

Why Managed Futures Work and Have Been a Standout in 2008

an overview of the investment class

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“That’s different.”

“That’s different,” is a Minnesotan’s polite way of disregarding something they don’t understand. When presented with an array of investment alternatives, it can be a challenge at times to sort through the various opportunities available. The Alternative space is called “alternative” because it is indeed different, but in the case of Managed Futures, “different” can be a very good thing.

Hedge funds have been experiencing major losses recently, while Managed Futures funds have been performing as a true safe haven in the midst of market turbulence. At the end of September 2008, the Barclay Hedge Fund Index was down -11.91% on the year, and every one of the seventeen sub-indices were down as well. The Barclay CTA Index, on the other hand, was up +7.90%, and all six of the sub-indices were positive. Of Barclay’s Top 30 basket of multi-advisor futures funds, as of the end of July, only four were negative over the last 12 month period. The Top 30 produced returns ranging from a low of -5.8% to a high of +38.88%, and Sharpe Ratios from a low of -0.52 to a high of +2.21.¹ In any environment, but especially in this year’s volatile market environment, an investment manager would be remiss with regard to fiduciary responsibility not to examine an asset class such as this.

¹Source: Barclay Hedge (www.BarclayHedge.com). Positive Sharpe Ratios were experienced in 24 of the 30 funds cited.

Managed Futures, as an asset class, has several inherently beneficial attributes that are often unavailable in other types of alternative investments. These include: the existence of deep and active markets (**liquidity**); the ability to profit from any moves in the market (**non-directionality**); returns that are independent of traditional market moves (**non-correlation**); the ability to achieve multiple exposure without borrowing (**cash efficiency**); the ability to determine the value of any position on an intra-day level (**transparency**); and the presence of multiple investment strategies (**diversification**). Let’s take these one at a time.

Characteristics of Managed Futures

Liquidity – With regard to liquidity, let’s note first that more than \$1.5 trillion in market value is traded every two weeks on the stock exchanges of the United States.² If this sounds like a lot, consider that America’s futures exchanges do that much business *every day*.³ The growth in the number of contracts available to be traded and in the volume of contracts traded has made Managed Futures an efficient and reliable marketplace. Today there are over 1,500 different futures contracts available to be traded on more than 80 exchanges worldwide. Capacity for initiating or covering exposure is extensive and growing. As the futures markets have matured, competition among market makers has increasingly narrowed bid/ask spreads across the board. Daily price limits help to prevent runaway markets by prohibiting trade outside a pre-determined price range that is reset daily to key off the previous day’s closing price. This provides a “cooling off” period during which traders and investors can reassess their positions in a dispassionate atmosphere. Limit-up or limit-down moves can create liquidity problems, and it is during these events that the options markets see a significant increase in trading volume, as traders seek to accomplish synthetically in the options what price limits will not let them do in the futures.

²SEC. Select SEC and Market Data Fiscal 2006. <http://www.sec.gov/about/secstats2006.pdf>. The actual number is \$1.69 trillion in market value every two weeks.

³CFTC. About the CFTC. May 4, 2007. http://www.cftc.gov/files/oirm/video/cftc_captions.htm.

Characteristics of Managed Futures (continued)

For the trader, liquidity means smaller slippage through enough volume to narrow and deepen the bid/ask spread, and to allow large orders to be processed efficiently. This means that under normal market conditions, traders can make trades of significant size without the fear of being unable to complete the entire trade, and with confidence that competition on both sides of the market will minimize the market impact of any one trade.

For the investor, liquidity means freedom from the kind of lock-up imposed in the hedge fund world. By utilizing managed accounts, a Commodity Pool Operator (“CPO”)⁴ or an individual investor can liquidate positions at any time, while in Managed Futures funds liquidity is generally on a monthly basis. Because the managers are able to liquidate positions on a daily basis, the funds are able in turn to provide investors this monthly liquidity. Because of this freedom, traders and investors are able to participate in a cycle in which they can 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.

Non-directionality and Non-correlation – With a buyer for every seller and a seller for every buyer, the futures markets are a zero-sum game. This means that for every long position there is an off-setting short position. The futures exchanges were founded by hedgers for hedgers in order to lock in prices. They were on both sides of the market then, and they still are today. Speculators have joined them and are the principal source of liquidity today, but it remains a zero-sum game within its own context, with equal long and short positions. However, because they are derivatives they can be arbitrated⁵ to outside cash instruments or used in other ways as a portfolio diversifier. When used this way in a Managed Futures program, the futures markets enter another context in which both the speculator and the diversifier can end up winners. As a hedging vehicle, the futures markets derive volume and value through arbitrage with the underlying cash markets, ironing out market inefficiencies and providing genuine price discovery.

Unlike the securities world, a Managed Futures program 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 shorts is the same as the margin for longs.

⁴The CFTC defines a Commodity Pool Operator as: “A person engaged in a business similar to an investment trust or a syndicate and who solicits or accepts funds, securities, or property for the purpose of trading commodity futures contracts or commodity options. The CPO either itself makes trading decisions on behalf of the pool or engages a Commodity Trading Advisor to do so.” http://www.cftc.gov/educationcenter/glossary/glossary_co.html

⁵Arbitrage is the exploitation of market inefficiency by the synchronous purchase and sale of identical or similar assets. This may take place in one market on one exchange, or in separate markets and/or separate exchanges.

Characteristics of Managed Futures (continued)

While hedge funds tend to invest in financial assets, Managed Futures funds invest instead in the genius and skill of the world's best traders. The edge these trading managers provide is the *alpha*, or the relative excess return. Returns that are independent of traditional market moves are possible through Managed Futures, which provide traders with the opportunity to produce *alpha*. If beta (non-diversifiable, systematic, real risk) can be identified and used by the Capital Asset Pricing Model ("CAPM")⁶ to determine a corresponding required rate of return, the resulting return adjusted for risk ("RAR")⁷ is a benchmark expectation that may be used in performance evaluation. Any returns exceeding that benchmark are the *alpha*. It is measured in terms of outright additional return and expressed as a percentage. For example, if a portfolio for which the CAPM expects a return of 7% actually produces a return of 10%, the additional 3% would be the *alpha*. The simple formula for *alpha* is:

$$\alpha = \text{PortfolioPerformance} - \beta \times \text{BenchmarkPerformance}$$

$$\beta = \rho \times \frac{\sigma_p}{\sigma_b}$$

ρ = correlation of PortfolioPerformance and BenchmarkPerformance

σ = volatility = standard deviation

This traditional concept of *alpha* as relative excess return was first proposed in 1968 by Michael Jensen when he developed a way to measure that return. Over the years, it has become the most popular return-to-risk measurement in use.⁸ An active manager can generate *alpha* either by constructing a portfolio that outperforms the benchmark, or by trading the portfolio so that it outperforms the benchmark.⁹ Keep in mind that *the accuracy of the performance measurement is dependent on the benchmark chosen for comparison*. An individual trading manager produces *alpha* through the design and execution of a trading program, while a CPO produces an additional layer of *alpha* through portfolio construction, allocation, and risk management.

While hedge funds and other traditional investment managers do provide *alpha*, their propensity to invest in assets is so dominant that their *alpha* impact is minimal when compared to the *alpha* provided by Managed Futures.

For the trader, non-directionality means the ability to go long or short with equal ease. The efficient nature of the market itself means that trader skill is the source of returns. This return, regardless of the underlying market, is *alpha*. Equities, bonds, and hedge funds all provide beta; in other words, their returns and profit are directly tied to the underlying market. Because futures traders trade independently of the underlying, they are capable of providing pure *alpha* on top or independent of the return of the underlying, and also on top of any other beta-driven investment.

⁶The Capital Asset Pricing Model ("CAPM") identifies systematic risk as the real risk of a portfolio, the assumption being that the unsystematic risk can be successfully and adequately mitigated through diversification. The resultant risk is the beta, or the non-diversifiable risk, of the portfolio. The model uses this to determine the necessary rate of return in order for an asset to be a value-enhancing addition to the portfolio, and thus is a model for pricing assets.

⁷Return Adjusted for Risk ("RAR") will be discussed further in the "Cash Efficiency" section.

⁸Darling, Gwenevere & Mukherjee, Kankana & Wilkens, Kathryn. "CTA Performance Evaluation with Data Envelopment Analysis." From Gregoriou, Greg N. et al. *Commodity Trading Advisors: Risk, Performance Analysis, and Selection*. Hoboken: John Wiley & Sons, 2004, pages 82-83. Russell Investment Group. Jensen Alpha. May 7, 2007. http://www.russell.com/us/glossary/analytics/jensen_alpha.htm.

⁹Index Investor. *Separating Alpha From Beta: Portable Alpha*. May 8, 2007. http://www.indexinvestor.com/Free/alphaBeta.php?gclid=CNCkv7vz_IsCFQzDQOodwhE5Uw

Characteristics of Managed Futures (continued)

For the investor, non-directionality means the availability of diversifying protection through negative correlation in adverse markets, positive correlation when the overall portfolio is profitable, and with little or no correlation when measured against all market conditions. Market events will occur in which correlations may lag, producing temporary performance setbacks, and these must be expected. During these events, *alpha* and options can provide buffers to smooth the performance of the investment until the market stabilizes.

Cash Efficiency – Risk does not have to be quantified in order to be perceived. It is human nature to consider and evaluate risk, even when the only tool available is intuition. For example, it is common knowledge that a \$20,000 windfall would be better invested as a down-payment on a house than used for a trip to the casino. This is because in the human mind aversion to leverage tracks closely with perceived riskiness. Investment opportunities unfortunately do not normally present themselves in such a black-and-white fashion. The shades of grey need to be quantified in order to be accurately evaluated, and this is where returns adjusted for risk comes into the picture.

The **return adjusted for risk (RAR)** is simply a reflection of the amount of risk it takes to achieve a particular amount of profit, or return. If Strategy A and Strategy B each pay a return of \$400 profit, which one is better? The answer lies in discovering the amount of risk to which the original investment is exposed in each strategy. If Strategy A were twice as risky as Strategy B, it would need a payoff of at least \$800 (or twice that of Strategy B) before it would make an equally attractive investment. Hence, the excess risk Strategy A carries in relation to its return makes it a less desirable investment than Strategy B. In other words, Strategy B is better because it has a better RAR. As Markowitz emphasized in the 1950's, the investment story is about more than just returns; when being evaluated, they must be adjusted for risk. And so, a program of Managed Futures, when used as an enhancement to a traditional portfolio of stocks and bonds, must do one thing well: Improve RAR. In other words, a portfolio of stocks, bonds, and Managed Futures must have a better RAR than the traditional portfolio of stocks and bonds alone. And so they do.

Characteristics of Managed Futures (continued)

At the 1983 Annual Conference of the Financial Analysts Federation in Toronto, Canada, Harvard Professor John Lintner presented a white paper entitled “The Potential Role of Managed Commodity-Financial Futures Accounts (and/or Funds) in Portfolios of Stocks and Bonds.” Professor Lintner’s groundbreaking study found that,

“...the improvements from holding efficiently selected portfolios of managed accounts or funds [referring to Managed Futures] are so large – and the correlations between those returns of the futures portfolios and those on the stock and bond portfolios are so surprisingly low (sometimes even negative) – that the return/risk trade-offs provided by augmented portfolios... clearly dominate the trade-offs available from portfolios of stocks alone.... Moreover, they do so by very considerable margins.”

His study concluded that,

“...the combined portfolios of stocks (or stocks and bonds) after including judicious investments...in managed futures accounts (or funds) show substantially less risk at every possible level of expected return than portfolios of stocks (or stocks and bonds) alone.”¹⁰

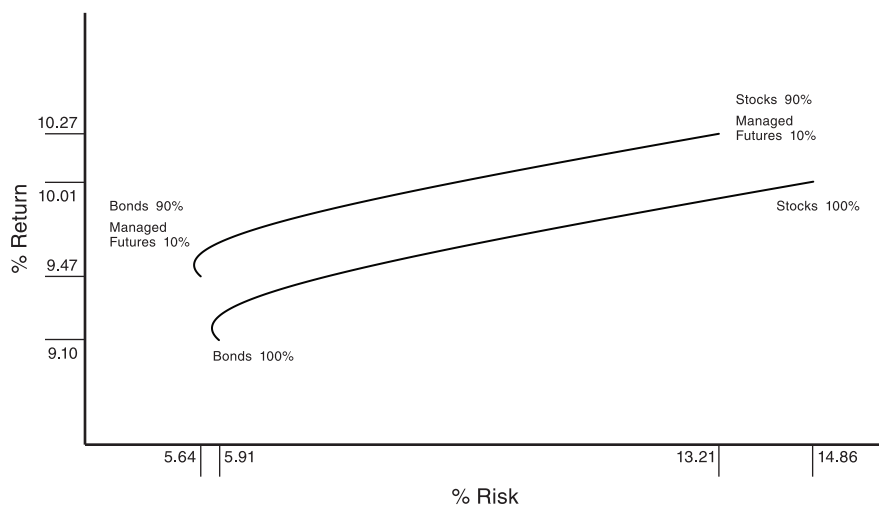
¹⁰ Lintner, John. “The Potential Role of Managed Commodity-Financial Futures Accounts,” page 67.

Lintner’s original samples were expanded and tested by other researchers, who showed his theories to be sound, thus providing an ongoing academic base for investing in Managed Futures.¹¹

¹¹ Chandler, Beverly. *Managed Futures*. Chichester: John Wiley & Sons, 1994, page 25.

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1980–2006



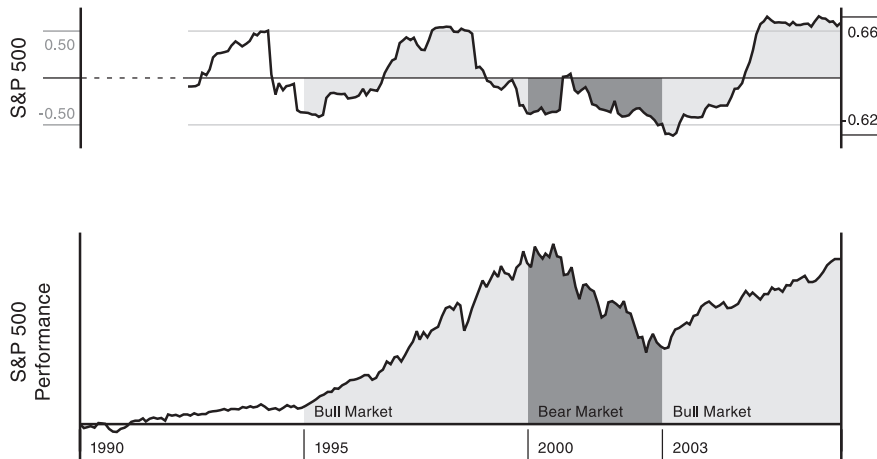
Characteristics of Managed Futures (continued)

We see in the graphs (or tables) above that Managed Futures do improve the RAR of a traditional portfolio, and they do it better than hedge funds. When we look at the contribution made by Managed Futures to a traditional portfolio of stocks and bonds, we find that it not only increases RAR, but that it also does something even better: Over time, it can reduce risk *and* increase returns. This is performance above and beyond what one might reasonably expect.

¹² Martinelli, Lionel & Vaissie, Mathieu. *Benchmarking the Performance of CTAs*. from Gregoriou, Greg N., et al. *Commodity Trading Advisors: Risk, Performance Analysis, and Selection*. Hoboken: John Wiley & Sons, 2004, page 24.

When applied appropriately to a traditional portfolio of stocks and bonds, a program of Managed Futures can produce a high negative correlation in a bear market, and a low negative correlation or even non-correlation in a bull market, thus behaving like a put.¹²

Correlation to Managed Futures During Bull & Bear Markets



rolling 24-month correlation to CISDM CTA Asset Weighted Index

Characteristics of Managed Futures (continued)

Portfolio Analysis 1990 – 2006

	Stocks	Stocks 80% Managed Futures 20%	change
Sharpe	0.32	0.45	0.13
Sortino	0.30	0.45	0.15
Calmar	0.18	0.26	0.08
Omega	1.62	1.81	0.19
Skewness	-0.48	-0.28	0.20
Kurtosis	0.91	0.81	-0.10

	Bonds	Bonds 80% Managed Futures 20%	change
Sharpe	0.80	0.94	0.14
Sortino	0.84	1.05	0.21
Calmar	1.39	1.90	0.51
Omega	3.02	3.36	0.34
Skewness	-0.41	-0.01	0.40
Kurtosis	0.63	1.56	0.93

	Hedge Funds	Hedge Funds 80% Managed Futures 20%	change
Sharpe	1.58	1.73	0.15
Sortino	1.68	2.24	0.56
Calmar	1.29	1.79	0.50
Omega	4.14	4.77	0.62
Skewness	-0.33	0.13	0.46
Kurtosis	3.44	1.98	-1.46

Characteristics of Managed Futures (continued)

Correlations of Managed Futures to the traditional portfolio are more negative (or less positive) than that of hedge funds. This correlation, combined with positive skew¹³ and small kurtosis¹⁴, means that Managed Futures can achieve a more consistent expectation of added value than other programs.

¹³ Skewness is the aberration of the distribution of returns on an investment, when compared to a symmetrical distribution. When viewed in a graphic format, positive skewness (in which expectations of outlying events are more positive than that of a symmetrical distribution) shows the entire structure bearing to the right of symmetrical, while negative skewness shows the entire structure bearing to the left of symmetrical.

¹⁴ Kurtosis is the slope of the distribution, and is therefore known also as the volatility of volatility. A high kurtosis shows a greater distribution towards the tails and away from the mean, resulting in a visual of a low and broad peak with fat tails. A low kurtosis shows just the opposite. Leptokurtosis, meanwhile, is the term that describes a distribution that includes both fatter tails and a higher peak than normal.

Managed Futures Industry's Volatility and Assets



Within the framework of modern portfolio theory, a program of Managed Futures not only adds value and diversification to a traditional portfolio of stocks and bonds, but does it better than hedge funds.¹⁵ A program of Managed Futures also adds value and diversification to a portfolio of stocks, bonds, and hedge funds.¹⁶ The relative risk inherent in the world of futures is tied to leverage, diversification, and portfolio construction.¹⁷

¹⁵ Here we are speaking of the risk adjusted returns of managed futures versus the risk adjusted returns of hedge funds when each is applied to a traditional portfolio of stocks and bonds.

¹⁶ Kat, Harry M. *Managed Futures and Hedge Funds: A Match Made in Heaven*. From Gregoriou, Greg N. et al. *Commodity Trading Advisors: Risk, Performance Analysis, and Selection*. Hoboken: John Wiley & Sons, 2004, page 17. Kat's essay provides considerable detail with regard to both skewness and kurtosis in the application of hedge funds and managed futures, together and separately.

¹⁷ Epstein, Charles B. *Managed Futures in the Institutional Portfolio*. New York: John Wiley & Sons, 1992, page 277.

The question should never be between leveraging or not; the question should always be about the relationship of the potential risk to an expected benefit. Everyone has different levels of both expected returns and risk tolerance. The better the RAR, the more leveraging makes sense. Cash efficiency allows an investor to lever up to a RAR that is appropriate for that investor's objectives and risk tolerance. With pinpoint accuracy, the cash efficiency offered by a program of Managed Futures permits the construction of a diversifying portfolio that meets the highest investment objectives through the most cost-effective and prudential use of capital.

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Characteristics of Managed Futures (continued)

For the trader, cash efficiency means the freedom to trade large notional accounts without being hindered by cash management. With the standardization and integrity of exchange-traded futures contracts, margin is easy to calculate and budget. Low margin rates permit significant cash efficiency, with excess capital in segregated accounts and available to be used either for risk management or for exposure opportunity, making customized investment solutions efficient and affordable.

For the investor, cash efficiency means the ability to increase exposure without borrowing additional capital, since excess cash is available for investment or for trading.

Transparency – Exchange-traded futures and options 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 and CQG. In this way, market moves are immediately known everywhere and to all. Add to this the transparency of the managed account, in which all positions are known, and it means that the value of a portfolio can be calculated at any time. The Managed Futures industry also answers to regulators, making the industry itself transparent and accountable.

For the trader, transparency means historical data is available for research, real-time market prices are available for signal generation, and market “color” (depth, volume, open interest, market sentiment, etc.) is available for the decision-making process. The growth of electronic data dissemination has fueled the growth of quantitative trading methods through the transparency that it provides.

For the investor, the transparency available is dependent upon the way the investment is structured. Investor funds often have limited levels of transparency, while managed accounts offer complete transparency, giving the investor or risk manager updated and full knowledge of account status and value. In addition, regulatory oversight produces a facet of transparency that protects the investor from fraud. This transparency ultimately provides the investor or risk manager with a significant amount of direct authority over the investment.

Diversification – Managed futures are an effective portfolio diversifier, mitigating volatility while adding non-correlated alpha to a traditional portfolio of stocks and bonds. Not only does a program of Managed Futures act as a diversifier to the traditional portfolio, but a Managed Futures program that contains multiple managers in its portfolio carries internal diversification as well. Since John Lintner’s original study in 1983, more and more investors have realized the powerful tool at their disposal in the form of Managed Futures. For the trader, diversification means freedom to pursue alpha without fear of adding to overall portfolio volatility. For the investor, diversification means added protection from volatility without losing the potential for additional profit.

¹⁵ Here we are speaking of the risk adjusted returns of managed futures versus the risk adjusted returns of hedge funds when each is applied to a traditional portfolio of stocks and bonds.

¹⁶ Kat, Harry M. *Managed Futures and Hedge Funds: A Match Made in Heaven*. From Gregoriou, Greg N. et al. *Commodity Trading Advisors: Risk, Performance Analysis, and Selection*. Hoboken: John Wiley & Sons, 2004, page 17. Kat’s essay provides considerable detail with regard to both skewness and kurtosis in the application of hedge funds and managed futures, together and separately.

¹⁷ Epstein, Charles B. *Managed Futures in the Institutional Portfolio*. New York: John Wiley & Sons, 1992, page 277.

Characteristics of Managed Futures (continued)

In summary, Managed Futures are liquid, non-directional, non-correlative, cash efficient, transparent, and diversifying. While only 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 in one trading program, and the way they play out allows them to be combined without incurring additional risk, ultimately offering unique opportunities to generate excess return in the form of alpha.

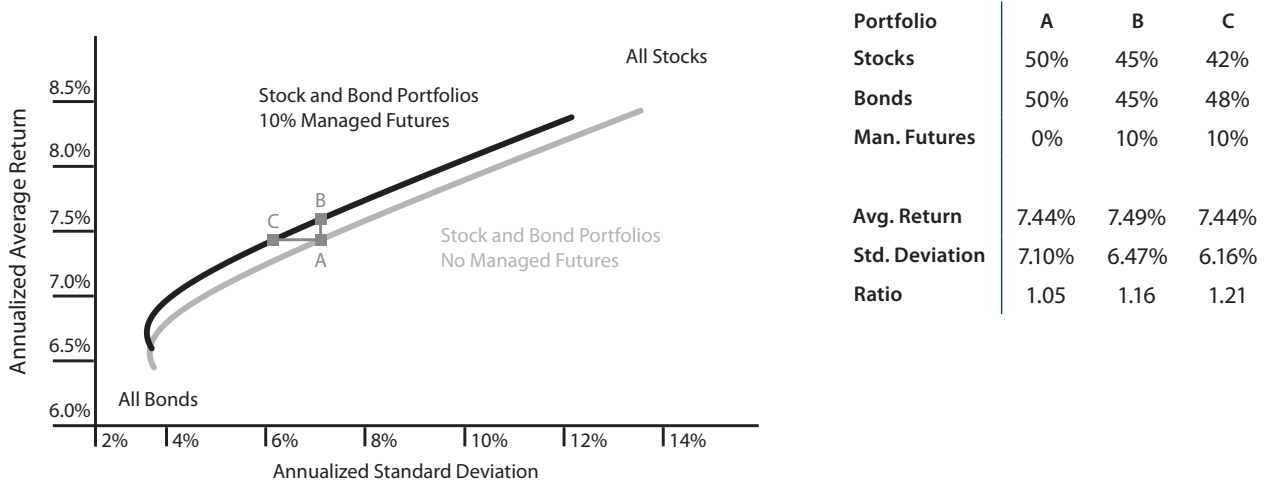
Over the last 30 years, academic literature has consistently demonstrated that the addition of Managed Futures to portfolios of stocks or stocks and bonds or even hedge funds, will provide a higher return for any given acceptable level of risk, or put another way, lower risk at any given level of return. The following are some of the more notable studies.

Academic Resources:

Lintner 1983	“The Potential Role of Managed Commodity-Financial Futures Accounts (and/or Funds) in Portfolios of Stocks and Bonds”
Bartatz 1990	“The Role of Managed Futures Accounts in an Investment Portfolio”
Oberuc 1990	“How to Diversity Euro-Stocks and Bonds with Hedged U.S. Managed Futures”
Fung, William and Hsieh 1997	“Empirical Characteristics of Dynamic Trading Strategies: The Case of Hedge Funds.”
Schneeweis 1999	“The Benefits of Managed Futures”
McFall 2005	“The Answer to Your Dreams? Investment Implications of Positive Asymmetry in CTA Returns”

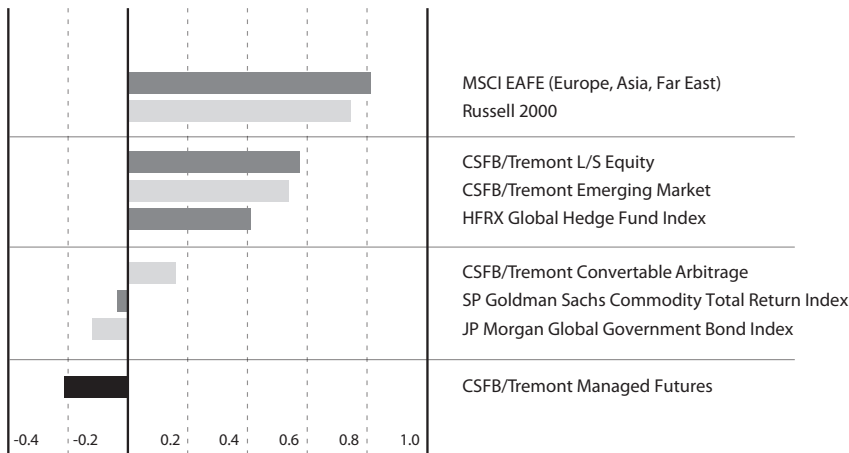
Performance of Managed Futures

As the following graph illustrates, the last 12 years indicate the strength of including Managed Futures in a traditional portfolio has not changed.



Stock/Bond Portfolio Return/Risk Relationships 1993-2008.
Managed Futures improve performance at every level of risk.

Most investments exhibit substantial correlation to traditional equity indices. The graph below depicts the correlation of selected index profiles, both traditional and alternative, to the S&P 500 equity index.

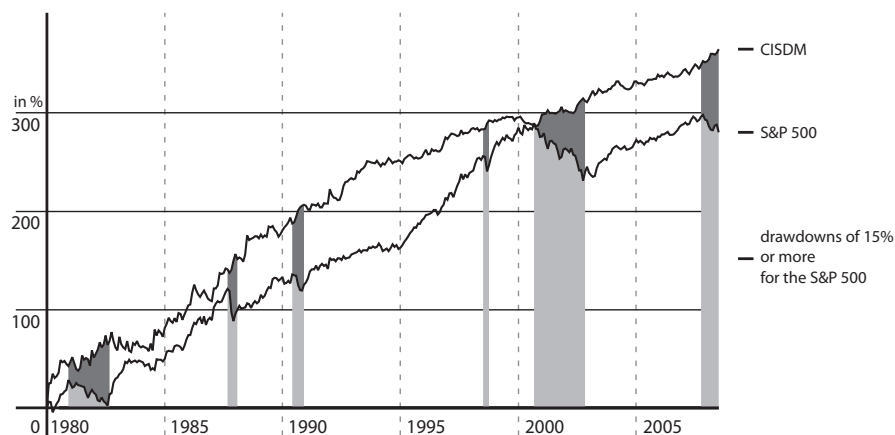


Correlation to S&P 500 Index Jan 1998 – Jun 2008

The Benefits of Multiple Managers

Managed Futures has a long history of consistently strong performance. In fact, over the last 23 years of data provided by CISDM, it has outperformed the equities markets, both in terms of absolute and risk or volatility adjusted returns.

Cumulative Arithmetic Index Returns 1980 - 2008



Diversity of Managers

For some investors desiring Managed Futures exposure, concerns may surface regarding the dramatic range of volatilities among traders, which can range from 4% (or below) to 40% (or above) annually. This volatility risk may seem to undermine both the desired returns and the portfolio enhancements. However, by volatility adjusting individual trade exposure and utilizing proprietary investment processes and risk management procedures, the great diversity of styles and strategies available in Managed Futures can be harnessed in multi-manager portfolios to balance reward and risk.

Efficient's Portfolio Diversification

In %	Macro / Fundamental	Counter Trend	Relative Value / Spreads	Volatility Arbitrage	Pattern Recognition	Trend-following		TOTAL	
						Momentum	Break Out		
Systematic	7.38	17.50	8.43	3.01	15.50	16.67	13.60	82.08	<i>Manager Style</i>
Discretionary	6.96	0.57	2.44	1.76	3.07	2.36	0.76	17.92	
>90	0.47	0.49	0.26	0.17	0.41	0.71	0.43	2.95	<i>Trade Length (in days)</i>
31-90	2.40	0.95	1.61	0.97	1.45	2.76	1.41	11.55	
11-30	4.48	1.70	3.13	1.02	3.15	4.72	3.14	21.34	
4-10	1.87	2.30	2.14	0.59	4.37	3.66	2.90	17.83	
1-3	2.05	5.98	2.25	1.14	6.46	4.74	3.04	25.65	
<1	3.07	6.64	1.48	0.89	2.72	2.44	3.44	20.68	

The Managed Futures industry has been a valid stand-alone space for the past several decades. Since 1983, it has also been shown to be a valuable addition to traditional portfolios, sparking significant growth in the Managed Futures industry. Unlike Hedge Funds, an investment in a Managed Futures fund is not an investment in the markets, but is rather an investment in trading genius and skill, with the added benefits of liquidity, non-directionality, non-correlation, cash efficiency, transparency, and diversification. Through the application of Managed Futures, specific investment objectives can be identified and met, helping to turn a good investment into a great one.

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Notes

CFTC

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