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# The Benefits of Managed Futures

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Exhibit 5

Performance: Zurich CTA Universe Strategies and Traditional Assets (1990-12/2001)

| | Return | Stdev | Sharpe Ratio | Minimum Monthly | Correlation S&P 500 | Correlation Lehman Bond |
|---|---|---|---|---|---|---|
| Zurich CTA$ | 11.2% | 10.3% | 0.56 | -6.0% | -0.10 | 0.27 |
| Zurich CTAEQ | 9.9% | 9.9% | 0.45 | -5.4% | -0.14 | 0.20 |
| Zurich Currency | 10.1% | 12.8% | 0.36 | -8.2% | 0.01 | 0.14 |
| Zurich Discretionary | 12.6% | 7.0% | 1.03 | -4.6% | -0.06 | 0.18 |
| Zurich Diversified | 9.7% | 11.8% | 0.36 | -7.5% | -0.13 | 0.25 |
| Zurich Financial | 11.2% | 13.4% | 0.43 | -8.6% | -0.06 | 0.35 |
| Zurich Trendfollowing | 10.6% | 16.6% | 0.31 | -10.4% | -0.14 | 0.27 |
| S&P 500 | 12.9% | 14.6% | 0.51 | -14.5% | 1.00 | 0.28 |
| Leh.Bros. Gov./Corp | 8.1% | 4.2% | 0.63 | -2.5% | 0.28 | 1.00 |

Source: Zurich, Datastream

Exhibit 6

Correlations in Best and Worst Forty-Eight S&P 500 Ranked Months (1990-2001)

| | All S&P Months | Worst S&P 500 Forty-Eight Months | Best S&P 500 Forty-Eight Months |
|---|---|---|---|
| Managed Futures | | | |
| Zurich CTA$ | -0.10 | -0.33 | 0.08 |
| Zurich CTAEQ | -0.14 | -0.40 | 0.12 |
| Zurich Currency | 0.01 | 0.15 | 0.22 |
| Zurich Discretionary | -0.06 | -0.13 | -0.01 |
| Zurich Diversified | -0.13 | -0.46 | 0.06 |
| Zurich Financial | -0.06 | -0.34 | 0.13 |
| Zurich Trendfollowing | -0.14 | -0.42 | 0.12 |
| Hedge funds | | | |
| Zurich Event Driven Universe | 0.47 | 0.59 | -0.18 |
| Zurich Fund of Funds Universe | 0.52 | 0.55 | 0.04 |
| Zurich Global Established Universe | 0.78 | 0.66 | 0.29 |
| Zurich Market Neutral Universe | 0.30 | 0.45 | 0.12 |
| Traditional Assets | | | |
| Lehman Govt/Corp.Bond | 0.28 | -0.06 | 0.09 |

Source: Zurich, Datastream

Exhibit 8 indicates further that when S&P 500 returns are ranked from low to high and divided into four thirty-three month subperiods, managed futures offered the opportunity of obtaining positive returns in months in which the S&P 500 provided negative returns as well as in months in which the S&P 500 reported positive returns. In contrast, certain alternative investments such as equity based global established hedge funds had negative returns in just those months in which the S&P 500 performed poorly.

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The Benefits of Managed Futures

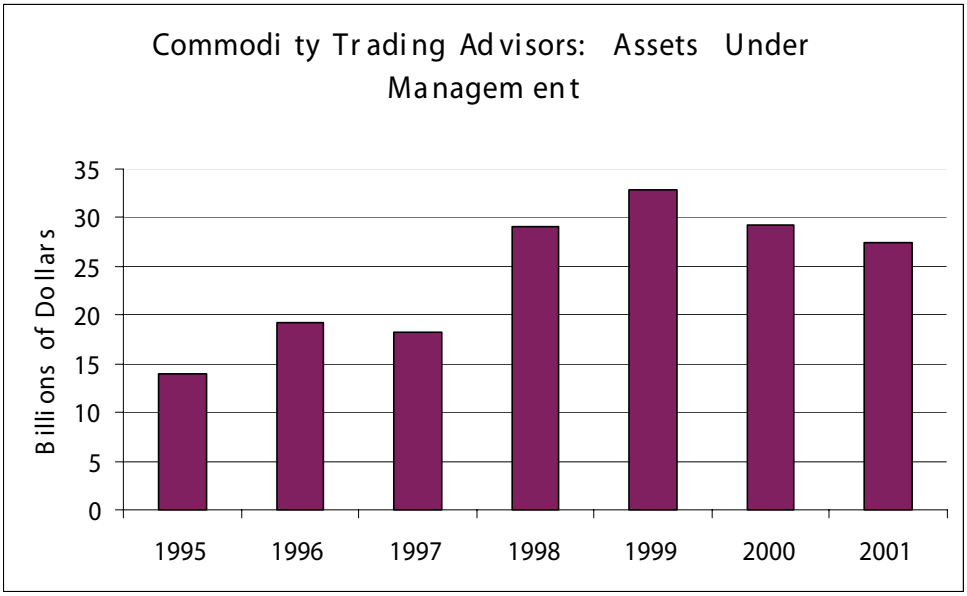
The term managed futures represents an industry comprised of professional money managers known as commodity trading advisors (CTAs) who manage client assets on a discretionary basis, using global futures and options markets as an investment medium. However, for managed futures to grow as an investment alternative, individuals need to increase their knowledge and comfort level as to the use of managed futures in their investment portfolios. Exactly, what are the benefits of managed futures as part of an investor's overall asset portfolio? Basically, managed futures provide direct exposure to international financial and nonfinancial asset sectors while offering (through their ability to easily take both long and short investment positions) a means to gain exposure to risk and return patterns not easily accessible with investment in traditional stock and bond portfolios. Investors must come to appreciate that the investment benefits in managed futures are well founded in financial theory and empirical evidence. While, it is impossible in a short synopsis to convey all the details of the benefits of managed futures, the following exhibits support managed futures as a means to:

(1) reduce portfolio volatility risk,

(2) enhance portfolio returns in economic environments in which traditional stock and bond investment media offer limited opportunities, and

(3) participate in a wide variety of new financial products and markets not available in traditional investor products.

Exhibit 1




Source: Zuric

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## The Growth and Benefit of Managed Futures

Futures and options have been used for centuries both as a risk management tool and return enhancement vehicle, yet managed futures, as an investment alternative, has been available only since the late 1960s. More recently, institutional investors such as corporate and public pension funds, endowments and trusts, and bank trust departments have been including managed futures as one segment of a well-diversified portfolio. As shown in Exhibit 1, the dollars under management for Commodity Trading Advisors in the Managed Futures industry has grown from less than $15 billion under management in 1990 to approximately $28 billion in 2001. Moreover, this number does not include the billions of dollars under management or in proprietary trading programs of major financial institutions which trade similar strategies but which do not report to traditional data sources.[1]

This growth in investor demand for managed futures products indicates investor appreciation the potential benefits of managed futures (e.g., reduced portfolio risk, potential for enhanced portfolio returns, ability to profit in different economic environments, and the ease of global diversification) as well as the special benefits that futures/options traders have (e.g., lower transaction costs, lower market impact costs, use of leverage, and trading in liquid markets) in trading traditional asset classes. In addition, the market integrity and safety of trading in organized exchanges for futures/options contracts provide further assurances of investor safety.

## Managed Futures: Risk and Return Performance

While CTAs have often been regarded as high risk investments, over the period 1990-2001, the average annualized standard deviations of individual CTAs and the Dow Jones 30 industrials were similar; that is, approximately 25%.[2] More importantly, investment theory has shown that assets should be compared on a risk-adjusted bases (e.g., mean return/standard deviation) and that the potential benefit of adding an asset to an existing portfolio may be measured by an asset's excess breakeven return; that is, the difference between its actual return and the return required to improve an asset's or portfolio's Sharpe ratio. Results in Exhibit 2 show that, over the past twelve years (1990-2001), investment in a portfolio of commodity trading advisors (e.g., Zurich CTA$) provides stand-alone risk and return benefits generally similar to or better than existing U.S. and world stock and bond investments.[3] The individual Sharpe ratios are as follows: Zurich CTA$ (.56), S&P 500 (.51), Lehman Brothers Government/Credit bond index (.63), Lehman Brothers World Government bond index (.31) and MSCI world stock index (.07).

More importantly, managed futures offers the investor an increased return to risk ratio when considered as an addition to widely diversified asset portfolios. The Sharpe ratio of the portfolios (Portfolio III and VI) which include at least a 10% investment in managed futures dominate those that invest solely in traditional stock and bond investments or in stock bond, and hedge funds (e.g., Portfolio III vs. II and Portfolio VI vs. V). The individual portfolio Sharpe ratios are as follows: Portfolio I (.65), Portfolio II (.86), Portfolio III (.95), Portfolio IV (.19), Portfolio V (.42), Portfolio VI (.51). The benefits of managed futures in diversified portfolios is further illustrated in Exhibit 3 in that when the Zurich CTA$ is added to a S&P 500, Lehman Brothers Bond index, as well as a S&P 500 and Lehman Brothers bond portfolio, increased risk adjusted investment opportunities exist.

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[1] Assets under management in CTA based publicly traded funds or private pools have remained in the range of $8 billion to $10 billion dollars over the period 1995 to 2001.

[2] The annual and monthly returns presented in their nominal form. Annualized standard deviations are derived by multiplying the monthly data by the square root of 12.

[3] Zurich Commodity Trading Advisor Universe and Managed Futures Pools and Fund Universe returns replace the Managed Accounts Reports (MAR) data used in previous studies. Zurich recently purchased the MAR CTA and Hedge Fund databases.

## Exhibit 2

Performance

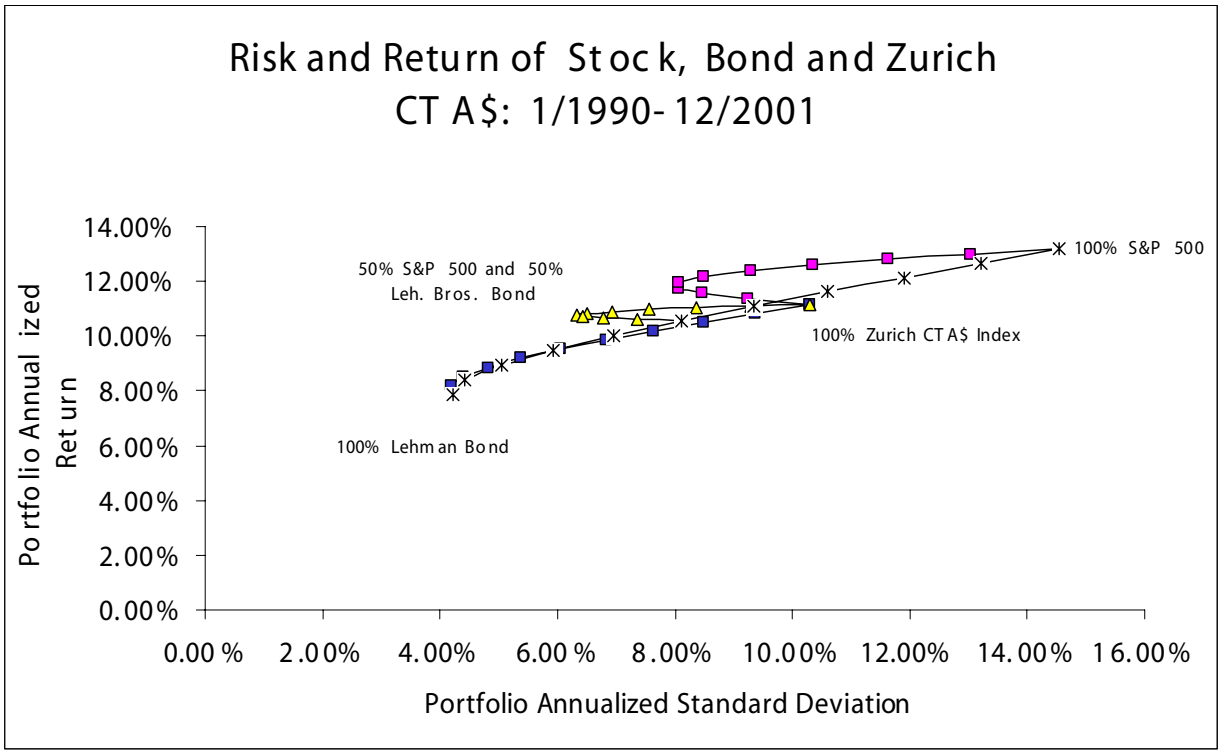
| January, 1990-December, 2001 | Zurich CTA$ | Zurich Fund of Funds Hedge Fund Universe | S&P 500 | Lehman Gov./Corp Bond | MSCI | Lehman Global Bond |
|---|---|---|---|---|---|---|
| Annualized Return | 11.2% | 13.8% | 12.9% | 8.1% | 6.5% | 6.9% |
| Annualized Stdev | 10.3% | 4.3% | 14.6% | 4.2% | 14.6% | 4.9% |
| Sharpe Ratio | 0.56 | 1.96 | 0.51 | 0.63 | 0.07 | 0.31 |
| Minimum Monthly Return | -6.0% | -4.5% | -14.5% | -2.5% | -13.4% | -3.0% |
| Correlation With Zurich CTA$ | | 0.22 | -0.10 | 0.27 | -0.12 | 0.19 |

| | Portfolio I S&P 500 & Lehman Bond | Portfolio II S&P 500, Lehman Bond and Zurich HF Fund of Funds | Portfolio III S&P 500, Lehman Bond Zurich HF Fund of Funds and CTA$ | Portfolio IV MSCI and Lehman Global Bond | Portfolio V MSCI, Lehman Global Bond and Zurich HF Fund of Funds | Portfolio VI MSCI, Lehman Global Bond Zurich HF Fund of Funds and CTA$ |
|---|---|---|---|---|---|---|
| Annualized Return | 10.71% | 11.37% | 11.42% | 6.98% | 8.37% | 8.72% |
| Annualized Stdev | 8.12% | 6.89% | 6.32% | 8.40% | 7.08% | 6.46% |
| Sharpe Ratio | 0.65 | 0.86 | 0.95 | 0.19 | 0.42 | 0.51 |
| Minimum Monthly Return | -6.25% | -5.89% | -4.77% | -5.63% | -5.39% | -4.32% |
| Correlation With Zurich CTA$ | -0.02 | 0.03 | | 0.04 | 0.01 | |

Portfolio I = 50% S&P 500 and 50% Lehman Brothers Gov./Corp. Bond
Portfolio II = 40% S&P 500, 40% Lehman Brothers Gov./Corp. Bond and 20% Zurich HF Fund of Funds
Portfolio III = 90% Portfolio II and 10% Zurich CTA$
Portfolio IV = 50% MSCI and 50% Lehman Brothers Global Bond
Portfolio V = 40% MSCI, 40% Lehman Brothers Global Bond and 20% Zurich HF Fund of Funds
Portfolio VI = 90% Portfolio V and 10% Zurich CTA$

Source: Zurich, Datastream

## Exhibit 3

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Alternative Risk/Return Opportunities

Exhibits 4 and 5 display the performance of the Zurich CTA$ and various Zurich CTA strategy-based subsets as well as their correlations with other CTA based investment strategies as well as with traditional assets. In general the correlation of CTA strategies with other CTA strategies is dependent on the degree to which the strategies are trend-based or discretionary. Since most CTAs utilize trendfollowing strategies, the overall dollar-weighted and equal weighted indices are also highly correlated with other CTA strategies dominated by trendfollowing indices.

On average the correlation of CTA indices, such as the Zurich CTA$ and various Zurich CTA strategy based subsets with traditional stock and bond indices, are often close to zero on average. While many managed futures programs are often negatively correlated with traditional assets in months when traditional asset returns are negative they are positively correlated with traditional assets when traditional asset returns are positive. For instance, as shown in Exhibit 6, for the period 1990 through 2001, the Zurich CTA$ is negatively correlated (-.33) with the S&P 500 when the S&P 500 posted its forty-eight worst months and yet is positively correlated (.08) when the S&P 500 reported its best forty-eight months. In contrast, as shown in Exhibits 6 and 7, other alternative investment strategies such as hedge funds which may have equity exposure (e.g., event driven or global established) have higher correlation with the equity market when the equity market is falling than when the equity market is rising.[4]

Exhibit 4

Correlation: Zurich CTA Universe Strategies (1990-2001)

| | Zurich CTA$ | Zurich CTAEQ | Zurich Currency | Zurich Discretionary | Zurich Diversified | Zurich Financial | Zurich Trendfollowing |
|---|---|---|---|---|---|---|---|
| CTA$ | 1.00 | | | | | | |
| CTAEQ | 0.92 | 1.00 | | | | | |
| Currency | 0.69 | 0.66 | 1.00 | | | | |
| Discretionary | 0.62 | 0.50 | 0.43 | 1.00 | | | |
| Diversified | 0.93 | 0.90 | 0.55 | 0.58 | 1.00 | | |
| Financial | 0.92 | 0.86 | 0.61 | 0.45 | 0.83 | 1.00 | |
| Trendfollowing | 0.96 | 0.94 | 0.68 | 0.49 | 0.92 | 0.93 | 1.00 |

Source: Zurich, Datastream

[4] In the Exhibits in this study, Zurich CTA and hedge fund universe returns are used. CTA$ is the dollar weighted CTA universe. CTAEQ is the equal weighted CTA universe. The additional CTA indices are segmented by CTA reporting strategy (e.g., currency, financial, diversified) or style (Discretionary, Trendfollowing). For hedge funds, Event Driven is the median of the reporting hedge funds grouped as distressed and risk arbitrage. The Zurich Fund of Funds is the median of reporting hedge fund of funds where capital allocated among a number of hedge funds. The Zurich Global Established are the median of the reporting global established managers who are primarily U.S. and Europe equity managers with a long bias who are more bottom-up-oriented in that they tend to be stock-pickers. The Zurich Market Neutral is the median reporting long/short stocks, convertible arbitrage, stock Index arbitrage, and fixed income arbitrage managers. It is important to note that the Zurich CTA and Hedge Fund universe returns used in this study are not the same as the Zurich Hedge Fund Indices which are designed specifically to track particular strategies which meet predefined criteria and which are, by design, more style pure.

Exhibit 5

Performance: Zurich CTA Universe Strategies and Traditional Assets (1990-12/2001)

| | Return | Stdev | Sharpe Ratio | Minimum Monthly | Correlation S&P 500 | Correlation Lehman Bond |
|---|---|---|---|---|---|---|
| Zurich CTA$ | 11.2% | 10.3% | 0.56 | -6.0% | -0.10 | 0.27 |
| Zurich CTAEQ | 9.9% | 9.9% | 0.45 | -5.4% | -0.14 | 0.20 |
| Zurich Currency | 10.1% | 12.8% | 0.36 | -8.2% | 0.01 | 0.14 |
| Zurich Discretionary | 12.6% | 7.0% | 1.03 | -4.6% | -0.06 | 0.18 |
| Zurich Diversified | 9.7% | 11.8% | 0.36 | -7.5% | -0.13 | 0.25 |
| Zurich Financial | 11.2% | 13.4% | 0.43 | -8.6% | -0.06 | 0.35 |
| Zurich Trendfollowing | 10.6% | 16.6% | 0.31 | -10.4% | -0.14 | 0.27 |
| S&P 500 | 12.9% | 14.6% | 0.51 | -14.5% | 1.00 | 0.28 |
| Leh.Bros. Gov./Corp | 8.1% | 4.2% | 0.63 | -2.5% | 0.28 | 1.00 |

Source: Zurich, Datastream

Exhibit 6

Correlations in Best and Worst Forty-Eight S&P 500 Ranked Months (1990-2001)

| | All S&P Months | Worst S&P 500 Forty-Eight Months | Best S&P 500 Forty-Eight Months |
|---|---|---|---|
| Managed Futures | | | |
| Zurich CTA$ | -0.10 | -0.33 | 0.08 |
| Zurich CTAEQ | -0.14 | -0.40 | 0.12 |
| Zurich Currency | 0.01 | 0.15 | 0.22 |
| Zurich Discretionary | -0.06 | -0.13 | -0.01 |
| Zurich Diversified | -0.13 | -0.46 | 0.06 |
| Zurich Financial | -0.06 | -0.34 | 0.13 |
| Zurich Trendfollowing | -0.14 | -0.42 | 0.12 |
| Hedge funds | | | |
| Zurich Event Driven Universe | 0.47 | 0.59 | -0.18 |
| Zurich Fund of Funds Universe | 0.52 | 0.55 | 0.04 |
| Zurich Global Established Universe | 0.78 | 0.66 | 0.29 |
| Zurich Market Neutral Universe | 0.30 | 0.45 | 0.12 |
| Traditional Assets | | | |
| Lehman Govt/Corp.Bond | 0.28 | -0.06 | 0.09 |

Source: Zurich, Datastream

Exhibit 8 indicates further that when S&P 500 returns are ranked from low to high and divided into four thirty-three month subperiods, managed futures offered the opportunity of obtaining positive returns in months in which the S&P 500 provided negative returns as well as in months in which the S&P 500 reported positive returns. In contrast, certain alternative investments such as equity based global established hedge funds had negative returns in just those months in which the S&P 500 performed poorly.

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Exhibit 7

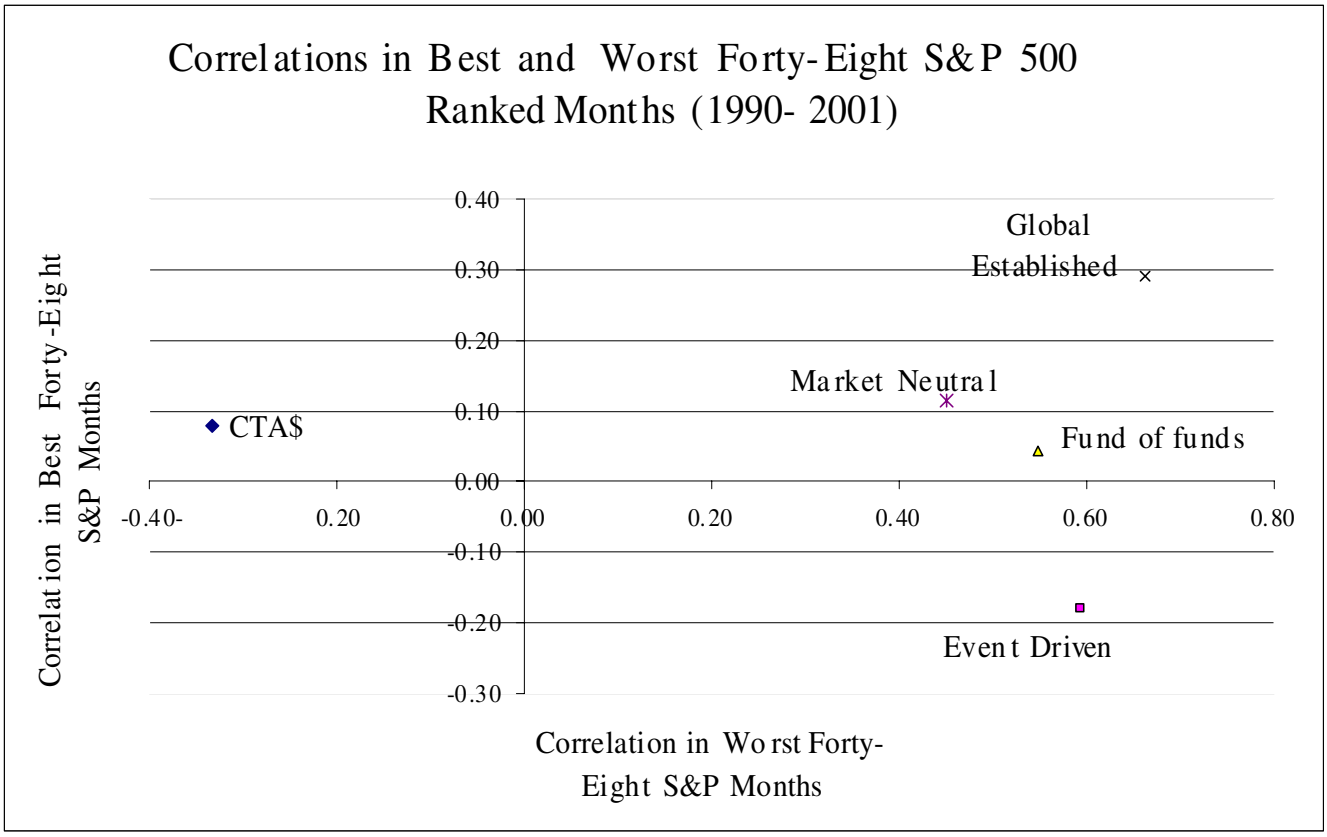


Exhibit 8

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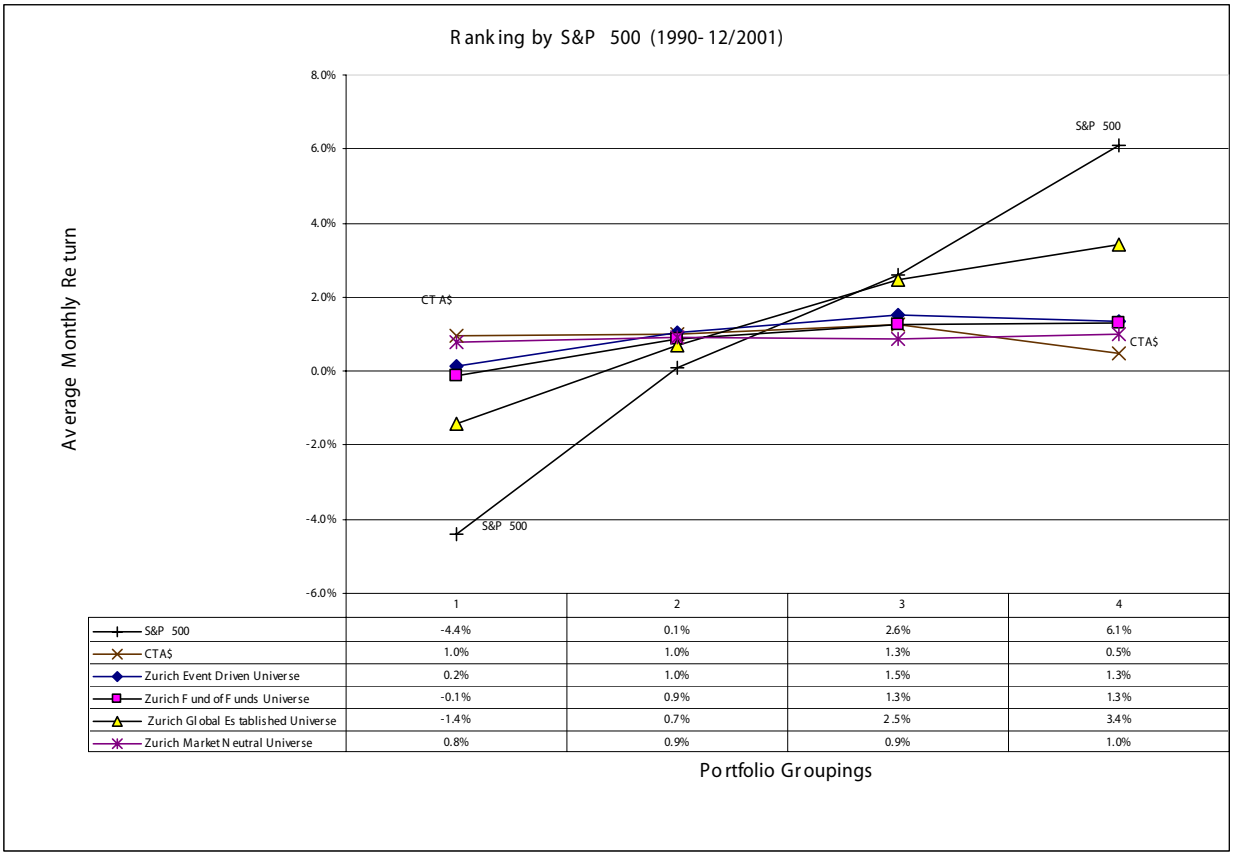


| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| S&P 500 | -4.4% | 0.1% | 2.6% | 6.1% |
| CTA$ | 1.0% | 1.0% | 1.3% | 0.5% |
| Zurich Event Driven Universe | 0.2% | 1.0% | 1.5% | 1.3% |
| Zurich Fund of Funds Universe | -0.1% | 0.9% | 1.3% | 1.3% |
| Zurich Global Established Universe | -1.4% | 0.7% | 2.5% | 3.4% |
| Zurich Market Neutral Universe | 0.8% | 0.9% | 0.9% | 1.0% |

Source: Zurich, Datastream

## Recent Performance

As shown in Exhibit 9, over the most recent five-year period (1997-2001), managed futures have continued to provide benefits as additions to existing stock and stock and stock/bond portfolios. It must be pointed out that over the past five years, the S&P 500 has generally outperformed managed futures as well as many other investment strategies. However, managed futures have had a significantly higher risk-adjusted performance over the last five years with a Sharpe ratio on the Zurich CTA$ of 0.85 versus 0.60 on the S&P 500.

Exhibit 9

Past performance is not indicative of future results. The risk of loss in futures trading can be substantial. An investor could lose more than the initial investment.

Performance

| January, 1997- December, 2001 | Zurich CTA$ | Zurich Fund of Funds Hedge Fund Universe | S&P 500 | Lehman Gov. /Corp Bond | MSCI | Lehman Global Bond |
|---|---|---|---|---|---|---|
| Annualized Return | 6.8% | 10.0% | 10.7% | 7.4% | 5.3% | 3.2% |
| Annualized Stdev | 7.9% | 5.3% | 17.9% | 3.8% | 16.3% | 5.0% |
| Sharpe Ratio | 0.85 | 1.90 | 0.60 | 1.95 | 0.33 | 0.64 |
| Minimum Monthly Return | -5.1% | -4.5% | -14.5% | -2.4% | -13.4% | -3.0% |
| Correlation With Zurich CTA$ | | 0.23 | -0.19 | 0.42 | -0.19 | 0.15 |

| | Portfolio I S&P 500 & Lehman Bond | Portfolio II S&P 500, Lehman Bond and Zuirch HF Fund of Funds | Portfolio III S&P 500, Lehman Bond Zurich HF Fund of Funds and CTA$ | Portfolio IV MSCland Lehman Global Bond | Portfolio V MSCI, Lehman Global Bond and Zuirch HF Fund of Funds | Portfolio VI MSCI, Lehman Global Bond Zurich HF Fund of Funds and CTA$ |
|---|---|---|---|---|---|---|
| Annualized Return | 9.5% | 9.6% | 9.4% | 4.7% | 5.8% | 5.9% |
| Annualized Stdev | 9.2% | 7.9% | 7.1% | 8.7% | 7.5% | 6.8% |
| Sharpe Ratio | 1.03 | 1.22 | 1.33 | 0.53 | 0.76 | 0.88 |
| Minimum Monthly Return | -6.3% | -5.9% | -4.8% | -5.6% | -5.4% | -4.3% |
| Correlation With Zurich CTA$ | -0.10 | -0.07 | | -0.13 | -0.10 | |

Portfolio I = 50% S&P 500 and 50% Lehman Brothers Gov./Corp. Bond
Portfolio II = 40% S&P 500, 40% Lehman Brothers Gov./Corp. Bond and 20% Zuirch HF Fund of Funds
Portfolio III = 90% Portfolio II and 10% Zurich CTA$
Portfolio IV = 50% MSCI and 50% Lehman Brothers Global Bond
Portfolio V = 40% MSCI, 40% Lehman Brothers Global Bond and 20% Zurich HF Fund of Funds
Portfolio VI = 90% Portfolio V and 10% Zurich CTA$
Source: Zurich, Datastream

## Differential Source of Returns to Manage Futures, Hedge Funds, and Traditional Assets

The real benefit to managed futures is if they provide sources of returns that are uniquely different from traditional stock or bonds or even hedge funds. For instance, hedge funds have been marketed as offering unique risk and return properties that are not easily available though traditional investment securities or investment products. These return opportunities stem from the expanded universe of securities available to trade and to the broader range of trading strategies.

One reason for the supposedly low correlation and potential diversification benefit is that hedge funds often describe themselves as employing skill-based investment strategies that do not explicitly attempt to track a particular index. Since their goal is to maximize long-term returns independently of a proscribed traditional stock and bond index, they emphasize absolute returns and not returns relative to a predetermined index. It is important to realize, however, that while hedge funds do not emphasize benchmark tracking this does not mean that their entire return is based solely on manager skill or is independent of the movement of underlying stock, bond, or currency markets. Hedge fund managers often track a particular investment strategy or investment opportunity. When appropriately grouped, these hedge fund strategies have been shown to be driven by the same common market factors such as changes in stock and bond returns or stock market volatility that drive traditional stock and bond market. For instance, in Exhibit 10, the performance of various hedge fund strategies is reported relative to stock and bond markets as well as other factors that have been shown in prior studies to explain returns (increase in risk – i.e., S&P 500 implied volatility). As expected, results show that equity bias hedge fund strategies (e.g., global established) have high correlation with the same factors as long- equity (e.g., S&P 500).

Exhibit 10

Past performance is not indicative of future results. The risk of loss in futures trading can be substantial. An investor could lose more than the initial investment.

Factor Correlations (1990-2001)

| | S&P 500 | Leh. Bros . Bond | Change in Credit Spread Moody's (Baa-Aaa) | Change in VIX |
|---|---|---|---|---|
| Managed Futures | | | | |
| Zurich CTA$ | -0.10 | 0.27 | -0.02 | 0.18 |
| Zurich CTAEQ | -0.14 | 0.20 | 0.10 | 0.20 |
| Zurich Currency | 0.01 | 0.14 | 0.01 | 0.04 |
| Zurich Discretionary | -0.06 | 0.18 | -0.07 | 0.11 |
| Zurich Diversified | -0.13 | 0.25 | -0.01 | 0.24 |
| Zurich Financial | -0.06 | 0.35 | -0.04 | 0.17 |
| Zurich Trendfollowing | -0.14 | 0.27 | 0.00 | 0.23 |
| Hedge funds | | | | |
| Zuirch Event Driven Univ. | 0.47 | 0.10 | -0.30 | -0.41 |
| Zurich HF FOF Univ. | 0.52 | 0.19 | -0.15 | -0.34 |
| Zuirch Global Est. Univ. | 0.78 | 0.17 | -0.26 | -0.47 |
| Zurich Mkt. Neutral Univ. | 0.30 | 0.11 | -0.21 | -0.11 |
| Traditional Assets | | | | |
| S&P 500 | 1.00 | 0.28 | -0.15 | -0.64 |
| Leh. Bros. Bond | 0.28 | 1.00 | -0.06 | -0.06 |

Change in Credit Spread is the change in the spread between Baa and Aaa yield indices. A positive (negative) value indicates an increased (decrease) in the returns of the strategy as the spread increases.

Change in VIX is the change in the VIX contract (e.g., implied volatility of the S&P 100). A positive (negative) value indicates an increased (decrease) in returns when the VIX (implied volatility) increases.

Source: Zurich, Datastream

In contrast, managed futures universe returns are not correlated with the stock and bond markets or changes in equity market volatility but track indices that reflect trendfollowing return patterns. As shown in Exhibit 11, certain managed futures strategies which are systematic and trendfollowng in nature are highly correlated with simple passive trendfollowing indices. In contrast, managed futures programs that are not trendfollowing in structure are not correlated with these trendfollowing indices, such that diversification across trendfollowing and non-trendfollowing strategies may offer diversification.[5]

Exhibit 11

Factor Correlations: Zurich Managed Futures (1996-2001)

| | S&P 500 | Leh. Bros. Bondnge in Credit Sp Moody's (Baa-Aa | Change in VIX | Trendfollowing Interest Rate | Trendfollowing Currency | Trendfollowing Stock | Trendfollowing Physicals |
|---|---|---|---|---|---|---|---|
| Zurich CTA$ | -0.07 | 0.48 | 0.02 | 0.15 | 0.58 | 0.54 | 0.28 | 0.22 |
| Zurich CTAEQ | -0.10 | 0.37 | 0.20 | 0.15 | 0.58 | 0.61 | 0.27 | 0.18 |
| Zurich Currency | 0.08 | 0.10 | 0.20 | -0.13 | 0.00 | 0.69 | -0.18 | -0.06 |
| Zurich Discretionary | 0.11 | 0.25 | -0.21 | -0.03 | 0.35 | 0.23 | 0.22 | 0.09 |
| Zurich Diversified | -0.13 | 0.45 | 0.00 | 0.23 | 0.58 | 0.44 | 0.40 | 0.32 |
| Zurich Systematic | -0.07 | 0.43 | 0.04 | 0.12 | 0.53 | 0.52 | 0.23 | 0.27 |
| Zurich Financial | -0.10 | 0.51 | 0.04 | 0.18 | 0.64 | 0.48 | 0.26 | 0.13 |
| Zurich Trendfollowing | -0.18 | 0.47 | 0.10 | 0.25 | 0.62 | 0.55 | 0.35 | 0.21 |
| S&P 500 | 1.00 | 0.06 | -0.07 | -0.68 | -0.07 | -0.14 | -0.23 | -0.23 |
| Leh. Bros. Bond | 0.06 | 1.00 | 0.06 | 0.08 | 0.48 | 0.13 | 0.28 | 0.12 |

* CTA returns are Zurich Universe Medians

** Trendfollowing Interest Rate, Currency, and Stock are Passive Systematic CTA Indices (See www.CISDM.org)

Source: Zurich, Datastream

Summary and Conclusion :

[5] See www.cisdm.org for data and description of trendfollowing indices.

Past performance is not indicative of future results. The risk of loss in futures trading can be substantial. An investor could lose more than the initial investment.

The results of this study provide important information to the investment community about the benefits of managed futures.

First, managed futures trade in markets which offer investors the same market integrity and safety as stock and bond markets. Managed futures investment, as for stocks and bonds, provide investors with the assurance that their investment managers work with a high degree of government oversight and self regulation and trade primarily in closely regulated markets.

Second, managed futures are not more risky than traditional equity investment. Investment in a single commodity trading advisor is shown to have risks and returns which are similar to investment in a single equity investment. Moreover, a portfolio of commodity trading advisors are also shown to have risks and returns which are similar to traditional equity portfolio investments.

Third, most traditional money managers (any many hedge fund managers) are restricted by regulation or convention to holding primarily long investment positions and from using actively traded futures and option contracts (which offer lower transaction costs and lower market impact costs than direct stock or bond investment). Thus, in contrast to most stock and bond investment vehicles, managed futures traders offer unique return opportunities which exist through trading a wide variety of global stock and bond futures and options market and through holding either long or short investment positions in different economic environments (e.g., arbitrage opportunities, rising and falling stock and bond markets, changing market volatility). As a result of these differing investment styles and investment opportunities, managed futures traders have the potential for a positive return even though futures and options markets in total provide a zero net gain among all market participants. Thus managed futures are shown on average to have a low return correlation with traditional stock and bond markets as well as many hedge fund strategies and to offer investors the potential for reduced portfolio risk and enhanced investment return. As important, for properly constructed portfolios, managed futures are also shown to offer unique downside risk control along with upside return potential.

Simply put, the logical extension of using investment managers with specialized knowledge of traditional markets to obtain maximum return/risk tradeoffs is to add specialized managers who can obtain the unique returns in market conditions and types of securities not generally available to traditional asset managers; that is, managed futures.

Selected References

Schneeweis, Thomas. "Dealing With Myths of Managed Futures," The Journal of Alternative Investments, (Summer, 1998), pp. 9-18.

Schneeweis, Thomas. The Benefits of Managed Futures. AIMA, 1996.

Schneeweis, Thomas and Joe Pescatore eds. The Handbook of Alternative Investment Strategies: An Investor's Guide. Institutional Investor, 1999.