CTAs Focus On R&D Awaiting Trend Breakout

Strategy in doldrums after stellar 2008 performance

BILL McINTOSH

During the past two years managed futures strategies have enjoyed the best of times and the worst of times. In 2008, commodity trading advisors (CTAs) were the toast of hedge fund investors for providing 20%-plus returns as the failure of Lehman Brothers ignited the credit crunch and a sharp correction in global equities markets. The diversification of CTA strategies and the ample liquidity of the main markets they traded proved a winning combination at a time when virtually all other strategies – notably with the exception of short-biased and some macro funds – suffered big drawdowns.

In some ways, 2008 marked the conclusion of a golden age for managed futures. The strategy had performed well, generating robust returns every year since 2004. This strong run coincided with the overall boom in hedge funds which saw sufficiently large inflows to double industry-wide assets under management to over $2 trillion. During this period of rapid growth CTAs became a smaller portion of the hedge fund sector (see Fig.1) even though some managers – notably London's Winton Capital, Quantitative Investment Management in the US and Netherlands-based Transtrend – attracted substantial new allocations. At the same time, Man Group's AHL flagship continued to be comfortably the biggest managed futures fund with AUM rising to over $20 billion.

In the aftermath of 2008, however, CTAs lost momentum. The record historical rebound in equities and gains for short rates and energy from March 2009 were offset by downturns in foreign exchange, bonds and metals. Just as many hedge fund strategies had suffered from crude beta exposure, just months later they rode the market rocket to end 2009 in a far healthier position. CTAs, however, recorded drawdowns. The size of the sector to the overall hedge fund segment was steady at around 15% of industry AUM in early 2009 as investors continued to allocate to CTAs despite the drawdown. Against this backdrop, *The Hedge Fund Journal* undertook an evaluation of the managed futures sector. Through interviews with mangers, investors and analysts we have endeavoured to assess the significance of the current drawdown, how and when it might expire, as well as how the CTA sector continues to evolve.

Harding's perspective

David Harding, the founder of Winton Capital and before that a co-founder of AHL, offers a clear perspective on operating managed futures strategies. That's a factor of 25 years experience and his firm's undeniable success with institutional investors – Winton now manages $13 billion. Harding recalls that in the run-up to the end of the millennium many investors had written off CTAs.

"Things were very bleak in the late 1990s," he says. "In 1999, stocks were going up 40% a year and had been going up for years. People didn't want to invest in something that made 15% a year in a risky fashion when stocks were rising 20% a year with no risk! CTAs were very unpopular then."

How does the late 1990s compare to now? "I don't think people will give up as quickly now," Harding says. "There is a longer history, more institutional money and lower competition." The message is that allocations to CTAs are more resilient at least for successful funds. "CTAs are now part of the hedge fund universe. And the hedge fund universe has $1.7 trillion and CTAs are a percentage of that. So if hedge fund investors decide not to do CTAs it will go down from, say, 15% to 11% (of the universe) or something like that."

Perhaps the scariest scenario for any managed futures manager is the realisation that a strategy may bear the hallmarks of the trading environment and market conditions in which it emerged. In theory, this means that any strategy could have a built-in sell-by date or an engineered obsolescence. In this scenario, a CTA might need to completely alter its model because market conditions had changed so radically from the conditions when the strategy was created.

Harding accepts this notion but with caveats and offers a simple solution. "I've always believed that what CTAs do wouldn't work as well in the future as it has in the past," he says. "Therefore it is very, very important to try to improve it and do research. That's always been what I've believed and I've not changed my belief. So far, have events proven me right? Not necessarily. But I don't think events have proved me wrong. What has happened is that trend following has carried on working much longer and much better than you might have anticipated 20 years ago or 10 years ago. You can make of that what you will."

Time and again, CTAs say that research and diversification into new markets are central to optimising performance, especially during periods when the amount of capital chasing returns is increasing. "There has to be a continual source of new discovery," Harding says. For its part, Winton has launched new research-driven business thrusts into equities and high frequency trading. "If you just stand still, then you wouldn't expect the model to stop working, but it would work less well." Asked for an example of applied research, he cites improved methods of volatility estimation as a key innovation that came out of a particular market event, in this case, the 1988 corn bull market. "Everybody has benefitted from that," Harding says. "That's an example of intellectual property. It's portable. It travels from firm to firm."

Investing in systems

More recently, CTAs have invested heavily in systems to lower the cost of trade execution, minimise their market footprint and streamline processing. BlueTrend, the systematic trading arm of BlueCrest Capital Management, has almost doubled its research team to 31 staff. "We have entered a new phase of our technology and one of the key aims is to streamline what we call the model path to production," Leda Braga, Head of Systematic Trading at BlueCrest, told a recent call for investors in the $400 million BlueTrend UCITS Fund which sits within the firm's $9 billion systematic strategies group. "We want the technology to allow us to be more agile."

As one of the most profitable hedge funds, BlueCrest has an ample research pipeline. It has developed a transaction cost control system that is designed to be particularly effective with metals where trading costs are high. Another product of the systematic research team's efforts is forecasting and portfolio construction improvements. "We have achieved significant profit improvements around the updating of our proprietary alpha forecasting system," Braga told investors. "These improvements consist of (an) updated algorithm for capital construction and integrated with it a regular portfolio review process that performs very efficiently and benefits from new software tools." A third area of research saw new contracts added in short rates, energies and equities, including India's Nifty 50 and the Thai Set 50 indexes. BlueCrest is also making improvements in FX trading and the use of currency indices, while investigating possible uses of non-price data to both enrich BlueTrend and apply to new macro strategies.

Beach offers discretionary experience

At Beach Horizon LLP, co-founder and veteran trader David Beach brings discretionery experience to his research role which is combined with systematic experience from the other team members who began their careers at AHL in London. Beach Horizon has typically invested 60% in commodities and 10% in stocks with rates, currencies and other instruments providing additional diversification.

The approach of Beach Horizon is that research can never provide all of the answers and that it falls to fund managers to make the final call, which draws on the team's diverse experience and skill. For example, in a recent FX portfolio research project, the team decided to include some exotic currencies even though there wasn't the same amount of data in comparison to other FX markets. Paul Netherwood, a co-founder and the firm's head of research, says this is an example of a discretionary decision backed up with quantitative research. Beach's approach to trend following is to break down the price signal into its different frequencies.

Frequency analysis shows investors influence on the market by investing at different time horizons where it manifests itself as trending activity in short, medium and long-term actions. Since prices are fractal in their nature, the system tries to identify what the dominant frequencies are and gauge trend, strength and direction from that dominant frequency using digital signal processing technology.

The method performed well for investors with Beach Horizon up 60% in 2008 – more than double the returns of the managed futures sub-index of the Credit Suisse Tremont Index – and down just 4.6% in 2009. Netherwood attributes the out performance to capturing the commodity price movements at the beginning of 2008. "Most CTAs did well at the end of the year (2008)," he says. "But Beach was up 30% by the end of February due to its exposure to commodities," he adds, citing the fund's timing in shifting portfolio allocations.

Significant drawdowns

But the strong performance of CTAs in 2008 has given way to a statistically significant period of drawdowns for managed futures funds generally. The drawdown of Man Group's AHL Diversified, the sector leader with AUM of over $20 billion, was 15% to 29th March 2010 having begun to trend lower on 29th December 2008. That 65 week drawdown isn't a record but it is closing in on the longest ever 76 week drawdown that bottomed with a decline of 18.7% during the period of 12th January 2004 to 27th June 2005. Though both of these drawdowns are considerably longer than the next most recent one from November 2001 to August 2002, it is during this shorter period of trending lower that AHL suffered its greatest negative performance of 22%.

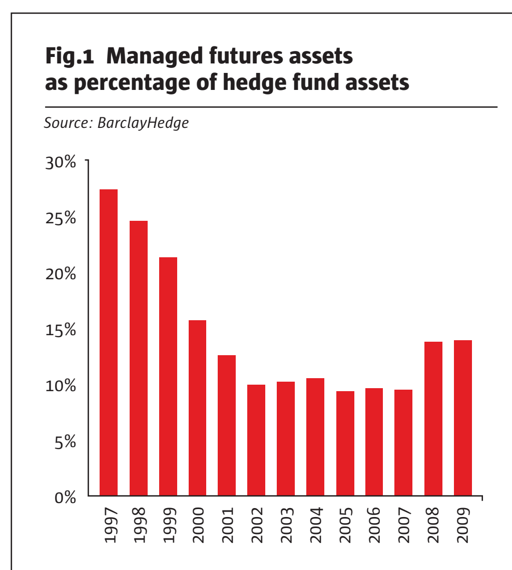
Michael de Groot, a client portfolio manager at AHL, blames the current drawdown on an acute lack of trends across a number of markets, but in particular, bonds and currencies. It is possible, however, that a turn around is in the offing with AHL Diversified gaining 2.2% for 2010 to 29th March, including a rise of 5.4% from 23rd February to 29th March.

Discussing historic market conditions, Beach's Netherwood describes 2008 as being like two years rolled into one, adding that 2009 was, in effect, like a six month period stretched out for a year. Obviously the periodic nature of market cycles is unpredictable. As cycles in markets come and go CTAs can pick up on them, but if prices enter a trend-less period then CTAs may flounder. "If 2008 was a year for capturing directional moves, 2009 was a year for reducing and managing risk, and keeping the gains made in 2008," he says.

Other CTAs echo the view that the 2009-drawdown, while major, is still within historical reference points. "We did a huge amount of forensic analysis of this drawdown," says Anthony Todd, CEO of Aspect Capital. "It was challenging for us, but it was within statistical expectation." Like AHL and Winton, Aspect's investment strategy is designed to capture medium term market trends ranging from a few weeks to several months.

Fig.1 Managed futures assets as percentage of hedge fund assets

Source: BarclayHedge



Adapting to markets

As market volumes grow, trading velocity increases and the interrelationship of different market instruments become more complex. CTAs have proven adept at adapting to these changes. With high frequency and algorithmic trading expected to double in volume by 2012 to 45% of all transactions the need to keep up with rapid technological change won't dissipate. "In my view, managed futures strategies have been adapting their trading approach more than other types of strategies to changes in markets," says Aureliano Gentilini, Global Head of Hedge Fund Research at Thomson Reuters unit Lipper. "They have tried to use quantitative methods that are more sophisticated than in the past. Certainly research in managed futures has become more and more relevant as many more managers have been implementing automated trades." Even fundamentally-driven managers, he notes, are looking to embed some systematic trading into portfolio management. Further evidence that CTAs are proving popular with investors, according to TASS data, is that they are attracting inflows despite their recent weak performance.

"The reason for (positive inflows) is that CTA managers are more transparent and offer better liquidity," Gentilini says. "And the fact that they are historically uncorrelated across the main markets is appealing to asset allocators. Investment risk, liquidity risk and counterparty risk are important variables where CTA funds have an advantage and it will help them gain much more space in hedge fund portfolios." The strength of CTAs in these areas is also likely to be attractive to institutional investors who may be drawn to redirect some fund of funds or multi-strategy allocations to managed futures managers.

Quantitative hits stride

Perhaps the fasting growth CTA over the past decade has been Quantitative Investment Management based in Charlottesville, Virginia. Launched in 2001 by SocGen trading veteran Jaffray Woodriff and Michael Geismar, QIM since 2006 has ramped up AUM from $150 million to around $5.1 billion (including $500 million in an equity product). It makes QIM the biggest CTA in the US supplanting Campbell & Co., which held the title for some years, but has now slipped back to managing around $3 billion.

QIM represents a new breed of CTA turning over its trading book very quickly. At QIM, the average holding period for a trade is seven days – compared to, say, around four to eight weeks with medium term trend followers – though some trades can last just 24 hours. QIM's annualised performance is around 16% and it, too, is in a drawdown. However, the negative performance only began in October 2009 and has resulted in a drawdown of just 9.3%.

Though shorter-term CTAs offer investors another source of diversification from their longer-term CTA peers, the former can be more sensitive to other players in the market. "If other traders were doing the types of trade we are doing we would have problems because the trades would be crowded," says Geismar. "Innovation and improving the models may be more important for us than for medium and long term trend followers." QIM has an unusual wrinkle to its approach: more of its risk budget is allocated to stock index futures than to other futures sectors. Despite the drawdown at QIM now running for over six months, its Global programme still made a return of 11% for 2009 as stock index futures returned 16% through September.

"Liquidity is one of the most important things to us," says Geismar. "Our models predict the most liquid markets the best. We are hopeful we will see more volatility in the market. The VIX (in early April) is at 17 and more volatility would benefit our model."

Short term trends

Another short-term futures manager is New York-based Systematic Alpha, which manages over $500 million. The 11-person research team headed by the founder and portfolio manager Alexei Chekhlov is

doing exhaustive statistical testing at the shorter time-separation periods between two price-changes to identify where mean reversion regime crosses-over into the trend-following regime. The trading frequency of the firm's flagship fund varies from a few minutes to a couple of days. The aim is to capture short-term over reactions in the market prices. The rapid trading frequency means the fund can offer complete transparency. "Because our positions change every few hours we are not afraid of revealing them," says Chekhlov. "We can give someone our positions in detail because in eight hours on average they will be significantly different." The strategy is up 0.82% through March in 2010 in the single leverage version and +1.82% in the 2X version, while the single leverage product gained 5.74% in 2009 (12.5% in the 2X product) and 16.78% in 2008 (46.06% in the 2X product).

The model's key focus is the property of price mean reversion and it applies a consistently contrarian approach to returns generation. "We are prepared for the over-reactions in markets," says Chekhlov. "If the markets excessively over-react we will capture these price movements. This way of thinking is unusual but it allowed us to produce the properties of returns that people have come to ask for. Our strategies try to exploit the herding and over-betting in the markets. Not everybody believes that this exists and not everyone is a believer in the diligent quant approach."

A new product tapping investor demand for managed futures through an off shore and exchange traded fund is the QBasis Managed Futures Fund. It soared 145% in 2008 but lost 16% in 2009. The fund is divided 70% between a break out trend following strategy with 30% following a swing/reversal strategy that tries to capture profits in sideways market movements and/or trend reversals. The ETF, which has daily liquidity, works as a feeder to the main fund, but doesn't put any constraints on markets, liquidity or leverage. "Our biggest difference is we are in the markets 95% of the time," says co-founder Philipp Polzl. "We roll from long to short," he says, noting that most managed futures programmes go flat first. "Qbasis tries to go short rather than wait for the trend to emerge."

The next trend

The philosophy of trend followers is that a model may suffer drawdowns but eventually it will generate returns. The current drawdown is one of the longest CTAs have ever seen so it is unlikely to continue for, say, another 12 months. "From a pure statistical perspective I don't expect this to last very much longer," says Beach partner Netherwood.

But for the models to work, trends have to emerge that can be exploited. The ideal environment for a trend follower is a transition from one economic environment to another since this can have a ripple effect across a variety of futures markets from rates to currencies to commodities. In recent months, Greece has created some interesting directional movement in currencies as has quantitative easing. On one view, quantitative easing is potentially storing up a bevy of trouble that, in theory, would end in extreme directionality with high inflation. CTAs would expect to generate good returns in such an environment.

"My general feeling is that the managers are more positive now than last year," says Lipper's Gentilini. "They see macro-driven fundamental trends being more and more relevant this year. This could make for some interesting developments in 2010."

At BlueCrest, the main exposures of the systematic funds at the end of January were dominated by fixed income with some positions in energy. Braga told investors that the margin to equity was relatively high at 16%. "Typically we are pleased when the margin to equity is high," she said. "The system will gear up and gear down in response to opportunities – so margin to equity implies that at a bottom up level the system is finding trend signals. It is finding opportunities and putting the position on."

Braga explained that what controls the margin to equity of the system is how much conviction it has got on the signals that it receives. The position on rates, for example, will be a function of the price action, volatility and other variables. Given that rates have been near 0 for a considerable period, a big hike would be expected to lead to a large increase in volatility. In turn, the system would respond with a decrease in position intensity. "We are contemplating a difficult price action," Braga told investors. "A big reversal (on rates contract prices) will mean some lost profits but that's what makes the programme what it is. Interfering has other effects that we don't like or subscribe to."

Inflation versus deflation

At Aspect, Anthony Todd also expects strong trends to emerge but is ambivalent about what they might actually be. "We are at an interesting juncture," he says. "There are very divergent views about the path of the global economy over the coming one to three years: inflation versus deflation. One of the advantages of having a systematic approach is that we don't make forecasts. The forces and dislocations we see mean strong themes will emerge that will drive crowd behaviour and result in momentum in markets. I'm very confident we can tap this for our clients."

Time and again, however, CTA managers return to the theme that research drives what they do and portfolio performance. Indeed, the bigger the fund in terms of AUM the more crucial new research becomes. AHL's de Groot, a client portfolio manager who works alongside the fund's research teams developing portfolios and trading models, notes that the fund doesn't have an outlook for markets. "The main focus of the research is to refine existing models and come up with new ones," he says. "We are looking to get trades with an improved Sharpe ratio. We are targeting a certain level of risk and we want to generate a return for that. So we target volatility rather than returns. We are constantly reviewing new markets to increase diversity and have liquid returns."

AHL, Winton and BlueCrest have expanded research efforts dramatically in recent years as management and performance fees have swollen profits. Yet smaller firms, less financially able to compete in the PhD arms race, still focus substantial resources on research. A successful European example of this approach is Altis Partners, based in Jersey. It launched in 2001 with just over $1 million but now manages around $1.5 billion in the wake of several years of strong performance including a 56.9% return in 2008.

"With R&D it is not necessary quantity that is important, it is quality," says Zbigniew Hermaszewski, one of four Altis co-founders and co-Head of Research & Technology. "Thinking hard about the questions you ask before you ask them is the key to research," he says. For his part, Hermaszewski has studied the mid-2008 reversal in energy markets. "It led us to look into these sharp turnarounds and how to capture them better," he says. "These turning points are very difficult to predict. If the market is moving in one direction there is often a general consensus that it will continue. The speed of the turnaround (in the portfolio) is critical. If you make it too quickly you can fall victim to a re-emergence of the trend. If you make it slowly you are subject to a sustained drawdown. There are things we learn to adapt the models. We aim to distinguish between a genuine change of direction and a chimera. It is difficult, but you can get it right over time."

The unprecedented upheaval in markets since 2007 has led Hermaszewski to asses what he calls market coherence. This led to the development of a new portfolio technique to handle risk. "We've always looked for general effects rather than specific effects to trade on," he says. "Our position in the euro, for example, is a result of its general movement rather than a function of issues like sovereign debt that are of concern at the moment. You can see models working in different environments and we would expect them to carry on working in the future. If a model is too specific it may suffer in a different environment and not work over time." **THFJ**