

GRANITE ASSET MANAGEMENT
Alternative Investments

A Case for Managed Futures Portfolio Diversification Opportunities



Managed Futures: Portfolio Diversification Opportunities

Introduction

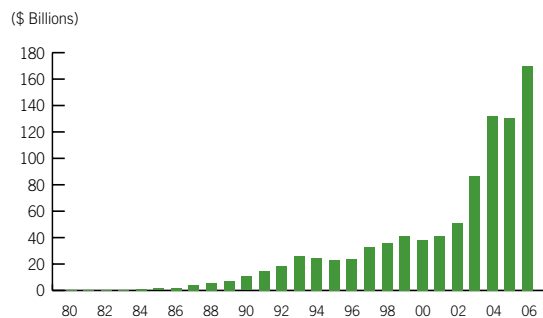
Managed futures is a type of alternative investment and represents an industry made up of professional money managers that manage assets on behalf of their clients. Using global futures, options and forex markets, they implement their systems to take positions based on expected profit potential.

These money managers are referred to as Commodity Trading Advisors, or CTAs. The term “CTA”, however, is a bit of a misnomer -- while futures and forward contracts may represent agricultural products, energies, cattle, hogs, metals, and other commodities, many CTAs also focus on trading currencies, financial instruments, stock indexes and single stock futures. CTAs seek to profit from moves in the contract prices of commodities, stocks, bonds and currencies -- not an appreciation in value of the underlying asset -- and each CTA employs his or her own strategy for profit maximization.

Managed futures investments have been used by individual investors for more than 25 years. More recently, institutional investors such as pension funds, banks, endowments, trusts and family offices have incorporated managed futures as one segment of a well-diversified portfolio.

Growth of Managed Futures

(January 1980 - December 2006)



*Source: Barclay Trading Group

Characteristics of Managed Futures

As an alternative investment strategy, managed futures is increasingly being recognized as an important investment alternative that may potentially enhance the returns and lower the overall volatility of a diversified investment portfolio.

CTAs (managed futures) have a fundamental source of returns: long-term secular shifts in capital flows, i.e., trends. Therefore, it tends to reason that the largest majority of CTAs are long-term trend-followers.

Trend-following CTAs are generally systematic, pure momentum traders. They do not base trading decisions on fundamentals, and in fact their positions may contain trades that are fundamentally contradictory. Because of this, CTAs are less concentrated and less exposed to particular investment themes than other alternative investments.

CTAs typically trade a large number of individual global markets, resulting in a broad exposure to trends, and making them highly-diversified. Their trading style tends to be reactive, meaning they typically participate in a trend after the trend is established, rather than predicting the trend based on fundamental factors.

CTAs tend to be very price-based and specific in individual contract analysis when looking to define trends. Some have referred to CTAs (managed futures) as being a “Global Micro” approach since they are “bottom up” (their systems start with individual transactions) as opposed to a “Macro” view that implies a fundamental and global opinion. CTAs are also highly-responsive to changing market conditions. And as has been implied, they can reverse positions without worrying about a confusing fundamental view. For this reason, many believe that CTAs are more efficient at consistently capturing trends in a wide range of markets.



The Value of Diversification

The Value of Diversification

Today, a variety of academic research and evidence demonstrates the potential benefit of incorporating managed futures to create better balance to a stock and bond portfolio.

Although futures investments involve substantial risk and are not suitable for everyone, the general conclusion is that diversification of non-correlated asset classes, such as the introduction of managed futures to an investment portfolio, can both reduce portfolio risk and enhance overall portfolio performance.

Modern Portfolio Theory, introduced by Nobel Prize-Winning economist Harry Markowitz with his paper "Portfolio Selection" in the 1952 Journal of Finance, showed how to measure the risk of various securities and how to combine them in a portfolio to get the maximum return for a given risk.

The concept of Modern Portfolio Theory was further advanced by the work of Harvard professor Dr. John Lintner in his 1983 study, "The Potential Role of Managed Commodity-Financial Futures Accounts in Portfolios of Stocks and Bonds".

His conclusions stated, "...The combined portfolios of stocks (or stocks and bonds) after including judicious investments in appropriately selected sub-portfolios of investments in managed futures accounts...show substantially less risk at every possible level of expected return than portfolios of stocks (or stocks and bonds) alone".

The Ability to Profit in Virtually Any Economic Environment

In addition to improving overall portfolio returns, managed futures have the ability to perform well in a variety of economic climates, including inflation and periods of down stock markets.

One reason for this is that managed futures trading advisors have the ability to take advantage of price trends in either direction. For example, during periods of inflation, commodities such as gold, silver, oil, and grains tend to do well.

Access to Global Markets

The establishment of global futures exchanges allow managed futures trading advisors to diversify their trading systems by participating in over 50 different markets worldwide. These include currencies, stock indices, financials, agricultural products, precious metals, and energy products.

Thus, managed futures trading advisors have a variety of opportunities for profit potential and risk reduction through an array of non-correlated markets.

The Concept of Non-Correlation

Non-Correlation

Although trading in futures may be highly volatile and risky, adding managed futures as a component to a diversified investment portfolio may actually decrease volatility and increase returns in a portfolio as a whole.

The concept of non-correlation is displayed in the table below which compares the correlations between managed futures, domestic bonds and domestic stocks. A correlation of +1 indicates perfect correlation, a correlation of 0 indicates no correlation and a correlation of -1 indicates perfect negative correlation.

(January, 1980 Through December, 2006)

	Managed Futures	U.S. Stocks	U.S. Bonds
Managed Futures	1.00	-0.10	0.12
U.S. Stocks		1.00	0.22
U.S. Bonds			1.00

Market Direction

Another way to evaluate the relationship between managed futures and stocks is to consider the frequency with which they move, or do not move, in the same direction. Over the period from January, 1980 through December, 2006:

- In nearly 50% of those months managed futures moved in an opposite direction from stocks.
- In 35% of those months both managed futures and stocks posted positive returns.
- In only 17% of those months did both managed futures and stocks move lower.

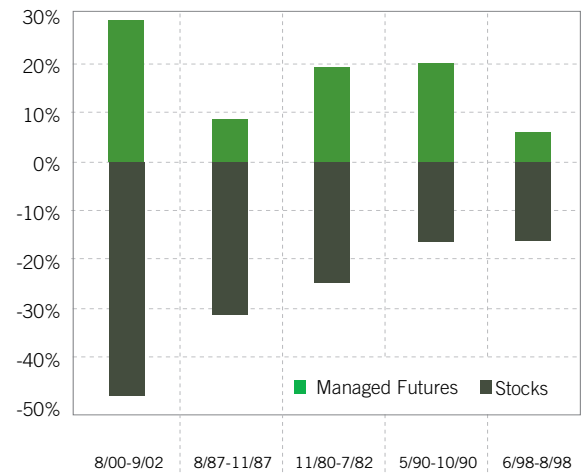
Data: Managed Futures: CISDM Managed Futures Index; U.S. Stocks: S&P 500 Index; U.S. Bonds: Lehman Brothers Aggregate Bond Index.

Investing in managed futures is speculative, involves a high degree of risk, and is not suitable for all investors. Past performance is not necessarily indicative of future results.

Managed Futures vs. Stocks

(January, 1980 Through December, 2006)

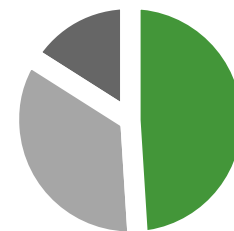
The chart below shows the performance of managed futures during the five worst declines in U.S. Stocks as represented by the S&P 500 Index. This chart further demonstrates the concept of non-correlation between these two asset classes.



Direction of Monthly Returns

(January, 1980 Through December, 2006)

55 Months = 17% Both Down
154 Months = 48% Opposite Directions



115 Months = 35% Both Up

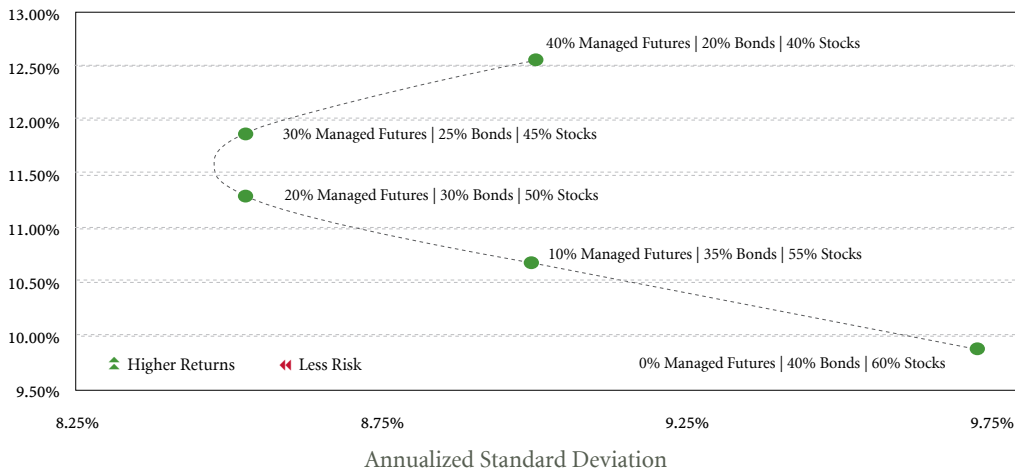


Balanced Performance in the Global Marketplace

The Effect of Diversifying a Traditional Portfolio into Managed Futures

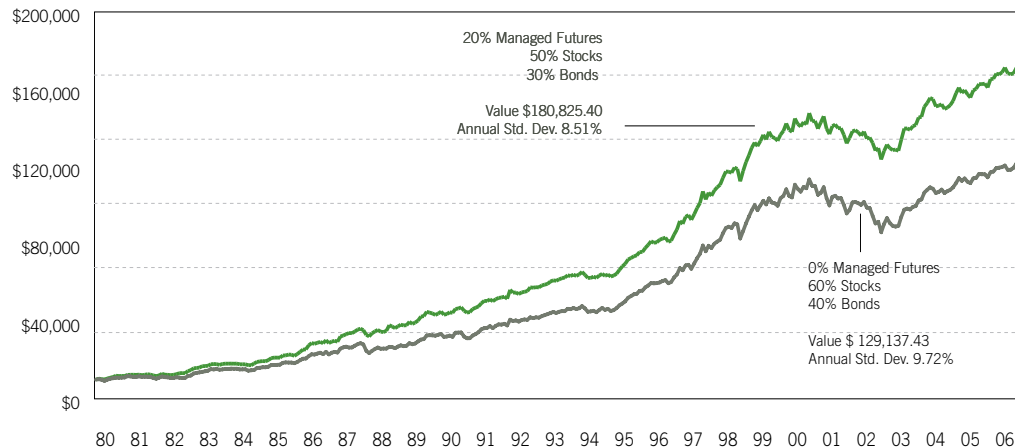
(January, 1980 Through December, 2006)

Compounded Annual Returns



Value of Initial \$10,000 Portfolio vs. a Traditional Stock and Bond Portfolio

(January, 1980 Through December, 2006)



Data: Managed Futures: CISDM Managed Futures Index; U.S. Stocks: S&P 500 Index; U.S. Bonds: Lehman Brothers Aggregate Bond Index.

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The Structure of Managed Futures

Structure of Managed Futures

There are several types of industry participants in the managed futures sector.

- Commodity Trading Advisors (CTAs) are responsible for the actual trading decisions and activity of a managed futures account.
- Commodity Pool Operators (CPOs) assemble public funds or private pools, usually in the form of limited partnerships, and select the trading advisors.
- Futures Commission Merchants (FCMs) are the brokerage firms that execute and clear CTA-directed trades on various exchanges.

Managed futures advisors and investors benefit from the structural efficiencies of the futures markets. Liquid markets facilitate entering and exiting market positions. Other key efficiencies include:

- Use of leverage
- Minimized transaction costs
- Liquidity/rapid execution
- Opportunity in rising, falling, or trendless markets
- Value capture in the market.

Evaluating a CTA

Investors should understand that there are risks associated with trading futures. An investment with a CTA should include a complete review of the CTA's disclosure document. In this review, key aspects that should be evaluated include:

- CTA trading style
- Trading history
- Performance
- Measure of risk-adjusted returns
- Qualitative due diligence
- Fee structures.

There are two primary types of trading styles. Many traders will incorporate aspects of both.

- Technical traders: rely on designed systems and computer signals to guide in and out of trades.
- Fundamental traders: rely on economics, politics, and the principles of supply and demand.



Managed Futures and Hedge Funds

Hedge funds are often said to provide investors with the best of both worlds: an expected return similar to equity combined with a risk similar to that of bonds. For example, the report *Stocks, Bonds, and Hedge Funds: Not A Free Lunch!*, published in 2003 in the *Journal of Investment Management* and co-authored by Harry M. Kat from the Cass Business School, London, showed that although including hedge funds in a traditional investment portfolio may significantly improve that portfolio's mean variance characteristics, it can also be expected to lead to significantly lower skewness. Mr. Kat furthers this research in his report *Managed Futures And Hedge Funds: A Match Made In Heaven*, published in 2004 in the *Journal of Investment Management*.

In his report, Mr. Kat states, "We find that allocating to managed futures allows investors to achieve a very substantial degree of overall risk reduction at, in terms of expected return, relatively limited costs. Apart from their lower expected return, managed futures appear to be more effective diversifiers than hedge funds. Adding managed futures to a portfolio of stocks and bonds will reduce that portfolio's standard deviation more and quicker than hedge funds will, and without the undesirable side effects on skewness and kurtosis. The overall portfolio standard deviation can be reduced further by combining both hedge funds and managed futures with stocks and bonds. As long as at least 45–50% of the alternatives allocation is allocated to managed futures, this will have no negative side effects on skewness and kurtosis".

Table 1: Basic Statistics S&P 500, Bonds, Hedge Funds, and Managed Futures.

	<u>S&P 500</u>	<u>Bonds</u>	<u>Hedge Funds</u>	<u>Managed Futures</u>
Mean	1.00	0.45	0.99	0.70
Standard deviation	4.39	1.77	2.44	2.89
Skewness	-0.82	0.58	-0.47	0.45
Excess kurtosis	1.05	1.45	2.67	0.21
<i>Correlations</i>				
S&P 500	1			
Bonds	0.15	1		
HF	0.63	-0.05	1	
MF	-0.07	0.20	-0.14	1

Table 2: Return Statistics 50/50 Portfolios of Stocks, Bonds, and Hedge Funds or Managed Futures

<u>Hedge Funds</u>					<u>Managed Futures</u>				
% HF	Mean	SD	Skew	Kurt	% MF	Mean	SD	Skew	Kurt
0	0.72	2.49	-0.33	-0.03	0	0.72	2.49	-0.33	-0.03
5	0.73	2.43	-0.40	0.02	5	0.71	2.37	-0.28	-0.18
10	0.74	2.38	-0.46	0.08	10	0.71	2.26	-0.21	-0.30
15	0.76	2.33	-0.53	0.17	15	0.71	2.16	-0.14	-0.39
20	0.77	2.29	-0.60	0.28	20	0.71	2.08	-0.06	-0.42
25	0.78	2.25	-0.66	0.42	25	0.71	2.00	0.02	-0.40
30	0.80	2.22	-0.72	0.58	30	0.71	1.95	0.10	-0.32
35	0.81	2.20	-0.78	0.77	35	0.71	1.91	0.18	-0.20
40	0.82	2.18	-0.82	0.97	40	0.71	1.89	0.24	-0.06
45	0.84	2.17	-0.85	1.19	45	0.71	1.89	0.30	0.08
50	0.85	2.16	-0.87	1.41	50	0.71	1.91	0.34	0.19

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Summary of Benefits

Benefits of Managed Futures

- Provides direct exposure to international financial and non-financial asset sectors
- Offers a means to gain exposure to risk and return patterns not easily accessible with investment in traditional stock and bond portfolios
- Reduces portfolio risk
- Ability to profit in different economic environments
- Global Diversification
- Timely Portfolio Diversification
- May be just as profitable during declining stock, bond and real estate investments

Who Invests in Managed Futures

- Public Pension Funds
- Corporate Pension Funds
- Corporate Treasurers
- Insurance Companies
- Foundations, Endowments and Trusts
- Funds of Funds
- Family Offices
- Proprietary Bank Capital
- Central Banks
- Governments
- Individuals

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