

# Understanding Managed Futures

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## Introduction

Managed futures have proven their strengths as an investment since the first funds were launched in the early 1970s. For over more than 30 years, they have shown their ability to generate returns from investing in futures and options contracts, going both long and short on the full range of commodity, currency and financial markets. This means they can generate positive returns regardless of whether mainstream financial markets are rising or falling. Consequently, they have great appeal to investors wishing to diversify their equity market exposure.

Futures markets have been in existence since the mid-17th century, when US grain producers used them to buy protection against adverse price movements. In the 1970s, foreign exchange and interest rate futures emerged, followed in the early 1980s by stock index futures. Now, there is a huge range of futures and options contracts, traded in large volumes both on exchanges and over the counter worldwide.

The managed futures industry has grown substantially in recent years. Figures from the Barclay Group show assets management by the industry rose from USD 310 million in 1980 to USD 206 billion at 31 December 2008. That is a compound annual growth rate of 26.1%.

There are two broad investment approaches – systematic trend-following and discretionary. The former, which is mostly computer-driven and relies on technical analysis, accounts for (by far) the majority of the sector by value. By contrast, discretionary trading relies on personal experience and judgment to drive trading decisions. Fundamental data is used to assess markets, with technical analysis employed to refine timing.

## Proven benefits over time

Over time, futures funds have demonstrated the following attractive performance characteristics<sup>1</sup>:

- Similar levels of percentage return to equity markets
- Low or negative correlations to equity markets
- Ability to profit in rising and falling markets

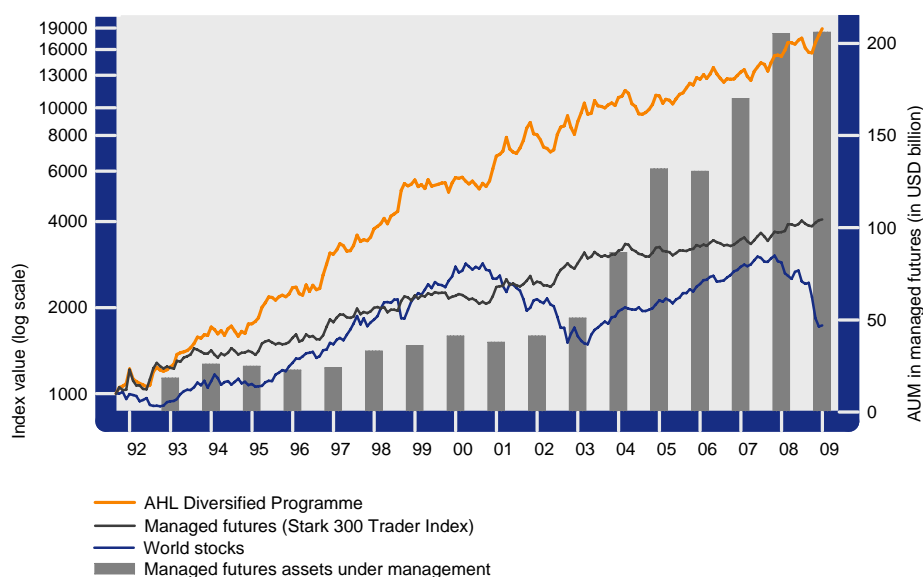
These three features have made managed futures highly attractive vehicles for investment portfolios seeking to diversify their sources of return. In particular, the lack of correlation with equity markets means that adding managed futures to a traditional investment portfolio can enhance returns while reducing risk.

While many of the large, successful systematic managed futures funds have generated relatively similar performance, across the industry as a whole there is a wide disparity in the quality of returns. This is best demonstrated by wide variations in risk-adjusted return measures such as the Sharpe ratio<sup>2</sup>.

Among systematic trend-following managers, the most successful tend to be those that continually enhance their trading models, risk control systems and trading platforms.

### Managed futures vs. World stocks and bonds

From 31 August 1991 to 31 December 2008<sup>3</sup>



<sup>1</sup> See performance section.

<sup>2</sup> The Sharpe ratio is calculated by dividing annualised returns in excess of the risk-free rate by standard deviation - the higher the number the better.

<sup>3</sup> AHL Diversified programme: represented by the actual track record for Athena Guaranteed Futures Limited (prior to 1 October 1997, actual trading results have been adjusted to reflect the current guaranteed public fee structure). World Stocks: MSCI World Index hedged to USD (price return), World bonds: Citigroup WGBI World Index hedged to USD (total return). Managed Futures: Stark 300 Trader Index.

# Investment approach

## Identifying trends across diverse markets

### *Markets experience persistent anomalies in the form of price trends*

The majority of managed futures funds employ computer-driven quantitative investment processes. These programmes tend to be primarily directional in nature, seeking to identify and take advantage of both upward and downward price trends across a wide range of markets.

In recent years, a number of managers have sought to achieve even greater diversification by introducing non-directional, market-neutral type trading strategies alongside their main trend-following programmes. Additionally, managers are investing across a wider range of markets as growing liquidity makes it possible to do so. Examples of new markets include credit derivatives as well as emerging market stock indices, bonds and currencies; instruments such as swaps and exchange traded funds (ETFs) have further enhanced the opportunity set.

In time, this would suggest that the correlation between different managed futures funds should diminish. As yet, however, there is little discernible evidence of this.

## Trend-following in greater detail

### *Trend-following funds diversify positions across a broad range of markets and strategies*

The basic premise on which these funds trade is that markets experience persistent price trends. These trends can be explained by various factors, such as crowd behaviour or differing levels of information among market participants. Although they vary in intensity, frequency and duration they can be seen across all sectors and markets. Analysing past price activity should, therefore, provide statistical insights into future price movements.

Trend-following systems are driven by powerful computerised processes that sample prices in real-time and measure price momentum and break-outs. Investment rules are executed within a systematic framework in which a position is taken once a trend is identified and exited when signals indicate a high likelihood of a different trend developing. Managers typically diversify their positions across a broad range of sectors, markets and instruments. Additional diversification is achieved by combining various systems that look for trends over multiple time frames, ranging from two to three days to several months. The blending of these models, sectors, markets and instruments helps to reduce risk and widen the scope of returns.

## Portfolio construction and risk management

### *Parametric measures of risk monitoring are often supplemented with stress testing*

Managed futures funds will generally seek to optimise returns for a given level of risk and often deploy a degree of leverage through margin trading. As a result, stringent risk management is critical to long-term performance. At the core of this is the principle of diversification, which may be enhanced by giving priority to positions with low correlations to one another.

Portfolios are typically built from the bottom-up, with volatility of individual markets, correlations between markets, expected returns, market access costs and liquidity the main inputs into the process. The result is a diversified portfolio that is designed to maximise expected return for a given level of risk.

Trade execution is important, particularly for high-volume systematic managers, in order to avoid price slippage – the spread between the price at which an opportunity is identified and that at which the trade is executed. Market volume and liquidity are crucial factors, as are trading techniques, which may be continually refined. The emergence of electronic trading in recent years has rapidly reduced the time to execution and the price of individual trades, which has helped managers trade smaller margin opportunities and thereby increased industry capacity.

In order to achieve the best prices, it is imperative for managers to have a highly developed trading infrastructure, including a large network of brokers, skilled traders and the ability to make the best use of electronic trading platforms. Additionally, trading the full range of global markets requires a dedicated team of traders is on hand 24 hours a day, with the requisite technical support. As a result, managed futures trading is increasingly become a scale industry, with significant barriers to entry for new players.

## Performance

### An attractive mix of returns, risk and low correlation

*Parametric measures of risk monitoring are often supplemented with stress testing*

Historic performance illustrates the benefits of managed futures funds. Over time, both average industry returns and volatility have been comparable to world equity markets. Yet the correlation between managed futures and equities has been low, making futures funds a valuable form of diversification for broad investment portfolios.

In the period from 31 August 1991 to 31 December 2008, the Stark 300 Trader Index of managed futures funds rose 306.4%, compared to a gain of 73.2% for the MSCI World Index hedged to USD. Annualised volatility, meanwhile, has been 10.7% for the Stark index and 13.8% for the MSCI. But correlation between the two has actually been negative at -0.08.

#### From 31 August 1991 to 31 December 2008<sup>3</sup>

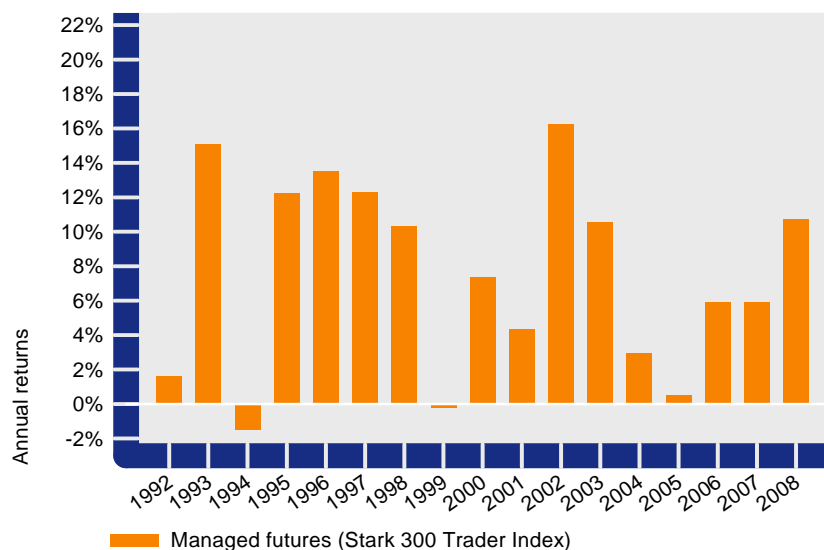
	AHL Diversified Programme	World stocks	Managed futures
Annualised return	18.5%	3.2%	8.41%
Annualised volatility	16.6%	13.8%	10.7%
Correlation	1.00	-0.15	0.82

The performance of managed futures varies from year to year and depends on how well markets are trending. They tend to perform well when there are long, sustained trends – either up or down. They do not perform so well when markets are range-bound or when trends suddenly reverse.

For example, the Stark Traders Index rose 16.2% in 2002 at a time when world stocks were taking a pummeling. The MSCI World Stocks hedged to USD lost 25.8% that year in the aftermath of September 11. In 1993, Stark rose 15.1% as the world stocks index gained 17.5%. By contrast, in 2004, the Stark index rose just 2.9%. There were few notable trends in the year, with currencies in particular providing scant opportunity.

## Annual returns for managed futures

1 January 2002 to 31 December 2008



## Diversification when markets fall

### *Opportunity for strong performance during market dislocations*

At times of economic or market distress, managed futures have provided valuable diversification. For example, during the equity bear market of 1 April 2000 to 31 March 2003, world stocks, as measured by the MSCI World Index hedged to USD, fell by 47.8%. Over the same period, the Stark index climbed a substantial 36.7%, capturing strong trends in currency, bond and energy markets.

During the market panic caused by the 1998 Russian debt crisis and Long-Term Capital Management collapse, managed futures were similarly valuable. Between 1 August 1998 and 30 September 1998, world stocks fell 14.2% and the Stark index rose 12.1%.

The low correlation between managed futures and other types of hedge funds also adds to their strength as a source of diversification. For example, over the period from 1 January 1990 to 31 December 2008, the Stark index had a correlation of -0.01 with the HFRI Equity Hedge Index. The table below shows the correlation of managed futures to a variety of hedge fund styles.

## Correlation of Stark 300 Trader Index to other hedge fund styles

1 January 1990 to December 2008

	Stark 300
HFRI Fund of Fund Index	0.21
HFRI Relative Value Index	- 0.12
HFRI Equity Hedge Index	- 0.01
HFRI Macro Index	0.36
HFRI Event Driven Index	- 0.09

## Differentiating between managed futures funds

### *Low correlation with other hedge fund styles*

Performance data shows that there is a considerable disparity in the quality of managed futures funds' performances. While some managed futures funds have attractive returns per unit of risk, others do not. This is best illustrated by measures such as the Sharpe and Sortino ratios<sup>4</sup>. By way of example, the AHL Diversified Programme has produced a Sharpe ratio of 0.86 and a Sortino ratio of 1.58 between 31 August 1991 and 31 December 2008. Meanwhile, the industry average, as represented by the Stark 300 index, has a Sharpe ratio of just 0.41 and a Sortino ratio of 0.73.

<sup>4</sup> The Sortino ratio is a ratio of annualised returns to downside standard deviation - the higher the number the better.

## About the author

Rupert Bruce is a principal of The Clerkenwell Consultancy, a London-based media services company he founded that has been providing writing and publishing services to financial institutions and large companies since 1999. Rupert previously had a career in financial journalism. He was co-founder and editor of Global Fund Analysis, the hedge fund research periodical. Before that, he was an investment writer with the International Herald Tribune, a capital markets reporter with Institutional Investor magazine and a business reporter with The Independent newspaper.

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