



## Spotlight: Emil van Essen

From establishing an early passion for the markets to developing his pioneering spread trading program, Emil van Essen talks about his journey to the top of his field **BY MATT SMITH**

**A**s a boy in Canada the young Emil van Essen invested the wages from a paper round in rare coins. A man running the coin shop he would visit was a commodity trader and gave van Essen his start in the business.

“He started teaching me about trading and let me trade on his account,” recalls van Essen. “By the time I was 14 or 15 I was immersed in the markets. It was something that you really feel in your blood.

“I knew this is what I wanted to do from when I was a teenager.”

After completing a degree in advanced maths at the University of Waterloo, in 1987 he got a job with Prudential Bache Securities, aged 21, developing options strategy for institutions.

“I was a math guy so options strategies were kind of natural to me. I felt really comfortable and loved options,” he remembers.

Van Essen went on to join Bank of Montreal in Toronto where they were developing an algorithmic prop-trading group. He was the first head of the group and became the bank’s first director of managed futures.

“Math and computer guys were not in demand at that stage,” he recalls. “Within the bank I scooped up some guys for the group that had those skills. It wasn’t really a skill set people used in trading. But I saw that as valuable.”

But while the quantitative strategies proved successful, van Essen says that over the years he changed his views, and saw that trading ideas had to come from the markets.

“I started out with a real math attitude: you just look at the numbers and develop a methodology and fundamentals didn’t mean anything. But over time I realised the ideas have to come from the market,” he says.

“You have to be immersed in the market. You have to see what’s going on and the ideas come from the market, and the back testing is really to validate your idea, to find the best way to execute the plan and to understand how robust your plan is, what the risk involved is, and how to manage that risk.”

In 1997, van Essen registered as a CTA and began hedging CTA portfolios for a large family office. He formed a brokerage firm called Vankar Trading Corp in 2001, where he began developing his current spread trading CTA program, which launched in December 2006. In 2010, he sold his interest in Vankar Trading to focus on the program and moved across the Loop in Chicago to grow the CTA business.

Kevin Craney, associate director of managed futures at RJO Futures, says Emil van Essen has set himself apart in the CTA space with its spread trading strategy and broad analysis of how different spreads behave.

“Through time, the spread trading program has delivered very consistent double-digit returns while adequately managing risk. This is on account of their quantitative research with elements of discretionary human involvement in the trade process,” Craney says.

Since 2007, the Emil van Essen (EvE) Spread Trading Program has evolved from a commodity futures roll arbitrage strategy to incorporate spread behaviour modelling, spread convergence and two years ago added interest yield curve models and inter-market spreads.

Assets under management have grown to roughly \$350m, mostly through managed accounts, and the program has an annualised return since inception of 24%.

VAN ESSEN ON..... CHESS

Van Essen uses a chess analogy to explain the marrying of a discretionary and model driven approach.

"In chess, computers have a big edge, but humans actually are very superior in a lot of ways," he says. "Computers have that number crunching ability and humans have the ability to look deeper into a problem and see things far out in the future that a computer can't see.

"A good player with a good computer is much stronger than the best computer or the best human by itself, and they've proven that."

EvE LLC now employs 16 people and the firm has strengthened its operations team in recent years. Russ Rausch joined as COO in July 2011 from Trading Technologies where he was head of global buyside and previously CFO. Nick Hatzopoulos joined last year as chief risk officer. He was previously with NKH Advisors and Derivatech Risk Solutions.

Another notable hire last year was John Farley, who came from Atlantic Trading, one of the world's largest exchange traded interest rate option market makers, to improve strategy implementation and become head of trading.

The beginnings of the program

In 2006, van Essen saw an opportunity in some of major shifts occurring in the market. One was the growth of long-only commodity funds, which had exploded from less than \$10bn in 2000 to become a dominant force, trading hundreds of billions and in some cases accounted for more than 50% of open interest in commodity futures.

The second was the evolution of electronic trading that allowed commodity spreads to be traded as a symbol on the exchanges.

"We realised that all these long only funds had a really predictable way of rolling that we could take advantage of," explains van Essen. "When they rolled they were causing the spreads to go down. They were selling the front month and then rolling to the next, which means they were selling the spreads and doing it at a predictable time. Our job was to get in front of this flow of money every month."

Van Essen also had to take account of other speculators on the floor, but metaphorically he says they became the "front-runners of the front-runners".

It proved to be a high alpha strategy, with the flagship program returning 32.7% in 2007, and 83.7% in 2008. But the game began to change, van Essen says, as the funds changed where they positioned themselves on the curve to minimise the roll effect. New bank-structured products also entered the fray.

"These products would sell spreads in anticipation of the roll and when they had to get out they had to buy a lot of their spreads back and we could 'front run' them as they got out of their positions."

The adaption underlines van Essen's view that trading commodities requires a discretionary overlay. "I think pure systematic approaches can be good in a high frequency environment or maybe some types of statistical arbitrage, but you have to have a general concept of how the markets work I think before you trade," he says.

"There are a lot of events and one-off situations that happen in commodities that make you have to understand what's going on in the market, and roll arb is certainly one of those situations.

"It is constantly changing, the participants in those markets are changing all the time and if you have a pure systematic approach and you're not in touch with what's going on in the market you are certainly susceptible to significant losses when the market changes its behaviour."

As the roll arbitrage started fading in 2009, the EvE program began to grow other models. Through 2007 and into 2008, as the firm built its software and databases, it developed CTA-like models focused on spreads, initially as a filter to the roll arbitrage strategy. Calendar spread trades were also introduced outside of the roll-period to expand the strategy and improve risk-adjusted returns.

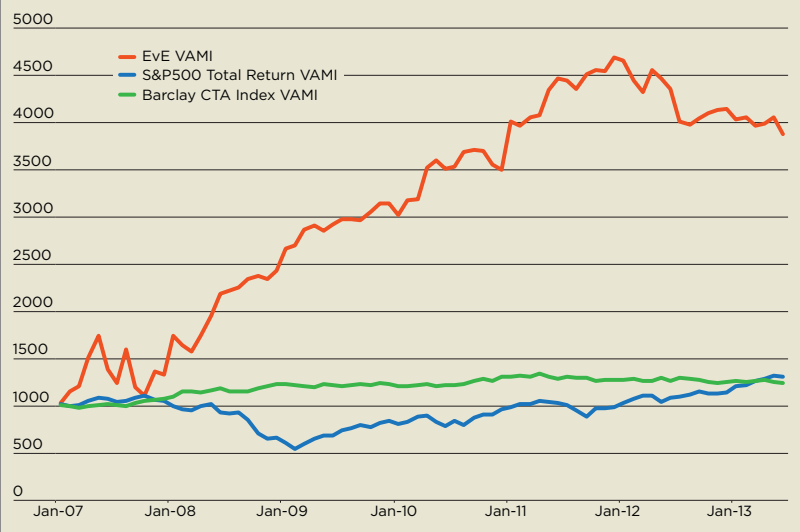
"One thing we learned is spreads are a lot more predictable than the outright markets and therefore models in spreads are more robust and can generate much higher alpha," van Essen says.

"There is a lot of noise in trend following and you get less of that in spread-trading. Also, you have more choices. It's more tricky to trade spreads. The execution is difficult if you try to do it systematically. You have to understand how behaviour changes across the term structure. It's a deeper market in terms of complexity but once you master that there is potentially significantly more alpha to be had."

Spread models were merged with the roll arbitrage program but van Essen's team also realised a lot of the modelling could stand alone as an alpha generator and become a main driver of returns.

The flagship program returned 28.8% in 2009, when many other CTAs lost money, and followed with a 11.4% return in 2010, and 33.9% in 2011. But 2012 proved a difficult year and the program suffered its first annual loss, down 11.63%, according to BarclayHedge.

GROWTH OF \$1000 IN EVE SPREAD TRADING PROGRAM



## 20 PROFILE

### VAN ESSEN ON..... THE FUTURE OF COMMODITY MARKETS

"I'm not sure of the timing but I think you're going to have a dramatic increase in volatility, especially in the energies," he says.

"When it moves it's really going to move a lot and I'm not sure whether it's going to be up or down but I think you're going to see a giant move.

"I would also say people need to have increased awareness about event risk. I think the Middle East has a lot of potential event risk and the existence of long only funds makes the impact of an event much higher than it was ten years ago."

"There were some shockingly big moves and a changing environment last year where we saw some unprecedented volatility and unprecedented moves and we got caught in a couple of those that went against us," van Essen says.

The losses made van Essen dig deeper to figure out ways of improving the program and refining the modelling process.

"What we found was our models have the potential to generate a lot of small returns instead of having all big lumpy positions that you could take a big loss on if there was a shock to the system. So we've been working on that."

#### The current program

The flagship program retains spread trading at its core, and primarily trades commodities through calendar and inter-commodity spreads across 20 different futures markets. Some interest rates and VIX trading is also included.

The program can be broken down into three models: the roll-arbitrage, another carry, or convergence, model; and a third divergence model.

Last year van Essen found a new target for the roll strategy: the largest trend-followers. He explains that they don't have the same ability as the long-only funds of spreading their positions across the term structure as they typically have to stay in the most liquid contracts, including when they have to roll.

"Our job is to figure out when all these trend followers are in the same positions," he says. "When they are all on the same side we can identify when they as a group are likely to roll and get in front of the flow of money."

That job involves watching the markets, talking to people, and analysing the statistics.

"You can see when we dissect the data when they start hitting bids or paying offers and moving the market. We can help validate it through looking at open interest behaviour," van Essen says.

While more complex than anticipating the long only fund rolls, it's "potentially equally profitable", he says. The carry model, he explains, is powerful but more complicated in a commodity market than an interest rate market, due to the varying seasonality and volatility in different parts of the year.

The model normalises the spreads so they can be measured in strength and identifies the dominant spread in the term structure: the one that appears to reflect the real market. It can then measure all the other spreads against it to predict whether they are likely to converge up or down to its price.

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The flagship program returned 28.8% in 2009, when many other CTAs lost money”

"There is a lot of noise and speculative behaviour that drives spreads into dislocation in different parts of the curve but in the end they tend to converge to the prices that really matter. So if you can identify that and trade those dislocations in the markets, you have the potential for a steady return from a lot of different places," says van Essen.

The divergence model seeks to take advantage of disruptions, usually short-lived, in the term structure of commodities caused by significant moves in spot markets.

"Our job is to measure that inflexion point where we think they are going to diverge, essentially do a spread between the spot market and the spread. If we sell the spread and buy the spot market we've got a natural hedge, and if they diverge it's going to lead to a significant gain," van Essen says.

In all of the core models, the exact same approach is taken to each single market. While van Essen acknowledges there are differences in the behaviour patterns between energies and non-energies, he says all obey the three core strategies. "It's just how we execute on them that will vary."

EvE has recently sought to diversify its product offering with the launch of long-only and long/short commodities programs.

"Over the years one of our strongest things was looking at the relationship between spreads and the spot market to predict what spreads are going to do. It tells a big story," he says.

The new programs combine normal trend following and spread trading methods, which van Essen says produces the potential for a "much more steady equity curve".

"In long/short a lot of trend followers are not as experienced in handling the roll. We think we're the ones that 'tax the roll' and we think we can do a good job of improving the roll strategy, which can add quite a bit to the alpha on the return." It's much more of a systematic approach but we do use a discretionary overlay, mostly from a roll perspective."

Expertise from the inter-commodity trading in spreads has also been added to the long/short program. Van Essen is clearly eyeing an opportunity for growth, assigning a \$3bn capacity to the program. **CTA**

### VAN ESSEN ON..... RISK MANAGEMENT

Finding ways to maintain returns but reduce the volatility has been a core focus for program development. In 2007 it was running at a very high volatility and was deleveraged in 2008; by one third in January and again by one half in August of that year.

More recent structural changes to the program to use smaller positions sizes have also reduced margin, now between 5% to 20%.

Van Essen says even though market volatility is down, he has found risk has increased in recent years. To protect against tail risk, and partly to diversify the program, option hedging was introduced in July last year.

"We look at the use of options as a small tax on our returns that over the long run can produce the occasionally lumpy return when you need it most. We think over, say, a five-year time horizon, the options will actually add value to the portfolio and mitigate extreme risk."