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HEDGENORDIC

PROMOTION. FOR INVESTMENT PROFESSIONALS ONLY. NOT FOR PUBLIC DISTRIBUTION



Managed Futures & Global Macro

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INTRODUCTION

HedgeNordic is the leading media covering the Nordic alternative investment and hedge fund universe. The website brings daily news, research, analysis and background that is relevant to Nordic hedge fund professionals from the sell and buy side from all tiers.

HedgeNordic publishes monthly, quarterly and annual reports on recent developments in her core market as well as special, indepth reports on "hot topics".

HedgeNordic also calculates and publishes the Nordic Hedge Index (NHX) and is host to the Nordic Hedge Award and organizes round tables and seminars.



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The Editor...

Bring out the cook!



In our set-up, it was unthinkable that “the brain” behind our models would ever to leave his teams’ conclave to meet an investor. All too often the quanty, geeky developers are hidden away, or chose to hide away, in a sterile, high security lab-like environment and never engage with prospects, investors or even their own staff.

As cold, remote and rational the financial industry is - and all the more so when it comes to systematic trading - it is still a people’s business. And people like to, I’d argue they have a need to, engage with people. All is fine meeting the staff in the front of house, the well-dressed receptionist guiding you to the table and slick, well-spoken and trained waiter splashing out recommendations while waiving around stylish menu cards. The star, and the one diners need to praise and trust remains the chef.

While yes, it is essential investors understand how the systems work and may react to given situation, how algorithms determine entry points and exits, position sizes and what have you, when it comes to man versus machine. They like to engage with Dr. Frankenstein, and not his monster.

Printing fancy high - gloss marketing brochures or making technically impressive power point presentations and having hordes of legal and compliance people fill out due diligence questionnaires is all necessary and often rather well taken care of. But bring out the cook! Let them show some passion and have them explain why they add a pinch of salt here or there. Have some faith, they can do it! And when the plate is served, the cook is the only one really knowing what went into the stew today.



Kamran G. Ghalitschi
CEO / Publisher HedgeNordic

There are few pop bands I dislike more than the “Pet Shop Boys”. One line of their lyrics to „Opportunities” I find though describes how many shops in the asset management space divide the roles among their marketing teams and portfolio management: “I’ve got the brains you’ve got the looks. Let’s make lots of money.”

While working in sales for a CTA in what must have been the third or fourth meeting with an investor pitching for a large ticket I ran out of talent. Questions were getting quite sophisticated, specific and digging deep into the core of our trading models. Out of my comfort zone, I started cantering phrases and actually said to him “that we could not reveal the secret recipe” of the trading system. His response was epic: “I don’t need to see the recipe, but I’d like to meet the cook.” That sentence, then and there, was an eye opener for me.

A different kind of animal

Lynx Asset Management was founded in Stockholm in 1999. From day one we set out to build a diversified, fully systematic investment process to identify trends and other patterns in financial markets.

Today, we are widely recognised as a top-performing CTA with US\$6 billion in assets under management and multiple awards to our name.

To learn more, please visit www.lynxhedge.se.



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NORDIC CTAS OUTPERFORM IN ANOTHER DULL YEAR FOR THE INDUSTRY

by Jonathan Furelid - HedgeNordic



Nordic CTAs had another tricky year in 2016 but managed to outperform its international peers. While the NHX CTA index gained 2.2 percent on the year, relevant benchmark indices lost 4.5 percent on average. The struggle for the managed futures industry has continued into the first quarter of 2017.

Leaving an uninspiring 2015 behind, where the leading managed futures benchmark index "SG CTA Index" ended the year flat, CTAs were looking for revenge going into 2016. Following a forceful equity market sell-off and adjoint risk-off trends in other markets during the first two months of the year, CTAs got off to a great start.

In January and February alone, the industry made gains of about 7 percent. The Nordic CTA Index, NHX CTA, added close to 9 percent during the same period.

However, the risk sentiment improved vastly in the months leading up to the Brexit vote in June. As a result, CTAs had given back the gains seen in the first two months ahead of the vote. The UK vote to leave the European Union however spurred some significant market trends that made the industry prosper again. June and July turned out be strong months for CTAs overall.

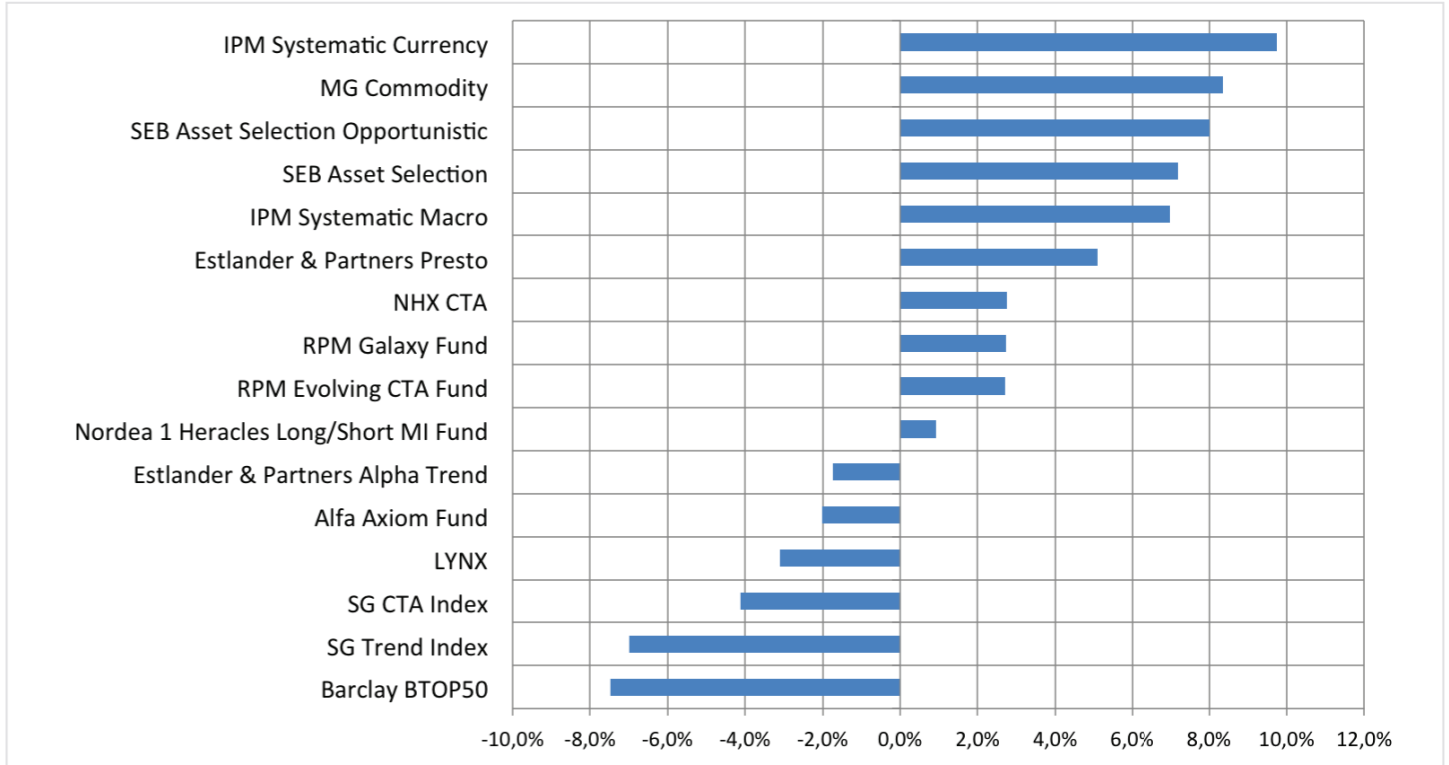
Again, the risk seeking environment returned quickly as the dust from Brexit had settled. The period from August to December was a long negative stretch for the CTA industry. The surprise outcome of the US election was not enough to reignite broad market trends. By the end of the year, the SG CTA Index had lost 2.9 percent.

NORDIC CTAS OUTPERFORM

Nordic CTAs had a relatively strong showing during the year. The NHX CTA Index, which is an equal weighted index of Nordic CTAs, gained 2.2 percent, leading to an outperformance of more than 5 percentage points compared to the SG CTA Index.

On the trend following side, SEB was the big winner posting gains of 5.1 and 10.2 percent respectively for its Asset Selection and Asset Selection Opportunistic programs. IPM Currency was however the best performing program in risk adjusted terms followed by MG Commodity and SEB Asset Selection Opportunistic in third place (see chart below).

NHX CTA CONSTITUENTS - RANKING 2016 (RISK-ADJUSTED)

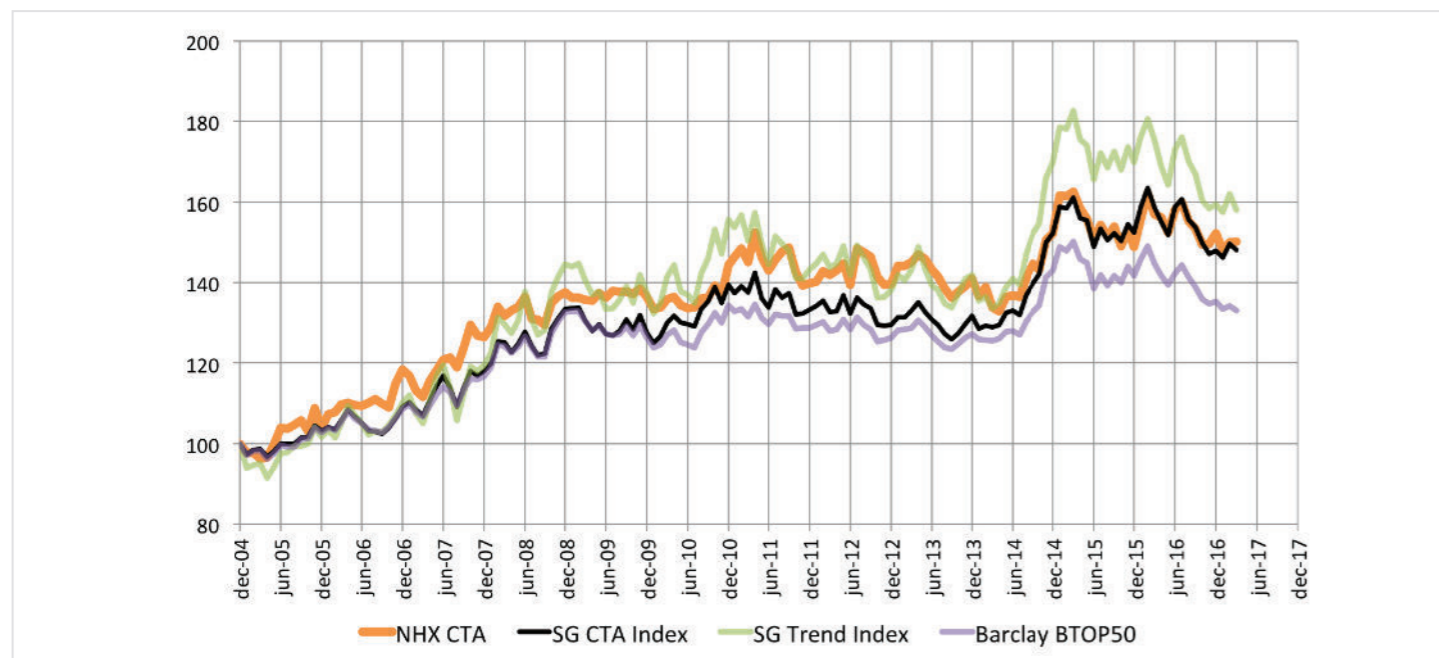


Source: HedgeNordic, BarclayHedge and SG Prime Services

Looking at the aggregate performance for the Nordic CTA Industry in a longer term perspective, the NHX CTA has performed in line with the SG CTA index to a similar volatility profile. Nordic CTAs have however significantly outperformed the Barclay BTOP50 index, which is composed of the 50 largest CTAs in terms of assets in the world.

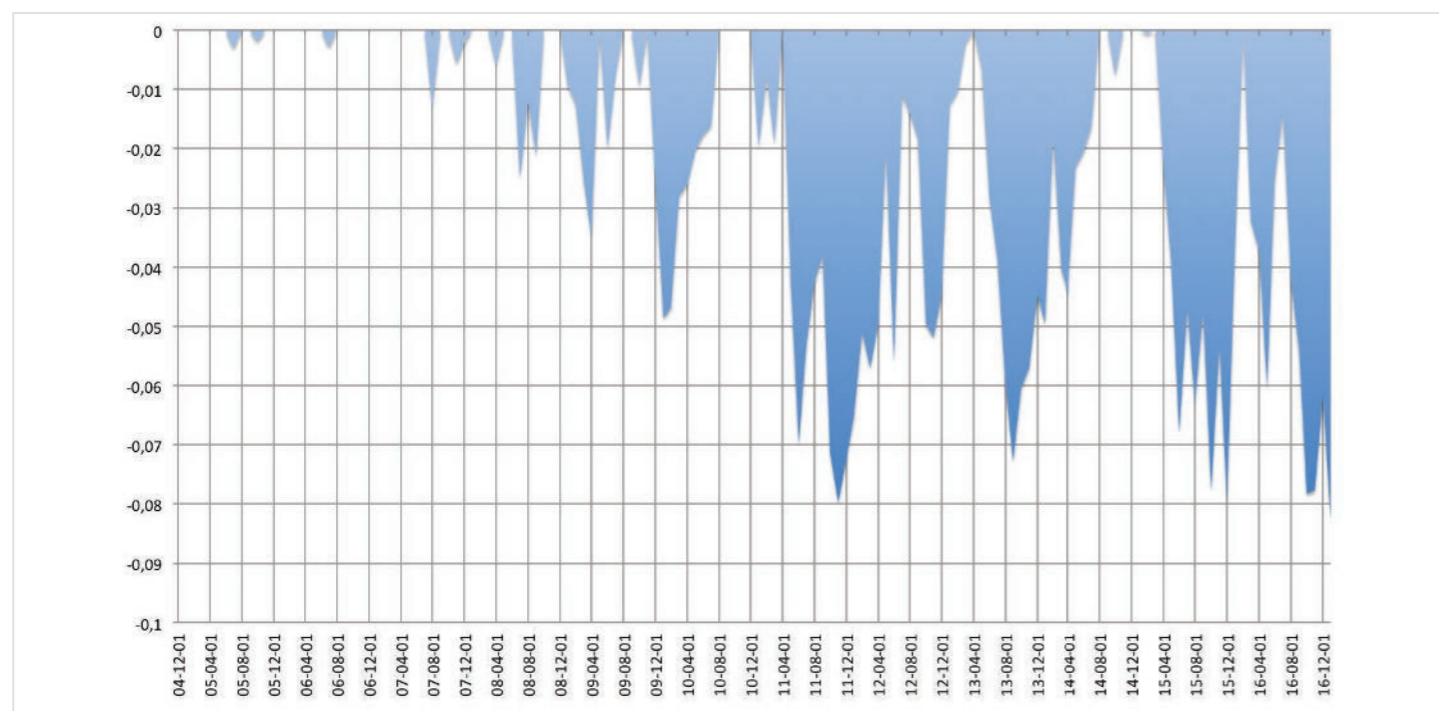
Despite an overall strong relative performance, the NHX CTA index is however struggling to recover to its previous highs. Even though the Nordic CTA universe as a group gained 2.2% last year, the drawdown seen since the highest level recorded in February 2016 amounted to about 8 percent, as of December 2016.

NHX CTA LONG-TERM PERFORMANCE VS. BENCHMARKS



Source: HedgeNordic, BarclayHedge and SG Prime Services

NHX CTA INDEX DRAWDOWN



Source: HedgeNordic

CTA RETURNS REMAIN MUTED IN FIRST QUARTER

Looking at CTA performance for the first three months of 2017, reveals that returns have remained muted throughout the period. The NHX CTA posted losses of 1.4 percent which is somewhat better than the Barclay BTOP50 which was down 1.8 percent but relatively weaker compared to the SG CTA Index (+0.1%) and the SG Trend Index (-0.9%).

Overall, CTAs started the year on a weak note with trends in currencies reversing (US dollar weakened) while

also commodities markets detracting from performance. February offered a more positive environment where long positions in equity indices and long base metals positions contributed. In March, CTAs are again giving back profits from the previous month. A weakening US dollar on concerns for the US administration's ability to carry through tax reforms and infrastructure investments have been mentioned as explanation to the weak numbers.

Performance numbers for the Nordic CTA industry (2016 and Q1 2017) as well as for major industry benchmarks, are summarized below.

HEDGENORDIC CTA - PERFORMANCE OVERVIEW 2016/Q1 2017

| Manager/Program | Volatility* | Jan | Feb | Mar | Q1 2017 | 2016 |
|--------------------------------------|--------------|--------------|-------------|--------------|--------------|--------------|
| Trend Following | | | | | | |
| Alfa Axiom Fund | 15,4% | -3,8% | 0,5% | -7,1% | -10,1% | -2,9% |
| LYNX | 14,9% | -1,9% | 4,6% | -3,7% | -1,2% | -4,2% |
| Estlander & Partners Alpha Trend | 10,9% | -2,7% | -1,2% | -2,5% | -6,2% | -1,6% |
| Nordea 1 Heracles Long/Short MI Fund | 11,6% | 0,1% | 2,4% | -0,2% | 2,2% | 0,9% |
| SEB Asset Selection | 8,1% | -2,0% | 1,7% | -0,8% | -1,1% | 5,1% |
| SEB Asset Selection Opportunistic | 15,2% | -3,6% | 2,9% | -0,9% | -1,7% | 10,2% |
| Average | 12,7% | -2,3% | 1,8% | -2,5% | -3,0% | 1,3% |
| Macro/Fundamental | | | | | | |
| IPM Systematic Macro | 12,5% | -2,2% | 0,1% | 6,3% | 4,0% | 7,4% |
| Average | 12,5% | -2,2% | 0,1% | 6,3% | 4,0% | 7,4% |
| Commodities | | | | | | |
| MG Commodity | 4,3% | 0,3% | 4,0% | 0,0% | 4,3% | 3,1% |
| Average | 4,3% | 0,3% | 4,0% | 0,0% | 4,3% | 3,1% |
| Currencies | | | | | | |
| IPM Systematic Currency | 11,5% | -4,4% | 2,7% | 4,8% | 2,8% | 9,5% |
| Average | 11,5% | -4,4% | 2,7% | 4,8% | 2,8% | 9,5% |
| Short-Term | | | | | | |
| Estlander & Partners Presto | 10,7% | -2,9% | 1,2% | 7,6% | 5,7% | 4,6% |
| Average | 10,7% | -2,9% | 1,2% | 7,6% | 5,7% | 4,6% |
| Multi-Manager | | | | | | |
| RPM Evolving CTA Fund | 15,4% | -6,5% | 5,0% | -1,8% | -3,6% | 3,3% |
| RPM Galaxy Fund | 21,1% | -0,2% | 4,4% | -1,9% | 2,2% | 4,3% |
| Average | 18,2% | -3,4% | 4,7% | -1,9% | -0,7% | 3,8% |
| Nordic CTA Average | 11,7% | -2,3% | 2,2% | 0,0% | -0,2% | 3,1% |
| Benchmark | | | | | | |
| Barclay BTOP50 | 7,1% | -1,4% | 0,6% | -0,9% | -1,8% | -4,4% |
| SG CTA Index | 8,7% | -1,1% | 2,2% | -1,0% | 0,1% | -2,9% |
| SG Trend Index | 10,5% | -1,2% | 2,9% | -2,5% | -0,9% | -6,2% |
| NHX CTA | 8,8% | -2,7% | 1,3% | 0,1% | -1,4% | 2,2% |
| Benchmark Average | 8,8% | -1,6% | 1,7% | -1,1% | -1,0% | -2,8% |

Source: HedgeNordic, BarclayHedge and SG Prime Services



TREND FOLLOWING: quality not quantity

by **Dr. Stephen Wood**, Senior Product Manager, Aspect Capital

Investors typically seek to exploit the power of diversification: it is possible to improve risk-adjusted returns simply by combining different diversifying strategies of similar risk and return. As this is an ongoing challenge for investors, we looked at whether this approach should also be applied to trend following models.

Such models are typically used by managed futures managers that apply a systematic approach to capturing trends, both upward and downward, in a broad and diversified range of asset classes and markets. There are many different methods of creating trend following models, and we considered a wide range of common approaches to investigate whether the combination of several of these models can lead to improved performance, or whether there is a better way to construct a trend following system. Ultimately, the findings show how different trend following models, when applied to the same portfolio of markets and operated at similar speeds, generally have very high correlations with each other and so offer only limited diversification benefits. A better approach to trend following is to apply a holistic methodology which aims to capture the most effective features of many different techniques and to integrate them in a single high-calibre model.

Thirteen trend following models were considered in the analysis, all applied to the same portfolio of markets and set to capture medium-term trends of approximately two to three months. The origins of these models are



Dr. Stephen Wood, Senior Product Manager, Aspect Capital

varied, and include models popularised by the 'Turtle traders', the legendary systematic traders initially taught by Richard Dennis in Chicago in the early 1980s. Also included are a number of models that have been regularly cited in academic literature, and a number of other well-known trend-capture techniques. While these 13 models

represent a broad range of different approaches to systematic medium-term trend capture, they are highly correlated to each other, as shown in the table below. The lowest correlation is 67%, while the average correlation is 89%.

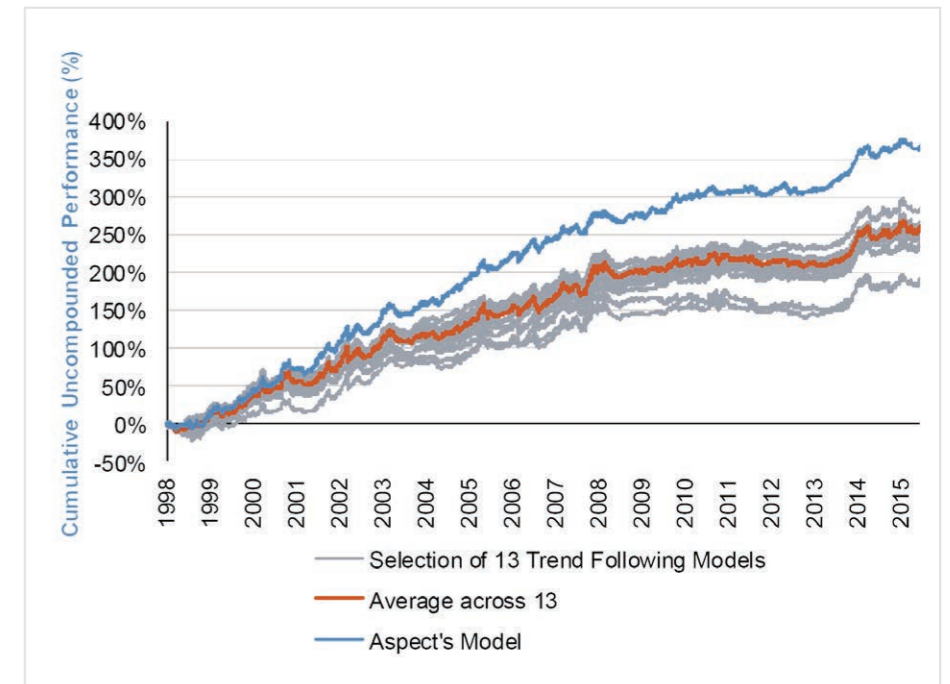
As a consequence of the high levels of correlation between the individual models, the diversification benefit that arises from combining them is very slight. The analysis goes further, considering all possible equally-weighted combinations of the 13 models, to investigate the impact on performance as the number of models combined is varied. Again we find that there is very little diversification benefit to be had from combining models.

We believe that there are good reasons to apply an integrated methodology to trend following: if the goal is to maximise performance from trend following, it is better to build the best possible single trend following model that integrates distinguishing features of many different approaches. Systematic investment research should continuously lead to innovations across the various elements of a single holistic model. These elements include the processing of market data, the measurement of trends, and the method used to determine position sizes based on trend strengths.

The chart below compares the 13 models with a proprietary, holistic trend following model, developed over almost 20 years of evolutionary research. This single model significantly outperforms all of the 13 models over the period. The chart also shows the performance of the averaged strategy across all the 13 simple models. The performance of the averaged strategy is comparable to the performance of some of the individual models, reflecting the limited diversification benefit that comes from combining trend following models.

The results support the argument that if the goal is to maximise performance from trend following, it is better

SIMULATED PERFORMANCE OF TREND FOLLOWING MODELS VS ASPECT'S TREND FOLLOWING MODEL: JAN 1999 TO JUN 2016



SIMULATED CORRELATIONS BETWEEN TREND FOLLOWING MODELS: JAN 1999 TO JUN 2016

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 | Model 9 | Model 10 | Model 11 | Model 12 | Model 13 |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|
| Model 1 | 100% | 86% | 90% | 67% | 75% | 67% | 71% | 67% | 81% | 86% | 80% | 83% | 85% |
| Model 2 | | 100% | 95% | 88% | 94% | 90% | 89% | 90% | 94% | 95% | 93% | 97% | 95% |
| Model 3 | | | 100% | 81% | 88% | 81% | 83% | 82% | 90% | 92% | 87% | 94% | 91% |
| Model 4 | | | | 100% | 94% | 90% | 92% | 90% | 86% | 88% | 87% | 89% | 88% |
| Model 5 | | | | | 100% | 92% | 92% | 93% | 92% | 92% | 91% | 94% | 94% |
| Model 6 | | | | | | 100% | 91% | 92% | 89% | 88% | 89% | 91% | 89% |
| Model 7 | | | | | | | 100% | 88% | 88% | 89% | 88% | 90% | 88% |
| Model 8 | | | | | | | | 100% | 85% | 91% | 83% | 92% | 90% |
| Model 9 | | | | | | | | | 100% | 90% | 96% | 94% | 93% |
| Model 10 | | | | | | | | | | 100% | 89% | 97% | 96% |
| Model 11 | | | | | | | | | | | 100% | 93% | 92% |
| Model 12 | | | | | | | | | | | | 100% | 95% |
| Model 13 | | | | | | | | | | | | | 100% |

to build the best possible single trend following model that integrates features of various approaches rather than relying on diversification from different models. In essence, the number of individual trend following models that comprise a trend following portfolio is not in itself a measure of its superiority: the best approach is to focus on building a single, well-researched trend following model.

THE 13 TREND FOLLOWING MODELS AND ASPECT'S MODEL RESULTS ARE BASED ON SIMULATED OR HYPOTHETICAL PERFORMANCE RESULTS THAT HAVE CERTAIN LIMITATIONS. UNLIKE THE RESULTS SHOWN IN AN ACTUAL PERFORMANCE RECORD, THESE RESULTS DO NOT REPRESENT ACTUAL TRADING.



TREND FOLLOWING IN A RISING-RATE ENVIRONMENT

by WINTON CAPITAL MANAGEMENT

Fixed income trend following strategies have benefited over the past 35 years from the combination of a general downwards drift in interest rates and a positive roll yield. Now that rates have started to rise in the US, investors may be concerned that the roll yield could act in the opposite direction to falling spot prices and reduce the returns that trend following on bond futures can earn going forward.

In this research article, we show that roll yields on US 10-year Treasury note futures have mostly acted in the same direction as spot prices in the past and that there was no significant difference in trend-following performance between the various interest rate and roll-yield “regimes” we identified.

In April 2014, we examined the historical performance of a trend-following strategy on US 10-year Treasury note futures in a research brief titled Trend Following and Interest Rates. We found the strategy performed well in both rising and

falling interest rate regimes. This result may have surprised those who would expect the roll yield¹ to work against the trend follower in a rising-rate environment.²

Over the past 35 years, the US 10-year Treasury note futures have mostly been in backwardation, which occurs when the government bond yield is greater than the short-term interest rate, resulting in a positive roll yield. In addition, as rates have generally drifted lower over this period, the spot price has trended upwards. Together these produced positive average returns for the cash market and a steep and upwards long-term trend in the back-adjusted futures price³, as seen in figure 1, overleaf.

At the heart of arguments around the prospect of poor trend-following returns is the assumption that bond futures will continue to provide a positive roll yield as we move into a regime of rising interest rates. This would result in the roll yield and changes in spot prices acting in opposite directions and offsetting each other.

First and foremost, trend-following performance depends on the interaction between changes in the spot price and the roll yield over the timescales a system is designed to be profitable on; not long-term directional trends in contract prices alone. That said, our analysis suggests that markets have tended to provide a negative roll yield when rates rise.

To reach this conclusion we ran historical simulations of trend following and carry systems on US 10-year Treasury note futures.⁴ Carry strategies attempt to directly predict and profit from the roll yield. On the right-hand axis of figure 1 we show the annualised return, gross of transaction costs, of carry (light blue) and a medium-speed trend-following system (purple) during four-year, non-overlapping periods. Both systems had an approximately constant annualised volatility of 10%.

We then separated the price history into two distinct periods: January 1962 to April 1982, when interest rates generally rose (and prices fell), and April 1982 to December

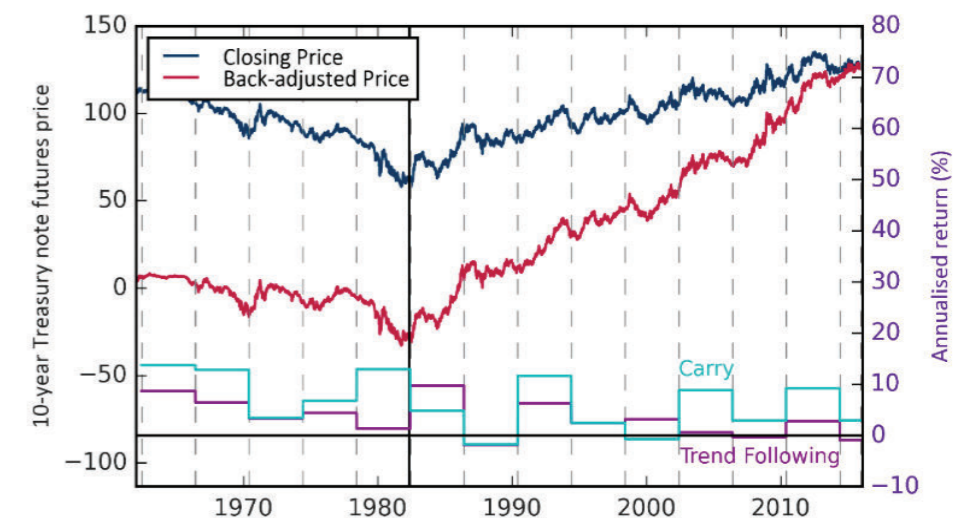


Figure 1. Left-hand axis: Closing (blue) and back-adjusted (red) US 10-year Treasury note futures prices; Right-hand axis: the performance of trend following (purple) and carry (light blue) in four-year, non-overlapping periods from 1962 to 2015; May 1982 (the black line) roughly separates two interest rate regimes.

2015, when interest rates broadly fell (and prices rose). Comparing these two periods, there was no significant change in the performance of the two systems.⁵

We also used our backtest to simulate the performance of trend following when the market was in backwardation or contango – that is, a positive or negative roll yield, respectively – and in rising and falling interest rate environments. We use the sign of the carry signal to identify whether the market is in contango or backwardation.⁶ Table 1, overleaf, shows the annualised return (and the corresponding standard error) of trend following in each of these four “regimes”. In brackets, we have provided the total numbers of years spent in each regime.

| Annualised return (number of years in regime) | | |
|---|-------------------|-------------------|
| | 1963-1982 | 1982-2015 |
| Backwardation | 3.2 ±4.1% (6.1Y) | 2.3 ±1.6% (27.3Y) |
| Contango | 7.3 ±3.9% (12.3Y) | 5.3 ±3.3% (6.0Y) |

Table 1. The historical performance of a simulated trend-following system on US 10-year Treasury note futures in four “regimes”. The total period in years spent within each regime is in brackets. The errors on the annualised returns are standard errors.

For the most part, we found that US 10-year Treasury note futures were in backwardation during the falling-rate period but in contango during the rising-rate period. This means that roll yields and changes in spot prices tended to be in the same direction, potentially amplifying futures price trends.

We also saw that the trend-following strategy had performed well in all four combinations of the interest rate and roll yield “regimes”; delivering positive performance when roll yields and spot price changes were acting in the opposite direction. Interestingly, during the falling-rate period, the system performed better when the market was in contango rather than in backwardation, on average.

However, the differences in returns between the four “regimes” were not statistically significant.

While we have only assessed a single trading system on a single market, and past performance is no guarantee of future results, this brief shows the dangers of making performance assumptions that are not backed up by the analysis of data.

1 The roll yield is the return captured from the convergence of the futures price to the spot price during the life of the futures contract.

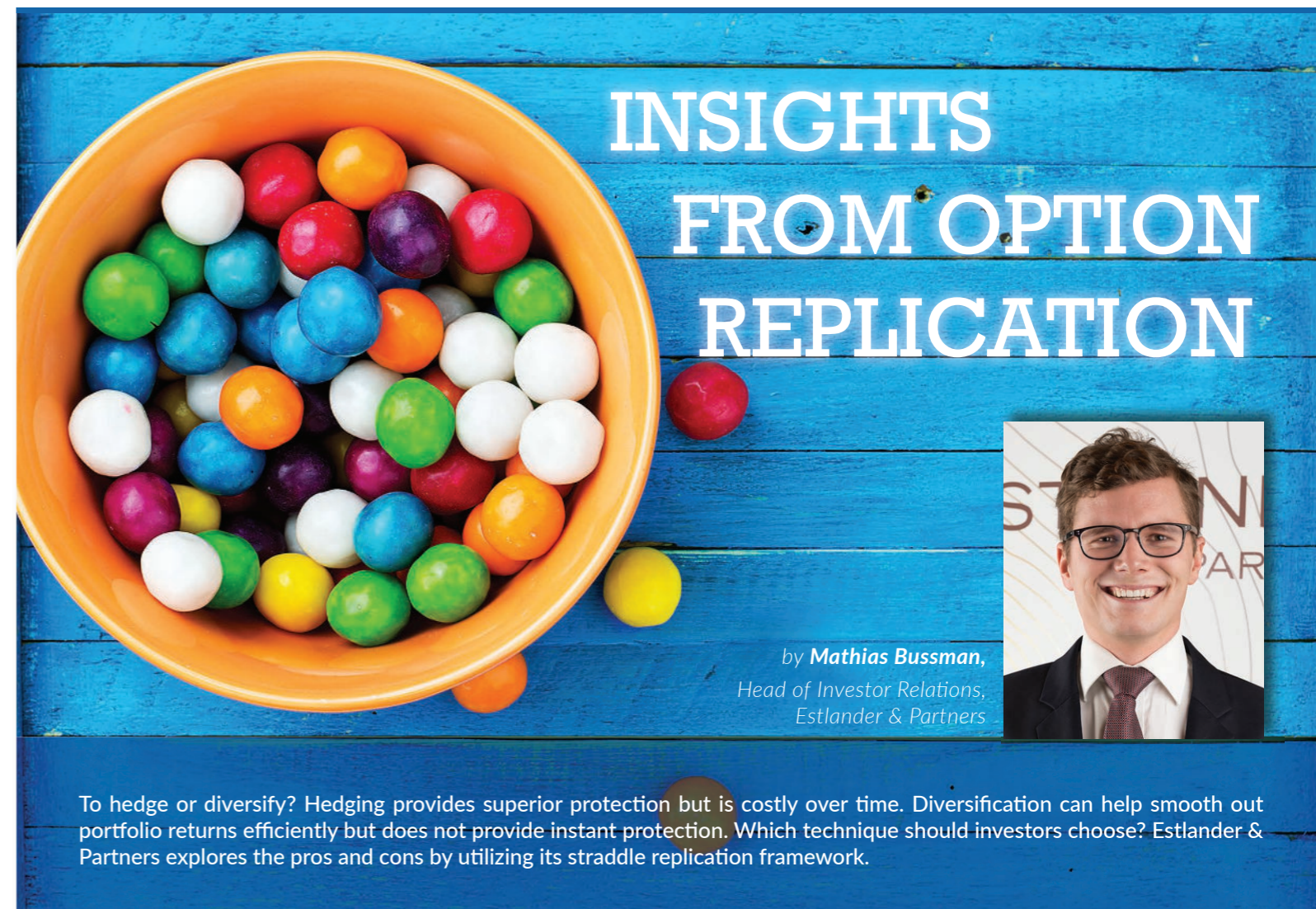
2 See: Niederhoffer & Weddepohl, CTAs and rising interest rates: is the party over?, 2014.

3 The back-adjusted price series reflects the returns of a long position in the front contract of the futures market.

4 We focus on a single market for simplicity and select US 10-year Treasury note futures as it is the largest bond futures market by volume. A similar analysis could be applied to other bond markets if historical government bond yields and short-term interest rate data is available. The futures prices have been synthesised from April 1982 back to January 1962 by using historical bond yields and short-term interest rates, assuming spot-future parity. Our trend-following system starts from May 1962, while our carry strategy starts from July 1963.

5 We need to be careful when analysing the profitability of a trading system that uses synthetic data. Synthesised futures prices are an estimate of what a futures contract would have traded for at the time and tend to be smoother than real prices.

6 In this case, defined as the government bond yield minus the short-term interest rate.



INSIGHTS FROM OPTION REPLICATION

by **Mathias Bussman**,
Head of Investor Relations,
Estlander & Partners

To hedge or diversify? Hedging provides superior protection but is costly over time. Diversification can help smooth out portfolio returns efficiently but does not provide instant protection. Which technique should investors choose? Estlander & Partners explores the pros and cons by utilizing its straddle replication framework.

Estlander & Partners has a long experience in providing diversifying exposures through its 25+ year CTA and trend following business. Perhaps less known is the fact that the business started out in options trading and market making. The organization's strong options heritage helps in approaching many research problems. Using our straddle replication framework, we will demonstrate the pros and cons of hedging and diversification.

What is the difference between diversification and hedging? Diversification builds upon the idiosyncrasies in the return drivers of the underlying portfolio. By applying a diversifying return driver, the investor implements an offsetting or balancing exposure. Two drivers are diversifying if the correlation between them is less than 1. The lower the correlation the stronger will the diversification effect be.

Hedging is the process of offsetting a certain risk (or a portion of it) in the portfolio. A hedge efficiently protects the portfolio against the risk the investor does not wish to

carry. The downside of hedging is that it comes at a cost. The cost can take the form of foregone profit opportunities or an upfront premium. Investors can choose to maintain the upside potential while protecting the downside by buying options. In this case hedging is comparable to buying insurance and the cost of the hedge is the option premium.

“Diversification adds performance opportunities and does not necessarily carry the same inherent cost as pure hedging.”

Diversification won't provide the same degree of protection against a certain risk as a pure hedge. Still, diversification is the most widely used risk mitigation tool for many investors. Importantly, diversification adds performance opportunities and does not necessarily carry the same inherent cost as pure hedging.

Is there a way to combine option-like hedging with the opportunities from diversification? The Estlander & Partners straddle replication framework aims to replicate the exposure of option straddles without actually buying the options themselves. An option gives the buyer a right but no obligation. Hence, option buyers pay a premium to induce the seller to take the other side of the trade. The price of the option is determined by supply and demand. The option premium tends to favour the seller, due to the negatively skewed return profile and the potentially unlimited downside from being short an option. Many studies have documented positive performance over time from selling options. A hedge constructed using options will thus have a negative expected return. The Estlander & Partners straddle replication framework aims at replicating a broad options exposure in futures markets while minimizing costs. The replication does not produce identical protection as options do. On the other hand, it has a positive return expectation.

Figure 1 shows a hypothetical equity/bond portfolio and the rolling correlation of the straddle replication strategy towards this portfolio. The correlation varies over time but tends to be negative during sell-offs, highlighting the diversification properties of the replication.

The hedging vs. diversification problem is a trade-off between expected return and risk mitigation. An investor

who wants a full hedge has to pay for it. In the case of prolonged equity downturns or a slower shift towards rising interest rates the investor may be better served by an efficient diversifier than a perfect hedge. This trade-off

“The hedging vs. diversification problem is a trade-off between expected return and risk mitigation.”

can be illustrated by comparing the outcome of replicating option straddles of different maturities. Figure 2 shows the expected return and the correlation towards the equity/bond portfolio for different straddle maturities ranging from 6 months to 15 months. The expected return is higher and the negative correlation is smaller for longer maturities. The closer a hedge the investor prefers, the more he has to sacrifice in terms of expected returns.

The driver of the expected return / risk mitigation relationship can be chased down to the gamma of the option straddle. Gamma measures the rate of change in the option delta i.e. the change in the directionality of the option position. All else being equal, the shorter the maturity of an at-the-money straddle, the higher the gamma. Positive gamma drives the valuable dynamic

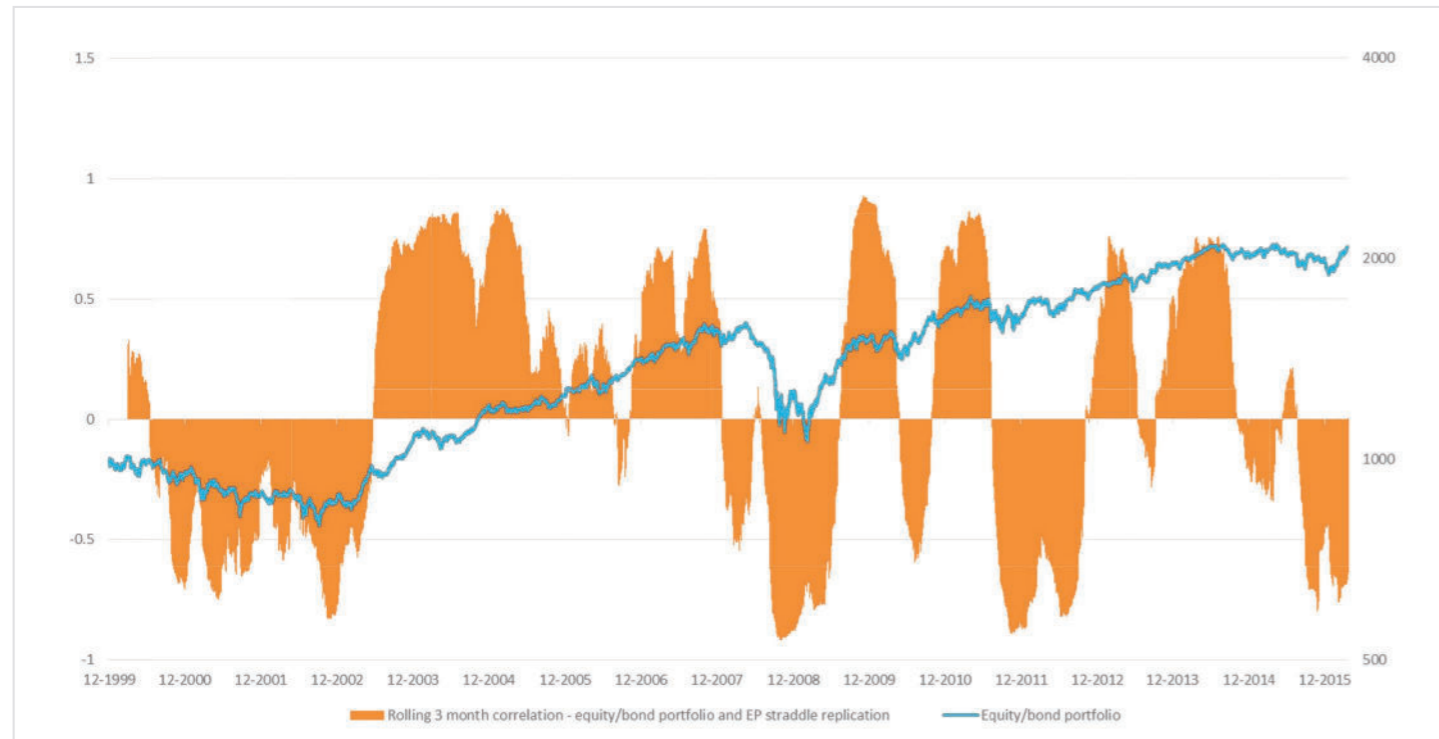


Figure 1: Rolling 3 month correlation of EP straddle replication towards the equity/bond portfolio. The straddle replication showed here is hypothetical and based on EPs theoretical straddle replication methodology. The replication is applied on 45 liquid futures markets across equity indices, interest rates and currencies. The equity/bond portfolio is a 50/50 mix of global equities (MSCI AC World Index) and global bonds (JPM Global Aggregate Bond Index).

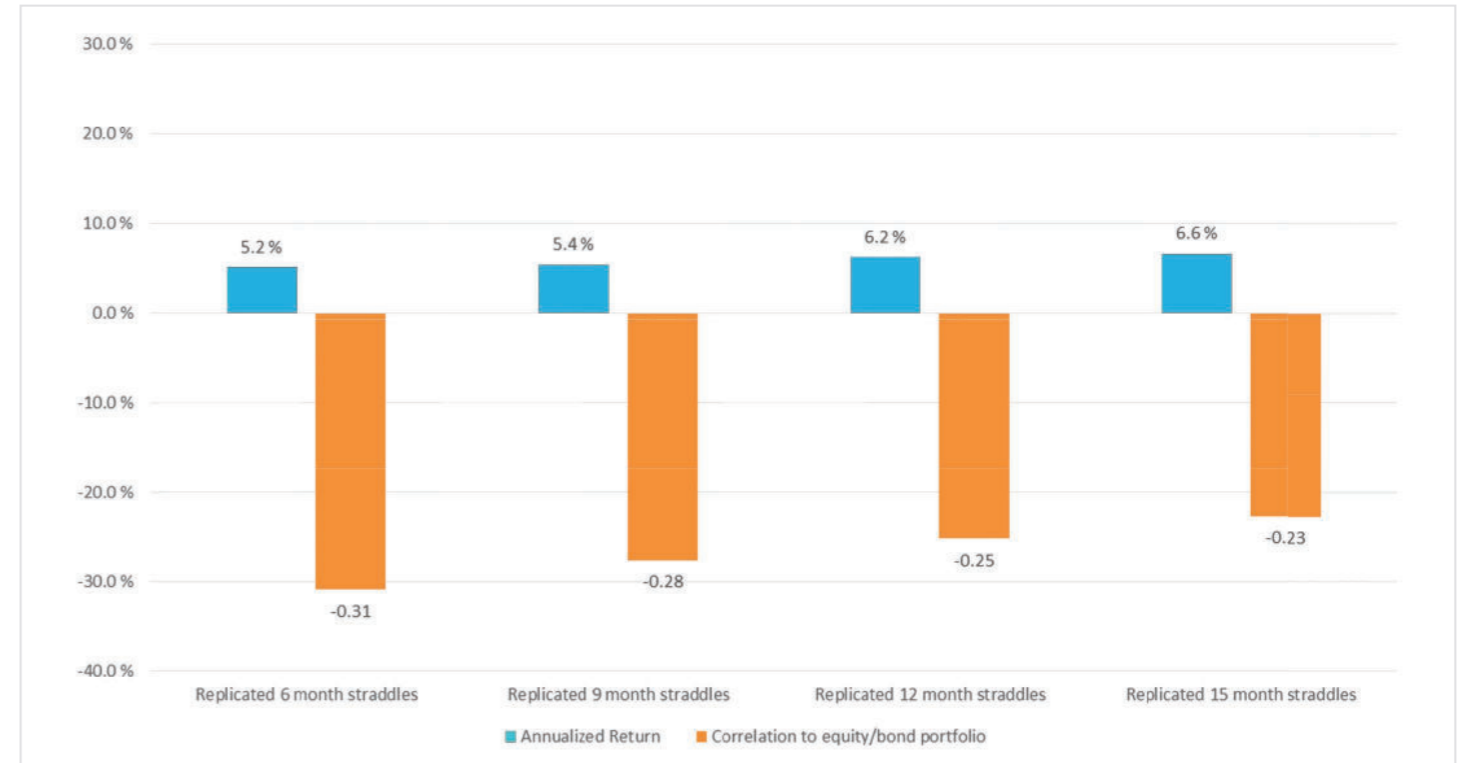


Figure 2: Annualized return and correlation towards the equity/bond portfolio for different straddle maturities.

correlation profile of the replicated straddles towards the equity/bond portfolio in figure 1. The average gamma for the different maturities is given in figure 3. By targeting different levels of gamma the investor can ‘slide’ on the expected return / risk mitigation trade-off surface and choose the combination that fits best with their portfolio objectives.

To hedge or diversify? It is a function of the objectives of the investor. The pure hedge offers superior protection but comes at a cost. The diversifier looks to balance the portfolio risk efficiently over time while preserving the positive return expectation. An investor should only hedge risks that he absolutely cannot carry. The rest should probably be balanced using diversification.

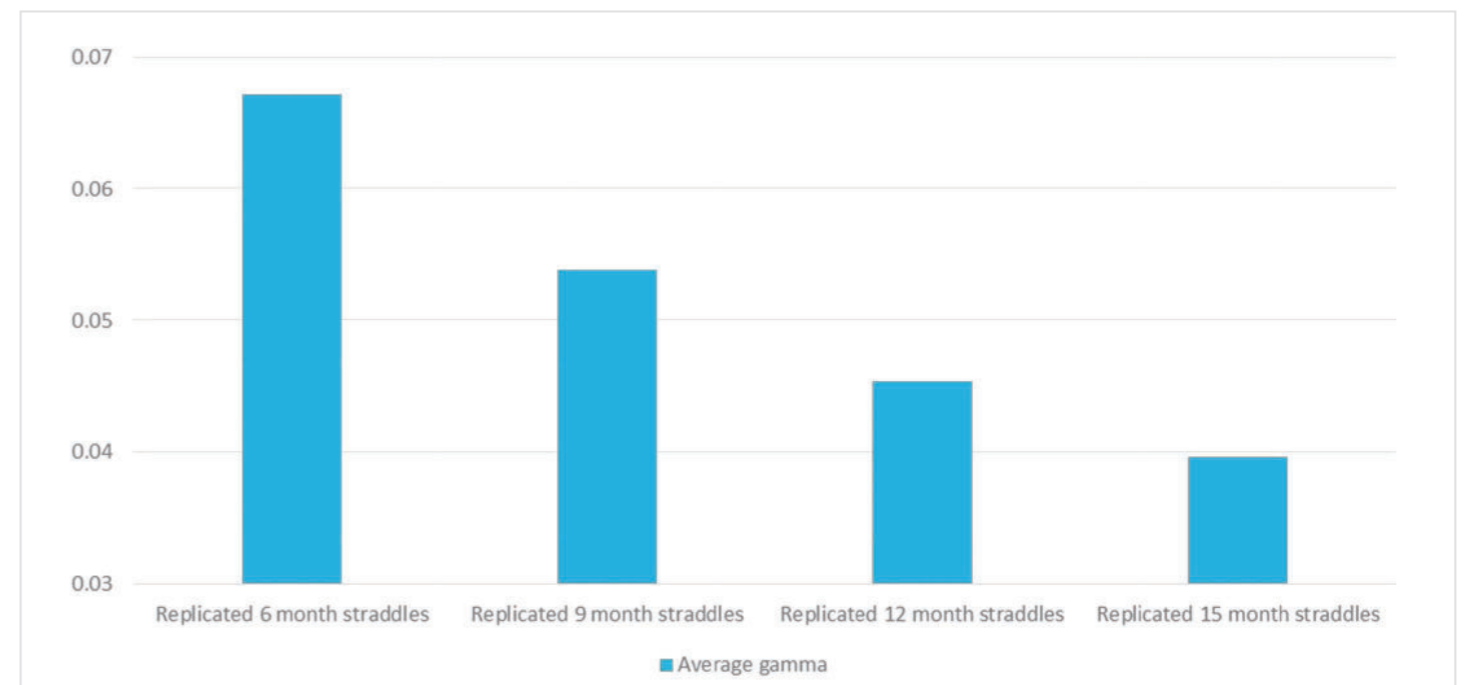


Figure 3: Average gamma for different straddle maturities.



How will Trend Followers Perform in a Rising Interest Rate Environment?

Rising interest rates are a top-of-mind concern for investors right now. Inquiries about the impact of rising rates are among the most frequently asked questions from our clients and prospects in recent months. There seems to be a lot of uncertainty (and in some cases, misconceptions) about the ability of CTAs to thrive in rising/ higher interest rate environments. We, at DUNN Capital Management, LLC ("DUNN"), don't know if the extended bull-market in fixed income is officially over, but it seems likely. Admittedly, we have thought that numerous times over the last 8 years or so since the end of the credit crisis. That's why we strictly focus on systematic trading ... Since human intuition is often faulty, we deliberately take emotion and subjective decision-making out of the equation and let our models algorithmically determine what the price data is telling us. Nevertheless, we welcome this opportunity to discuss our views on rising rates, whether they occur in the near or far-off future.

There are two main sources of investor anxiety around rising interest rates, which we will address from the bottom up. First is the micro-issue of roll yield. It appears to be generally accepted that a significant portion of gains earned by CTAs over the long bull market in fixed income have been attributable to the roll-yield. So the question is how much will gains earned during a bear market in bonds be eroded by roll "expense". The second source of angst is the macro-issue of whether or not rising interest rate environments generate enough overall trends in other markets for CTAs to identify and exploit. This gets to

the question of whether higher interest rate environments are conducive to the trendiness of markets in all global sectors.

There are three sources of returns on positions in futures contracts. The first and most obvious is the change in spot prices. The second is the so-called "roll yield", which is the change in futures prices due to the necessary convergence of futures and spot prices when time approaches the contract expiration date. The third is the return on collateral. In the particular case of interest rates, DUNN strategies have realized substantial gains in the last two years due mainly to the second source of returns, roll yield. For example, the roll yield will be profitable when holding a long position on interest rate futures if neither the market's expectation of raising interest rates nor some implied risk premium for long futures positions is realized. This behavior has displayed a consistent trend, which has favored disciplined trend-following systems and allowed us to profit even in a zero- or negative-rate environment.

Going forward, if interest rates maintain a sustained ascent and fixed income futures remain in backwardation, the price of futures will tend to rise as the contract gets closer to expiration, generating a positive roll yield and chipping away at the profitability of short positions. In other words, if interest rates do not climb as fast as anticipated, futures prices will rise and cause any strategy holding short interest rate positions to give back some of its gains. Some investors have posited that the roll yield will more than offset any gain generated by a change in spot prices and make

fixed income markets difficult for CTAs. However, there are several problems with this assumption. First, there is no guarantee that the fixed income futures markets will remain in backwardation in the years to come or that the slope of the rate curve will be as steep as it has been. These are the factors that determine roll yield and, as there are numerous market dynamics affecting the interest rate curve, it is not a given that the roll yield will be positive or significant in

a rising interest rate environment. The impact of roll yield could be small in a rising interest rate environment and has been in the past. Another problem with this view is that it assumes simple constant positions in a fixed term-structure scenario. In reality, trend following signals look at continuous price changes incorporating both rate changes and roll yield. This explains why we at DUNN are still long some of the European fixed income futures, even as rates have begun to

rise. In this case, our models are expecting the profit earned from the roll yield to surpass any losses due to a change in interest rates. So the bottom line is that DUNN's trend following strategies are certainly smart enough to profitably trade fixed income futures in a rising rate environment, but the magnitude of their contribution to the total program performance may or may not be diminished by roll yield depending on the shape of the rate curve.

future when we encounter this market dynamic again. Of course past performance is no guarantee of future results. But trend following is trend following and investors have been applying rules-based decision mechanisms to market information for hundreds of years.

We have plenty of recent data to examine how CTAs perform in individual months where rates went up or down. These small changes happen every month and are not what worry our investors. They are interested in what happens during larger rate moves over longer periods of time. The type of sustained rise that hasn't happened in almost two decades. They want to know: Will CTAs be a liability or a positive performer in their portfolio in the years to come. So we looked back at our firm's performance during rising rate regimes, which we defined as periods of 12 months or more that contained an increase in rates of 200 basis points or more. Please see the graph and table for the results.

When isolating these rising rate regimes and analyzing DUNN's performance during these periods, it's clear that trend following worked well from a return perspective and at the same time remained uncorrelated with equities. It's also important to keep in mind that both our signal-generation process and portfolio risk control are much more sophisticated and the computing capabilities much more powerful, today than what we had in place during these past rising rate regimes.

As we move into the future, if and when we finally encounter another rising rate regime, I think what can be expected from trend followers in general is largely the same as what they have delivered over the years:

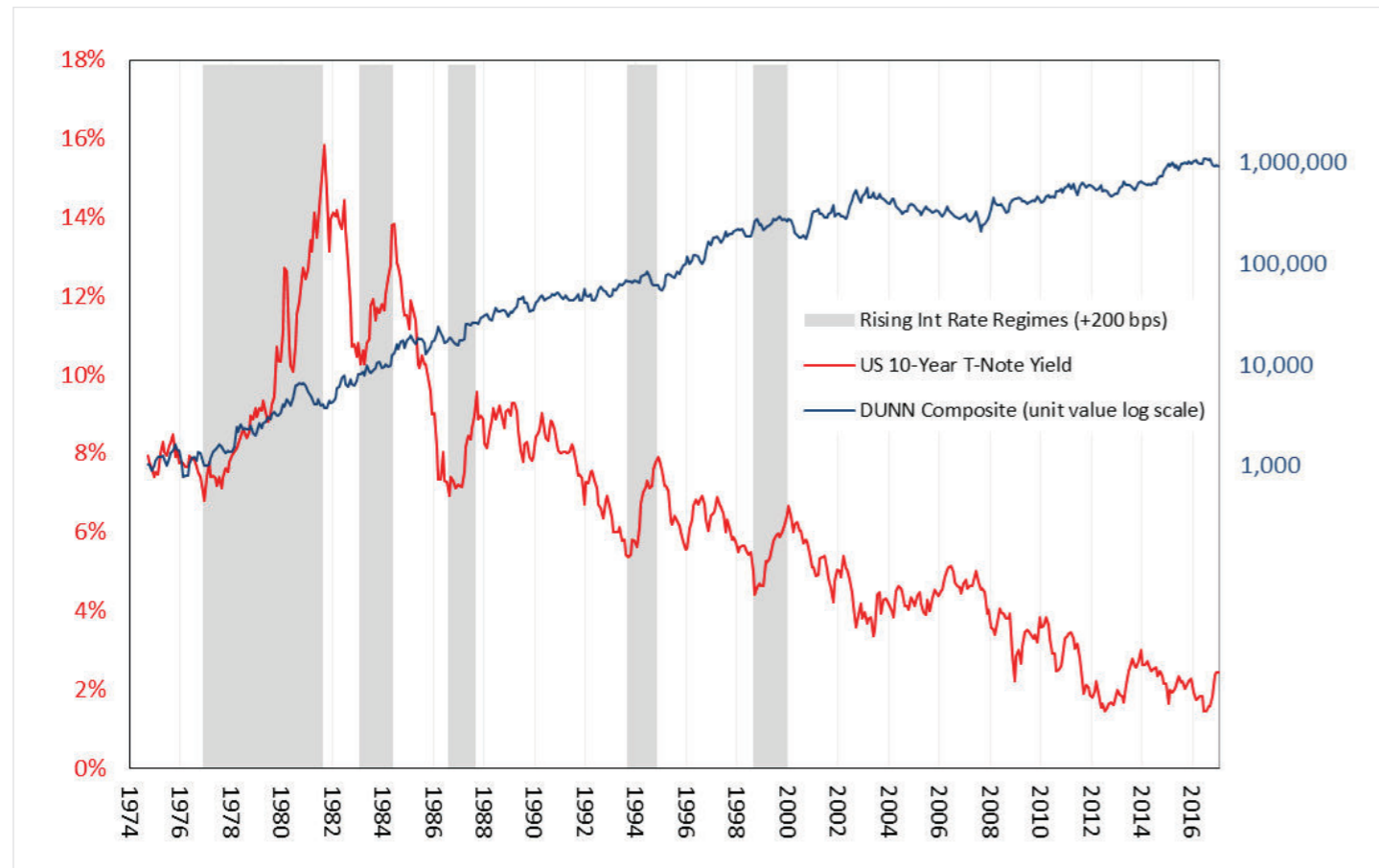
- Rising rates will be a catalyst for trends to develop in a variety of market sectors.
- Trend followers will identify and exploit trends wherever they exist.
- It is unpredictable what markets will be most affected by rising rates, so investing with a diversified trend follower is key.
- Trend followers will remain largely uncorrelated with fixed income and equities, making the asset class a very beneficial addition to traditional portfolios.
- It is difficult to anticipate the timing of strong and sustained market moves, so to trend following should always be a core allocation.

“This behavior has displayed a consistent trend, which has favored disciplined trend-following systems and allowed us to profit even in a zero- or negative-rate environment.”

Now to address the bigger picture concern... Because most of today's CTAs did not even exist the last time there was a sustained rising rate dynamic in the marketplace, investors question how managed futures strategies will perform in such an environment. We know that trend followers have no long or short bias, so, theoretically, such managers should be able to perform in up or down markets. And we know that a material and sustained rise in interest rates should have the capability of directly and/ or indirectly generating trends in a variety of market sectors. But, because many investors have not seen this in action, they question whether or not rising rates are actually good catalysts for trends. This perceived lack of history is compounded by the potential for a positive roll yield to reduce the profitability of short positions in the fixed income sector if rates increase in a material and sustained fashion. After all, fixed income is known to have been a big contributor to managed futures performance during the rise in popularity of the strategy over the last two decades.

It turns out we don't have to solely rely on theory or simulated performance to determine the potential for trend following success during rising rate environments. Though the industry was smaller in the 1970s, 80s & 90s when we last experienced rising interest rate regimes, there were CTAs applying trend following techniques and DUNN was one of them. DUNN was launched in 1974 and has been practicing trend following from inception. We can look back on the performance of the DUNN Composite during rising interest rate regimes as an indicator for what we might expect in the

DUNN Composite Performance vs US 10-Year T-Note Yield, Sep 1974 – Jan 2017



Performance During Rising Rate Regimes Since Inception of DUNN in 1974

| Period | | | US 10 Yr T Note Yield | | | DUNN Performance | | S&P Performance | | DUNN/S&P Correlation |
|---------|--------|--------|-----------------------|-------|----------|------------------|------------|-----------------|------------|----------------------|
| Trough | Peak | Months | Trough | Peak | Increase | Total | Annualized | Total | Annualized | |
| Dec-76 | Sep-81 | 57 | 6.8% | 15.8% | 9.0% | 246.5% | 29.9% | 45.3% | 8.2% | 8.7% |
| Feb-83 | Jun-84 | 16 | 10.3% | 13.8% | 3.6% | 63.4% | 44.5% | 9.9% | 7.3% | -48.6% |
| Aug-86 | Sep-87 | 13 | 6.9% | 9.6% | 2.7% | 39.7% | 36.2% | 31.6% | 28.8% | 1.9% |
| Sep-93 | Nov-94 | 14 | 5.4% | 7.9% | 2.5% | -8.3% | -7.2% | 2.2% | 1.8% | -53.5% |
| Sep-98 | Jan-00 | 16 | 4.4% | 6.7% | 2.2% | 4.7% | 3.5% | 39.4% | 28.3% | -42.6% |
| Average | | 23 | 4.0% | | | 21.4% | | 14.9% | | |

CTA & TREND FOLLOWING PERFORMANCE

a closer look at 2016 - The Long & Short of it



Major CTA benchmark indices ended 2016 in the red, despite performing strongly during three main events that triggered short-term volatility to spike; the January equity market meltdown, Brexit and the US election. By using a trend following replicator developed by Joakim Agerback and Tor Gudmundsen Sinclair, HedgeNordic seeks to understand what were the major trends picked up on by CTAs during the year as well as what markets that negatively affected performance in 2016.

By replicating commonly known trend following techniques, Agerback and Sinclair have managed to develop a strategy approach with high explanatory value that can offer investors insights into what components are

driving CTA returns. Throughout the article we will refer to this replicator as the beta trend portfolio..

In figure 1 below, the beta trend portfolio is mapped against major CTA indices. The replicator appears more volatile (14% annual standard deviation over time) compared to the CTA indices because of diversification effects in an index, but 14% is probably close to industry standard. The strategy is also net of transaction costs but before fees to show the exposure without impact of management fee and performance fee. Performance fee would otherwise give a smoothing effect on the upside performance as upcoming performance fee is deducted from the NAV.

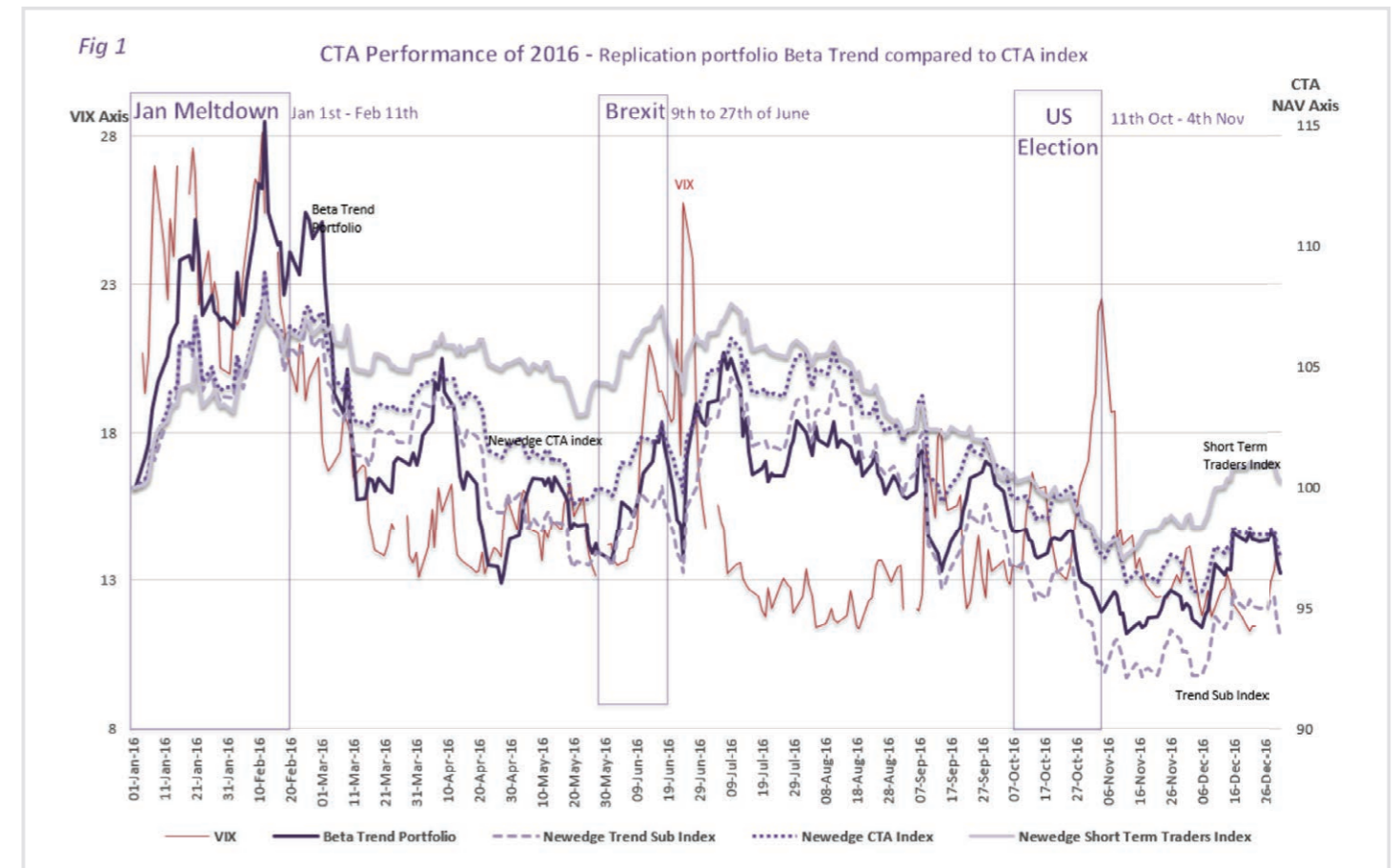


Fig 1: The periods are defined by the start of sharp increase in volatility up to decreases in volatility. The Beta Trend Portfolio follows the Newedge CTA indices very closely except the Short-Term Traders Index that offers significantly different exposure.

2016 a CTA Review

From a volatility and CTA perspective illustrated by the VIX in Fig 1 above, 2016 can be described by three main events. The January market meltdown, Brexit and the US Election. While all three events introduced volatility to the market 2016 didn't offer many smooth trends to ride,

noting that the two latter events were against consensus and expectations, hence contra trend. Observing that 2016 was a difficult year for CTAs, all three scenarios offered opportunities. CTAs proved valuable and the fact that different short and long legs of the portfolio can offer diversification is a good characteristic of CTAs.

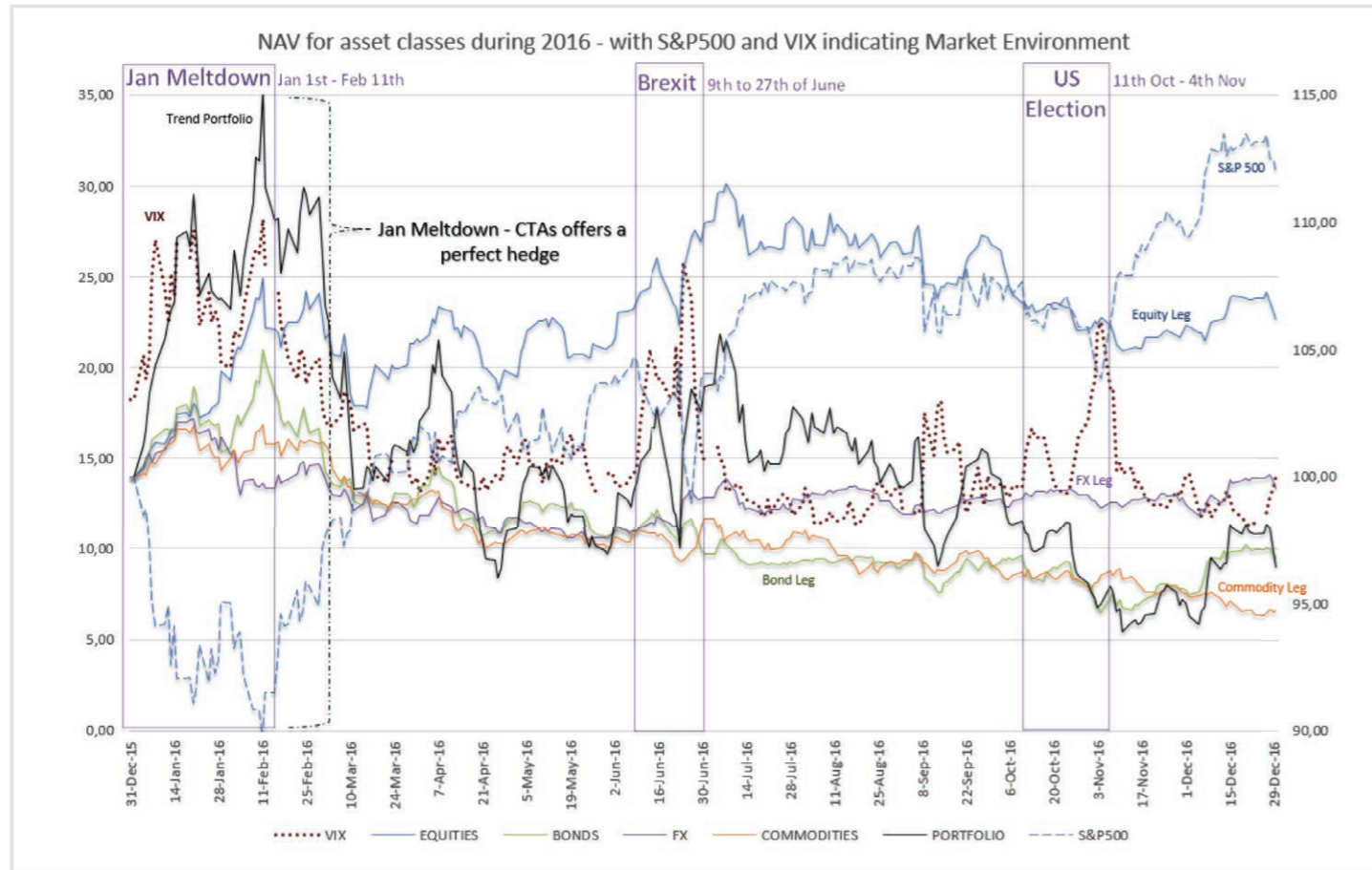


Fig 2: January – CTAs illustrating a perfect hedge through the mirrorlike NAV of the replica portfolio (black) against the S&P500 (dotted blue).

January melt down

January to the 11th of February showed signs about a global economic slowdown, oil prices crashing down to \$26 a barrel and S&P500 were down 11% and China the main worry, significantly more. Going short Chinese and Asian index future offered very profitable opportunities in January to mid-February. Per our replicator, trend followers (TFs) most likely also profited from short energy, long bond positions and being short major currencies against the USD, hence long USD trend. January’s market movement and TFs positioning coming in to the year should have earned investors significant returns in January.

The main reason TFs could profit from the equity drought in January was the fact that most short equity positions were likely established already in the end of 2015. It is important to realize that the short equity leg across a series of models for Trend followers over time is negative (0 to -2 % on annual basis). The component requires a serious move or an extended market downturn to be profitable. Including short signals for equities still adds value on risk adjusted

portfolio level and like 2008, January 2016 was an example of when the leg added portfolio benefits, see fig 2 & 3.

It is more often the long leg of the bond component that offers the diversification effect during rise in volatility and high volatility periods. During January established long bond positions in moving average models (slower than break out models), offered strong P&L contribution.

Brexit

On the 24th of June, we were given the somewhat surprising result that Britain were to leave the EU. The Brexit event caused the VIX to soar from low levels up to mid-twenties and quickly caused large losses in equities (-5% in S&P500) over just two days. As per the replica TFs were going in to the month short GBP and long JPY while else long USD against major FXs. The already established positions, GBP and JPY proved to be the stand out markets together with European long bond and short equity positions.

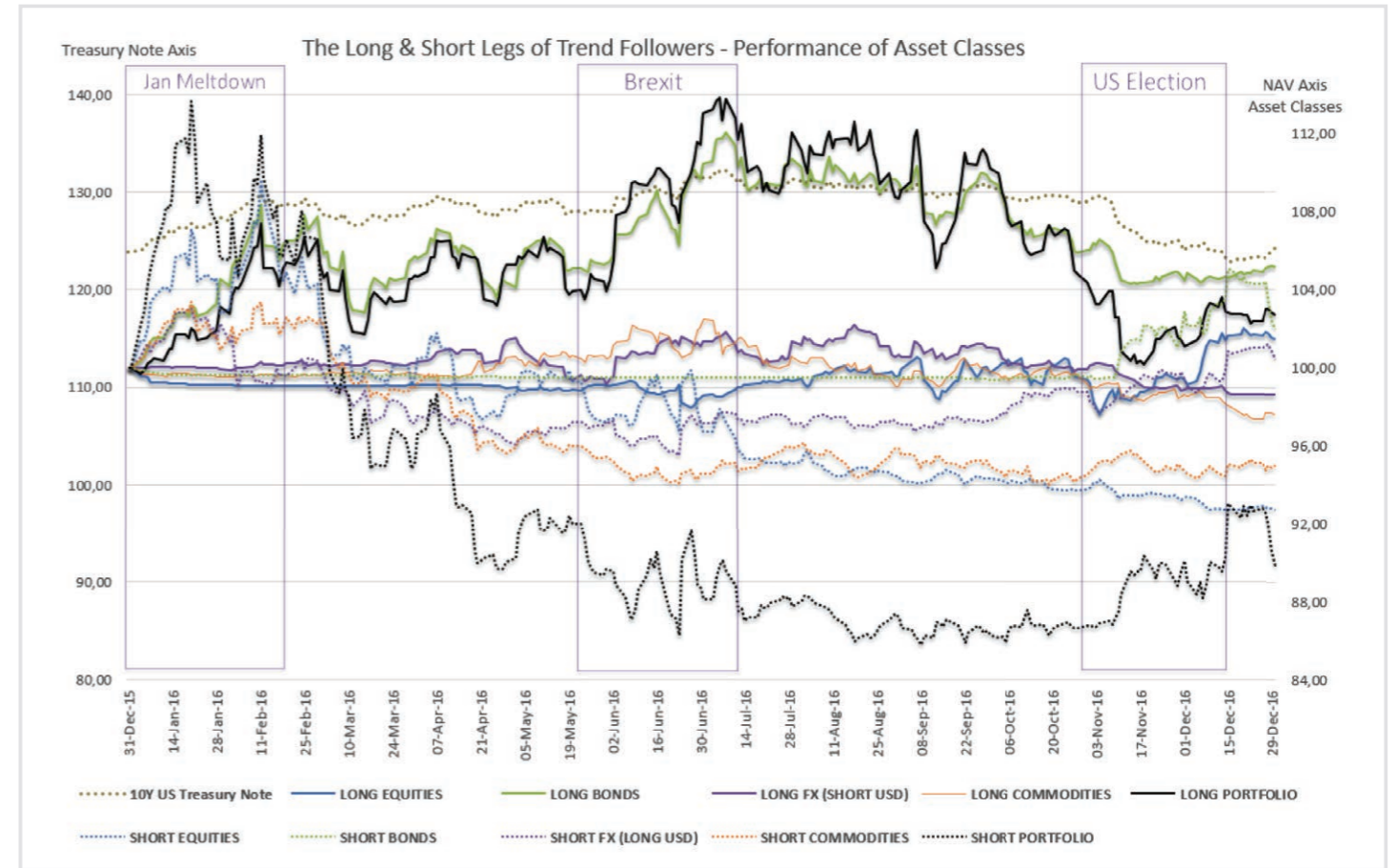


Fig 3: Shows the NAV contribution (right axis) during 2016 and during main events. Left axis show Treasury yield futures price during 2016 as an indication of Bond performance and positioning.

TFs are not very reactive and need considerable time and/or price movement to profit from trend reversal, but CTAs proved adaptiveness during Brexit through sufficient price moves. Nevertheless, holding those short equity positions proved costly throughout the year and was an expensive leg in the portfolio.

US Election

Again an unexpected event hardly priced in to the markets and TFs were caught with trending positions long equities, bonds and commodities. Hardly seen as a Trend Follower, Trump wasn’t late to take credit for a year-end equity rally that made TFs recoup some losses before year end.

Figure 3 points out that TFs was given the historical rare opportunity to go short bonds and be profitable. Especially in break out models supported by a sufficient trend break downwards. Short bonds produced positive results up to the mid-December reversal that saw P&L for the leg go down again, still ending positive for the year. The 30-year Bull Trend in bonds have made this leg seldom profitable

for TFs and even a challenger for CTAs with shorter term positioning, hence less reliant on the long-term trend.



Joakim Agerbäck



Conviction is paramount

Financial markets are prone to periods of heightened volatility, like an ocean, shaken at times by strong winds and storms. To successfully navigate during such periods requires expert knowledge. IPM's investment models have been designed to withstand market volatility, maintaining conviction to profit when markets converge back to their fundamentals. Only robust vehicles thrive in harsh waters.

Find more information about our approach at ipm.se or contact us at info@ipm.se.

Hot & Cold markets and positioning during 2016

Just as so many other years 2016 (table 5) was a bond year with long bond positioning most profitable. Short GBP, long the Canadian equity market and short Cocoa & Wheat were other stand out markets. Going short equity index were as touched upon earlier difficult during 2016.

2016 outside the three events

To elaborate on short equity positions the market environment could maybe be best described by the fact that the S&P500 and many other equity markets broke records in extended range bound trading without adding or losing more than 1% for over 35 days in a row. Volatility is

a two-edged sword for TFs though. TFs are often referred to as Crisis Alpha and long volatility but the fact is that from a risk adjusted basis TFs are most comfortable in low volatility environments, but with clear market direction and no false signals or break outs in markets.

The actual outcome of 2016 could have played out in many other potential ways much more painful for investors and their diversified traditional portfolios. Even though TFs didn't shine from a performance perspective the replicator indicate they offered investors clear portfolio benefits.

The trend following replicator is used with permission from Agerback and Sinclair. For a full description of the factors underlying the model, go to:

| Table 1 Jan Meltdown | Table 2 Brexit | Table 3 US Election | Table 4 Outside the 3 | Table 5 Full 2016 |
|-------------------------|-------------------------|----------------------------|-----------------------------|--------------------------|
| LONG JGB 4,33% | SHORT GBP 1,81% | LONG COFFEE 0,89% | LONG TSE60 3,33% | LONG JGB 4,09% |
| LONG SHORTSTERLIN 3,20% | LONG JPY 1,81% | SHORT NATURALGAS 0,67% | LONG eminiDOWJON 3,01% | LONG BOBL 3,90% |
| SHORT CHINA 2,55% | LONG BOBL 1,21% | SHORT SMI 0,56% | LONG SUGAR 2,90% | SHORT GBP 3,67% |
| LONG FNOTES 2,43% | LONG SHORTSTERLIN 1,16% | SHORT CRUDEOIL 0,40% | LONG eminiRussell20 2,81% | LONG BUNDS 3,34% |
| SHORT NIFTYFIFTY 2,31% | LONG TBONDS 1,11% | LONG GOLD 0,40% | LONG FTSE 2,27% | LONG TSE60 2,60% |
| LONG EURODOLLAR 2,14% | LONG BUNDS 1,10% | SHORT BRENT 0,39% | SHORT COCOA 1,80% | LONG EURIBOR 2,35% |
| SHORT IBEX 2,10% | SHORT MIB 1,00% | LONG SILVER 0,32% | SHORT EUR 1,66% | SHORT COCOA 2,01% |
| SHORT MIB 2,05% | SHORT IBEX 0,97% | SHORT COCOA 0,30% | SHORT EURODOLLAR 1,38% | SHORT WHEAT 1,72% |
| SHORT HANGSENG 2,02% | SHORT CAC40 0,86% | LONG ZYNOTES 0,27% | SHORT EUR 1,13% | SHORT EURODOLLAR 1,38% |
| LONG TNOTES 1,83% | SHORT WHEAT 0,84% | LONG FNOTES 0,24% | SHORT WHEAT 0,99% | SHORT TBONDS 0,87% |
| LONG NIKKEI -0,51% | SHORT COPPER -0,19% | SHORT IBEX -0,25% | LONG CGB S1 -2,09% | LONG SOYBEANOIL -0,95% |
| SHORT CHF -0,54% | SHORT COCOA -0,23% | SHORT WHEAT -0,26% | LONG TNOTES -2,34% | LONG SOYBEANMEAL -1,04% |
| LONG COCOA -0,55% | SHORT NATURALGAS -0,27% | SHORT WHEAT -0,29% | LONG EURODOLLAR -2,48% | LONG EUR -1,10% |
| LONG SUGAR -0,58% | SHORT COTTON -0,31% | SHORT GBP -0,30% | LONG FNOTES -2,81% | LONG CAD -1,19% |
| SHORT JPY -0,59% | SHORT AEX -0,40% | SHORT CORN -0,38% | LONG ZYNOTES -2,99% | LONG COFFEE -1,34% |
| SHORT SILVER -0,62% | LONG eminiDOWJON -0,73% | LONG NATURALGAS -1,04% | SHORT NIFTYFIFTY -3,17% | SHORT TSE60 -1,82% |
| SHORT EUR -0,70% | LONG TSE60 -0,75% | LONG HANGSENG -1,06% | SHORT HANGSENG -3,24% | SHORT AEX -1,85% |
| LONG TOPIX -0,70% | LONG SOYBEANS -0,76% | LONG eminiNASDAQ -1,19% | SHORT eminiRussell20 -3,40% | SHORT CAD -1,98% |
| LONG eminiNASDAQ -0,91% | LONG eminiS&P500 -0,79% | LONG eminiRussell20 -1,23% | SHORT BRENT -3,41% | SHORT TAIWAN -2,05% |
| SHORT GOLD -1,11% | LONG SOYBEANMEAL -0,92% | LONG FTSE -1,34% | SHORT IBEX -3,63% | SHORT SOYBEANMEAL -2,28% |



IPM Informed Portfolio Management was founded in 1998 with the purpose of delivering robust investment strategies with a systematic investment process to institutional investors. Today, IPM is primarily recognized for its multi-asset systematic macro strategy, but also for its Smart Beta equity strategy, both building on similar investment principles.

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The direction of machine learning in quantitative finance

By Dr Anthony Ledford and Sandy Rattray

Artificial intelligence (AI) is advancing rapidly. From driverless cars through to virtual assistants, from smart heating systems to Amazon drones, innovation seems to be everywhere. The field of finance is no different and machine learning (ML) techniques – a branch of AI – are increasingly being applied to investment analysis. Simply put, we define ML as any computerised system which can use algorithms to identify and act on repeatable patterns learned from data, without being explicitly guided as to what patterns to look for.

Common perceptions are often a hindrance to a proper understanding of the subject. In *The Hitchhiker's Guide to the Galaxy* the super-computer Deep Thought takes 7.5 million years to determine that the 'answer to the ultimate question of life, the universe, and everything' is 42. A similar picture is often conjured when people talk about ML – throwing enormous processing power at a massive dataset until some golden insight is found that can unlock

the secrets of the universe. In fact, the aim is often simply to combine a variety of weak information sources into a whole which has greater signalling power than any of the individual inputs in isolation.

In investment specifically, we think that a world of unbridled AI with people rendered redundant is some way off. We do, however, think that machines will continue to enable investors to benefit from areas that the human brain struggles to reach. *Homo sapiens* individuals have strong pattern recognition ability over small homogenous datasets but they struggle as the information set becomes larger and more varied.

This is undoubtedly the case for financial information, which is not only burgeoning in size but is also very diverse, consisting of the obvious numbers and text, but also more unusual information sources. For example, in the case of energy and crop markets, meteorological diagrams

are crucial pieces of material. ML techniques allow us to combine numerous and varied data sources to give insights that human intelligence might miss.

Expectations of imminent ML domination in finance have been encouraged by a series of computer victories in complex board games. In recent months we have seen Google's AlphaGo beat South Korean Lee Sedol, one of the world's most decorated Go players, by 4 games to 1. The game of Go is reported to have more possible board configurations than there are atoms in the universe. Given this, some media commentators have asked why the same computational fire-power could not be recalibrated to tackle the "game" of finance. The reality, however, is unlikely to be straightforward. Go has total observability – the board design, the number and color of the stones, are all set in advance and cannot change. With investment, although there are certain constants – such as the amount of money you have to invest – most of the factors and the



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“rules of the game” are more nebulous, and the regulatory, economic or demographic environments can of course change significantly over time. Navigating the correct path through this amorphous landscape requires the core human skill of contextualisation – making a qualitative judgement about how processing power should be best applied.

In addition, the unchanging rules of Go, combined with the computer’s ability to explore alternative moves through replay, enabled AlphaGo to evolve its game strategy through billions of rounds of self-play. A machine trying to do the same thing in financial markets faces a far greater challenge. This is not only because the number of permutations inherent in financial markets is massive – even relative to Go – and that the nature of the “game” changes through time, but also because real-life financial markets only get played out once. This massively limits the scope for financial strategy development through self-play.

“We think that machine learning naturally extends existing systematic data modelling approaches which already successfully provide robust rational alternatives to human behavioural biases.”

Having said all this, we do see huge future value in ML as a technique for assimilating information from larger and more varied data streams. We think that ML naturally extends existing systematic data modelling approaches which already successfully provide robust rational alternatives to human behavioural biases. But the challenge remains significant because, as we have discussed, finance is an order of magnitude more complex, and statistically noisy, than many of the arenas where ML has so far reported its greatest successes. Accordingly, for the foreseeable future we expect that the relationship between man and machine will remain collaborative rather than adversarial.

Indeed, we increasingly find that solutions in one domain can resonate in others, including finance and investment. One such example is the Galaxy Zoo Supernovae project (See <https://www.galaxyzoo.org/>). This is an online initiative which presents volunteer users with images of deep space and asks them to classify what they see based on each image’s features. The answers from many such volunteers are then aggregated to determine which



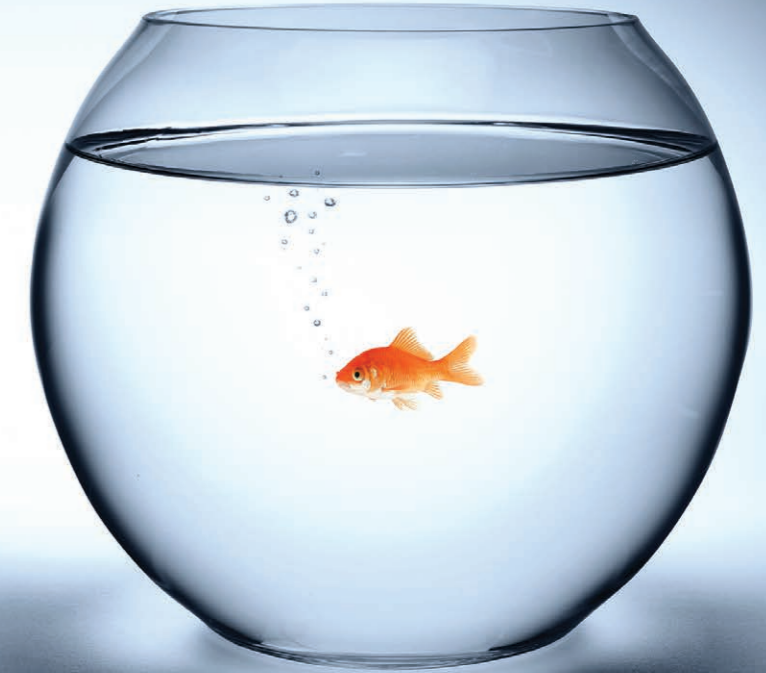
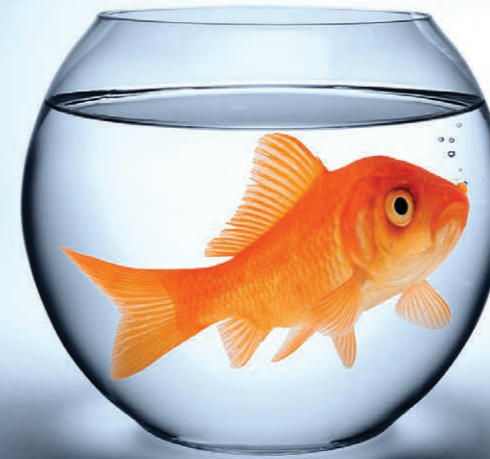
Sandy Rattray is CEO of Man AHL, CIO of Man Group and also a member of the Man Group Executive Committee

images contain supernovae. The ML methodology for solving this astronomy problem can also be applied to the task of extracting useful predictive signals from broker recommendations in the world of finance. Both cases involve classification decisions based on a variety of potentially conflicting evidence where learning is undertaken by processing the track records of individual astronomers or analysts. As ML matures, we expect to find similar examples of techniques which are transferable across disciplines.

When asked how he would spend a trillion dollars to solve global warming, the late Professor Sir David MacKay gave a somewhat surprising answer – data analytics. The implicit suggestion was that academics and practitioners alike are not currently extracting information from data to its full potential. We believe that organizations such as the Oxford-Man Institute, an academic hub for machine learning research applied to quantitative finance, which bring together researchers and practitioners from widely varied backgrounds, can be part of the solution. We think this could greatly accelerate progress, giving heightened insight into the investment world, and beyond.

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WHEN SIZE MATTERS



EXTRACTING ALPHA FROM LESS LIQUID MARKETS

by Jonathan Furelid – HedgeNordic

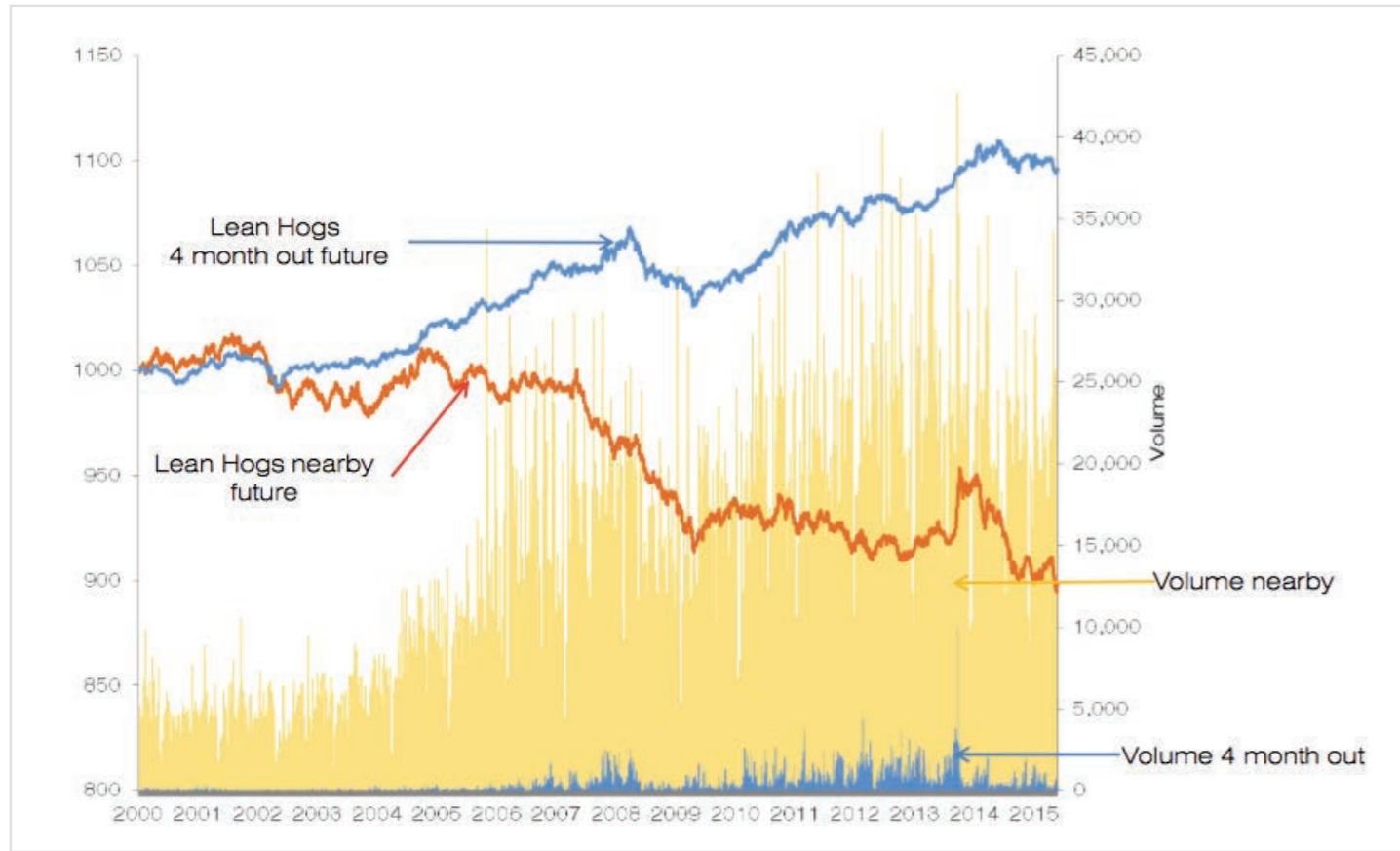
An often debated subject within the CTA industry is the impact of size on returns. Is there a reason to believe that CTAs with larger assets experience a deterioration of returns, simply as a function of them getting too large? Although no clear cut answer has been given to the question, there are thoughts supporting the idea that a different, uncorrelated and alpha generating opportunity-set awaits those CTAs that are small enough to tap into less liquid markets. SMN, a CTA based in Vienna, have put those thoughts to work.

Looking to benefit from their potential size advantage, SMN set up a managed futures program called “Structural Alpha Trend” in June 2016 aiming at systematically trading a multitude of less liquid markets that are largely ignored by the big CTAs. So far results have been encouraging according to Gernot Heitzinger, Managing Director at the Vienna-based CTA. “By focusing on around 50 markets that are outside of the universe of about 120 liquid futures

markets that are traded by most CTAs, we find a completely new opportunity-set for extracting trends and generating uncorrelated alpha. Simply put, big CTAs miss out on half of the opportunities just because they cannot trade illiquid markets efficiently”, Heitzinger says continuing:

“Within the less liquid market universe, that have approximately 200 instruments (an instrument can be any delivery month or a synthetic market – which is a combination of markets/delivery months) underlying, we found 40 uncorrelated return drivers, that compare to an equal amount of 40 uncorrelated return drivers within the liquid futures markets portfolio. The nice thing is that the cross correlation of these groups of uncorrelated markets is literally non-existent meaning that there are diversification benefits to be gained by combining them.

The Structural Alpha portfolio has so far been trading as a sub-set of SMN’s main program, Diversified Futures Fund



and according to Heitzinger, the fact that smaller markets display some unique characteristics make them a good diversifying return stream.

"In addition to simply trading smaller markets we are also trading far out delivery months of contracts in bigger and smaller markets. This translates into exploitable and very different trends compared to the trends seen in the nearby futures contract", Heitzinger explains showing a graph of the lean hogs future contract comparing the graph four months out to the nearest month. Inarguably showing deviations in underlying price trends.

Another factor playing into the smaller markets story is that they offer the possibility to exploit local trends in the agricultural markets, Heitzinger argues.

"Agricultural markets show strong local weather driven trend characteristics. Those uncorrelated but smaller markets cannot be traded effectively in large size due to volume and open interest. This is definitely a competitive advantage for smaller managers".

The way SMN expands the universe of less liquid markets is to trade synthetic markets. Synthetic markets refer to a combination of different contracts, this might be spreads

between two markets, calendar spreads and baskets of different contracts.

As smaller managers can exploit the full set of sectors, notwithstanding liquidity constraints, means that they will also be able to create a truly diversified managed futures portfolio, Heitzinger says.

"Given that a small market portfolio don't need to take into account accessibility issues due to liquidity, the markets weights in terms of sectors can be determined on the basis of correlations instead and allows for a higher relative exposure to commodities. This provides for a portfolio optimized on risk adjusted returns rather than a liquidity skewed portfolio that holds significant exposure to equities, fixed income and FX."

"With liquidity skewed portfolios having a sizeable exposure to interest rates markets, that also make them more vulnerable to interest rate levels. The smaller markets portfolio however is more or less independent of these levels", Heitzinger says.

With regards to the overall correlation of the Structural Alpha program compared to a broad CTA index, backtested data suggest that it has a correlation of about 0.2 which

is also what the program has delivered in live trading, Heitzinger says.

"That is the beauty of combining a liquid CTA portfolio with a portfolio focusing on less liquid markets, you capture trends but in a very different way. The less liquid market portfolio is for example less sensible to swings in risk aversion, for the simple reason that it trades a lot more niche contracts, typically in the agricultural sector".

Heitzinger doesn't see a major threat in that the larger CTA names will start offering similar products addressing the less liquid end of the futures markets, they will not be able to allocate enough assets to these markets in order for that allocation to have a meaningful impact on the overall portfolio, he argues. The capacity limit of SMN's less liquid markets portfolio is set to 400 MUSD.

"If you run a managed futures program with 20-30 billion USD in AuM, it is very unlikely that you would be able to allocate enough assets to the less liquid part of the market so that it would have any meaningful effect on the overall portfolio. That is the benefit of running a smaller CTA program, incremental improvements could have a significant impact on the performance and risk characteristics of your trading programme, we believe adding smaller markets is one of those improvements.

SMN are seeing good interest for their Structural Alpha program, according to Heitzinger. He takes that as a recognition that CTA allocators are starting to think along the same lines when it comes to concentration risks inherent in only having big names CTAs trading a similar set of markets, that is the most liquid ones.

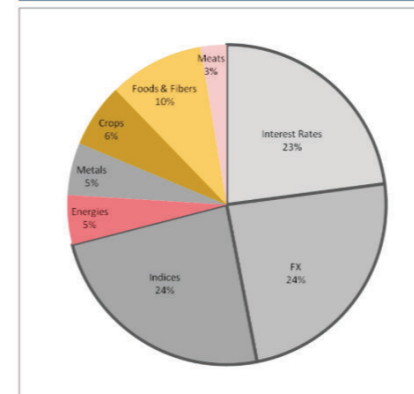
"I think that investors are beginning to recognise that they have too little diversification within their CTA book and that the exposure to financial contracts tends to get the



Gernot Heitzinger, SMN

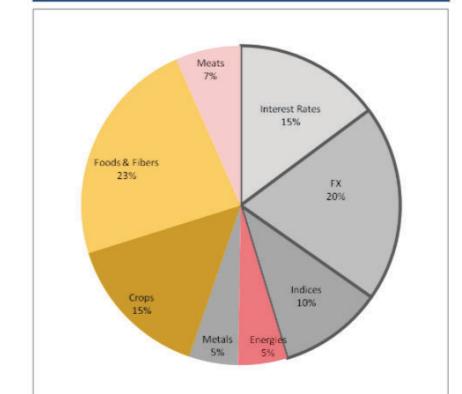
bulk of the exposure. By adding a program that exclusively focus on the markets that are not picked up on by big name CTAs will leave you with a much more balanced portfolio in terms of sectors and markets traded as well as adding uncorrelated trend exposure."

The liquidity skewed portfolio *



- Overexposure to the most liquid financial markets
- Loss of Diversification
- Market weights based on accessibility
- Increasing OTC exposure (mostly FX)

The truly diversified managed futures portfolio



- Maximum Diversification
- A Portfolio optimized for risk adjusted returns
- Market weights solely based on correlations. High commodities exposure
- As little exposure to OTC markets as possible

THE OPPORTUNITY SET FOR MACRO CURRENCY INVESTING

Combining Discretionary and Systematic Approaches

by Hamlin Lovell - HedgeNordic

Mark Farrington

Macro Currency Group (MCG) is one of fourteen autonomous boutiques affiliated with Principal Global Investors. MCG is a specialist global macro manager offering currency absolute return, overlay, beta, and hedging solutions to clients globally. Based in London and Sydney, the team has been managing macro strategies since 1997 under the same global style. They specialise in currency markets, but benefit from scale and efficiency of a larger organization, Principal Global Investors. The Global Time Diversified Absolute Return UCITS Fund trades liquid, G10, developed market currencies and offers daily dealing.

Global Macro Discretionary (GMD)

Mark Farrington, founder and head of MCG, has been running discretionary global macro for 25 of his 30 years in the financial markets. Farrington is American but has spent his entire working life in Asia and Europe: a decade in Japan before moving to Singapore, Sydney and then London since 2003. His career began, momentarily, in Tokyo, in 1985, when the Plaza Accord, devaluing the US dollar, catapulted Japan to a much greater part of world GDP in USD terms. "Japan was the first emerging market and there are parallels between the 1980s and today's balance of power in economic policy-making" he reflects.

Farrington is a fundamental investor who pays much attention to politics and central bank policies. Having studied International Strategy and Diplomacy at the London School of Economics, Farrington has, for a generation, been engaged in what he dubs "shadow diplomacy between Washington, Tokyo, Singapore, and Shanghai". Farrington's macro views are expressed through the currency markets, as they are the largest, and most liquid, financial markets, open 24 hours a day – and in some countries with little or no capital nor derivative markets, currencies can be the only liquid way to get exposure.

"Japan was the first emerging market and there are parallels between the 1980s and today's balance of power in economic policy-making."

Farrington believes that multiple forces are now coalescing to create an environment that should be conducive to fundamental macro investing. "Monetary policy extremism morphed to divergence last year and, by mid-2017, should come round to convergence with most central banks neutral or tightening" he envisages. Not only will interest rates continue to rise in the U.S., but "after eight

years of expansion, central bank balance sheets in reserve currencies will start contracting, as the Fed has frozen its purchases while the ECB and Bank of Japan should begin tapering theirs". Farrington expects this will be a moment of reckoning for the financial markets as yield curves steepen, credit spreads widen, volatility expands, and asset allocation switches back from illiquid peripheral markets to liquid, core markets. Notwithstanding central banks' clear signalling of imminent policies, Farrington contends that the prevailing benchmark mentality prevents most asset managers from factoring in the implications – so the tipping point will only occur when the policies materialise. Foreign exchange, for Farrington, is a perfect canvas as he expects the unwinding of QE will provoke huge cross-border capital flows, reverberating through the currency markets.

Farrington has owned the USD against a rotating basket of short currencies – emerging market and commodity currencies in risk-off episodes, with the euro, Swiss franc and Japanese yen used in risk-on periods. Based on previous USD super-cycles, Farrington judges that the U.S. dollar, which is now overvalued, is in the mature phase of its ascent – and that history could be made if the G20 agrees to halt, and reverse, the dollar's rise. Political undercurrents, in terms of protectionism, and burden-sharing rhetoric, could set the stage for markets to come full circle.

"It is extremely rare for global GNP to decline, in absolute terms, because that would require a synchronised recession in developed and emerging markets."

"The Bank of England could be second to raise rates after the Fed, as the UK economy is furthest along the road to recovery" projects Farrington, but he trades the pound sterling tactically as it remains vulnerable to Brexit-related news-flow. Farrington expects Australia, Canada and New Zealand could be relatively late rate hikers in this cycle as he foresees "a two-to-three year complex bottom in commodities because the super-cycle commodity bear market is not over".

Strategic Currency Program (SCP)

Most investment houses can be categorised as either discretionary or systematic, but MCG believes that discretionary and systematic macro investing can coexist as complementary approaches providing the two are focused on different timeframes. The rationale for the strategic currency program is that investors, such as sovereign wealth funds, want to participate in global economic growth in a

reasonably predictable fashion. Global GNP is an attractive benchmark for investments because its trajectory virtually always increases. "It is extremely rare for global GNP to decline, in absolute terms, because that would require a synchronised recession in developed and emerging markets" Farrington observes. Very seldom does this happen. 2008 saw developed economies shrink while emerging markets powered ahead. Conversely, the Asian crisis in the late 1990s witnessed recession in many emerging nations while the developed world continued to grow above trend.

Real assets, equities, property or commodities may be perceived as having a good fit with economic growth, but they may show signs of volatility that may frequently decouple from actual global GDP, as shown in graph 1. Therefore, MCG resolved to devise an investment approach that more reliably tracked economic growth, defined as the World Bank Global GDP index. Though this is comprised of G10 developed countries, their interconnectedness with emerging markets provides significant ballast.

The strategic currency program may seem simple but it took years of extensive research and back-testing to arrive at the chosen methodology. "Many people think that the currency carry trade approximates global growth, but you need to look beyond carry" explains portfolio manager, Dr. Ivan Petej, who received a PhD in Quantum Physics from the University of Oxford. Eventually, he found that the

fundamental drivers of foreign exchange markets could be distilled into three models: Forward Rate Bias (measuring the carry trade); Purchasing Power Parity (gauging valuation) and Trade Weighted Index (calibrating terms of trade).

"Many people think that the currency carry trade approximates global growth, but you need to look beyond carry."

"We carried out four years of paper trading (between 2007 and 2011) to prove the methodology before rolling it out to external investors" Petej recalls. Strategic currency program returns have generated a close fit with nominal GDP growth over multi-year periods (though there can be some divergence for individual years). They have also hugged global GDP much more tightly than a basket of currency managers or traditional models.

"All of the models are based on fundamentals that are long-term drivers of foreign exchange markets and each of the three applies to all currencies" explains Petej. Whereas the Global Macro discretionary strategy tends to hold positions for two-to-six months, whereas the strategic currency program is much longer term. The weighting of the three drivers are set according to their respective explanatory power to global GDP and are rebalanced annually to maintain these weights. "We considered quarterly or biennial

rebalancing but it did not add anything, so we did not want to risk over-fitting based on intra-year data" confirms Petej. For instance Purchasing Power Parity is very long-term and often may only predict exchange rates over periods of many years. Sometimes, it can also work over shorter periods. "Owning the Japanese yen in 2016 seemed counterintuitive given the rising risk appetite, but the currency was very undervalued and performed well" Petej observes.

All ten G10 currency pairs are tradable, but "each of the three models rank them and selects only the three most relevant pairs while taking into account liquidity" explains Petej. Where the models hold opposite positions these are offset, and can result in a smaller, or zero, position in a particular pair. Theoretically, all three models could hold the same three pairs, but this is very unlikely. The carry bucket is, by definition, long of carry, but overall could run at neutral (or negative) carry if negative yielding positions in the other two models counterbalanced (or outweighed) the positive carry. "This is most likely to happen at the extremes of cycles - when high yielding currencies become overvalued, the valuation models will start to offset the carry bias" Petej has seen.

One dimension of MCG's multi-faceted risk management is that the strategic currency program devotes between 1% and 1.5% per year to an option overlay strategy. "The aim is buy low delta, out of the money options, to help

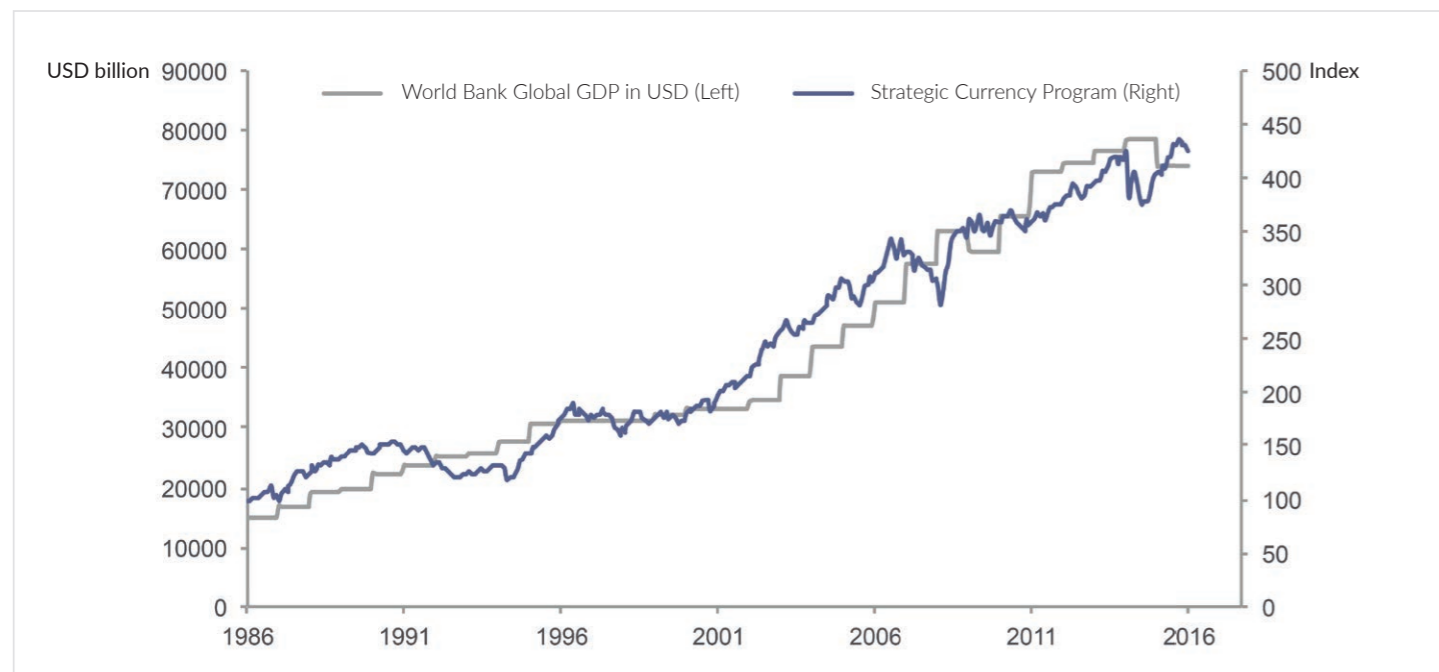
prevent losing too much on tail risk" explains Petej.

Global Time Diversified

The Global Time Diversified strategy blends the discretionary and systematic macro strategies with the aim to potentially generate a stable, return stream, regardless of the prevailing investment environment. The strategy is designed for absolute return investors looking for a source of lowly correlated alpha. It aims to provide diversification across a range of factors to produce stable, attractive, risk-adjusted returns over the medium- to long-term. Historically the two complementary strategies have shown slightly negative correlations, which have increased in recent years. Petej attributes this to "the unusual financial market climate and large central bank liquidity injections". The inverse relationship between G5 central bank balance sheets and global hard currency reserves which have grown significantly over the past few years, and financial market volatility, is shown in graph 2.

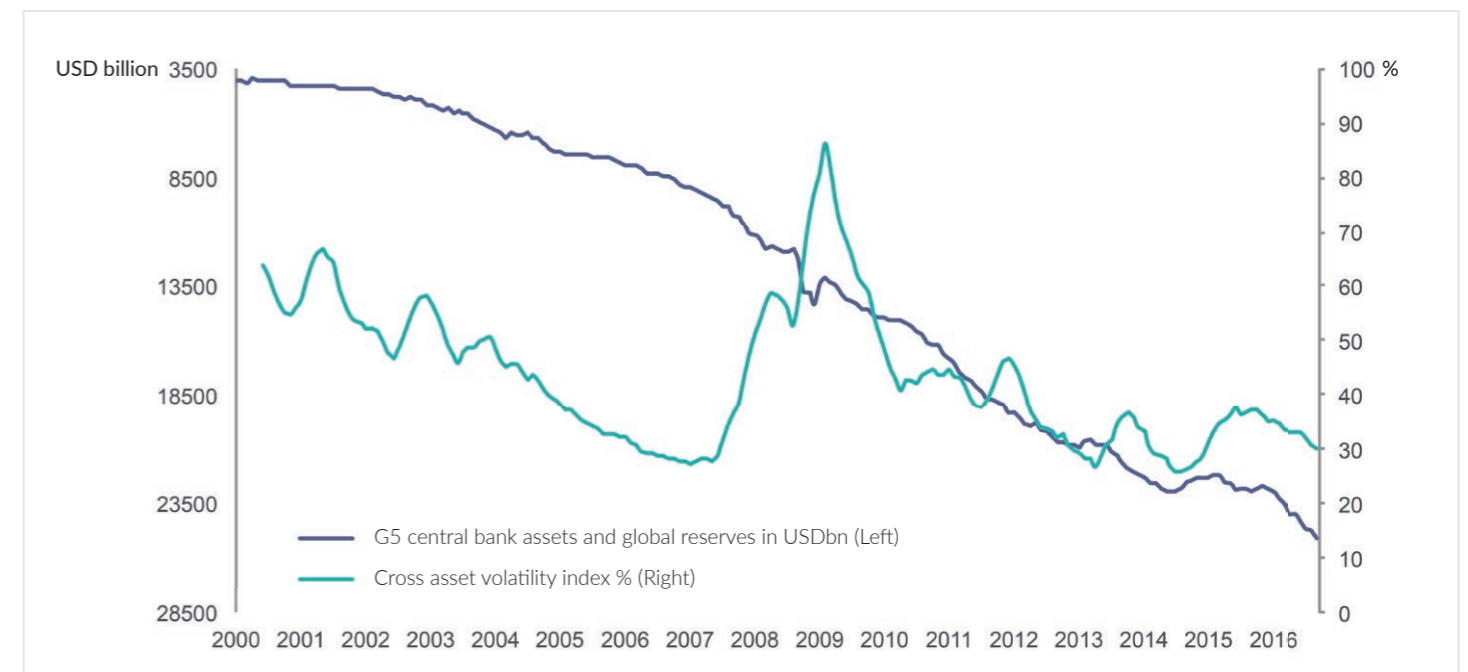
The macro strategies are available to Nordic investors through a UCITS Fund, or via segregated and managed accounts which can allow for higher or lower risk targets. A wider universe of G30 currencies which include emerging markets is also available,' says Jeroen Van Rooij, Managing Director, Country Manager Sales Benelux & Nordics, at Principal Global Investors.

Graph 1: Strategic currency program vs World bank global GDP



Source: Bloomberg, Principal Global Investors. Data as of December 2016.

Graph 2: Global central bank liquidity vs Cross asset financial market volatility



Source: IMF, Bloomberg, Principal Global Investors. Data as of September 2016 (latest figures available).



by Jonathan Furelid - HedgeNordic



Left to right: Mattias Wallenberg, Patrik Wallenberg, Christoffer Svanströmer

10Ten Kvanthedge - a mathematical approach to equity market trading

Based in a small town called Stockaryd in the southern Swedish province of Småland, 10Ten Fonder is somewhat of a rare species in the Nordic hedge fund space. With a team of traders executing what is referred to as a mathematical model trading European large cap stocks, 10Ten now want to make their mark on the Swedish hedge fund quant scene through the launch of the 10Ten Kvanthedge fund.

"We have been trading the model live for many years and feel confident that what has been delivered is a robust and repeatable system that we now want to offer to outside investors. We have very ambitious goals in terms of risk-adjusted performance, where our stated target is to be the best hedge fund in Sweden over 10 years in Sharpe-ratio terms", says Patrik Wallenberg, portfolio manager of 10Ten Kvanthedge.

Trade selection from big data analytics

The underlying quantitative system has been developed over many years by a group of equity market traders, led by Ronny Svanströmer. Svanströmer is the father of the original mathematical models which aim to track and profit from what Wallenberg refers to as "scenarios" that occur in equity markets, every day.

"Our model run daily analytical calculations on a very large data set and selectively enters trades based on

what is perceived as the most interesting opportunities from a risk/return perspective. The approach builds on big data analytics but the resulting positions are carefully filtered out so the amount of executed trades are far less than for a high frequency model. We are not a high frequency trader but the input to our model is partly based on analysing short-term market data", Wallenberg explains continuing:

"We only consider large cap European equities that we feel comfortable trading from a liquidity standpoint. The liquidity aspect is crucial for the system's ability to generate a high risk adjusted return, consistently over time. Approximately 70 percent of the positions are netted on an intraday basis, which means that we need to have significant liquidity in the underlying contracts traded in order to be able to execute the model properly".

According to Wallenberg, a central part in the model's efficiency is the way it filters out information to fit the definition of what is a tradeable scenario or not.

"We have a lot of information that we use as input to our model, but the crucial part is for it to navigate through large amounts of data and to filter out what makes sense to trade given the models definitions. When we have identified a scenario, we map the stocks that we refer to as 'tradeable objects' given the framework specified by the mathematical model."

A systematic approach executed by hand

The trading of the model is only partly systematic as it also requires manual intervention to place orders, Wallenberg says.

"The way the system identifies tradeable scenarios is completely systematic and takes place in what we call the analytical part of the process, when we then place orders this is done manually. The complexity of the system lies in the heavy calculations leading to a trade, the actual execution is then just a by-product from these calculations."

"The strategy is as close you can get to a market neutral strategy given that the time that we are exposed to directional market moves is very limited."

In trying to put a hedge fund label on the program, Wallenberg says that the fund is probably closest to a systematic equity market neutral fund.

"The strategy is as close you can get to a market neutral strategy given that the time that we are exposed to directional market moves is very limited. Having said that we have more long positions on over time than short positions, so there is a slight bias to the long side. We are clearly not a trend following fund however, as we do not try to predict and profit from market directionality."

Risk management at the core

At the core of the model is a very strict risk management process, and according to Wallenberg, everything the model does is derived from a rigorous risk assessment of each trade.

"I would say that 90 percent of what we do has a risk focus to it, we believe that if you manage risk as your top priority then good long-term performance will be a natural outcome of the work you do on the risk side."

"Our way of handling risk is to make small profits on a large number of trades that have very limited time exposure in the market. This also plays into our focus on large cap stocks. We want to be able to go in and out of stocks without being locked up due to liquidity constraints".

"The model needs a reasonable amount of volatility to be at its best, for the simple reason that there are more scenarios to profit from when things are moving in either direction."

"The fact that we typically have no overnight risk on is also part of the risk management thinking. This allow us to avoid being caught on the wrong side of the rather violent market moves that can be seen in the opening call of the market. In short, we take positions based on information that we have, not on what we think about tomorrow."

The fund was officially launched in August of last year, but has so far seen very low fluctuations and is more or less flat since inception. The reason for the small changes Wallenberg says is related to the fact that the fund, so far, has not reached a large enough asset base for the model to trade efficiently. Therefore, only a minor part of the portfolio is currently put at work in the quant model, resulting in a risk profile that is well below the stated annualised volatility target of 5-15 percent.

"The way we approach markets, the idea is to interact with a large amount of objects, or stocks. This in turn leads to certain fixed trading costs. In order not to have

these trading costs consume too much of the fund's performance, we need a certain minimum asset base."

"This also plays into how we manage risk, we do not want to be forced to take a too large position in a given market relative to the fund's size, we rather want to be diversified over many markets where we limit the amount of risk per trade."

In search for volatility but staying out of turbulent markets

The current market state, where equities are moving upwards steadily but with very limited volatility is according to Wallenberg not the optimal environment for the strategy, it works better in environments with some amount of volatility.

"The model needs a reasonable amount of volatility to be at its best, for the simple reason that there are more scenarios to profit from when things are moving in either direction. Having said that, we tend to be reluctant to take risk in very turbulent market conditions as the nervousness in the market is something that we cannot treat as a parameter in our system. The model simply gets too many distracting signals in these environments.

"When we have a binary event, such as in the recent case with the US election, we simply tend to stay out of the market until it has digested the new information. We do not try to have a crystal ball foreseeing or betting on events, we rather wait for the model to assess the new market conditions and stay completely out of the market until it has calmed down."

Looking forward, Wallenberg holds great hope that the fund will reach sufficient size within short so that the model can trade to its full potential. He sees no imminent capacity constraints on the upside and judge the system to be able to trade 2 billion SEK without any problems.

"Our system is very scalable once it has reached some size. With market volatility likely to pick up in the near term, we see very good trading opportunities ahead and remain confident that we can deliver in line with the strong results experienced from trading the model live for many years ahead of the fund launch".



Sean George is about to set up a credit hedge fund in Sweden under the Granit Fonder umbrella. Having spent the last 20 years in the US heading credit default swap desks at Bank of America, Deutsche Bank and Jefferies, he has successfully managed his way through a number of market cycles and even called the US housing market crash. As he now embarks on setting up a credit hedge fund on his home turf, George is said to be "cautiously optimistic" about the macro picture but has taken on a much more defensive stance following the recent Trump-rally.

"The market is currently priced for perfection and that is typically the time to be more alert to risks. We have had a good run in risk assets since the US presidential election but I prefer not to pick up pennies in front of a steamroller. In this greed phase, markets can turn around quickly", George says when asked to give his views on current market conditions.

George's upcoming Global Credit Opportunity Fund will invest about 75 percent of its capital in high-yielding corporate bonds while the rest will be used for short-term opportunities and hedging. Would the fund be up and running today, George says that he would free up liquidity to allow for a more defensive approach should the market become less risk seeking.

"The market is currently priced for perfection and that is typically the time to be more alert to risks."

"I have been positive on the banking sector and on infrastructure investments in the US, these views have been greatly rewarded following the 'Trump-bump'. As

the French election is coming up and as Donald Trump's promised stimulative measures are being questioned, there are good reasons to be cautious in the near term", George says continuing;

"Had the fund been up and running today, I would have taken profit on positions such as Deutsche Bank AT1's and US Steel while at the same time buying into total return swaps in order to increase the liquidity in the core portfolio. Bond duration hedges would also be subject to removal as I foresee an upcoming rally in bonds should the market become a bit more risk adverse. The US 10yr has been range bound, the 2,62 level was tested in front of the FED and has held again. The way I see it, there is not much needed for the market to turn sour given the combination of high equity market valuations, low volatility and significant political risks."

“There is not much needed for the market to turn sour given the combination of high equity market valuations, low volatility and significant political risks.”

Looking at flows and speculative positions in the market, George argues that he is not alone when it comes to selling out of positions that have rallied post Trump.

"Hedge funds are currently taking profits or selling short banking stocks, that to me is a sign that we have reached greed territory. Monitoring capital flows and speculative positions gives me a good sense of the underlying sentiment. Valuations is one thing but you always need to consider soft factors to get a feel for where the market is heading", he says.

Given that George runs his core portfolio of high yield corporate bonds with an investment horizon of 6-12 months, he also holds a view that is more longer term in nature, looking at prospects for the year ahead. In this regard, George believes that inflation will be the key factor to look at when trying to asses the development of interest rates going forward.

"I believe that the focus on stimulative measures in the US is likely to create inflationary pressures. If Trump manages to significantly reduce corporate taxes while at the same time realizing his protective measures, including a tax

amnesty and building a physical wall between the US and Mexico, that will bring inflation", George says continuing:

"We are monitoring the political situation closely and are still holding on to our reflationary view, however, that view builds on Trump actually managing to put his ideas to work. If that does not happen, we will need to reassess our view and potentially reposition, but currently we are cautiously optimistic about the prospects for the global economy".

When it comes to Europe, George says that inflation is starting to pick up in selective markets as well, and since the market is still pricing in a deflationary scenario with continuous supportive measures from the ECB, that could turn into significant market moves should the market be proven wrong, according to the fund manager.

"I think the latest figures coming out of Spain, showing signs of inflation, are worth noticing. Should that spread to additional countries, it would have a significant market impact given where valuations are today. Let's face it, the Germans already want to end quantitative easing (QE), if we see inflation ticking up in the south of Europe it will be hard for Draghi to keep QE alive in Europe."

In terms of the Swedish market, George says that he would hold no exposure currently. He believes that there are significant risks in regards to the amount of floating rate notes (FRNs) being bought in a very narrow segment of the market, thereby creating very concentrated risks.

“A significant part of the nvestments in floating rate notes in Sweden are made within the banking, finance and real estate sectors. I see this as a potential risk...”

"A significant part of the investments in floating rate notes in Sweden are made within the banking, finance and real estate sectors. I see this as a potential risk and as an unattractive trade from a risk/return perspective. Over 50% of the Swedish FRN-market is property bonds, that is very scary to me. "

"Currently you get paid for holding 5 year US treasuries above real estate bonds in Sweden, which indicates that there are few if any reasons to be active in the Swedish market at these yield levels. If there would be a market for

shorting real estate bonds in Sweden, I would definitely do so against US treasuries. I get paid to own US government bonds vs Swedish property bonds, I would do that every day of the year. I do not think Swedish retail investors understand how much mispriced risk they are taking in their domestic market."

According to George, there is no logical reason behind the continuous flow of assets into FRN-loans and bonds connected to the real estate sector in Sweden but rather a result of the mandates the local fund managers are tied to, as well as a follow-on effect of these managers seeking to reduce portfolio duration.

"The reason Swedish funds invest in these types of instruments is largely a result of the mandates they have, which forces them to hold these exposures. The fact that most funds currently seek to reduce duration risk is another reason for tapping into FRNs", George argues.

"On our end, we are also reducing duration risk and would hold a near zero duration if the fund would be up and running today. I would even consider holding negative duration had I been a bit more aggressive after the US election results. The mandate we have and the markets we trade allow us to do so in a much more efficient way than comparable funds on the Swedish market", George concludes.





HEDGENORDIC CTA ROUNDTABLE SUMMARY

MANAGED FUTURES AND SYSTEMATIC MACRO STRATEGIES

BY PIRKKO JUNTUNEN - HEDGENORDIC

The CTA and quantitative macro strategies did not have stellar years in 2015 and 2016 but inflows still look healthy. In a recent round-table discussion organised by HedgeNordic and moderated by **Jonathan Furelid**, investors and managers discussed the reasons behind performance and inflows but also looked at trends, fees and technology.

In the past decades and perhaps faster more recently, the CTA and quant-macro strategies have moved from the classic trend-following strategies to multi-faceted systematic trading strategies.

Allocators such as **Chad Martinsson**, **Helena Idenstedt**, **Ludvig Jarl** and **Per Ivarsson** may not have exactly the same approach but all agreed that competition has increased with more complex, diversifying strategies offered today, moving away from the pure trend-following ones. Banks as well as smaller stand-alone firms now offer trend-following products, often at competitive prices, which has led to a wider spectrum of strategies from low-cost to sophisticated ones.

Newer trend-following managers also tend to have an element of diversified strategies imbedded. Larger, more

established, managers have added so many diversifying strategies that many of them now offer stripped-down, low-cost versions of their models as a result of increased competition and investor demand, leading to more customisation. However, some argued that they do not want to carve up and sell individual parts because the strategies are designed to complement each other.

The CTA and quant-macro managers also have a plethora of approaches. There are those such as **Martin Estlander** who use models that were in use 20 years ago, albeit implemented differently, or **Niels Kaastrup-Larsen** staying true to trend-following where the aim is to be best of breed. On the other hand **Henrik Grunditz's** Win-

“ We would classify CTA’s by the instruments traded, rather than the style or strategy. ”

ton wants to be more than a CTA and have moved towards being a diversified quant multi-manager with the aim of being a long term risk-reducer and diversifier.

The question of the 2016 performance divided the views slightly with some arguing that events such as UK's Brexit vote and the US election of Trump had a negative impact with most getting one right and one wrong. **Stefan Nydahl** said those focusing on fundamentals saw the Brexit/Trump as catalysts in the dispersion or divergence from fundamentals.

Others viewed both of these as non-events as markets recovered quickly and put more emphasis on China dropping over 20% and the US equity correction at the beginning of the year. Most agreed that commodity exposure did not help and that those with shorter-term models were probably able to catch the reversal of fixed income earlier. Others pointed to the lack of volatility in July, August, September and October noting that it is difficult to be a trend-follower if there are not any trends to follow.

Estlander gave a quant view on performance and how they see the driver being the difference between the

short and the long-term volatility and over time the long-term volatility is higher than the short term. This has a high correlation to trend-following returns. However, occasionally such as in 2016, the relationship is unfavourable.

During the year there was also great dispersion of returns and much of this is down to the different factors impacting different managers, making diversification within the CTA space vital.

Going forward the participants agreed that there are opportunities arising for trend-followers which should boost performance. Dispersion between the policies of the different economic blocs could drive increasing long-term volatility and higher inflation and thus higher interest rates would also boost returns. The direction of interest rates is certainly seen as a theme but **Martinsson** said performance may seem better only because of the return on cash being earned.

Despite the performance struggles, asset flows for CTAs in 2015 and 2016 look robust and bigger players are getting bigger but the question is if demand is picking up overall. Again



the room was divided and many say they saw both inflows and outflows resulting in net flat inflows. Part of the reason for outflows, apart from performance, has been the decision, particularly in the US, for institutional investors to chuck hedge funds entirely trying to break up the strategies into individual parts aiming to access them cheaper. Inflows have been aided by the continued low-interest rate environment creating a demand for strategies that achieve decent yields and adds diversification. Other factors for strong inflows were performance but also lower fees as investors are looking for absolute net returns after fees. Estlander argued that if you take out Bridgewater as a CTA, assets remain at 2011 levels.

Filip Borgeström and Nydahl have both seen inflows from US clients and both agreed that the demand for diversification and uncorrelated returns are some of the biggest drivers. Martinsson, who is based in the US, said that momentum as an accepted source of return has attracted institutional investors. They want to access this as cheaply as possible leading to the growth in mechanical providers.

Johan Tjeder has a retail perspective and with that performance is almost the only driver as most do not understand the drivers. He would like to see more educational efforts to remedy this one-dimensional view.

Another discussion point was concentration and the issue of size again, and unsurprisingly, split the room. The number of start-ups was down 40% in the first half of 2016 compared to the same time the year before. Regulatory hurdles as well as raising capital is increasingly difficult. The issue of capacity is discussed within the larger firms and they have to accept that they will not be able to trade the smaller, less liquid markets. They, however, argue that there are plenty of opportunities in the liquid space and that everything is relative considering that there is some

US\$300 trillion in financial assets globally and US\$300 billion in CTAs, having US\$30 billion in assets is not so large. An advantage of size is of course resources and that this enables them to focus on long-term research which will pay off in the long run. Larger firms can research the less well studied and harder to capture return signals which could be essential in the future as the easily accessible strategies become less profitable in the future.

For allocators such as Idenstedt and Jarl size does matter but both see pros and cons with both large and small. Advantages of smaller players is their willingness to negotiate fees, the ability to trade in smaller markets and the potential of discovering future stars early. Jarl pointed out that while size matters their focus is more on the different strategies within the trend-following spectrum.

Smaller managers argued that if markets are divided into small and large the relative historical performance between the buckets is cyclical which has worked against smaller managers as the larger, more liquid markets have done well but that this may change if the cyclical is to prevail.



The sweet spot in terms of performance is always hard to find and while growth in assets and revenue at a reasonable pace can be an advantage as the manager can add to resources, talent and infrastructure but has to be mindful not to tweak the underlying strategy.

Another point made by Chris Reeve was that of execution and that while the barriers of entry have come down in terms of technology the key is execution. Newcomers into the trend-following space are particularly vulnerable to degradation of execution algorithms and unless they have the ability to invest in mitigating this their performance will suffer.

The pressure on fees has been discussed for some time and it is generally accepted that the 2 and 20 days are over

for most. The allocators at the table agreed that fees are increasingly important and of course nobody wants to pay alpha fees for beta products. In addition, the prevalence of cheaper products put further pressure on fees and Idenstedt argued that she is willing to sacrifice return if she is able to access momentum cheaply because then she can use the money saved to afford a different return stream that would add value to the overall portfolio. Jarl on the other hand said it depends on the strategy what they are willing to pay.

The managers said the fee pressure is real but there need to be more flexibility and innovation in how fees are charged. Some argued that perhaps the larger players should do without management fees as they can survive without them whereas smaller managers and start-ups cannot. Kaastrup-Larsen's DUNN Capital does not charge management fees at all and believes this creates a different environment and outlook as if the company does not make money for clients it does not make money for itself. The alignment of interest is vital and compared to private equity the hedge fund space is lagging. Estlander argued

that there should be flexibility and those that want plain vanilla low-cost products should be able to get them but they should be aware that performance will not be the same. You get what you pay for as the old adage states seems to hold true here as well.

The last topic of the discussion was technology and how the huge advances in technology plays into CTA and quant macro strategies. Database technology, inexpensive storage, computational power and more understanding and development of Artificial Intelligence techniques are opening up new possibilities for investment managers. Grunditz's Winton opened up a Silicon Valley office in order to be able to hire the smartest people in tech but also to be part of the start-up scene and has already made investment and are

looking to connect with like-minded VCs in the area.

Innovation and new technology is all well and good but all agreed that it is important to be able to explain the rationale and use for clients. Some are less keen than others, and while agreeing that innovation is necessary and exciting, and puts it down to philosophy and the issue of optimisation. A way to deal with optimisation, and as these strategies are by design optimisation methods, is to fully understand what it is you are trying to model. In machine learning it may not be that easy to fully understand what the model does and how it evolves and why. Bringing in components you do not fully understand will be detrimental in touch times as you may not have nerves to stay disciplined.

Many warned against the hype despite the exciting buzz or using new technology just for the sake of it without the ability to understand or explain them to investors. Overcoming the challenge of poor performance will be extremely difficult if you do not understand or know the role new components play in the portfolio.

The discussion then turned onto how we learn things in

general i.e via deduction and because machine learning is more like induction it creates a dilemma for some whereas others argue that induction can be used to guide the machine learning algorithm to amplify human knowledge about the how the world and markets work.

Participants: Per Ivarsson RPM, Chris Reeves Aspect Capital, Johan Tjeder Movestic Capital, Stefan Nydahl IPM, Ludvig Jarl, AltoCumulus Family Office, Filip Borgeström Lynx AM, Chad Martinsson Efficient Capital, Helen Idenstedt AP, Gernot Heitzinger SMN, Martin Estlander Estlander & Partners, Niels Kaastrup-Larsen DUNN Capital

Moderator: Jonathan Furelid



THE CTA-INDUSTRY

Chris Reeve

"The biggest change in the industry is the way it is being viewed from outside. Lots of people around this table spent many years evangelizing the benefits of trend-following and what I think changed in the last two or three years is that everyone has accepted that."

Ludvig Jarl

"We see each asset class in our portfolio as they have a purpose. We do not want to have too much diversification in each asset class. Within CTAs we try to stick to the pure trend-following part, we don't want to blend it out too much."



DOES SIZE MATTER?



Helen Idenstedt

"Of course (size) is something that we consider. There are pros and cons with being small and big, and for us, perhaps the advantages tilt would be to go with small managers."



Gernot Heitzinger:

"We see it as advantage to be small. We can trade 300 markets giving a similar risk budget to each market considering correlations of course."

Niels Kastrup Larsen

"I think if we're looking objectively at it, it is very hard to find evidence that very big firms produce better returns."



Johan Tjeder

"Without being rude, I can note that there's a correlation between the size of a firm and the opinion of the pros and cons of size."

TREND FOLLOWING



Martin Estlander

"Long-term, the correlation between trend following and equities should remain zero, simply because the return drivers of equities and trend following are completely different and clearly identifiable."



Filip Borgeström

"Trend following is at the core of what we do at Lynx today but you have to utilize newer and hopefully better techniques to capture that phenomenon."



Per Ivarsson

"The newer generation of trend-following managers coming up usually have an element of diversified strategies already included."

FEES



Stefan Nydahl

"If we're sophisticated enough to differentiate between what we call transient data or risk premia and what is actually alpha, then I think it will keep us even more on our toes."



Chad Martinson

"Efficient Capital sits in a unique place as we charge fees for building products, and we also negotiate fees with these managers. There are obviously fee pressures on both ends."



Henrik Grunditz

"Unless you're offering something extremely unique with consistently stellar performance, then the old 'two and twenty' model is pretty much finished."

NordicInsights

HEDGENORDIC ROUND TABLE DISCUSSIONS

The HedgeNordic series of round table discussions titled "Nordic Insights" aim to bring together industry professionals and experts in their field in a vivid discussion. The setup allows to look at and discuss a specific topic within the financial industry from various different angles, and hear of different opinions and approaches. The group would typically consist of a colourful mix of representatives from the financial industry. The combination of having a relatively small, intimate group of individuals for the discussion behind closed doors in combination with a wide circulation to a relevant audience in the Nordic region through a summary of the discussion in a convenient read-up paper combines the best of the two worlds of professional and personal relationship building and broad communication and branding.

The size of the group and format chosen, combining a casual lunch followed by the actual work session and discussion give an excellent opportunity to network and get to know the participants and organisations behind them in both a more personal and professional manner.

The Round Table Discussion is hosted without audience, behind closed doors. The moderated discussion will evolve around topics pre-defined in collaboration with the participants prior to the event. To insure a dynamic and lively discussion the specific questions that will be discussed are not disclosed prior to the get together





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