



An Overview of Managed Futures

Evolving attitudes towards hedge funds

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Managed futures strategies encompass a variety of active investment approaches expressed through liquid and transparent exchange-traded futures and foreign exchange markets. Options on these contracts may also be utilized. The \$300 billion+ managed futures industry is comprised of professional investment managers, commonly referred to as Commodity Trading Advisors (CTAs), who actively manage positions across a wide variety of global markets and sectors.

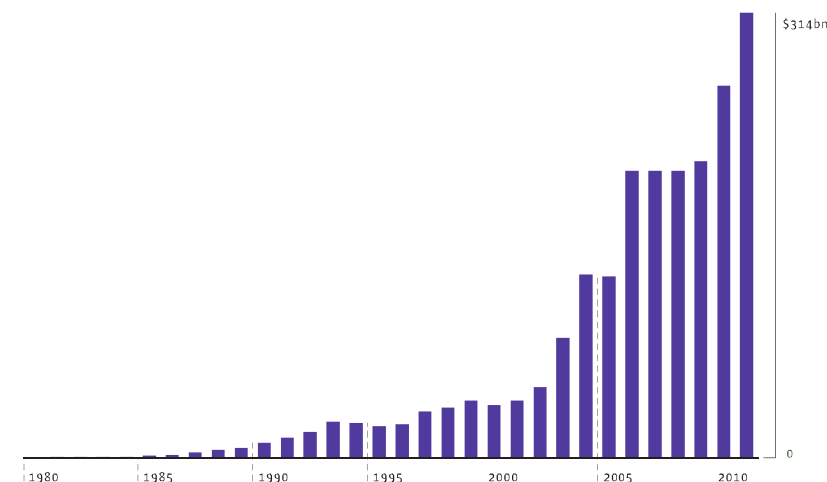
Managed futures as an investment class offer investors a number of beneficial attributes. Dr. John Lintner first widely published several of these benefits in his seminal 1983 paper, "The Potential Role of Managed Commodity-Financial Futures Accounts (and/or Funds) in Portfolios of Stocks and Bonds." In the paper he concluded that every well diversified portfolio would benefit from exposure to managed futures. Since Lintner's study, considerable independent research has arrived at similar conclusions.

This article will address the key characteristics of managed futures which benefit investors and highlight the potential advantages of including managed futures in a diversified portfolio.

- **Non-directionality:** no directional bias; ability to profit from increasing or decreasing values/prices without restriction;
- **Non-correlation:** historic returns exhibit low correlation to traditional and alternative asset classes;
- **Diversification:** managed futures investments can be diversified across a variety of active investment approaches, sectors traded and trade duration;
- **Liquidity:** deep, active futures and foreign exchange markets;

Fig.1 Managed futures industry assets under management (January 1980 – December 2011)

Source: BarclayHedge



- **Transparency:** intraday market-based pricing via futures exchanges and foreign exchange markets;
- **Cash efficiency:** ability to increase exposure without borrowing (financial leverage).

In addition to attractive historical absolute returns, the managed futures industry, as represented by the ITOXX Efficient Capital Managed Futures 20 Index, has also exhibited a low overall correlation to traditional assets such as stocks and bonds through a range of market environments. Managed futures have also exhibited a low overall correlation to other alternative asset classes including hedge fund strategies.

Managed futures growth

The managed futures industry has grown considerably over the last 30 years and has been one of the fastest growing alternative strategies over the last three years. The significant increase in open interest in futures markets, continuous improvement in information technology, and increased interest from institutional investors have contributed to an up-tick in the rate of growth over the last decade. While there are a large number of professional managed futures managers, the vast majority of capital is concentrated in a core group of firms. As illustrated in Fig.2, the top 20 managed futures managers ranked by assets under management account for over 50% of the total assets under management of the top 500 managed futures managers.

Overview of managed futures strategies

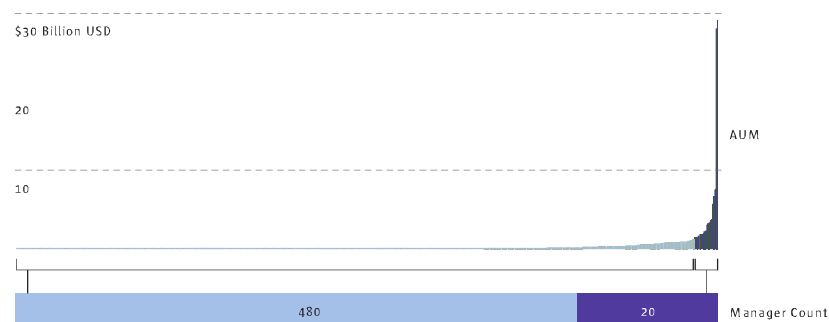
The managed futures industry can be described as an investment class in which alpha-targeting firms utilize a variety of information and active investment techniques to extract returns from the market using futures and foreign exchange instruments. Alpha, in this sense, can be understood as the active return independent of the underlying positions held.

Although there are a wide variety of approaches, many managed futures strategies profit from sustained capital flows in financial markets. These flows occur as a particular market moves from a state of imbalance toward a new equilibrium. Capital flows can take the form of rising markets as well as falling markets. Market inefficiencies form the basis for the alpha managed futures investment strategies

Fig.2 Top 500 managed futures managers' assets under management 2011

Top 20 CTAs (purple) versus remaining 480 CTAs by AUM (light blue)

Source: Efficient Capital Management LLC, BarclayHedge



aim to capture. These opportunities arise from market participants' behaviour such as commercial entities seeking to hedge market exposure.

Today a wide variety of systematic computer-driven models and discretionary approaches are being implemented based on both technical price-based inputs and fundamental information. Initial methods of extracting alpha by managed futures firms involved purchasing or selling a specific market instrument once a particular market high or low was reached. The initial approaches were based on the observation that markets often move with momentum that can continue in a particular direction. Over time, original break-out strategies developed into more sophisticated approaches. Trend-following strategies based on break-out and momentum concepts continued to evolve with the introduction of volatility filtering, risk budgeting, and more dynamic time-frame selection. In addition, some managers began to develop non-long-term trend concepts and employed more than just technical data in their systems.

Often opportunities for managed futures traders have historically come in periods that have proved difficult for conventional asset classes and other alternative investments. This is due to managed futures' ability to generate gains in expanding volatility environments through non-directional momentum and break-out trading.

Managed futures characteristics

Managed futures investments offer a number of beneficial characteristics for investors. These benefits stem from both the investment strategies employed and the attributes of the underlying futures and foreign exchange instruments held.

Non-directionality

The ability to generate investment gains in rising or falling market environments is referred to as non-directionality. Futures markets were created to allow market participants to enter long or short positions based on their hedging or speculative needs with equal ease. As a result, managers can profit with equal opportunity from the increase or the decrease in the price of an asset. Unlike the securities world, a managed futures programme is free from the dual burden of up-tick rules and the need to borrow the underlying when shorting. Also unlike equities, the margin required for a short position is the same as the margin required for a long position. The ability to profit equally from long or short positions, without the restrictions or additional costs, is one of the key attributes of managed futures.

Fig.3 is provided to demonstrate how a managed futures strategy may be able to profit from long or short positions in a market.

Fig.3 Hypothetical wheat position, price and resultant P&L
Q2 2007-Q3 2008

Source: Efficient Capital Management LLC

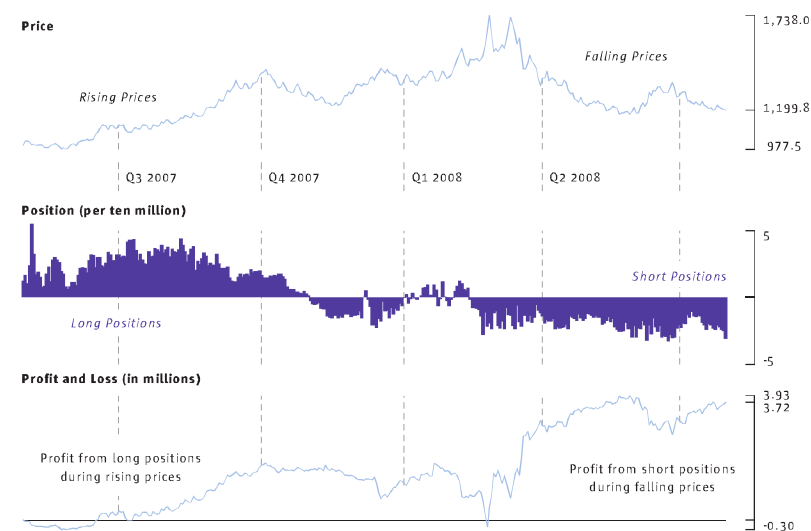
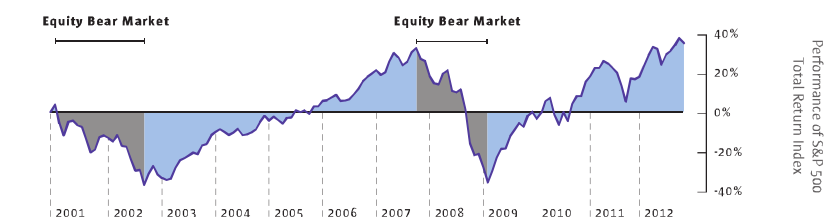


Fig.4 S&P 500 total return with bull and bear markets highlighted
January 2001 through October 2012

Source: Efficient Capital Management LLC, Bloomberg



Rolling 12-month correlation of iSTOXX Efficient Capital Managed Futures 20 Index to S&P 500
Negative correlation in bear markets highlighted • January 2001 through October 2012

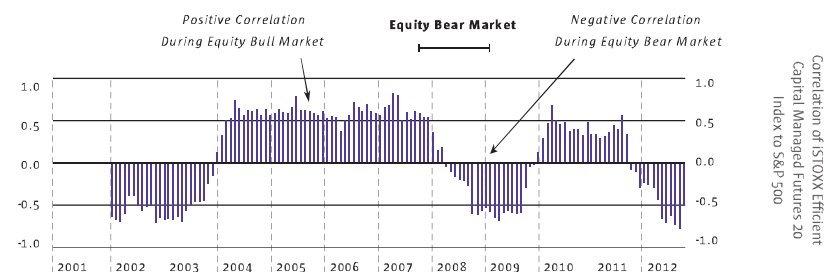
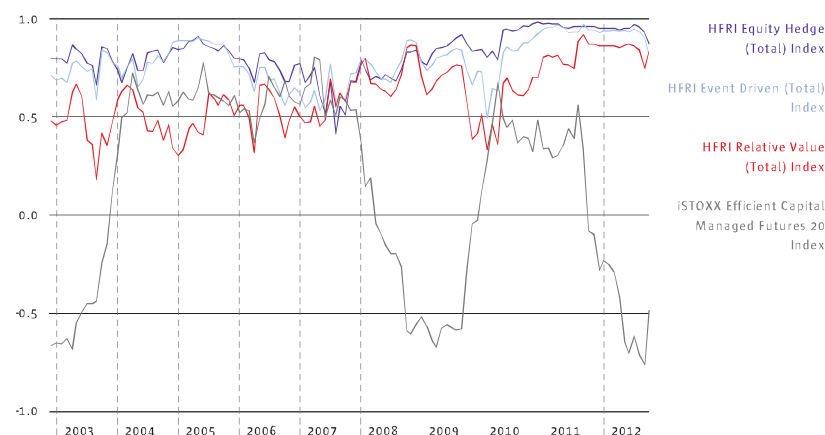


Fig.5 Rolling 12-month correlation to S&P 500

December 2002 through October 2012

Source: Efficient Capital Management LLC, HFRI

**Non-correlation**

Managed futures historically have exhibited low correlation to traditional investments and other alternative asset classes. This low correlation is created by managed futures managers' ability to dynamically enter long or short positions across equity index, fixed income, commodity, and foreign exchange markets without taking on any systematic exposure to an asset class (or beta).

Further, they can go long or short without any funding or exposure constraints. Relative to equities, managed futures have exhibited a measurable negative correlation in equity bear markets, and a positive correlation or non-correlation in equity bull markets. Overall, there has been non-correlation to equities as the net average correlation is near zero.

The often timely negative correlation of managed futures to equities is summarized in Fig.4 (see previous page). Some of the most difficult periods for equity markets have corresponded with positive performance realized by managed futures. Over extended periods of rising or falling equity markets, managed futures managers will often profit from the prevailing trend. Profiting from a trend in a falling equity market drives the timely negative correlation. While there is a conceptual basis for this non-correlation and historical precedence, challenging periods for managed futures theoretically can correspond with difficult equity markets.

Importantly, managed futures have also exhibited low correlation to other alternative asset classes, including hedge fund strategies. As shown in Fig.5,

this characteristic of non-correlation has persisted over time through a range of market environments. Managed futures have exhibited a meaningful positive correlation during equity bull markets such as 2006 and 2007 and meaningful negative correlation during the trying 2008 bear market for equities.

Diversification

Managed futures investments can provide investors a diversification benefit at a number of levels. Managed futures investments can be diversified across a variety of active investment approaches, sectors traded and trade duration.

A single-manager investment may not allow for optimal exposure to managed futures. A multi-manager approach has the ability to utilize a variety of managers to provide investors with diversified access to managed futures and an overall return representative of the managed futures investment class.

Further diversification can be achieved by investing in managers employing a variety of differentiated systematic and discretionary strategies including mean-reversion/relative value and value/macro-fundamental approaches. These strategies can be based on technical and/or fundamental inputs. A significant portion of all managed futures firms employ various mixes of such strategies.

Market and sector concentration differences between strategies can be a meaningful source of diversification as well when investing in managed

futures. While many alternative investments, including a large number of hedge fund strategies, trade primarily stocks and bonds, a diversified managed futures portfolio holds positions across a wide variety of sectors.

Finally, the average holding period (the period of time in which an average position is held by a manager) can vary significantly between managed futures investment managers. Combining managers with differing trade durations can also be a meaningful source of diversification.

Liquidity

Managed futures firms transact in the deepest, most liquid markets in the world. The growth in the number of contracts available to be traded and volume of contracts traded has made managed futures an efficient and reliable marketplace. Today there are over 150 different futures markets available to be traded and more than 80 exchanges worldwide. Capacity is extensive and growing. As the futures markets have enjoyed increased market participation and liquidity, bid/ask spreads have increasingly narrowed.

For the manager, liquidity means the ability to get in or out of any position quickly. For the investor, liquidity means freedom from lock-up provisions often imposed in some hedge fund strategies and other alternative investments. Because managers are able to liquidate positions on a daily basis, most managed futures funds offer daily or monthly liquidity. Because of this freedom, traders and investors are able to participate in a cycle in which they may easily move in and out of markets, which in turn improves the overall liquidity of those markets and creates the opportunity for unique product structures.

Transparency

Exchange-traded futures as well as interbank foreign exchange prices are continuously updated and made available to the public. Market depth and volume are tracked and published by the exchanges, and carried by data services such as Bloomberg. In this way, contract values can be tracked continuously. The managed futures industry also reports to regulators, making the industry itself transparent and accountable.

For the investor, the transparency of each position is dependent upon the way the investment is structured. The level of transparency in a fund is at the fund manager's discretion and often transparency is limited. Managed accounts, on the other hand, offer complete transparency, giving the investor updated and full knowledge of account status and value. This transparency ultimately provides the investor with a significant amount of

knowledge and control over the investment. The iSTOXX Efficient Capital Managed Futures 20 Index is comprised only of managers that are open to managed account investments.

Cash Efficiency

Futures contracts trade on margin. Margins generally are 5-15% of the overall value of the contract. For example, to secure a \$100 cash equivalent position, the investor may need only \$5 in cash. The investor then has \$95 left in cash, \$5 deposited in margin, and owns a \$100 value futures contract. This is "cash efficiency".

It is worth noting that many investment strategies use leverage to enhance returns. However, many other hedge fund strategies and other investment strategies that seek to take advantage of leverage do not deal with such liquid instruments, may have to pay the costs of borrowing and are dependent on a bank for leverage, or may not have transparent instruments. The transparency and liquidity of managed futures provide the proper controls needed to benefit from cash efficiency without any borrowing of capital while utilizing prudent and patrolled risk management.

For the investment manager, cash efficiency allows portfolio managers to target exposures with predictable volatility and a targeted level of returns. As an extension of this principle, cash efficiency allows for the ability to increase exposure, per the investor's desired risk preference, without any cost of borrowing typical in other alternative investments.

Managed futures in a portfolio

Managed futures are non-correlated, non-directional, diversified, liquid, transparent, and cash-efficient. While only pure non-directionality is unique to managed futures, the other characteristics exist in quite different forms in other investment classes. But it is only in managed futures that all of them can be found at work at the same time. The inclusion of managed futures in a portfolio has led to both increased returns and reduced volatility.

Fig.6 summarises the statistical profile of managed futures relative to traditional and alternative asset class benchmarks. In addition, the analysis illustrates the improvement in the statistical profile of a hypothetical portfolio of traditional

investments and hedge funds when combined with an investment in managed futures.

In this analysis, managed futures is shown to diversify and improve the performance of multiple portfolios. The Sharpe Ratio, a key variable to measure the improvement in the risk-adjusted return profile of an investment, shows the increase in return relative to a unit risk found when including managed futures in a portfolio.

Additionally, the Sortino ratio highlights that the inclusion of managed futures also reduces the downside volatility of the portfolio. This suggests that managed futures have historically benefited a portfolio during periods of market stress.

Within the framework of modern portfolio theory, managed futures exposure not only contributes absolute return but it also adds valuable diversification to a traditional portfolio of stocks and bonds as well as a portfolio of stocks, bonds, and hedge funds. Based on the characteristics outlined in this paper, managed futures can play an important role in balanced portfolios of traditional and alternative assets. **THFJ**

Fig.6 Hypothetical portfolio analysis

January 2001 through October 2012

Source: Efficient Capital Management LLC, Bloomberg, HFR

January 2001 – October 2012	Sharpe Ratio	Sortino Ratio	Calmar	Omega Ratio	Skew	Excess Kurtosis
iSTOXX Efficient Capital Management Managed Futures 20 Index	0.59	0.62	0.41	1.57	(0.13)	0.32
S&P 500 TR Index	0.16	0.14	0.05	1.20	(0.58)	0.87
JPM GGBI	0.97	1.07	0.85	2.08	0.04	0.50
HFR Equity Hedge (Total) Index	0.51	0.43	0.14	1.49	(0.88)	1.87

The following hypothetical portfolio analysis illustrates managed futures' diversification benefit to a portfolio of stocks, bonds and hedge funds

January 2001 – October 2012	Sharpe Ratio	Sortino Ratio	Calmar	Omega Ratio	Skew	Excess Kurtosis
50% Stocks 30% Bonds 20% Hedge Funds	0.46	0.41	0.14	1.46	(0.65)	1.30
20% Managed Futures 40% Stocks 24% Bonds 16% Hedge Funds	0.61	0.59	0.19	1.60	(0.46)	0.66

Risk-free rate=0%

ABOUT THE AUTHORS

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ABOUT EFFICIENT

Efficient Capital Management seeks to maximise the unique benefits of the managed futures space for institutional and high net worth investors. Efficient's objective is to provide access to top tier CTA trading talent in a broadly diversified, well balanced, risk managed, alpha generating portfolio, uncorrelated to stocks and bonds, with excellent risk adjusted returns.