Commodity Trading Advisors
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The market for managed futures accounts has grown tremendously. According to BarclaysHedge, assets under management in managed futures accounts grew from $0.31bn in 1980 to $320 billion as of the third quarter of 2011.

In this section we provide an overview of managed futures strategies and commodity trading advisors (CTAs). We define what CTA funds are; how CTAs achieve their investment objectives; the potential benefits of their strategies; and their potential pitfalls.

Exploring the CTA Market

Generally speaking, a CTA fund is a hedge fund that uses futures contracts to achieve its investment objective. CTA fund managers run different strategies using futures contracts, options on futures contracts, and FX forwards.

Advances in technology and the global integration of financial markets have opened up new opportunities in futures trading. CTAs were initially commodity-focused but they now invest across all futures markets, e.g. commodities, equities and currencies. Majority (roughly 2/3) of CTAs are systematic traders or trend followers with the mandate to go long and short and to use leverage.

Systematic strategies make use of computer programmes to interpret data and generate trades. These strategies attempt to capture large directional moves across diversified portfolios of markets. Trend followers also tend to be diversified across time frames. Discretionary strategies rely on a manager’s ability to exploit chart patterns or to predict global supply/demand imbalances from fundamental data.

According to BarclaysHedge, systematic trading is the most commonly employed strategy within the CTA universe, representing $269.33 billion in AUM. In contrast, discretionary traders managed $27.57 billion as of the third quarter of 2011.

As a simple example, a CTA would, for instance, go long a futures contract each month if the trailing 12-month return is above cash returns and go short if the trailing 12-month return is below cash returns. In reality, CTAs use far more complex strategies, adding multiple layers of indicators, including forward-looking signals, to determine whether to go long or short.

Trend following strategies are also referred to as momentum strategies as they are based on the assumption that indices that have performed well over the recent past will continue to perform well in the near future. Hence, this strategy relies on backward-looking signals rather than forecasts of the future. Jegadeesh-Titman (1993) showed that relative winners tend to continue as relative winners up to one year whereas recent relative losers tend to continue their losing streaks. This phenomenon is called the momentum.

Historical Data

Historically, CTAs have demonstrated some appealing characteristics relative to traditional asset classes such as equities and bonds.

In our example we use the Morningstar Diversified Futures Index as our proxy for CTAs’ performance. This index is a fully collateralised futures index, following pre-defined rules. As the table below demonstrates, CTAs experienced low to negative correlations to traditional asset classes and commodities over the last 10 years.
Most CTA managers are not just taking on systemic exposure to an asset class, or beta, but rather try to add alpha through active management. This freedom to go short or enter spread positions enables managed futures to achieve totally different return profiles compared to long-only passive indices. Despite the fact that managed futures strategies’ returns have historically tended to be uncorrelated to traditional asset classes, correlations are non-stationary over the short-term and may temporarily converge during market turmoil.

The next graph reveals very interesting return characteristics amongst CTAs. Over the time period in question, managed futures have delivered exceptional returns during bear markets in equities (2000-2002 & 2008) and have underperformed equity markets during bull runs (1997-1999, 2003-2007 & 2009-2010). Some managed futures managers try to exploit sustained capital cash flows across asset classes, which usually occur when markets move back into equilibrium after prolonged imbalances. Other managers bet on volatility and choppy price action typically accompanying these cash flows. Also, some managers generate their returns independent of the current state of the economy or prevailing level of volatility. This can in part explain why managed futures strategies have often outperformed long-only investments during market dislocations and macro events.

As the below table indicates, managed futures delivered superior cumulative returns, in particular as compared to stocks and commodities over the last two decades.

As we can see, trend following CTAs have exhibited attractive risk/return characteristics compared to other asset classes over the past two decades. However, the CTA proxy we’ve used here is a rules-based futures index; there are no management fees embedded in the index’s calculation. If we account for fees, which can reach 4-5% of assets under management, we can assume that the returns would decline commensurately.

The performance of discretionary traders is difficult to evaluate based on available historical data as the relevant indices suffer from a series of biases. It is therefore not possible to create a rules-based index to measure the performance of discretionary managers like the one we used to assess systematic strategies.

Moreover, as mentioned earlier, discretionary trading relies on the manager’s ability to effectively exploit chart patterns or divine global supply/demand imbalances from fundamental data and as such differ from trend followers. Hence, investors are ultimately betting on the manager’s skills to identify these patterns and imbalances. However, research has shown that very few, if any, active managers are able to consistently deliver alpha after fees. Nevertheless, to get some indication of the performance of discretionary CTA’s, we compare the Morningstar MSCI Discretionary Trading Index with the Morningstar Diversified Futures Index. As we can see in the table, the discretionary index underperformed the strategic index by 80bps per annum over the last 15 years but exhibited much lower volatility. However, it is difficult assign a true meaning to this number given the issues inherent in the construction of discretionary trading indices.

The ability of discretionary traders to trade in a completely opportunistic fashion often means that their returns are uncorrelated to those of trend followers and other investment strategies, e.g. hedge funds or passive long-only commodity indices. A study from the CISDM Research Department in 2006 showed that discretionary CTA’s and systematic CTA’s have a relatively low correlation with each other, implying the potential benefits of combining the two approaches in a combined CTA portfolio.
Commodity Trading Advisors (CTA)

**Drawbacks of CTAs**

As mentioned, CTAs have some drawbacks investors should be aware of, especially when it comes to analysing historical performance data and evaluating potential investments.

One of the biggest flaws in hedge fund indices stems from the fact that most listed hedge funds are not publicly traded and there is no official pricing, making valuation difficult. Because the reporting of performance data by CTAs is entirely voluntary, the relevant indices and any analysis of the performance of these strategies exhibit a series of biases:

- Selection bias results from the strategic reporting decision of these funds. Poorly performing funds might choose not to report to a database. Funds seeking to attract new investors are more likely to report whereas large successful funds might stop reporting as additional investors are required or even desired.

- The look-back bias is associated with the ex-post data withholding after a fund had previously reported its performance. For instance, funds might not report performance data prior to liquidation because of poor results. Moreover, funds may delay reporting poor performance data. More importantly, funds have the ability to remove their entire performance history on an ex-post basis.

- Survivorship bias stems from the fact that funds will disappear from the database once they are liquidated. Therefore, the index only tracks live funds. As the surviving funds have outperformed their peers, this leads to a positive bias.

- The backfill bias occurs when newly listed funds are permitted to submit performance history at the time of first reporting to the database. Again, this will lead to a positive bias as managers are more likely to report good performance. According to a study from the Yale International Center For Finance (Yale ICF), the average number of backfilled months of performance reported by CTAs is 43. The Yale ICF showed that the average CTA did not add any value for investors between 1994 and 2007. Even though the average bias-adjusted CTA return exceeded T-Bills by more than 5% per annum during this time frame—before fees—the average CTA beat T-Bills by a meagre 85bps with equity like volatility when adjusted for fees. The same study shows that the average standard deviation of an individual CTA fund is about double the standard deviation of an equally weighted CTA index, suggesting diversification benefits stem from holding a portfolio of CTAs. The study concludes that CTAs are able to deliver alpha, but only before fees are accounted for.

**Summary**

CTAs are perhaps most suitable for use as a diversifier within a well-balanced portfolio. Given the complexity of the strategies, it is not suitable for most retail investors. As mentioned earlier, managed futures have delivered exceptional returns during bear markets. However, Ramsey and Kins suggested in their 2004 paper that despite their resilience in tumultuous markets, managed futures strategies are not suitable as a portfolio hedge, but should rather be viewed as a source of non-correlated returns.

Exogenous events like the failed Russian coup in the 1990s or September 11 are prime examples where managed futures have not proven an effective hedge as they experienced losses alongside other asset classes. Much like stocks and bonds, CTAs are vulnerable to rapid reversals or the sudden onset of volatility. Despite some of the flaws, managed futures strategies have some merits. Many academics agree that
Commodity Trading Advisors (CTA) managed futures, in particular trend following strategies, have produced returns that are uncorrelated to traditional asset classes. Therefore, these strategies could serve as a good diversifier in a well-balanced portfolio.