



CTAs & Managed Futures

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Managed Futures funds provide attractive standalone performance, liquidity, low correlation to traditional asset classes and other strategies, and serve as a potential hedge against inflation. In 2008, they delivered on their promises. In this article, we explore critical aspects and prospects for the strategy.

Land ahead

We are in a fertile period for directional multi-asset class trading strategies. The financial shocks triggered in 2007 and 2008 set in motion major adjustments in the global economy. After a goldilocks period of synchronized global growth, we are now seeing diverging growth patterns and severe recessionary pressures in developed economies, varying inflation expectations over different horizons, bold and untested central bank actions and unprecedented fiscal

stimulus packages. These have created opportunities across all asset classes. One can reasonably expect that the political phalanx currently arrayed against the global economic downturn will likely be effective in resolving global imbalances. The measures implemented will create significant macroeconomic trading opportunities and set long-term trends in place, while the uncertainty in execution and the timing of results, and the scope for missteps along the way, will keep markets volatile.

Managed futures funds listen to the market and pay careful attention to fluctuations in volatility and at times crowding and sentiment, allowing them to participate in such opportunities without getting ahead of the market (it's better to be late than early) and without the behavioural risks associated with a discretionary thesis-oriented investment process. This served them especially well in 2008, a year that presented considerable investment challenges such as irrational behaviour by market participants, unpredictable political intervention, waves of deleveraging and disinvestment, swings in investor sentiment, and the difficulty in assessing fundamentals entering uncharted territory.

Insightful discretionary managers with compelling macro-economic theses that were subsequently proven correct were negatively affected by these challenges. Having now adapted their strategies to these environment risks, they are expected to perform exceedingly well in 2009.

Wind in the sails

Managed Futures funds have long been appreciated for their standalone performance, liquidity, effectiveness in diversification, attractive low correlation to traditional asset classes and other strategies, and as a potential hedge against inflation. Investment managers are constantly looking forward, even if their statistical models look back at historical market data. Significant investments are made in talent and infrastructure to drive the research and development of new trading, portfolio and risk strategies. Maintaining robustness in performance over varying market cycles and volatility regimes, and managing correlation shifts due to increasingly connected markets and rapidly shifting investment flows are some of the risks that make research a difficult but rewarding process.

The industry has successfully capitalized on the trading opportunities in 2008 and has been one of few bright spots in the alternative investments universe. According to Credit Suisse/Tremont Hedge Fund Index estimates,¹ Managed Futures (+18.23%) and Dedicated Short Bias (+13.87%) were the only strategies to post positive returns in 2008. Short-biased equity funds, despite being hampered by government interventions in short-selling, were obvious winners, given that global equity markets were down between -30% and -75%.

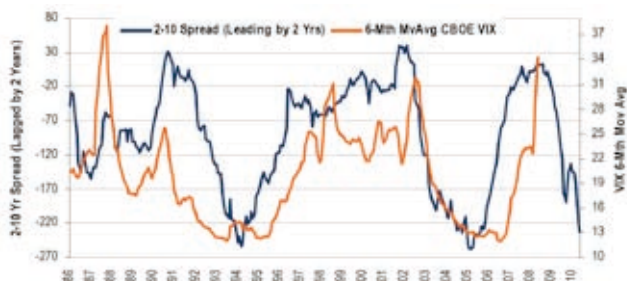
The success of Managed Futures funds is a strong validation of their strategy. It reflects the advantage of systematically removing human emotion from trading decisions and incorporating stop-loss concepts that provide explicit control over return path outcomes. Profits delivered from a broad set of return drivers under extremely volatile markets demonstrate the efficacy of the trading rules, portfolio construction, risk management mechanisms and portfolio diversification properties of the strategy.

Pitch and roll

Volatility is a key driver for Managed Future returns, especially for the increasing number of short-term and

high frequency models. Some market participants believe that volatility should settle lower as markets become more efficient. Viewed through the lens of continuous-time finance, financial engineering, and growing legions of perfectly rational, fully informed and sophisticated investors constantly engaged in discovering fair value, markets should be less likely to be in an extended state of disequilibrium. Relative-value portfolios, especially in fixed-income arbitrage, constructed with this view were characteristically short volatility. Volatility did settle lower, or rather collapsed, between 2004 and mid 2007, with traders wondering about a permanent regime shift. Some argue that volatility was depressed in that period by the surge in structuring and the exponential growth of credit default swaps that allowed, for example, large equity portfolios to be overlaid with CDS hedges rather than being rebalanced. The return of historically normal levels of volatility in 2007 coincided with the sudden and violent implosion of structured products. In some markets, levels have reached historical extremes over recent months. The outlook for volatility in 2009 is therefore an important consideration for the near-term prospects of Managed Futures funds. High volatility is said to burn out investors after which levels can normally be expected to collapse, but these are not normal times. Merrill Lynch forecasts financial market volatility to peak sometime during 2009. In late 2007, the historical relationship between monetary policy and financial market volatility (Figure 1) suggested an increase in financial market volatility during 2008 and this relationship now suggests that volatility might peak sometime in the second quarter of 2009, although the research also contends that the increased scope for policy mistakes should cushion the decline in asset volatility.²

Figure 1 | CBOE VIX and Inverted Slope of Yield Curve



Source: Merrill Lynch US Quantitative Strategy

¹ Credit Suisse/Tremont Hedge Fund Index estimates with 74% of funds reporting, Finalternatives.com

² Merrill Lynch, RIC-Monthly Investment Overview, December 2008, pg 9.

Diversification is the keel

The most valuable contribution of Managed Futures to investors is in periods when other strategies are not performing well and market volatility is high. A surge in volatility is characteristically unfavourable to traditional asset class portfolios and adversely affects the return potential of many hedge fund strategies. In 2008, traditional and diversified hedge fund portfolios suffered as volatility, and the volatility of volatility, remained high.

As global equity markets are expected to remain weak and volatility is forecast to remain elevated, institutional investors have been adjusting allocations to Managed Futures to provide the appropriate level of portfolio protection. With improving risk-adjusted returns over time, and stellar performance in the past eighteen months of crisis, investor confidence is higher than ever.

Newedge research finds that S&P500 returns are negatively correlated with S&P500 price volatility, and Managed Futures returns are largely unrelated to overall S&P500 price volatility, but that the correlation is slightly positive when stock volatility is normal or low (stocks are doing well), and negative when stock price volatility is high (stocks are not doing well).³ The case can be generalized by the finding that S&P500 price volatility may be the most important source of market volatility globally. This underscores the portfolio protection against market volatility that Managed Futures funds provide.

In constructing portfolios of Managed Futures funds, the use of correlations as an organizing principle is compelling, especially given the statistical nature of the design and management of the programs. This approach is supported by the fact that correlations between funds have been found to be quite stable and portfolio correlation estimates are fairly accurate especially if the true correlation of the funds is low. Portfolios constructed with this approach to maximize diversification are seen to outperform those with an emphasis on risk-adjusted performance alone.⁴

King Solomon's advice on diversification was to «Divide your portion to seven, even eight, for you do not know what misfortune may occur on the earth». ⁵ The number of markets traded in Managed Futures programs is far larger, often between 80 and 120. Models are generally not specific to a particular market or sector but rather designed to have a statistical edge in trading the dynamics of market prices. The

more markets a model trades, the larger the opportunity set for the model to generate profit. Consequently, new markets must be carefully tested to confirm the model's edge as well as satisfy all portfolio and risk constraints. The selection of new markets for a trading program depends on many factors such as the models' expected return contribution, correlation benefits to the program, position limits determined to be prudent, breadth of investor participation and assets deployed by similar strategies, and the risks assumed when markets dry up or become increasingly correlated. Milk (CME), Rough Rice (CBOT), Palladium (TOCOM) and the Indian Nifty Index (SGX) are examples of new contracts being considered by established programs.

Two straits, one less travelled

Short-term trading programs are a relatively new and growing segment of the industry, although a few pioneering managers have been around since the mid 90s. Funds employ a variety of methodologies including momentum, mean reversion, pattern recognition, fundamental, econometric, statistical arbitrage, and relative-value option strategies. Volatility increases trading opportunities and liquidity is necessary to protect alpha from slippage. The use of multiple models in diverse markets over timeframes ranging from seconds to a few days creates an astronomically large set of trading opportunities.

There are several implementation challenges that are compounded by the high-frequency nature of the strategy. Some of these challenges relate to data acquisition, modelling and software development, low latency execution infrastructure, algorithmic trading engines, dynamic portfolio optimization and risk management, and back-office efficiency. Consequently, there are high barriers to entry, and these can be made higher by accumulating sufficient technology, systematic trading experience and actual transaction cost data.

Figure 2 | Performance of Newedge momentum models in 2008



Source: Newedge

³ Newedge, «How stock price volatility affects stock returns and CTA returns», August 2008.

⁴ Newedge, «Superstars versus teamwork», May 2007.

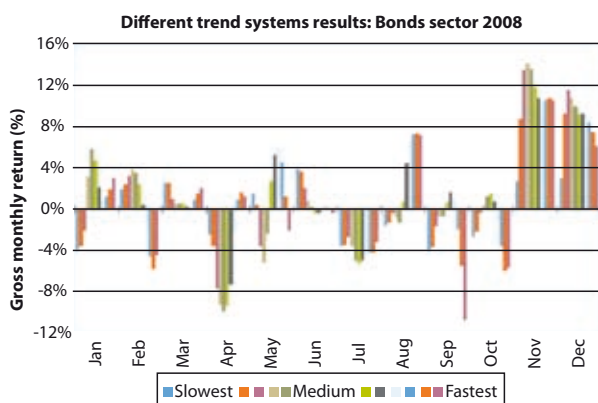
⁵ Ecclesiastes 11:2

Short-term trading funds are uncorrelated to all traditional asset classes and hedge fund strategies including other systematic strategies. While funds within a style and strategy often exhibit moderate to high correlation to each other, short-term managers are even uncorrelated to each other.

Systematic trend following models with a medium to long-term horizon still dominate the Managed Futures industry. The most common trend following systems are «moving average crossover» and «range breakout». The relationship of the current or a recent history of the market price to a longer history of the market price determines the start or end of a trend. There is believed to be little difference between trend following models with similar timescales, and small variations in day assumptions of range periods or fast/slow averages do not have a material impact on results. But, there can be substantial differences in trading results for models of different timescales. Newedge publishes the performance of a set of generic momentum models⁷ trading a static diversified portfolio of 39 markets. We see a fairly similar pattern of performance for faster and slower models between January and August 2008 (Figure 2), but the faster models generate substantially higher and more volatile returns after the dramatic increase in volatility after August.

Figure 3 shows the performance of a set of trend following systems with different time horizons in trading global bond futures in 2008.⁷ These systems are also generic with no portfolio and risk management overlays – hence the large size of some of the returns. There is quite a lot of variability in most months, and even in the universally positive months there is a large range of performance across the different time horizons.

Figure 3 | Performance of trend systems with different time horizon



Source: Aspect Capital

Managers differentiate themselves through optimal timescale diversification in their model set, and in the myriad of details

⁶ Newedge, «What you should expect from trend following», July 2004
⁷ Aspect Capital

in data management, portfolio construction and risk management, more than the trading rules at the heart of the system.

Depth and transparency

Managed Futures is one of the most customizable, liquid and transparent strategies in the alternative investments universe. Investment managers offer a range of funds or share classes to allow for independent or blended strategies, varying leverage or volatility targets, and varying liquidity terms. With some, one can negotiate separate accounts that can be customized for leverage, strategies employed, individual markets traded, and counterparty arrangements. Managers report exposures, performance and attribution on a frequent basis that multi-manager investors can feed into extensive portfolio and performance reporting tools.

Liquidity terms for Managed Futures funds and managed accounts are very attractive and generally range from daily to monthly. Liquidity and transparency, while always desirable, were often marginal differentiating factors in the eyes of investors in hedge funds. In 2008, the negative dynamics created by scarce financing, deleveraging, falling asset prices and pre-emptive investor withdrawals resulted in a liquidity crisis for hedge funds. This required fund managers to take extraordinary business measures, such as gating and suspending redemptions, to protect their firms and the disparate interests of their investors. As a result, Managed Futures funds saw fourth quarter redemptions from investors despite strong performance and an excellent outlook for the strategy. BarclayHedge reported outflows of USD17.5b in November alone. Given the liquidity of the underlying investments, fund managers comfortably handled these outflows and fulfilled their commitment to investors when it really counted.

Capacity below deck

The industry has enjoyed steady growth in recent years and currently manages around USD220b according to various industry sources. The investment management reputation of funds has also steadily improved, especially in the institutional investor segment. Of the 375 funds tracked in the Newedge Nelson Report, 25 funds manage over USD1b and 2 funds over USD10b.

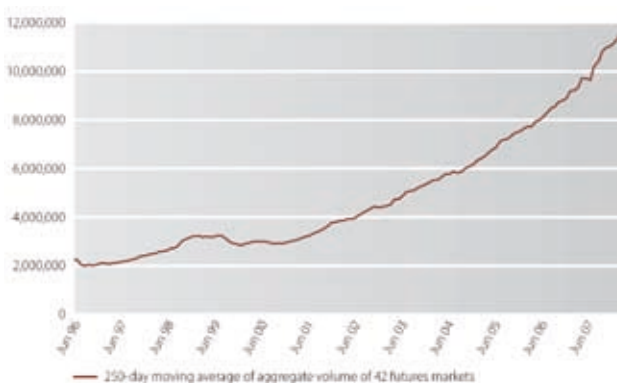
Long-term systems risk sharper trend reversals as larger amounts of capital driven by somewhat similar signals rush for the exits in the same contract markets. This is addressed statically or dynamically through portfolio construction and risk management. Position sizes can be adapted to changes

in liquidity, correlations between markets, and the impact of volatility on exposures required to generate the target level of return. This ensures the appropriate amount of capital is at risk in each market. In addition, it is conceivable that risk indicators for market sentiment and crowded investment flows could allow a program to safely head for the exit, but in practice it is exceedingly difficult to implement these robustly.

Short-term systems face the risk of recurring slippage costs for trading larger order sizes as assets grow. It is the size of the program itself and not other competing programs that is the enemy of its performance. Managers must continually analyze their position sizing, order stream, execution latency and transaction costs. Given the higher frequency of trading, a program that does not have a strong grip on costs will consistently underperform and suffer what is described as a death of a thousand cuts.

The major factors that support larger program capacity are: increased volumes observed in futures markets, improved market access, and greater diversification through new model timescales and markets. In early 2008, the volume traded in futures had tripled since 2000 and doubled since 2004 when the majority of volumes rolled over to screen-based trading allowing orders to be executed with greater ease. Although volumes were lower in many markets in 2008, trade sizes were also lower as a function of volatility. Electronic trading has improved access dramatically, and funds have developed algorithmic trading platforms to take advantage of this and dramatically reduce slippage.

Figure 4 | Increase in liquidity in futures markets



Source: Boronia Capital

Commodities aboard

Managed Futures funds have always been active in commodity markets, and they are still, anachronistically, called Commodity Trading Advisors. Commodities markets tend to be less liquid than financial markets. As smaller commodities limit trading

capacity, managers may decrease the weight of commodities in their portfolios as they expand their program assets. These markets are again playing a growing role in trading strategies. In the first half of 2008, the sustained rise in food, energy and metals driven by strong fundamentals contributed handsomely to profits. The reversal of the crowded long energy & materials versus short financials trade created a temporary setback. However, systematic trend programs soon reversed positions and profited from the continued downtrend in energies, agriculturals and metals driven by deleveraging and the demand destruction caused by the global downturn. These lower prices will reinforce the longer-term fundamentals of inadequate supply sowing the seeds of another commodity boom, which will also be very favourable for systematic trend programs.

Rising commodity prices in 2008 were met with social and political consternation. The market pressure created by buy-and-hold investors that do not contribute to price discovery was hotly debated. These can be expected to resurface more strongly in the next commodity boom. The linkage between energy and food markets has added to uncertainty in both markets, and the percolating awareness of the environmental and social impact of the production and consumption of energy and food may embroil these markets in wider protection movements.

We suggest that Managed Futures portfolios should have a prudent balance in exposures to and contributions from commodity markets, as with other asset classes, producing attractive risk-adjusted returns that are not dominated over meaningful horizons by any one asset class.

Dropping anchor

Managed Futures enjoy the benefit of the most liquid global markets, favourable market volatility, the absence of counterparty risk and the availability of relatively stable leverage in direct contrast to other hedge fund strategies in the current environment. The combination of performance and a broader and deeper asset base has put the wind in their sails as managers guide their programs into another year that promises to provide excellent opportunities. The prolonged dislocations and the continued negative momentum created by waves of forced deleveraging suggest a high potential for returns. As demonstrated during previous market downturns, Managed Futures funds benefit from significant trends and volatility and provide more effective diversification than other hedge fund strategies to improve portfolio risk-adjusted returns. Maintaining diversification is absolutely essential and Managed Futures has historically provided the best diversification when investors really need it.

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