Spotlight: Beach Horizon

The founders of the London-based CTA on enhancing their trend-following strategy with pattern recognition

BY MATT SMITH

When in 2006, David Beach closed the Beach Capital Management program he had run successfully for 17 years and returned more than $1bn of assets to investors, some mistook it as him quitting the industry.

But he has been fully active in the years since, building a successor systematic firm as CIO and senior partner of Beach Horizon.

October marks a milestone for the London-based manager, which 12 months ago fully implemented an automated version of Beach's pattern recognition strategy alongside other enhancements to its existing trend-following program.

It was the culmination of years of research and after a challenging period for managed futures, Beach Horizon is among the top performers as the sector emerges from its recession.

An 8.7% gain for its flagship program in September was its best monthly return since December 2010, advancing its YTD gain to 22.3% with a 12-month rolling return of 25.0%, according to performance databases.

Having a pattern approach as well as all the other aspects of our research make us more bullet proof

Automating patterns

Beach Horizon was set up in 2004 by David Beach, Sanjeev Lakhanpal and Paul Netherwood. Lakhanpal and Netherwood had previously worked together at AHL in the early 90s, while the founding trio of Michael Adam, David Harding and Martin Lueck were still at the helm.

Beach had hired Lakhanpal in 2000 from CA Investment Advisers to work as a senior trader at Beach Capital, which he founded in 1998. Netherwood came on board in 2001 from a software risk firm to build the Horizon model.

The Beach Horizon program began development in 2001, from ideas for a trend-based fund, and was paper-traded for nearly three years inside Beach Capital before it launched in May 2005.

In 2006, when Beach closed the Beach Capital fund at an all-time high, the firm's operations, IT, research and well-developed infrastructure were transferred to Beach Horizon.

Beach Horizon has always put research and strategy evolution at the core of what it does, aiming to increase an understanding of markets and trading system behaviour and feed this back into the strategy through enhanced models.

But the latest innovations are perhaps the most significant in Beach Horizon's history.

In many ways for Beach, it is a conclusion of a project he started over a decade ago – to automate his pattern recognition methodology.

He started trading using pattern recognition in 1989 while working at Sabre Fund Management, one of the UK's first CTAs, whose alumni also included AHL's Harding.

Beach continued to develop and trade the pattern concept when he later setup his own program and firm – Beach Capital, which itself has spawned a number of successful CTA managers.

While called the Discretionary Program, Beach says the discretionary element was concerned with specific market behaviour, whereas the underlying pattern methodology was rule-based and focused on identifying directionality.

"It was an all-consuming process, continuously watching up to 120 markets from Sunday night to Friday night. We were competing with companies with significantly more resources, but we were still able to generate strong performance. However this was exhausting. Eventually I'd had enough of trading almost 24 hours a day," explains Beach.

The fund generated an average annualised return of 20% between 1989 and 2006 with only one, small, down year.

Beach says frustration at a lack of progress of a long-running project to computerise the pattern method, which by 2006 was still not "anywhere near being ready", led to the decision to retire the fund.

Freed from the constant demands of fund management, Beach and the team at Beach Horizon were able to focus on automating the pattern recognition program.

A milestone in research was reached when they were finally able to incorporate pattern recognition into the Beach Horizon portfolio.

"It's very pleasing not having to leave all my pattern work, and put it to good use," says Beach, who adds that the firm has a database of more than 20,000 instances of the defined patterns, some stretching back to the 1950s, to draw upon.

"It's difficult to communicate how much of an achievement it is," says Netherwood, a PhD in computer science spanning machine vision, pattern recognition, digital signal processing and artificial intelligence.

"Although the patterns were rigorously defined, the process still involved visual recognition that is difficult to implement reliably with a machine. Variations in scale, location and shape create a potentially unlimited number of decisions which had to be codified."

Pattern recognition is now combined with Beach Horizon's digital signal processing (DSP) trend-following methodology.

DSP, which identifies cycles in markets, leverages off a large body of scientific and engineering knowledge for the analysis of signal data.

The blend of DSP, a linear approach, with the non-linear style of patterns, benefits the program during range-bound markets and at points of inflexion and is particularly well suited to poor market conditions for traditional trend-following, Netherwood says.

Lakhanpal, a former a head of trading at AHL, explains: "When you get abrupt market changes, in the past the systems had a cyclical response to what was going on, which was somewhat lagged. The patterns give our model a more trader-style response, but with an advantageous statistical risk-reward associated with taking an action at that point."

Beach adds the when markets are trending its "relatively easy".

"It's when the markets are more difficult that you really have to focus on doing things differently to avoid giving back too much money," he says.

"It's about making yourself as bullet proof as you can be. You can't avoid drawdowns, but you can try to minimise their length and severity. Having a pattern approach as well as all the other aspects of our research make us more bullet proof."

While Beach Horizon has stayed true to its fundamental tenets of diversification, a meaningful exposure to commodities and a trend-capture approach, a number of other enhancements were scaled into the program through 2013.

Commodities have long offered strong diversification attributes to the Beach Horizon portfolio and that kind of behaviour was very persistent for more than 20 years, explains Lakhanpal.

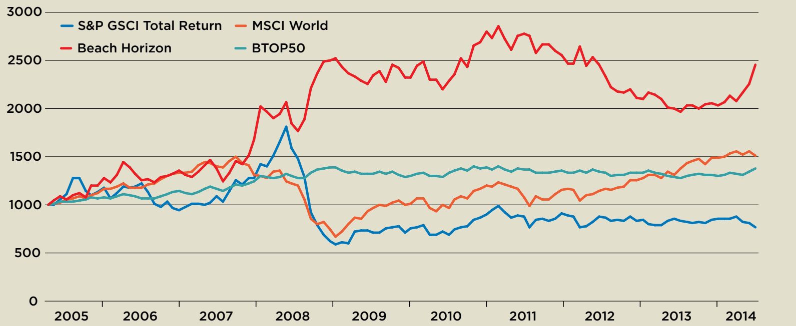
This changed following the 2008 crisis, when all markets, including commodities, became more correlated, driven by macro-economic events. This persisted for a much longer period than prior transient events, Lakhanpal adds.

"At first it didn't impact what we were doing as we had various adjustment criteria," he says.

But it soon became an area to reinvestigate. "It's one of our aims to constantly question assumptions. Correlations and their persistence were changing so that was something we were going to study."

The research resulted in an enhancement to

GROWTH OF $1,000 IN BEACH HORIZON



Source: S&P, MSCI, BarclayHedge, IASG

Beach Horizon's portfolio-weighting methodology.

Netherwood says the aim now is to be more adaptive and more dynamic in finding markets that are much better diversifiers in a portfolio, for a given market environment.

We want diversification, but some markets are better at providing return and diversification at certain times than others. Those are the ones we're trying to seek out

"We want diversification, but some markets are better at providing return and diversification at certain times than others. Those are the ones we're trying to seek out," he says.

Lakhanpal frames it as a risk jigsaw puzzle. "You can't just follow every runaway trending market and control your risk.

"It's about including influences into the portfolio that allows you to combine them so that you're controlling risk in a manageable way."

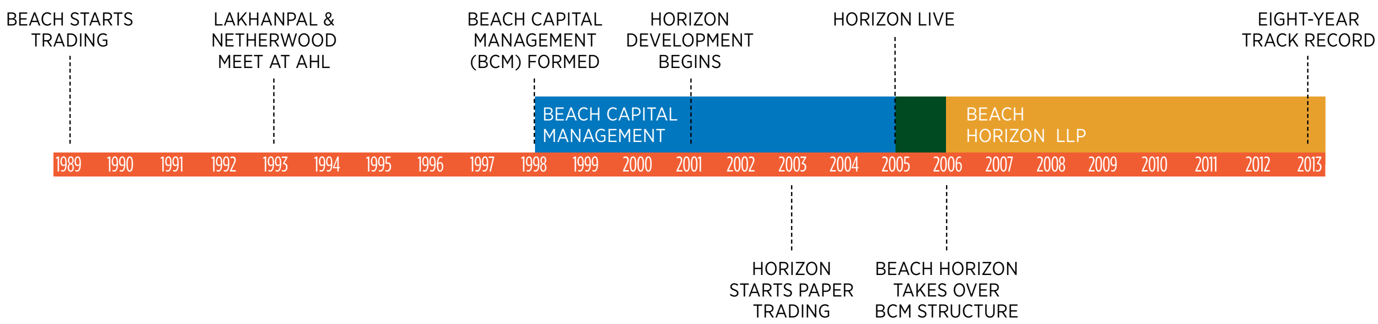
The strategy risk is still designed to target a long term 15% annualised volatility, but the changes to the program have reduced the average holding period from 60 to 45 days, as well as its correlation to the Newedge Trend Index, which has dropped from about 0.8 to 0.4 over the past 12 months.

More significantly, there has been no correlation to the Newedge Trend Index during down days over the same period.

The number of markets traded has also been expanded from 94 to 125 – not counting distinct contract months.

While reticent to put figures on how the new system compares to the old, "as no one believes back tests", Lakhanpal says it has "fundamentally changed the downside risk profile of the strategy".

EXPANDING HORIZONS



Better downside protection

The Beach Horizon Program returned double digit returns in the first three years of trading and then made a 64% gain in 2008.

Assets were rolling in, peaking at nearly $1bn in AuM by mid-2012. But the inflows came just as performance dipped, in line with many peers, and Beach Horizon was hit by the asset withdrawal from the sector that has coincided with rocket-fuelled returns for equities, pumped up by QE.

On reflection, Lakhanpal says the difficult period for the industry may be a benefit in the long run as post-crisis conditions have been incorporated into data sets, and have influenced the direction of research. "Our research has shown us that with better techniques and better technology there were trading returns and trends to be had in that period. What was needed was better downside protection, which our new research gives us."

He believes negative press about the performance of managed futures and assets leaving the sector has sometimes overshadowed the fact that investors are still allocating, that innovation and research is still taking place, and hundreds of billions of dollars remain under management.

Beach Horizon today, with firm assets of $80m and a long-standing team of seasoned professionals including the three partners, is ready for growth benefiting from past experience and capability to run much larger AuM.

Having embraced advances in technology in the past two decades, the company has already built a mature and highly automated infrastructure that seeks to reduce operational and structural risk, rivalling competitors many times its size.

All its software has been developed in-house. A bespoke OMS and electronic trading screens combines both algorithmic and trader managed execution for niche and specialist markets.

The trading model is fully integrated with the execution model so that fill and execution information is captured and fed back into a slippage model that adjusts Beach Horizon's liquidity-seeking algorithms for the best trading efficiency.

For the three partners, the focus of the firm will continue to be on research. But how large would they like Horizon to grow? Beach has some reservations about asset-gathers.

"You don't have to be greedy. You don't have to be $10bn. We don't have an AuM target, but it's going to be capped at a level that does not affect our returns," he says.

"If you get too large, you're starting to reduce the influence of a number of markets that will be beneficial over time."

While not actively building a pipeline of a new products, Beach Horizon has just launched a Ucits fund with City Fund Management, a London-based fund of managed accounts.

To comply with Esma guidelines, it is structured without commodities, but otherwise employs the enhanced strategy, which benefits from the new research.

Looking ahead, Beach's goals for the firm are performance-related. "To be consistently up there," he says.

Fundamental to achieving that will be remaining as committed as ever to refining and improving the program.

"We love the work," says Lakhanpal. "We love doing the research, creating new models, learning about market behaviour and trading.

"Down the line we may focus on other strategies and processes. We will only do what we think we can do well and focus on research projects that ask intelligent questions and we believe are likely to deliver results." CTA
