tends to derive its returns from both alpha and market beta, performance may be accompanied by higher correlation to market moves, which may also provide for higher up-capture in bull markets.

The HFRI Macro Index had mixed results following the initial rate hikes but tended to do well when analyzing the complete rate hike cycle (Fig 2: “Initial Market Reaction” & Fig 3: “Longer Term Reaction”). Macro managers, by utilizing futures and options, have the ability to quickly navigate market disruptions by taking advantage of arbitrage opportunities. Managed

⁴ Federal Open Market Committee: branch of the Federal Reserve Board that determines the direction of monetary policy.

futures, represented by the BTOP 50 Index, outperformed equities initially in all three initial periods (Fig 2: “Initial Market Reaction”) and generally delivered solid performance over the relevant full 1994 and 2004 FOMC rate hike periods, but underperformed during the 1999-2000 period (Fig 3: “Longer Term Reaction”).

Given the recent Fed decision to begin scaling back the stimulus and the resulting surge in yields, well positioned hedge fund managers may be able to take advantage of the recent equity market correction and the impending higher rate environment. For long short equity managers, the end of the macro driven markets and the improved differentiation resulting from increased stock dispersion is seen as a positive for fundamental stock selection. Relative value managers may potentially benefit from floating rate instruments and widening spreads while global macro managers may find opportunities in regional divergence and commodities. Event driven strategies should continue to benefit from idiosyncratic opportunities that tend to have lower sensitivity to market moves. Preliminary HFRI Fund Weighted Composite Index returns for June 2013 are -1.31% which is in-line with an S&P 500 return of -1.34% but outperforms the Barclays Aggregate Index return of -1.55%. The HFRI Relative Value Index is down -0.93% for June 2013, which follows its historical pattern by limiting the downside during initial stage of rate hikes.

Illiquid Alternatives & Inflationary Periods

Real Assets, which include real estate, infrastructure, commodities and timber, have historically performed well during rising rate periods associated with inflation. Because real assets are the building blocks of consumable and production goods, they are valuable due to their utility and tend to remain in high demand irrespective of the economic conditions. Theoretically, the inclusion of real assets in a portfolio contributes the following attributes to a portfolio: inflation hedging, diversification, and low correlation in addition to attractive returns during inflationary periods.

Real estate, which is comprised of Core, Value Added and Opportunistic strategies, has historically posted strong returns in times of inflationary periods. This is because rising interest rate periods are typically associated with increasing commercial rents resulting from landlords passing along higher costs to lessees. The net effect is that net operating income increases, thereby increasing the value of the asset. Wage inflation also impacts real estate by providing higher bid support when transacting for residential properties. These diversifying characteristics of the asset class may offer a hedging alternative during the forthcoming rising rate environment. Analysis done by Henry McVeigh, KKR’s Head of Global Macro & Asset Allocation, points to the following: “In our view, real estate is most effective as an inflation hedge in an extremely low interest rate environment, which is generally what we expect for the next few years.”⁵

The commodities sector, which in private equity mostly refers to energy such as oil and gas and renewables such as wind and solar power, has also tended to perform well in inflationary periods. Given that rising interest rate periods are typically associated with expanding economies, the associated growing demand for energy and power acts as a boost to commodity prices worldwide. Henry McVeigh has also done significant work in the area of private real assets. In one of his recent pieces, he notes: “Not surprisingly, our advice is that, in situations where illiquidity is not a major obstacle, certain investors may wish to migrate towards private investments because they tend to outperform not only the GSCI Total Return but also the GSCI Spot Return. In fact, over the past fifteen years, the Cambridge Natural Resources Index has had an average annualized return of 15.9% while the GSCI Spot has averaged 11.0%. Moreover, the annualized standard deviation of returns for the Cambridge Natural Resources Index is 13.0% versus 25.5% for the GSCI Spot Index.”⁶

The infrastructure sector may also provide an inflation hedge during a rising interest rate period given that it is backed by physical assets with real use to a functioning economy. Direct infrastructure projects typically offer income and capital appreciation and have real rate adjustment clauses which allow for built in protections against inflation. Additionally, because infrastructure assets provide essential services, economic ups and downs may have limited impact on cash flows.

Timber is another real asset sector that has historically offered diversification benefits to equities and bonds. Timber is comprised of two components, timber and land, and is primarily sourced from North and South America and Australia. As global population continues to grow at an exponential pace, the demand for wood products is expected to increase placing upward pressure on prices. Also, the arising housing market recovery should provide a boost to lumber demand and prices.

Although not a real asset, middle market direct lending allows clients to take advantage of the illiquidity premium offered in the credit markets while providing securities with floating rate structures that may offer protection should the Fed start increasing short term interest rates. For more details on this topic, please refer to our May 2013 Middle Market Direct Lending white paper.

⁵ KKR Insights: Global Macro Trends, “Real Estate: Focus on Growth, Yield and Inflation-Hedging”, September 2012

⁶ KKR Insights: Global Macro Trends, “Natural Resources: A Step Further”, February 2013

Conclusion

As we enter a period of rising rates for the first time in many years, an allocation to less correlated, alpha driven hedge fund and real asset strategies may be beneficial to investor portfolios. Overall, hedge fund portfolios should provide diversification and downside protection with the ability to participate in the upside. For suitable investors looking for longer term protection to rising rates and inflation, real assets, as a result of their inflation hedging properties and low historical correlation to financial assets, are sectors that may potentially offer attractive alternative returns. The Morgan Stanley platform offers a diversified set of manager options employing different styles and strategies. Because manager styles within strategies can produce disparate results, manager selection is an important consideration in maximizing the probability of achieving one's investment objectives. In this study, indices were used as a proxy for hedge fund performance.

Index Definitions

HFRI Fund Weighted Composite Index

The HFRI Fund Weighted Composite 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 US Dollar and have a minimum of \$50 Million under management or a twelve (12) month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.

HFRI Equity Hedge (Total) Index

Equity Hedge: Investment Managers who maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. Equity Hedge managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short.

HFRI Event-Driven (Total) Index

Event-Driven: Investment Managers who maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional derivative securities. Event Driven exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company specific developments. Investment theses are typically predicated on fundamental characteristics (as opposed to quantitative), with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

HFRI Macro (Total) Index

Macro: Investment Managers which trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top down and bottom up theses, quantitative and fundamental approaches and long and short term holding periods. Although some strategies employ Relative Value techniques, Macro strategies are distinct from Relative Value strategies in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments, rather than realization of a valuation discrepancy between securities. In a similar way, while both Macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposed to Equity Hedge, in which the fundamental characteristics on the company are the most significant are integral to investment thesis.

HFRI Relative Value (Total) Index

Index comprises of investment managers who maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager. Relative Value position may be involved in corporate transactions also, but as opposed to Event Driven exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction.

While the HFRI Indices are frequently used, they have limitations (some of which are typical of other widely used indices). These limitations include survivorship bias (the returns of the indices may not be representative of all the hedge funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all hedge funds are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many hedge funds do not report to indices, and the index may omit funds, the inclusion of which might significantly affect the performance shown). The HFRI Indices are based on information self-reported by hedge fund managers that decide on their own, at any time, whether or not they want to provide, or continue to provide, information to HFR Asset Management, L.L.C. Results for funds that go out of business are included in the index until the date that they cease operations. Therefore, these indices may not be complete or accurate representations of the hedge fund universe, and may be biased in several ways.

Barclays Capital Aggregate Bond Index: The Government/Credit and the Mortgage-Backed indices are combined to form the Aggregate Bond Index. Total Return comprises price appreciation/depreciation and income as a % of the original investment. This index is rebalanced monthly by market capitalization.

S&P 500 Index: Covers 400 industrial, 40 utility, 20 transportation and 40 financial companies of the U.S. market (mostly NYSE issues). The index represents about 75% of NYSE's market cap and 30% of NYSE issues. It is a capitalization-weighted index calculated on a total return basis with dividends reinvested.

S&P GSCI® Index: measure of general price movements and inflation in the world economy. The index represents market beta and is world-production weighted. It is designed to be investable by including the most liquid commodity futures, and provides diversification with low correlations to other asset classes.

Three S&P GSCI™ indices are published: excess return, total return and spot. The excess return index measures the returns accrued from investing in uncollateralized nearby commodity futures, the total return index measures the returns accrued from investing in fully-collateralized nearby commodity futures, and the spot index measures the level of nearby commodity prices. Thus, the excess return and total return indices provide useful representations of returns available to investors from investing in the S&P GSCI™. In fact, the total return (i.e., the return on the S&P GSCI™ total return index) is the measure of commodity returns that is completely comparable to returns from a regular investment in the S&P 500 (with dividend reinvestment) or a government bond, while the return on the excess return index is comparable to the return on the S&P 500 above cash.

Barclay BTOP50 Index: index that seeks to replicate the overall composition of the managed futures industry with regard to trading style and overall market exposure. The BTOP50 employs a top-down approach in selecting its constituents. The largest investable trading advisor programs, as measured by assets under management, are selected for inclusion in the BTOP50. In each calendar year the selected trading advisors represent, in aggregate, no less than 50% of the investable assets of the Barclay CTA Universe. To be included in the BTOP50, the following criteria must be met: program must be open for investment, manager must be willing to provide us daily returns, program must have at least two years of trading activity, program's advisor must have at least three years of operating history, the BTOP50's portfolio will be equally weighted among the selected programs at the beginning of each calendar year and will be rebalanced annually.

Cambridge Natural Resources: Cambridge Associates' proprietary private investments performance database is one of the largest such data repositories in the world. The Natural Resources index is an end-to-end calculation based on data compiled from 269 natural resources funds, (including 67 Energy Upstream & Royalties, 122 U.S. Private Equity Energy, 42 Global ex U.S. Private Equity Energy, and 38 Timber funds), including fully liquidated partnerships, formed between 1986 and 2012. Pooled end-to-end return, net of fees, expenses, and carried interest

Past performance is not a guarantee or prediction of comparable future results. The index returns shown are for illustrative purposes only. They do not represent the results of any specific investment. Index returns do not include any fees, expenses or charges that would reduce returns. The indexes are unmanaged and an investor cannot invest directly in an index.

Glossary of Statistical Terms

Alpha: Alpha is a measure of the excess return delivered by an active manager over time. It is generally calculated relative to a benchmark, and if positive, suggests that a manager has added value in excess of the benchmark.

Beta: measures a manager's volatility relative to its benchmark. A manager with a Beta higher than 1.0 has historically been more volatile than the benchmark, while a manager with a Beta lower than 1.0 has been less volatile.

Correlation: measures the degree to which the returns of two securities or indices are related. The range of possible correlations is between 1.0 and -1.0. Positive correlation indicates that returns tend to move in the same direction. Negative correlation indicates that returns tend to move in opposite directions. Zero correlation implies that there is no relationship between the securities' returns.

Covariance: A measure of the degree to which returns on two risky assets move in tandem. A positive covariance means that asset returns move together and a negative covariance means returns move inversely.

Idiosyncratic: A company specific characteristic.

Strategy Definitions

Core, Value-Added and Opportunistic Fund Strategies demonstrate the general risk / return characteristics of the three broad investment styles within real estate. Core funds typically utilize low leverage and invest domestically in stabilized assets, whereas Opportunistic funds typically utilize high leverage, take on more market risk, and may invest domestically and/or internationally. Value-Added funds generally fall somewhere between the two.

Equity Hedge investing consists of a core holding of long equities hedged at all times with short sales of stocks and/or stock index options. Some managers maintain a substantial portion of assets within a hedged structure and commonly employ leverage.

Event-Driven is also known as "corporate life cycle" investing. This involves investing in opportunities created by significant transactional events, such as spin-offs, mergers and acquisitions, bankruptcy reorganizations, recapitalizations and share buybacks.

Macro involves investing by making leveraged bets on anticipated price movements of stock markets, interest rates, foreign exchange and physical commodities.

Relative Value Arbitrage attempts to take advantage of relative pricing discrepancies between instruments including equities, debt, options and futures. Managers may use mathematical, fundamental, or technical analysis to determine misvaluations.

Important Notes

This document has been prepared by the Morgan Stanley Wealth Management Alternative Investments Group ("AIG") for informational purposes only and is not an offer to buy or sell or a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy.

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Diversification does not assure a profit or protect against loss in declining markets.

Alternative investments can be highly illiquid, speculative and not suitable for all investors. Investing in alternative investments is only intended for experienced and sophisticated investors who are willing to bear the high economic risks associated with such an investment. Investors should carefully review and consider potential risks before investing. Certain of these risks may include: loss of all or substantial portion of the investment due to leveraging, short selling, or other speculative practices; lack of liquidity in that there may be no secondary market for a fund and none is expected to develop; volatility of returns; restrictions on transferring interests in a fund; potential lack of diversification and resulting higher risk due to concentration of trading authority when a single alternative manager is utilized; absence of information regarding valuations and pricing; complex tax structures and delays in tax reporting; less regulation and higher fees than mutual funds; and manager risk. Individual funds will have specific risks related to their investment programs that will vary from fund to fund.

Are You Qualified to Invest in Alternatives?

If you are looking to add alternative investments to your portfolio, you should be a sophisticated investor and be able to understand the complex investment strategies sometimes employed, and tolerate the risks and liquidity constraints

of alternative asset classes. To find out if you are qualified to invest in alternative investments such as hedge funds, you can talk to a qualified Financial Advisor/Private Wealth Advisor as eligibility requirements vary greatly when compared to traditional investments.

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