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MARCH 2023

SPECIAL REPORT

MANAGED FUTURES/CTA

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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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Editor´s Note…

Not an Overnight Success

In my opening comments for HedgeNordic's special report on Managed Futures and Systematic Macro from March 2016, we addressed the question "are CTAs dead?" The decade since the fallout of the great financial crisis (GFC) has indeed been a dire period, especially for trend following strategies. Performance was meager, tempting some investors to give up on the strategy and turn elsewhere. Some managers, too, started doubting and tweaking their systems to adjust to "the new normal."

In 2022, especially the first half of the year, many CTA managers found an environment that enabled them to showcase their abilities to navigate rough waters.

The breakdown of the post-GFC regime was triggered by a whole set of symptoms. Geopolitical uncertainties (Ukraine, Taiwan) and the sanctions on Russia by the Western World, disrupted supply chains still affected by Covid restrictions and boycotts, de-globalization and the rise of protectionism, the energy shock in Europe, spike in inflation and rising interest rates are just some of events that moved financial markets. And these movements then, especially on multiple markets trading equities, bonds, currencies and commodities, created opportunities for trend following strategies.

And indeed, the performance of managed futures funds stood out, not just in comparison to the long-only world, but also towards other hedge fund strategies. Broadly, hedge funds fell 4.25% in 2022, according to the HFRI 500 Fund Weighted Composite Index. Equity hedge funds recorded their worst performance in 2022 among the four main hedge funds categories tracked by HFR. Their 10.37% loss still managed to beat broader stock market indices such as the S&P 500, which fell 19.4% to record its worst year since 2008.

The picture was not much different in the Nordic hedge fund universe. The CTA sub-category within the Nordic Hedge Index (NHX) was the only one showing green numbers, up by 3.9% in 2022. The eight managed futures vehicles in the Nordic Hedge Index with positive performance for 2022 gained 14.4% on average, as funds with a tilt to more traditional trend-following performed best in 2022. All other strategy categories ended 2022 in negative territory. NHX composite dropped by 6%, multi-managers edged down by 0.7%, equity strategies fell by 5% and fixed-income strategies by a painful 7.2%.

The return figures CTAs were largely able to generate last year were by no means an overnight success or a random strike of fortune. Typically, their track records are the results of years, sometimes decades, of research and experience and sticking to your guns. In fact, those who over-engineered to navigate the post GFC regime found themselves on a much rockier ride in what may be the "new, old normal."

Summarizing, 2022 underlined the case that trend following CTAs should not only be a part of a portfolio to provide diversification or crisis alpha, but can also be a true performance engine that contributes to the overall portfolio performance in various environments.

This paper will cover a wide area of topics. Kathryn Kaminski and Yingshan Zhao review the "Themes of 2022" and Man AHL's Adi Mackic discusses "The Need for Speed in Trend-Following Strategies." In "ESG – No Hiding Behind the Hedges," Harold de Boer takes on the ESG discussion around Managed Futures strategies.

Mike Going, Mike Marcey and Marat Molyboga from Chicago-based Efficient Capital look into the question "Inflation, Post-Inflation, No Inflation – what's an Investor to do?" Christoph Junge and his team at Danish pension fund Velliv "Value Simplicity over Complexity" when selecting CTA managers.

In an interview with Hamlin Lovell, Nick Granger gives deep insights into "PIMCO's Pure Play Trend Following Strategy." Linus Nilsson and Tanya Gupta from NilssonHedge look into the challenge of benchmarking a CTA in "Apples to Apples using Pears," while Alan Dunne and Niels Kaastrup Larsen from the podcast TopTradaers Unplugged address the topic of "Bringing back Crisis Alpha" and share findings from their recent podcasts with some of the leading managers in this space.

For some years now, HedgeNordic has had the pleasure of gathering local and international CTA managers and investors to a CTA round table. A summary of the last session from November 2022 is also featured in this report.

While no one knows what the future holds, the same may be true for the CTA space as for Mark Twain, who supposedly replied to a newspaper inquiry on his death "The reports of my death have been greatly exaggerated."

We do hope there are some interesting reads for you in this publication.

Kamran Ghalitschi
PUBLISHER, HEDGENORDIC

Themes of 2022

By Kathryn M. Kaminski, Ph.D., CAIA® Chief Research Strategist, Portfolio Manager and Yingshan Zhao, CFA® Research Scientist

INTRODUCTION

As macroeconomic uncertainty and inflation created havoc on traditional assets in 2022, this resulted in a range of strong global trends and a spectacular year for trend-following strategies. These strategies can take long and/or short positions in a range of asset classes, depending on price trends in those assets; this gives the strategy the potential to provide "crisis alpha," or positive returns even when traditional assets decline or are in a state of stress. This year's inflation crisis was certainly no exception to that narrative. Over 2022, trend-followers saw several key themes: 1) stellar performance across several asset classes over the year, with fixed income leading the pack; 2) heightened return dispersion across manager returns on the upside; and 3) variations in CTA style factors that may explain some of this dispersion.

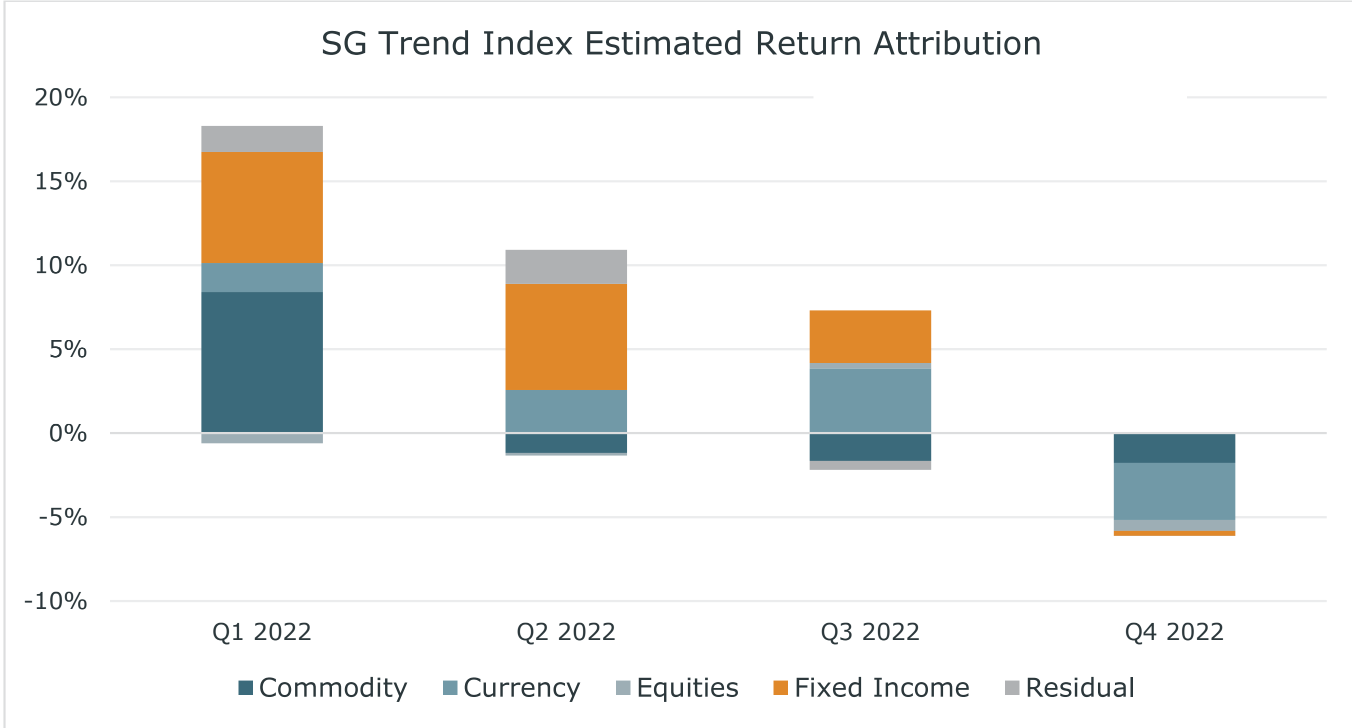

Figure 1: Quarterly estimated returns by asset class for the SG Trend Index. Residual returns are those that cannot be attributed to any specific asset class using this estimation methodology. Past performance is not necessarily indicative of future results. It is not possible to invest directly in any index. Source: Bloomberg and AlphaSimplex.

A BANNER YEAR FOR TREND

The largest theme in 2022 was rising rates and the presence of high downside volatility in fixed-income markets. This allowed trend followers to profit from the short fixed-income trade, also known as the "pigs fly" trade, which was profitable for one of the first times in roughly forty years.[1] First-quarter concern over inflation was exacerbated by the Russian invasion of Ukraine beginning in late February. Despite market turbulence and geopolitical concerns, central bankers had to remain steady in their fight against inflation globally. As shown in Figure 1, this led to a phenomenal Q1 for trend following. Rate hikes disappointed fixed-income markets and led to the beginning of what would be a long decline through much of 2022. Oil prices skyrocketed and became volatile, locking in some nice gains for trend-following strategies that had been following this trend beginning in 2020. In short, commodities and fixed income contributed the lion's share of gains in Q1.

Q2 marked the continuation of higher volatility and a highly trendy environment until June, when trends and asset-class returns began to consolidate and de-gross portfolios. Moving into Q3, markets were full of hope that central bankers would simply back off. Instead, central bankers stood steady in August, which sent markets racing back to the "fight inflation" narrative. One key difference from the first half of the year was that commodities had started to revert and show risk-off behavior in the summer and the markets shifted focus to the relative strength of the U.S. dollar and the potential for even higher rates. As a result, gains were centered on short fixed income and long the U.S. dollar in Q3.

After three straight quarters with sizable gains in trends, Q4 was a tumultuous, volatile, and reverting quarter for trend following. While October and December were months of back and forth but no sustained losses, November was the month where market hopes regained their fervor reverting many longer-term trends of the year. Trend signals wallowed through the end of a year in consolidation waiting for the next big surprises for 2023.

QUANTITATIVE MARKET MEASUREMENTS

In addition to performance, there were a few other interesting quantitative themes to note in 2022. In a

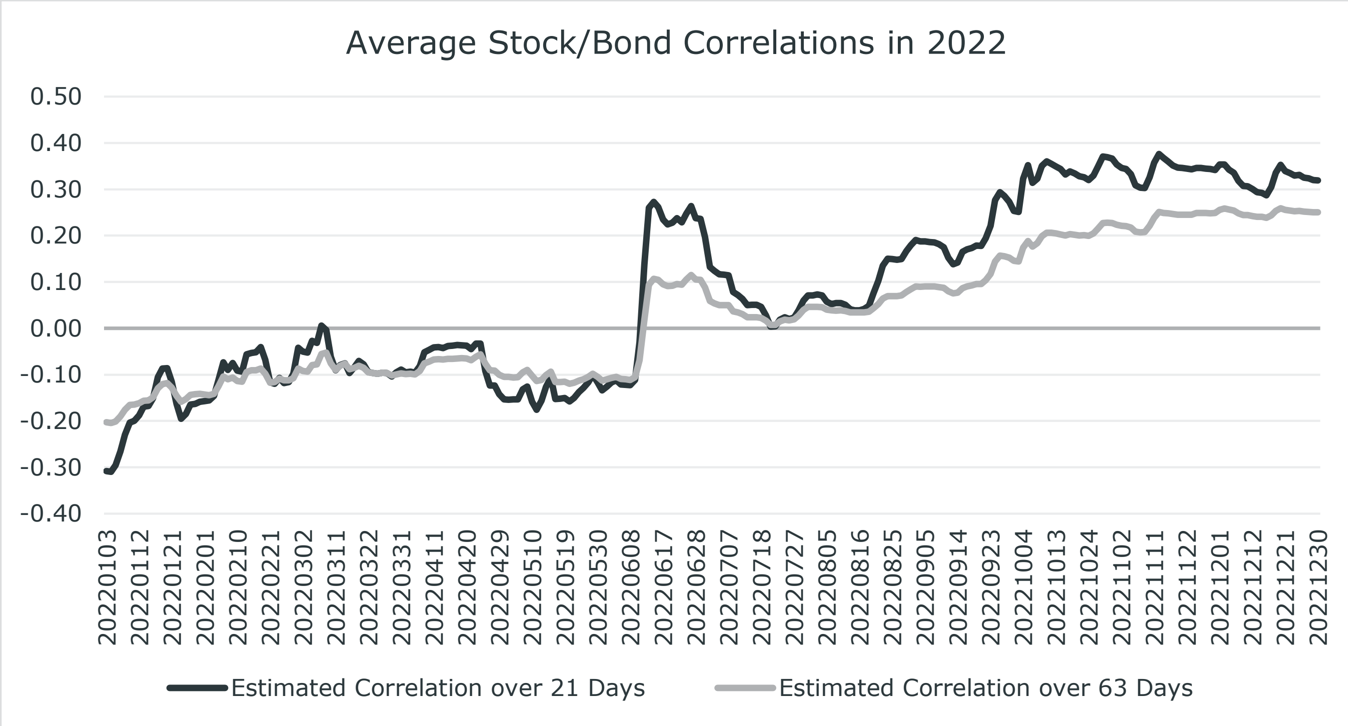

Figure 2: Cross-asset correlation between a selection of stocks and bonds traded in a representative trend-following strategy, estimated over 21 days or 63 days. Past performance is not necessarily indicative of future results. Source: Bloomberg and AlphaSimplex.

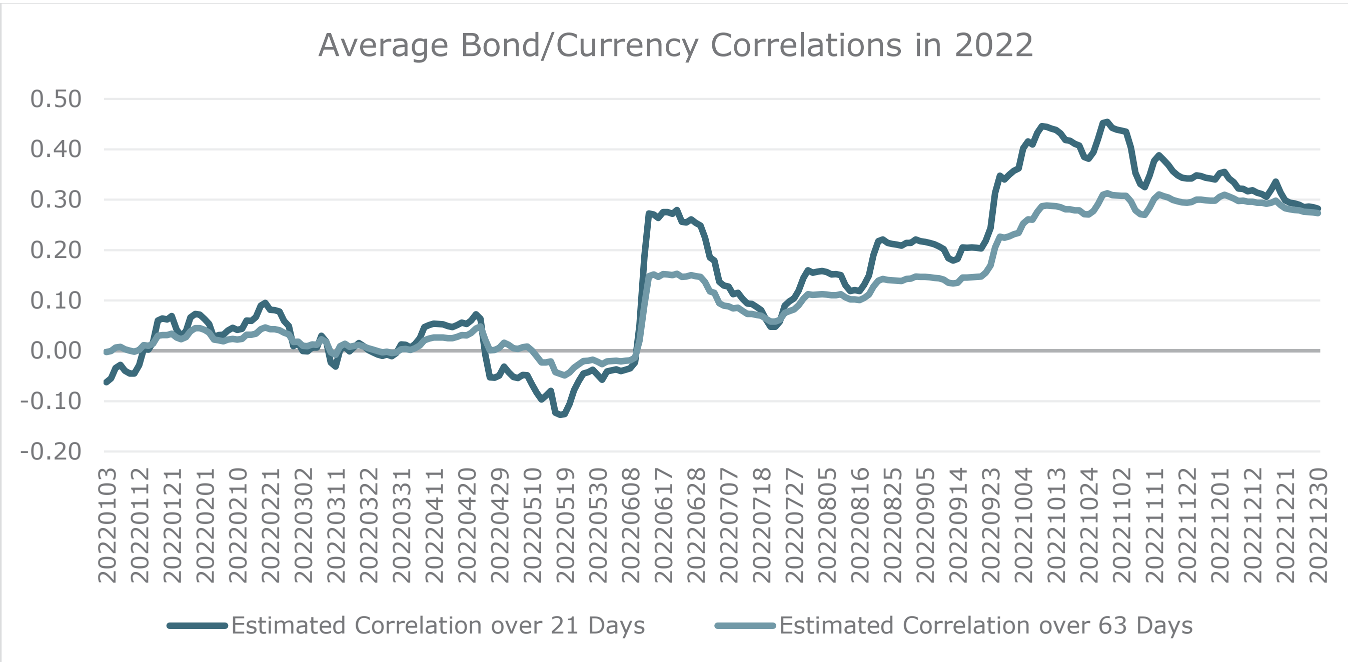

Figure 3: Cross-asset correlations between a selection of bonds and currencies traded in a representative trend-following strategy, estimated over 21 days or 63 days. Past performance is not necessarily indicative of future results. Source: Bloomberg and AlphaSimplex.

year with both stocks and bonds down, correlation sure didn't help either. Stock/bond correlation began the year negative and moved to relatively positive for most the second half of the year. Figure 2 plots the correlation between stocks and bonds in 2022. Although this relationship is one that is widely followed by investors, there is another interesting quantitative theme that was quite pronounced: the correlation between fixed income and currencies, which came in markedly positive this year. Figure 3 plots the correlation between foreign currencies (short the U.S. dollar) and fixed income in 2022. (In

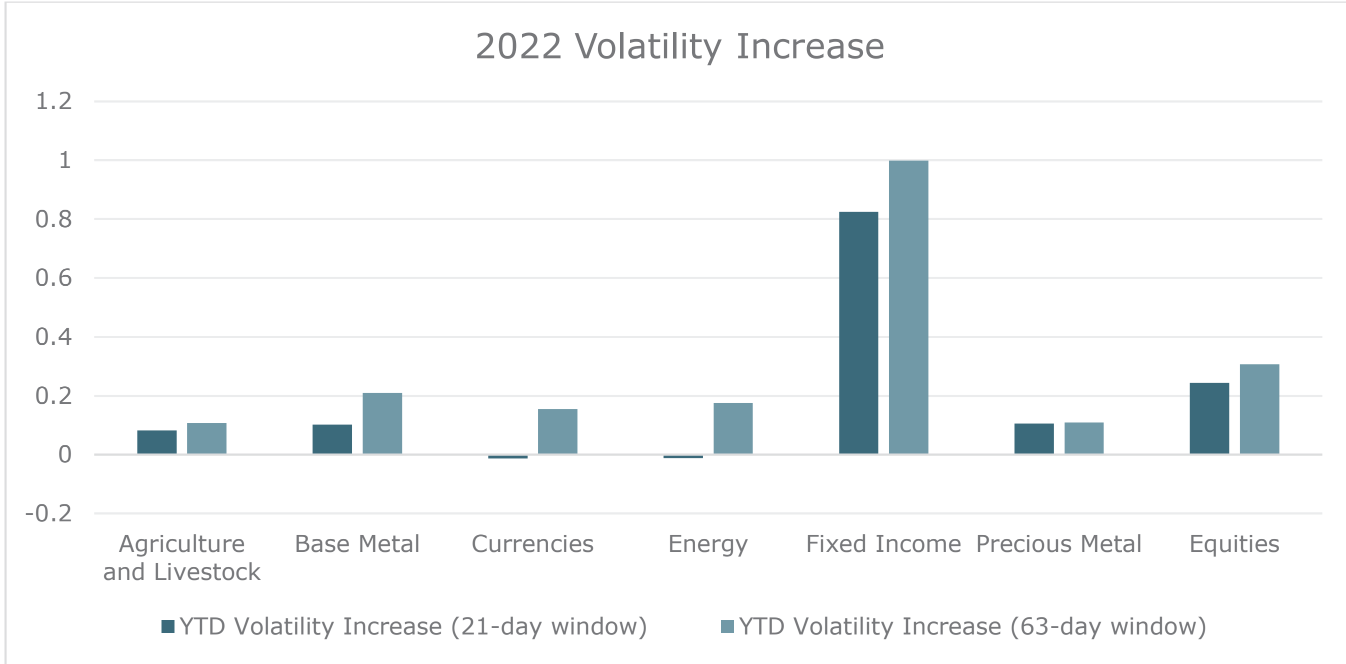

Figure 4: Relative difference in volatility estimates, by asset class, as a percentage of the start level of volatility at the beginning of 2022. Past performance is not necessarily indicative of future results. Source: Bloomberg and AlphaSimplex.

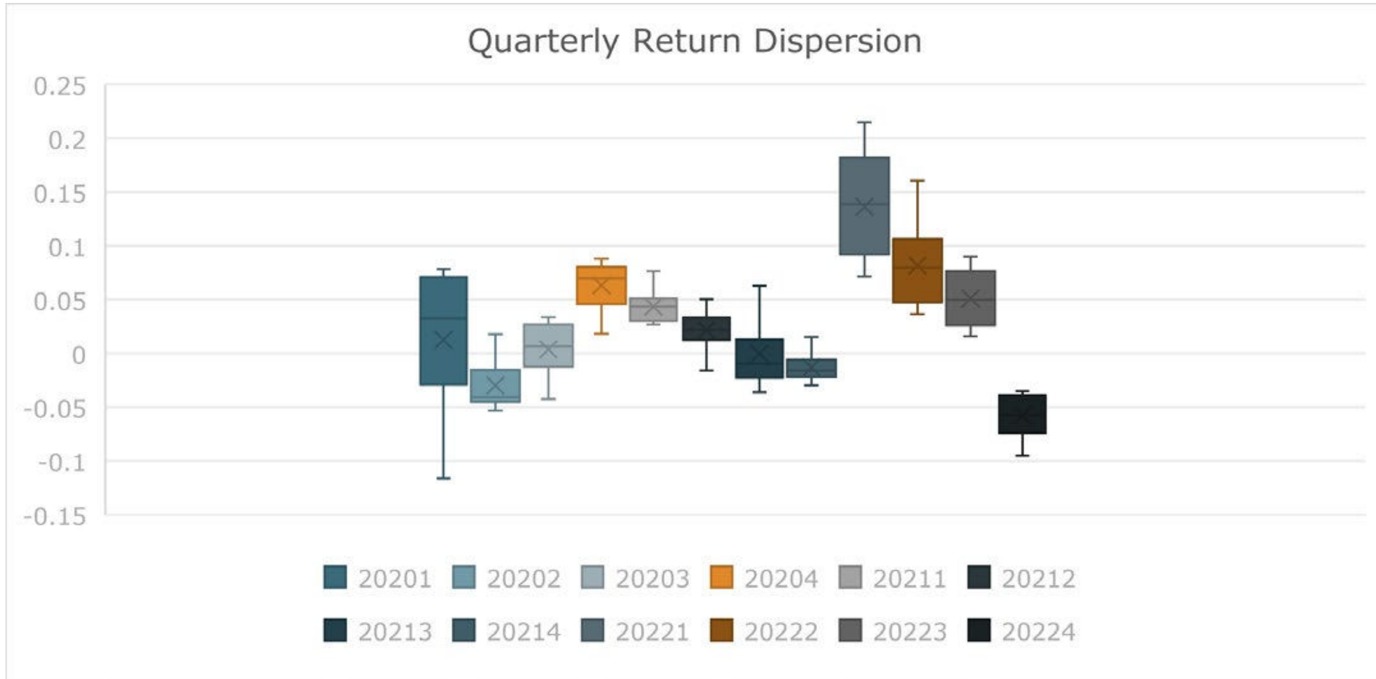

Figure 5: Quarterly return dispersion from 2020–2022 between the 10 largest CTA trend managers in the '40 Act space with daily liquidity. Past performance is not necessarily indicative of future results. Source: Bloomberg and AlphaSimplex.

simple terms, the U.S. dollar was positively correlated with interest rates.)

2022 demonstrated strong correlations between asset classes, but it also was a year where volatility behaved rather interestingly as well. Throughout the year, volatility estimates continued to increase, with certain risk assets peaking during the first quarter. However, the biggest volatility story is around fixed income. Figure 4 plots the relative percentage change difference as a percentage of the start level of volatility at the beginning of the year. Fixed-income volatility

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has roughly doubled (up almost 100%!), from 4% to 8%. Other asset classes have experienced increases in volatility but not in the same relative magnitude. 2022 is the year that investors remembered that fixed income has downside volatility.

RETURN DISPERSION IN FULL FORCE

Trend followers had a stellar year overall, as demonstrated by the performance of the SG Trend Index in 2022. Despite this, the results varied substantially across managers. Figure 5 plots the quarterly return dispersion using a box plot for the 10 largest CTA trend managers in the '40 Act space with daily liquidity. From this graph, we can clearly see that since Q1 2020 the return dispersion has remained somewhat well contained—until Q1 2022, when return dispersion spiked again on the upside. Return dispersion on the downside was somewhat consistent with previous quarters in Q4 2022.

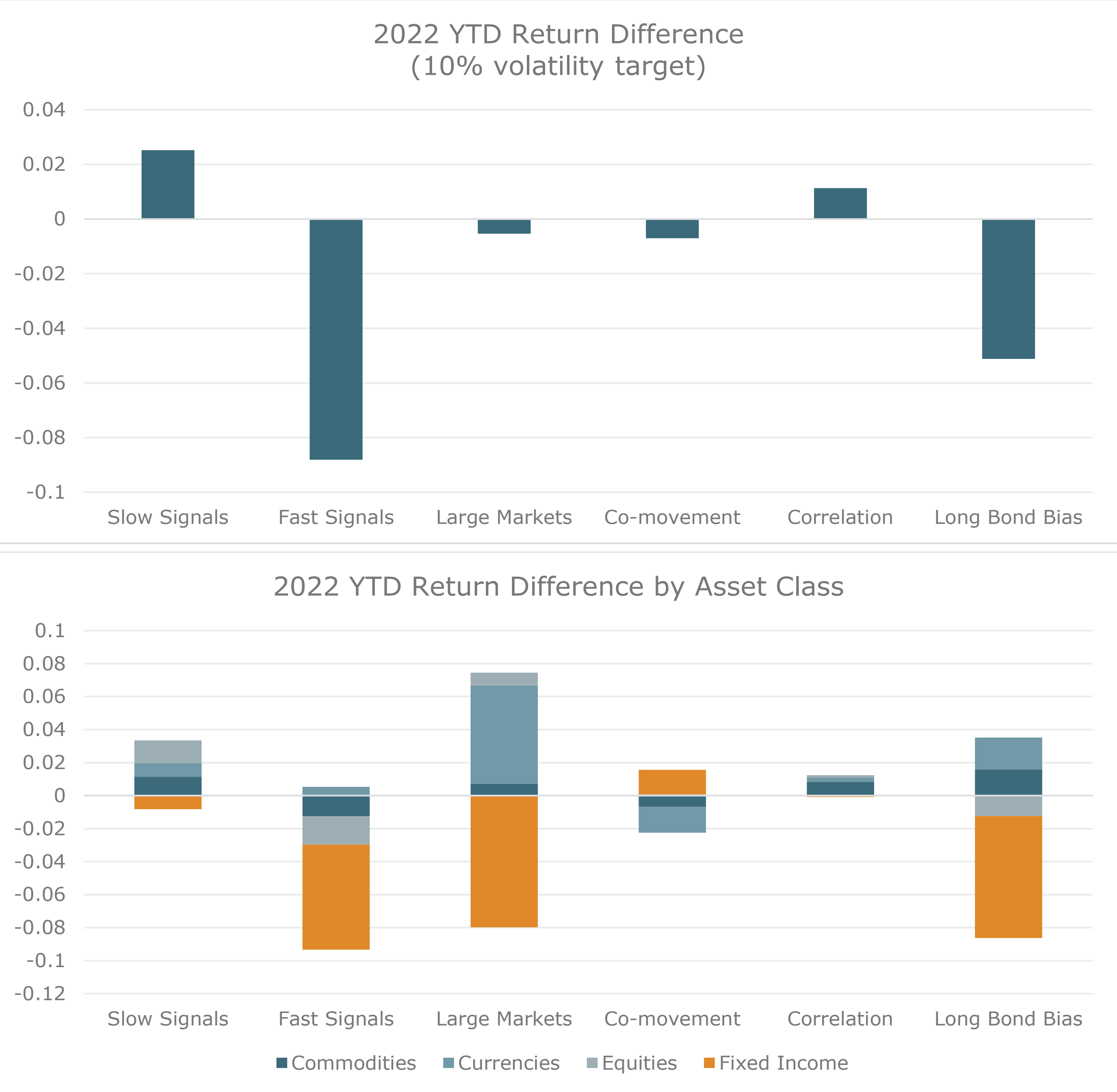

Figure 6: Return differences for trend systems with different style tilts in 2022. Past performance is not necessarily indicative of future results. Source: Bloomberg and AlphaSimplex.

Given the range of returns in Q1 2022, it is clear that manager-by-manager performance was quite different from the index.

CTA STYLE FACTORS TELL THE TALE

As seen from the higher return dispersion in 2022, manager returns varied across a range of interesting trends. A few themes to consider are some of the classic CTA style factors, as well as other factors such as a long bond bias.[2] Figure 6 plots the cumulative return difference for trend systems with different style tilts in 2022. The asset class decomposition of each factor is detailed in the graph below. Each trend system is run at a 10% volatility for comparison with a representative trend system. Slow and steady was better in 2022 with slow signals in commodities outperforming; slower signals also outperformed in currencies and equities. Faster signals in fixed income underperformed as these signals most likely pivoted too easily off the biggest trend of 2022. Larger markets, like the euro and Japanese yen, were more trendy in currencies, while larger markets in fixed income actually underperformed. Fixed-income markets with more residual co-movement outperformed currency markets which co-moved more. More correlated markets in commodities, notably energy markets, outperformed in 2022. Finally, adding a long bond bias to a system would result in a 4% cumulative reduction in return, which was driven by a roughly 7% loss of opportunity in fixed income with an offset gain in commodities and currencies.[3] From this graph, the potential for long bond bias and speed created the largest deviations in return in 2022.

WHAT'S NEXT?

Although 2022 was a great year for trend, trends change and new market trends evolve. The biggest questions for 2023 are how fast inflation will fall and if we could hit another cycle of rate hikes despite the regained hope of investors coming out of the final few weeks of 2022. The one asset class that has been quieter since the first half of 2022 is the commodity sector and equity risk has remained low all year. Perhaps the next big trend for risk assets could be a positive trend, something traditional investors would certainly welcome.

1) Kaminski and Sun 2022 examined short signals in fixed income for trend following. This work was highlighted in the Bloomberg article "Quants at AlphaSimplex Explain 'Pigs Fly' Trade Behind 30% Gain." (McCormick 2022).

2) CTA Style Factors are described in, for example, Greyserman and Kaminski 2014, Kaminski 2019, and Kaminski and Yang 2021.

3) The long bias factor is the difference between a trend system with a 50% reduction in negative trend signals versus a non-biased system. In a negatively-biased system, when fixed-income signals are discounted, risk may focus on other asset classes. The decomposition demonstrates that the reduction of trend signals might have had positive performance outside of fixed income, but the larger impact was less exposure to short positions in fixed income.

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The Need for Speed in Trend-Following Strategies

Adi Mackic – Man AHL


Adi Mackic, Senior Client Portfolio Manager – Man AHL

"I FEEL THE NEED, THE NEED FOR SPEED"

At Man AHL, we empathise with what is probably Maverick's most famous quote in 1986's 'Top Gun'. Following trends quickly and being responsive to emergent (or dissipating) changes in market directions, is a design goal for all of our trend-following strategies. In this article, we argue that more responsive trend-following strategies provide attractive risk-management properties over slower implementations and are more complementary to traditional investments.

WHAT IS 'SPEED' IN TREND-FOLLOWING?

Academic studies have shown that trends exist in markets over different time horizons, with some persisting for a few days or weeks, and others running for several months. By 'speed', we mean trend-length sensitivity; 'fast' and 'slow' trend systems focus on capturing the short- and long- end of this spectrum, respectively. There are a variety of algorithms that can be used to identify trends. In this article, we investigate performance characteristics of a suite of double exponentially weighted moving-average crossover ('MAC') models. These, or variations thereof, have been in use at Man AHL for around three decades and still represent the model with greatest risk allocation in our trend-following strategies. The choice of trading speeds is chosen to both span the range of trends we are seeking to capture, and minimise correlation between the models.

To determine performance characteristics of strategies with different speeds, we backtest each strategy from 1995 through to 2022 across the 50 most liquid futures and FX forward markets and apply equal risk allocations across asset classes. Individual markets are volatility scaled such that each has equal risk weight within an asset class. High-level results are shown in Table 1.

Table 1: High-Level Statistics of Trend-Following Speeds

	MOM V. Fast	MOM Fast	MOM Med	MOM Slow	MOM V. Slow
Sharpe ratio (before costs)	0.69	0.79	0.98	1.09	0.93
Skewness (before costs)	0.63	0.59	0.14	-0.14	-0.09
Turnover on Gross Exposure	14.3	7.6	4.3	2.7	2.1
Correlation to S&P 500	-0.20	-0.18	-0.15	-0.10	0.01
Correlation to US 10-year Teasuries	0.17	0.18	0.19	0.21	0.24

Source: Man Group; Between 1 January 1995 and 31 August 2022. Skewness calculated using montly overlapping returns.

As expected, turnover decreases with slower speeds. Reassuringly, Sharpe ratios are all significantly positive. Skewness is positive for almost all speeds, but is more so for fast strategies.

What's interesting in Table 1 is the apparent trade-off between Sharpe ratio and skewness; risk-adjusted returns increase with slower speed, but risk-management properties, via skewness, deteriorate. The intuition here is that faster models cut off losses quickly when a trend reverses, cutting off that left tail, while still allowing profits to run.

THE NEED FOR SPEED

Our analysis thus far has shown that returns from our MAC models at different speeds are positive in the long term and are lowly correlated to each other. A systematic mindset says that this diversification should be captured by trading all the speeds, thereby increasing risk-adjusted returns and, with the judicious use of leverage, returns themselves.

But what weights should we allocate to each model speed?

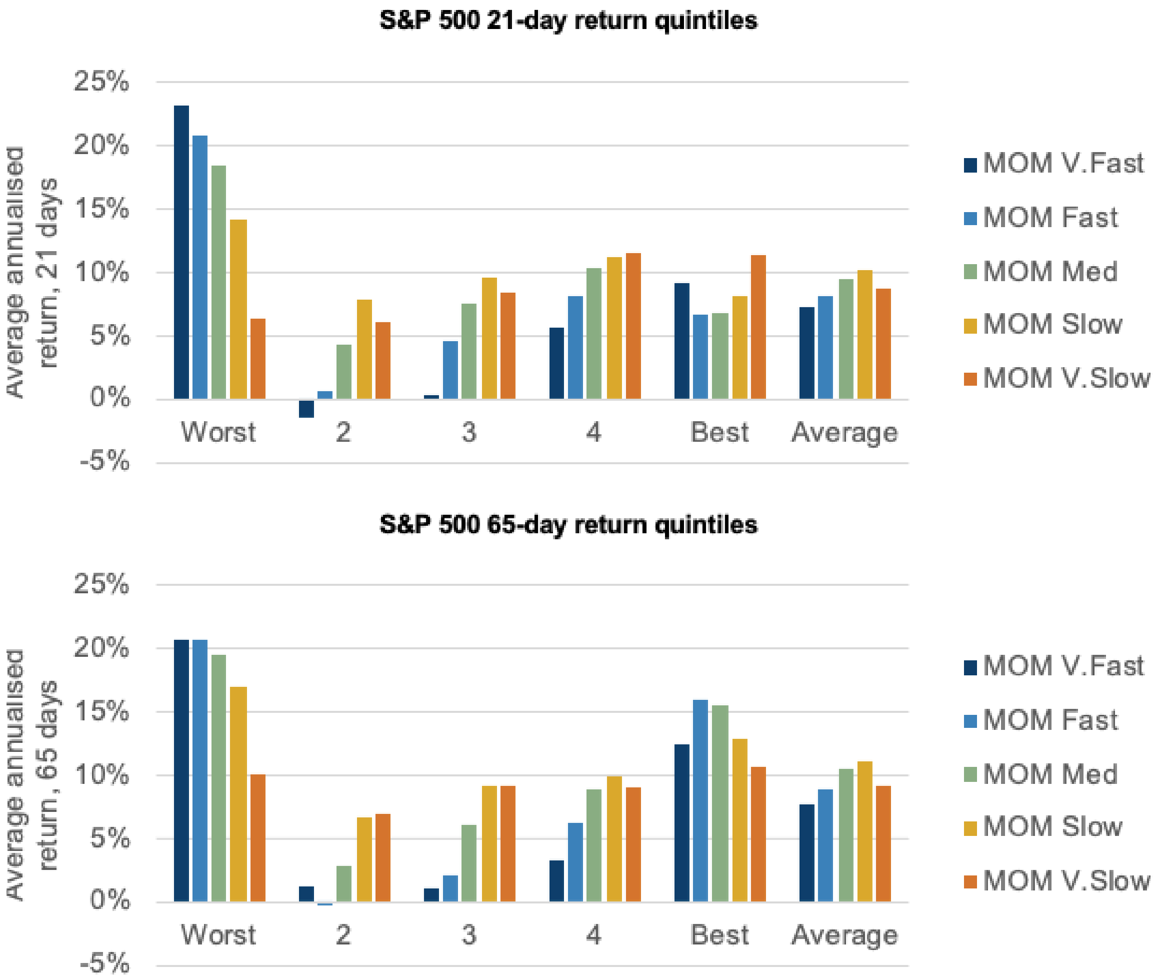
At Man AHL, we find a persuasive argument for having proportionate weights to fast trend models through the analysis of 'Crisis Alpha' (i.e. trend-following's historically observed property of performing well in risk-off environments). In Figure 1, we plot the performance of each of our speeds by S&P 500 return quintile – around one month holding period on the top, and around three months on the lower plot.

The average annualised return for both time horizons studies generally improves as speed of trading decreases. However, convexity and performance when the S&P 500 is in its worst quintile, our 'Crisis Alpha', increases as the speed is intensified. We further investigate this effect by examining the asset class performance by speed during the worst S&P 500 return quintile (across 21- and 65-day returns, Figure 2).

First, we find that regardless of speed, trend systems generate their 'Crisis Alpha' from gains in all asset classes, not just equities.

Second, positive equity attributions are typically a feature of faster trend models. The slowest trend

Figure 1: Performance by Speed During Equity Return Quintiles



Source: Man Group, Bloomberg; between 1 January 1995 and 31 August 2022. Each model speed is scaled to 10% annualised volatility (ex post).

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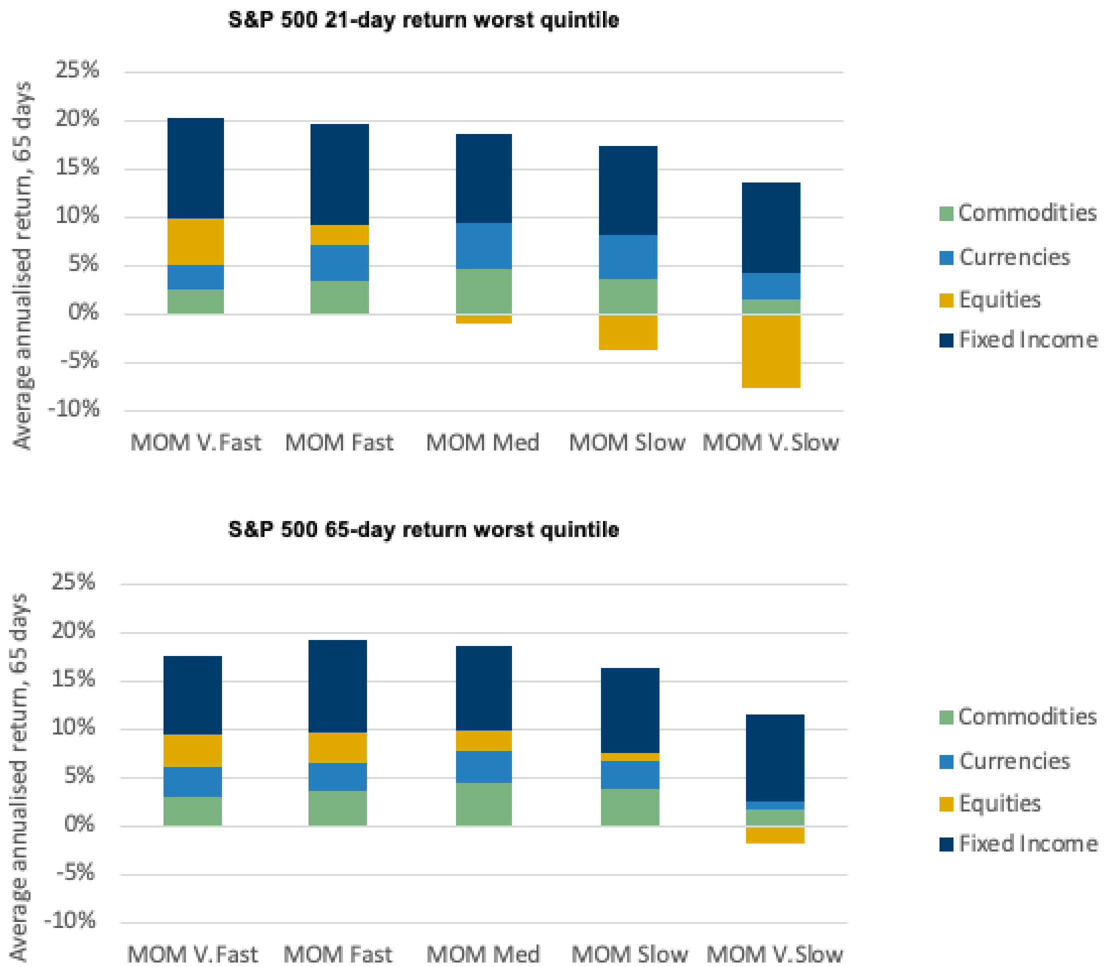
speed cannot shift to a short position over a 1- or 3-month horizon. To us, this is crucial given that investors may often review performance, and therefore investments, on a monthly or quarterly basis. This was of great significance during the short-lived Covid-led equity rout in Q1 2020. If 'Crisis Alpha' is a desired outcome of an allocation to trend following, then a responsive trend system is key to ensure that outcome.

THE NEED FOR EXECUTION

As always, the real world has the potential to get in the way. Transaction costs impact faster trading speeds disproportionately because of the higher turnover and therefore more frequent crossing of the bid-offer spread. Using Man AHL's trading cost models, built using three decades of experience trading trend-following strategies at scale, we find that risk-adjusted returns after costs are materially lower for faster speeds over the long term. Interestingly, skewness properties remain largely intact, and unaffected by the addition of costs. Moreover, during 'Crisis Alpha', average returns at faster speeds are impacted more once transaction costs are included, but remain the best performer during equity weakness.

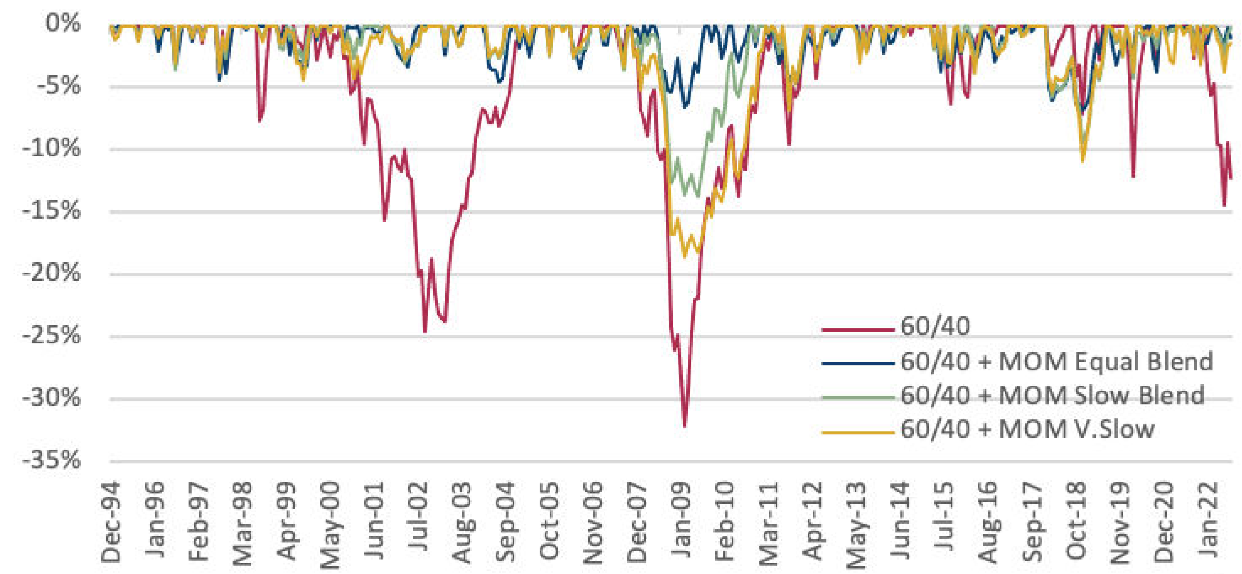
It stands to reason, therefore, that efficient execution is the gatekeeper to being able to trade fast. Maverick may have felt the need for speed, but he needed his F-14 to get there. Man AHL's F-14 is a purpose-built execution platform, with two cornerstones. First, algorithms are tuned to Man AHL's style of trading. Second, flow is disguised to minimise the predictability of trades and hence reduce the

Figure 2: Performance by Speed by Asset Class During Worst Equity Return Quintile



Source: Man Group, Bloomberg; between 1 January 1995 and 31 August 2022. Each model speed is scaled to 10% annualised volatility (ex post).

Figure 3: Drawdown of Various Trend Speed Combinations with a 60/40 Portfolio



	60/40	60/40+MOM Equal Blend	60/40+MOM Slow Blend	60/40+MOM V.Slow
30-Sep-02	-24.5%	0.0%	-0.1%	-0.4%
27-Feb-09	-32.1%	-6.6%	-13.6%	-18.6%
30-Sep-15	-6.3%	-3.1%	-2.8%	-3.1%
31-Oct-18	-4.1%	-6.3%	-5.4%	-6.1%
31-Mar-20	-12.2%	-2.1%	-4.2%	-3.7%
30-Jun-22	-14.4%	-1.5%	-2.4%	-3.7%

Source: Man Group; between 1 January 1995 and 31 August 2022.

60/40 is represented by 60% allocation to the MSCI World Index and 40% allocation to the Barclays Global Aggregate Bond Index. The trend portfolios have been scaled to 10% annualised volatility (ex post) prior to being combined with the 60/40 portfolio

negative impact of high-frequency traders. Broadly, we find that Man AHL reduces transaction costs by a factor of two over bank algorithms.

DIVERSIFICATION IN A TRADITIONAL PORTFOLIO

To our knowledge, very few investors own solely trend-following strategies. Instead, they tend to be used as part of a portfolio. If the aim of the trend-following allocation is to boost the defensive properties of a portfolio, then perhaps a more responsive system – allocating more to fast trend models – may suit best, in our view. We explore this below by comparing the drawdown profile of a traditional 60/40 portfolio combined with various trend strategies, ranging from very slow, a slow blend and finally an equal blend across all speeds. All trend strategies are adjusted to reflect 10% return volatility before being combined with the 60/40 portfolio. In order to emphasise any drawdown impact, we choose an equal allocation between the two components.

Figure 3 shows the drawdown chart of each combined portfolio as well as the 60/40 portfolio without an allocation to a trend strategy, alongside values at key drawdown episodes. Here, drawdowns are defined as peak-to-current returns at each point in time. As expected, all combinations with a trend strategy deliver some degree of risk mitigation compared to the traditional portfolio. Moreover, the degree of downside mitigation typically improves with greater allocation to faster speeds.

The results suggest that, just like Maverick, investors in trend-following, particularly those seeking defensive properties, should feel the need for speed.

Please see Important Information regarding hypothetical results here

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ESG – No Hiding Behind the Hedges

By Harold de Boer – Transtrend

A theme that is increasingly in the spotlight for Managed Futures strategies is ESG, which concerns whether and how managers take Environmental, Social and Governance factors into account in their investment process. We suppose most investors do not strive to violate human rights by contributing to poverty, hunger, slavery, and the like; they will rather aim to contribute to human prosperity and welfare. Nor will many investors strive to contribute to the destruction of our planet, including its biodiversity and climate, if only because such destruction would undermine their own prosperity. However, there seems to be a wide spectrum of approaches to dealing with these various thorny issues.

One end of this spectrum can be described — perhaps somewhat harshly phrased — as 'passive hiding'. Investors on this end of the spectrum prefer not to be associated with any of these issues. They do not want to be questioned or pointed at, and they do not want to get the feeling that they have to excuse themselves. In essence, they prefer not to be seen with dirty hands. This approach is most efficiently implemented by excluding all markets and instruments that are somehow linked to these thorny issues, preferably on the basis of 'objective'

"We believe that the most rewarding way to deal with issues is to be part of the solution, not by shying away from them and most certainly not by closing your eyes to them."


Harold de Boer, Head of R&D - Transtrend

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criteria formulated and quantified by an independent third party. The other end of the spectrum can be described as 'active participation'. Investors on this side do not mind to get their hands dirty. They do not avoid thorny issues but rather discuss them, make their own decisions, and are willing to explain their choices. Even if doing so would sometimes reflect unfavorably on them.

From this, it may be clear that we at Transtrend are avid supporters of the latter approach. Not only because we believe this is the (only) way to have a positive impact, but also because we believe this to be in the best interest of our investments and therefore in the best interest of our clients. We are convinced that passivity in general does not deserve a reward and generally is not rewarded. When investors consider being seen with dirty hands a risk they want to avoid, they will pay a risk premium for that. We believe that the most rewarding way to deal with issues is to be part of the solution, not by shying away from them and most certainly not by closing your eyes to them. Successful investing in our view is about being on the road forwards, not about hiding behind the hedges.

At the same time, no matter our convictions, we have to be extremely modest. Taking our role seriously starts by acknowledging the limitations of our power. For instance, the fact that we predominantly trade futures contracts seriously limits the number of ways we can have impact. Carrying price risk, contributing to price discovery and offering liquidity — as important as these roles are for the well-functioning of markets — that's about it. And we can only fulfill these roles if we in fact actively trade these contracts, not if we exclude them. So our (potential) impact starts with inclusion.

ACTIVE PARTICIPATION IN THE ENERGY TRANSITION

There is a growing number of above all private investors — including those whose pensions are managed by pension fund managers — that prefer to invest fossil-free. While we understand this desire, we do not believe that making large scale fossil-free investments is currently possible. Our society is still highly dependent on fossils. Petroleum, for instance, is an important raw material for producing popular products like plastic and other synthetics, as well as petrol and kerosine. The use of fossil energy may have partly been replaced by the use of energy from sustainable sources such as wind and solar energy, but a lot of fossil fuels had to be burned for the manufacturing and installation of all the required wind turbines and solar panels. Not even Greta Thunberg can perform all her activities without the use of fossil fuels! Firms and investment managers might compensate for their use of fossil fuels, but that does not fundamentally change their dependency.

> "If we want to participate in this transition in a meaningful way, if we want to fulfill our fundamental role as an investor, we have to trade the futures contracts that are directly or indirectly linked to this transition. That all starts with inclusion, not with exclusion."

However, underlying this demand for fossil-free investments lies a strong force of people that endeavor to reduce our society's dependence on fossil fuels and — driving this goal — want to reduce the emission of carbon and other greenhouse gasses. We embrace this trend, and we most definitely want to participate in it. The question here is: What would be effective ways to do so? We do not believe that reducing the 'carbon footprint' of an investment portfolio by selling (existing) stocks of high-pollution firms and buying those of low-pollution firms really contributes. In essence, this only changes the (potential) composition of the shareholder meetings of these firms. The voting rights of the stocks of the more polluting firms will move towards owners that care less about pollution. We do not expect that this will drive these firms to reduce their pollution. And, if instead of the actual stocks only futures and other derivatives on these stocks change hands, no one in the board room will notice any change. We do not shake up companies by trading derivatives.

But that does not prevent us from participating in such an important and far-reaching project as the energy transition — a transition that has a huge impact on many markets, not only those in the energy sector. For instance, large shifts in the sources of energy used induce large changes in the demand for various metals. Such changes constitute a major source of risk for many parties involved. For the parties that have to adapt their consumption patterns as well as for the parties that have to adapt their production process. For the producers of goods that will likely meet strongly growing demand as well as for the producers of the goods that likely will meet diminishing demand but that our society cannot yet do without. To keep the momentum of this transition going, someone has to carry these risks. This is foremost the role of investors. Futures contracts are extremely efficient instruments for transferring these risks. Therefore, if we want to participate in this transition in a meaningful way, if we want to fulfill our fundamental role as an investor, we have to trade the futures contracts that are directly or indirectly linked to this transition. That all starts with inclusion, not with exclusion.

By trading futures contracts we do not only carry price risk, but we also offer liquidity and contribute to price discovery. More generally, we contribute to the well-functioning of these markets. Which actually seems to be a reason for some investors to exclude some of these futures contracts. They do not want to contribute to the well-functioning of for instance the "dirty" coal market. The implicit assumption here is that a well-functioning market favors the polluting entities. But is this really the case? Just ask yourself which participants typically benefit the most from impaired markets.

These are the participants that are best positioned to control the market. In the case of coal, these are the producers. If the coal market does not function well while our society cannot yet do without coal, the position of coal producers becomes somewhat comparable to that of drug dealers — their profit margins would be huge. We rather prefer that all legal, legitimate markets function well. Which among others is a necessary condition for environmental costs to be priced in properly. We certainly think there is room for improvement here. But we will not make an effective contribution if we exclude these markets.

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Inflation, Post-Inflation, No Inflation – What's an Investor to do?

By Mike Going, Mike Marcey, Marat Molyboga – Efficient Capital

"Even if the IRO has strong performance during inflationary regimes, there is a risk of mistiming the investment and experiencing losses if a post-inflationary environment is unfavorable for the portfolio."

Inflation has been at the forefront of the agendas of investors and central banks worldwide this year. The current CPI Index, at 8.4% in July 2022, is as high as it has been in four decades. As a result, investors are scrambling to protect their portfolios and are looking for solutions beyond the common 60/40 approach. But history and intuition suggest the difficulty of knowing the duration and intensity of inflation, raising the question of whether to implement a strategy designed for an inflationary regime, only to have inflation end and the strategy become obsolete or ineffective.

In this short article, we want to do three things:

1. Highlight an approach that has historically performed well in inflationary regimes,[1]

2. Demonstrate that this approach does well after inflationary regimes have ended, removing the problem of market timing,

3. Discuss specific ways to implement this approach

1. WHAT HAS DONE WELL IN INFLATIONARY REGIMES?

Table 1 summarizes the performance of stocks, bonds, commodities, and risk premia strategies across eight inflationary regimes since 1940.[2] Note that a portfolio of stocks and bonds experienced material losses in all but two inflationary regimes. By contrast, commodities and time-series and cross-sectional momentum strategies were profitable across all inflationary regimes.

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Table 1. Performance of major asset classes and risk premia during historical inflationary periods

		US Enters WW II: Apr 1941-May 1942	End of WW II: Mar 1946-Mar 1947	Korean War: Aug 1950-Feb 1951	Ending of Bretton Woods: Feb 1966 - Jan 1970	OPEC Oil Embargo: July 1972-Dec 1974	Iranian Revolution: Feb 1977-Mar 1980	Raegan's Boom: Feb 1987-Nov 1990	China Demand Boom: Sept 2007 - July 2008	Average
Assets	Stocks	-8.96%	-7.84%	52.67%	-4.00%	-18.89%	-2.42%	0.89%	-15.76%	-0.54%
Assets	Government Bonds	2.13%	0.86%	1.18%	-0.93%	-0.81%	-0.69%	1.46%	-7.32%	-0.52%
Assets	Corporate Bonds	3.35%	-0.64%	-2.52%	-7.51%	-3.76%	-11.74%	-0.11%	4.64%	-2.29%
Assets	Commodities	26.60%	36.88%	52.51%	0.00%	53.91%	9.31%	8.43%	22.96%	26.32%
Risk premia	TSMOM	10.27%	36.50%	17.25%	14.53%	43.22%	30.02%	9.56%	3.33%	20.59%
Risk premia	Value	-2.40%	2.07%	0.94%	2.14%	1.16%	0.28%	4.34%	-5.59%	0.37%
Risk premia	Momentum	5.14%	2.59%	2.69%	3.16%	7.18%	5.48%	3.41%	10.93%	5.07%
Risk premia	Carry	-5.93%	-5.92%	2.27%	4.46%	6.20%	4.82%	3.90%	4.19%	1.75%
Risk premia	Defensive	0.57%	8.17%	7.20%	2.07%	-1.24%	-3.86%	1.25%	-3.69%	1.31%

Based on these historical results, a 60/40 blend of stocks and bonds is now used as a proxy for the portfolio of an institutional investor. Trend and commodity exposures are added in equal parts to create a portfolio (Inflation Risk Offset) with a 50/30/10/10 blend of stocks, bonds, trend, and commodities, respectively, and rebalanced monthly. As shown in Table 2, allocating to trend and commodities strategies at 10% each improves the performance of the 60/40 portfolio in each of the inflationary regimes and has an average performance increase of 4.49 percentage points.

Table 2. Performance improvement due to adding commodity and trend exposure

	US Enters WW II: Apr 1941-May 1942	End of WW II: Mar 1946-Mar 1947	Korean War: Aug 1950-Feb 1951	Ending of Bretton Woods: Feb 1966 - Jan 1970	OPEC Oil Embargo: July 1972-Dec 1974	Iranian Revolution: Feb 1977-Mar 1980	Raegan's Boom: Feb 1987-Nov 1990	China Demand Boom: Sept 2007 - July 2008	Average
60-40 Stocks and Bonds	-4.4%	-4.2%	29.8%	-2.6%	-11.8%	-1.5%	1.6%	-12.4%	-0.7%
50-30-10-10 Stocks, Bonds, Commodities and Trend	-0.3%	3.0%	31.9%	-0.6%	-1.8%	2.6%	3.2%	-7.6%	3.8%
Performance improvement	4.1%	7.3%	2.1%	2.0%	10.0%	4.0%	1.7%	4.8%	4.5%

2. HOW DOES THIS APPROACH DO WHEN INFLATIONARY REGIMES HAVE ENDED?

It is well known that timing environments is challenging. Even if the IRO has strong performance during inflationary regimes, there is a risk of mistiming the investment and experiencing losses if a post-inflationary environment is unfavorable for the portfolio. Therefore, we now want to examine the performance of this approach for three years after each inflationary regime.

> "Our analysis shows striking theoretical benefits of the Inflation Risk Offset solution. Moreover, investors have a variety of ways to actually implement this approach, depending on their specific objectives and constraints."

Table 3 shows that the IRO portfolio protects against inflationary periods while delivering modest performance improvements over the three years immediately after the inflationary regime ends. With an equal allocation of 10% to both trend and commodities, performance improved by nine basis points during the post-inflationary period. These results represent a peculiar case in which an investor gets paid handsomely to own a portfolio during inflationary environments but also receives a small payment to own that portfolio in non-inflationary environments. Therefore, the risk of mistiming the Inflation Risk Offset portfolio is relatively low.

3. IMPLEMENTATION CONSIDERATIONS

Our analysis shows striking theoretical benefits of the Inflation Risk Offset solution. Moreover, investors have a variety of ways to actually implement this approach, depending on their specific objectives and constraints. For instance, multiple cost-effective, well-diversified commodity indices are readily available to investors. Two of the most popular indices are the Dow Jones Commodity Index, (which includes 28 commodity futures contracts and is equally weighted across the three sub-sectors of energies, metals, and agricultures/ livestock and liquidity-weighted within the sub-sectors) and the S&P Goldman Sachs Commodity Index.

In addition, one can access the trend-following component in either a passive way (through something like the Mount Lucas Management Index) or by investing directly in trend-following managers. Because of the high return dispersion that exists even among highly correlated trend managers (up to 40 or 50 percentage points per annum with relatively low return persistence), a multi-manager approach may be an attractive option.[3] Investing in five or six trend-following managers improves the Sharpe ratio by roughly thirty percent and poses less idiosyncratic risk.

We believe that institutional investors should consider two potential solutions. Those investors who are very cost-sensitive, and have a strong preference for passive investing, may want to consider a portfolio that includes the Dow Jones Commodity Index and the MLM index. Others may want to consider a portfolio that includes the Dow Jones Commodity Index and an actively managed portfolio of five or six trend-following managers. Both solutions require little funding due to their cash efficiency and can be structured as an overlay on top of the equity and bond exposures.

Table 3. 3-years Post-Inflationary Regime

	US Enters WW II: Apr 1941-May 1942	End of WW II: Mar 1946-Mar 1947	Korean War: Aug 1950-Feb 1951	Ending of Bretton Woods: Feb 1966 - Jan 1970	OPEC Oil Embargo: July 1972-Dec 1974	Iranian Revolution: Feb 1977-Mar 1980	Raegan's Boom: Feb 1987-Nov 1990	China Demand Boom: Sept 2007 - July 2008	Average
60-40 Stocks and Bonds	17.83%	6.85%	7.21%	8.00%	8.86%	6.11%	7.86%	3.84%	8.32%
50-30-10-10 Stocks, Bonds, Commodities and Trend	18.90%	6.17%	6.94%	9.69%	8.96%	5.46%	6.91%	4.27%	8.41%
Performance improvement	1.07%	-0.67%	-0.27%	1.69%	0.10%	-0.65%	-0.95%	0.43%	0.09%

CONCLUDING REMARKS

Whether inflation is transitory or not, we have illustrated the value of adding commodity and trend following to traditional portfolios. In addition, because the IRO portfolios have historically done well in periods after inflation has ended, the need to correctly predict the duration of inflation is mitigated. Rather than having a cost associated with it, the proposed inflation protection portfolio actually pays an investor to own the inflation risk offset. Finally, there are multiple ways that an investor can implement a simple Inflation Risk Offset solution.

1) We use the eight inflationary periods defined in Neville, H., Draaisma, T., Funnell, B., Harvey, C.R., and O. Van Hemert (2021) "The best strategies for inflationary times."

2) We rely on the time series of excess returns from the AQR data library.

3) See Marcey and Molyboga "Commentary: the value of diversification in CTA investments", Pensions and Investments, April 13, 2020.

Velliv on CTAs: "We Value Simplicity over Complexity"

By Eugeniu Guzun – HedgeNordic

Christoph Junge, Head of Alternatives – Velliv

In the investment management arena, 2022 was the year of trend-following CTAs. Twenty of the world's largest CTAs tracked by Société Générale booked a record gain of 20 percent for the year, outpacing the previous record set in 2008. Right when it was needed most, CTAs provided the crisis alpha they are expected to deliver. Following the rally, are institutional investors looking to allocate to CTAs too late to the party?

Citing research by systematic asset manager AQR Capital Management, Velliv's Head of Alternatives Christoph Junge sees no reason to fear being too late. "Trend-followers do not tend to underperform the year following a strong year according to AQR," points out Junge. His own research on alternative investments during times of crisis conducted in 2020 found that "CTAs as a group have been the only asset class in our study that consistently performed in each crisis since 1980." The market environment of 2022 proved his research conclusions right again.

CTAs have become a common allocation in many institutional investment portfolios, including Velliv,

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one of Denmark's largest commercial pension companies. "We view CTAs as a strategic allocation and use CTAs as a portfolio diversifier," says Junge. "It is just a matter of time before the next crisis will happen. Therefore it is beneficial to have CTAs in the portfolio as they tend to outperform during periods of heightened volatility," he elaborates. "We are not expecting high standalone returns from CTAs but we expect them to perform when we need it the most."

OPTIMAL ALLOCATION TO CTAS

The optimal allocation to trend-following CTAs varies on a case-by-case basis and depends on each investor's broader portfolio, according to Junge. "The optimal allocation depends on the rest of the portfolio. If the portfolio only consists of equities and bonds, CTAs should perhaps be a larger allocation in the range of 10 to 15 percent to really move the needle," argues Junge. In a more diversified portfolio similar to the one maintained by Velliv, a smaller allocation to CTAs can still offset the impact of equity and bond market drawdowns.

"We have a very diversified portfolio to start with, with the portfolio including a range of asset classes such as real estate, private equity, alternative credit and infrastructure," says Junge. With equities and bonds accounting for a lesser share of the overall portfolio, a smaller allocation to CTAs can successfully offset some of the public market losses in times of crisis. The optimal allocation to CTAs is a "trade-off between total returns and portfolio protection," according to Junge. "While CTAs attempt and do deliver crisis alpha, they also can have longer periods of sluggish performance."

CURRENT ENVIRONMENT FOR CTAS

Junge does not expect 2023 to be a year of sluggish performance for trend followers. "While we do not expect 2023 to be such a strong year for CTAs as 2022, we see no reason to believe that 2023 will be a particularly negative year for trend followers," he says. "And even if 2023 will be a negative year, CTAs will play their role when the next crisis comes." Some investors have stayed away from trend-following CTAs due to their lagging performance throughout the 2010s.

"CTAs may have faced a difficult market environment between the global financial crisis and the COVID era due to central bank activity, which resulted in too little volatility and no trends that were long-lasting and strong enough," argues Junge. "With central banks being less accommodative in the face of higher inflation, we could witness more macro volatility, which should be good for CTAs." Following the on-and-off performance of CTAs, Junge has been evaluating the possibility of timing the allocation to CTAs by defining a regime-switching model that identifies trendy or non-trendy environments.

"After longer periods of close to zero or even negative performance for CTAs, I am curious to research whether one can forecast the performance of CTAs," says Junge. "Similar to the regime-switching models in other markets, we want to investigate whether we are in a friendly environment for trend-followers or we are in a non-trendy environment." Until Junge and his team find a time-tested regime-switching model for timing the allocation to CTAs, Velliv seeks to maintain exposure to the asset class as part of its strategic allocation.

OPTIMAL NUMBER OF CTAS IN PORTFOLIO AND SELECTION PROCESS

Another important decision allocators face focuses on finding the optimal number of CTA strategies in a portfolio to balance the trade-off between diversification and idiosyncratic risk stemming from this asset class. Research by multi-boutique asset manager Hermes Fund Managers concludes that the optimal number of CTA managers to exploit this trade-off is between four and eight.

"We have settled for four because there is also the trade-off between diversification and the effort to monitor the number of managers in the portfolio," argues Junge. "We have to follow each manager very closely, and it obviously takes a lot more time to follow eight managers than four," he continues. The bigger allocation tickets to a smaller number of managers also enable more attractive fee structures for institutional investors such as Velliv.

While most CTAs share similar investment goals, the nature of their trading strategies, the markets they trade, their models and investment horizons, as well as their trading styles are all different. As Velliv's Head of Alternatives responsible for building the CTA allocation, Junge opted to invest in more simple, lower-cost trend-following CTAs. "When we submitted a traditional request for proposal (RFP) in 2021-2022, we got about 50 proposals from diverse managers that we ended up dividing into two groups: beta and alpha managers," says Junge.

> "We view CTAs as a strategic allocation. We are not expecting high standalone returns from CTAs but we expect them to perform when we need it the most."

The Beta bucket comprised traditional trend-followers running cheaper products, typically with a fixed management fee and no performance fee, according to Junge. The Alpha bucket comprised trend-following managers that "employ trend-following plus something on top, which could be a macro overlay or could involve some more alternative markets." Velliv prefers, for now, to invest in Beta managers that offer exposure to pure time-series momentum at a lower cost, according to Junge. "We like Beta managers with plain-vanilla trend models that do not have so much secret sauce overlay," says Junge. "Managers differ in how they construct their portfolios and implement their strategies. We believe we can get everything we like about CTAs from the Beta pocket. We value simplicity over complexity."

The manager selection process involved both quantitative and qualitative considerations. "On the quant side, we obviously evaluated measures such as the Sortino and Sharpe ratios, the skewness and performance during certain time periods," according to Junge. "In addition to the quant measures, we also looked at qualitative measures such as the quality of organizations, stability in the team, the background of the team, and how long they worked together." The operating lifespan of these strategies has been another important component of Velliv's decision-making process. "We have considered CTAs with a minimum lifetime of three years" that have navigated the changing and volatile markets of recent years.

After going through a longer period of relatively poor performance since the financial crisis of 2008, the CTA industry "didn't play as big a role as they should in investors' portfolios in recent years," according to Junge. "Given the heightened volatility from last year and especially given that both equities and bonds posted losses at the same point in time, institutional investors will realize the need to look for some other diversifiers," says Velliv's Head of Alternatives.

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Nick Granger
Managing Director and Portfolio Manager – PIMCO

PIMCO's Pure Play Trend Following Strategy

By Hamlin Lovell – HedgeNordic

"We need to be very careful and humble about what we know and what we do not know."

BUILDING ON A DISTINCTIVE QUANTITATIVE INVESTING PLATFORM

PIMCO's commitment to quantitative strategies, and its distinctive environment for quant research, were first developed in 2003, the year its quant platform was founded. But the area received a boost when CEO Emmanuel Roman joined PIMCO in 2016 and made quant a strategic priority, and was further strengthened when Managing Director and Portfolio Manager Nick Granger joined in 2020.

"Moving to an organization with institutional support for quant from the top level in terms of resourcing, technology, and data, was very important", says Granger, who also finds the West Coast US California lifestyle a refreshing change from London. "It is a very collaborative firm where quant is not siloed but is mixed into the rest of the investment management effort. This widens our opportunity set into areas such as one of the world's leading mortgage trading desks," points out Granger.

The broader quant platform at PIMCO has grown to over 150 people. PIMCO has built out a variety of quant strategies to take advantage of opportunities, in areas such as emerging markets (EM) fixed income, volatility instruments and credit. For instance, the firm's distinctive alternative risk premia (ARP) strategy has gone beyond classic carry, momentum and value factors. It exploits risk premia in mortgages, volatility and credit markets, as well as seasonality premia in commodities, leveraging specialist expertise.

The multi-strategy hedge fund has been successful at systematically trading credit. PIMCO's 'trend-following commodities trading advisor (CTA) strategy has become the largest US mutual fund in this space and the strategy can also be accessed in UCITS format.

DEFINED USE OF DISCRETION

The integration of discretionary and systematic analysts and portfolio managers raises questions about division between the styles, and the firm carefully defines where discretion can and cannot enter the process. "We will not try to second guess quant models," explains Granger. "We need to be very careful and humble about what we know and what we do not know. We run a model and intervening in models with any regularity tends to detract value. We build robust models to take advantage of inefficiencies, rather than trying to time markets."

Yet geopolitics is one area that can trigger discretionary intervention. "Our EM specialists are monitoring emerging markets in real time and can alert us to worrying events at an early stage. Our advisory board includes Ben Bernanke and former UK prime minister Gordon Brown. Where experts have a very strong view we may exit a position, but we would not reverse it to the opposite direction".

Trade execution is another area where humans cannot be replaced by machines in all areas. Quant strategies that trade only the most liquid markets may fully automate everything including execution, but PIMCO does not trade all markets through electronic algorithms. "In less liquid markets and those with

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> "We have a strong belief that trend is a unique style. Very few things have similar long-term positive alpha and diversifying characteristics."

sporadic liquidity, quant models assuming full liquidity do not work. We make use of counterparty relationships and discretionary execution using human traders to source over-the-counter (OTC) markets," says Granger.

AI AND MACHINE LEARNING

As with discretion, Granger is very selective about appropriate uses of artificial intelligence and machine learning techniques. He argues: "Machine learning works well with millions of data points, shorter or high-frequency holding periods, and very broad investment universes such as equities. But in financial markets with a low signal-to-noise ratio, there is a danger of data mining and over-fitting. Whereas we seek parameter robustness. We prefer ideas to be underpinned by fundamental insights and observations. We generate hypotheses and use data to verify or disprove them. The majority of our work is fundamental. Therefore, we might use machine learning techniques to transform sentiment data, images or audio data, into a numerical value, rather than using it directly."

PURE PLAY TREND (WITH SOME FILTERS)

PIMCO's trend-following program is a pure play: "We have a strong belief that trend is a unique style. Very few things have similar long-term positive alpha and diversifying characteristics. We do not want to fit-in overly clever stuff or switch to mean reversion when trend stops working."

Yet Granger believes that trend can be enhanced with some fundamental insights, such as seasonality, storage costs, and forward curve modelling for commodities. These can be used to filter or temper trend signals – but will never lead to an anti-trend position.

For instance, the inverse correlation between trend and carry strategy performance is well documented and is heeded at PIMCO. "At the individual market level, negative carry – such as crude oil in steep contango – would eat into expected returns from a long position and could lead to zero position, but would not lead to a counter-trend position. Conversely, positive carry could be enough to counterbalance a short trend signal and result in no position".

In addition, PIMCO can sometimes invest beyond the front month future or contract, to optimize carry dynamics.

DESIGNED TO BE DEFENSIVE

Granger argues that the PIMCO trend strategy aims to be relatively defensive for three reasons: style purity, trading speed and overrides on equity exposure. "Pure trend signals are not modified with other signals designed to smooth out performance when trend following is harder. Faster trend signals tend to be more defensive and improve positive skewness. They turn around and respond more quickly, especially when there is a new emerging theme such as COVID-19 in late February 2020".

There is also an explicit cap of 0.5 on equity upside beta, with somewhat more latitude on the downside. When markets see a bolt-out-of-the-blue drawdown, such as in February 2018, a long equities position can exacerbate drawdowns. "We therefore manage long exposure to ensure that we are not caught the wrong way".

The equity beta cap is calculated using both direct equity exposures and equity beta from other asset classes, where credit and emerging markets have the most notable equity market correlations. Some ARP versions of the strategy have also been calibrated with lower equity beta caps.

DEFINING "TRADITIONAL" AND "ALTERNATIVE" MARKETS

PIMCO has various versions of trend following. The trend sleeve within Alternative Risk Premia ARP programmes usually matches the flagship trend strategy (except for the versions with lower equity beta). The multi-strategy hedge fund exclusively focuses on relatively unique alternative and exotic markets and the pure trend-following strategies also have a significant weighting in these "alternative markets", even if they are not purely comprised of them in the way that some dedicated alternative markets CTAs are.

However, Granger argues that the split between "traditional" and "alternative" markets is to some extent a false dichotomy, partly due to PIMCO's existing market relationships. "Whereas most CTAs started trading futures and viewed a move into swaps as alternative, PIMCO sometimes finds it easier to trade swaps than futures".

Key "alternative" markets traded by PIMCO include emerging market rate swaps and currency forwards, mortgages, electricity, and emissions. These markets can be harder to access but PIMCO has extensive OTC counterparty relationships, and manages counterparty risk carefully.

Any perception that alternative markets are less liquid is not a useful generalization, according to Granger: "The traditional futures universe contains markets such as cotton, cocoa and orange juice, which can have very limited liquidity. Meanwhile, US mortgages, credit indices and swaps boast better liquidity than most futures markets".

Therefore, Granger sees plenty of scalability, though PIMCO's large asset base reduces any incentive to grow the strategy beyond optimal capacity, or indeed deviate from its stated style. "Even as the quant business grows, it will always be a relatively small part of the overall PIMCO business, so there is no pressure to grow assets by increasing weights in more liquid markets, or dilute the long-term diversification objectives of the strategy for the sake of short-term fee income," argues Granger.

COLLATERAL MANAGEMENT AND CREDIT RISK PREMIA

Most CTAs are sitting on substantial amounts of cash and benefitting from higher risk-free interest rates in 2022 and 2023. PIMCO's active collateral management aims to add a meaningful return on top of risk-free rates, through techniques such as repos, margin optimization and netting, and highly diversified exposure to highly rated short-term commercial paper issued by corporates. This does entail some degree of corporate credit risk premia, though Granger stresses that it is highly diversified. Clients with separately managed accounts could, of course, opt to keep cash in Treasuries or even consider other liquid fixed income strategies.

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Apples to Apples Using Pears

By Linus Nilsson and Tanya Gupta – NilssonHedge

Benchmarking a CTA (or any active strategy) is sometimes easy, but occasionally a difficult exercise. On the surface, it is about comparing a particular manager with other opportunities, an index, or absolute return expectations. But which one? What adjustments to make?

CTAs, in particular, have widely different risk levels which can cause low volatility managers to appear uncompetitive and higher volatility strategies may be perceived as overly risky. Most investment professionals adjust for volatility, either by looking at risk-adjusted rations (e.g. the Sharpe ratio) or by adjusting the time series itself.

Sadly, standalone result is never quite enough to convince investors. It is all relative, and no one has the same frame of reference, neither in time nor space. In this article, we present a few options from the viewpoint of a practitioner, that may be useful for both allocators and managers. This is not in any shape or form a universal solution, but rather a step in what we believe to be the right direction.

INDEX BENCHMARKING

A standardized approach is to use one of the many existing Hedge Fund benchmarks available to investors. Hedge fund indices generally suffer from backfill biases, survivorship and a myriad of other effect. As a general remark we would urge the analysts to use indices where these issues have been reduced as much as possible. Transparency is important, index formation and disclosed constituents are of importance for credibility.

If you outperform the benchmark, all is well, nothing more to worry about. Not that easy. You have more ground to cover, especially so when dealing with sophisticated clients.

For CTAs, given the potential for notional funding, there is a range of risk levels that is largely decided by the manager and clients. Thus, you probably want to volatility adjust the benchmark or the return stream from the manager. The simpler approach of looking at volatility adjusted ratios may miss specific events (for instance if all the out or under performance occurs in one month).

Throughout the post-Covid period, inflation has reared its ugly head and the world left the zero-interest rate policy regime. As most CTAs earn interest on their cash holdings you want to adjust for the prevailing funding rate. You can use the below “algorithm” to arrive at volatility adjusted returns:

1. Calculate excess returns, by removing the interest rate earnings. For simplicity you can use the prevailing US T-Bill rate.

2. Rescale the volatility of the excess returns to the target volatility level by multiplying by the ratio of the standard deviations of the investment and the benchmark. Other risk measures can be used.

3. Finally, add back the interest rate and you have now created a return stream that can be compared to the index.

4. Simply adjusting for the volatility ratio has been mostly correct for the past decade. If higher

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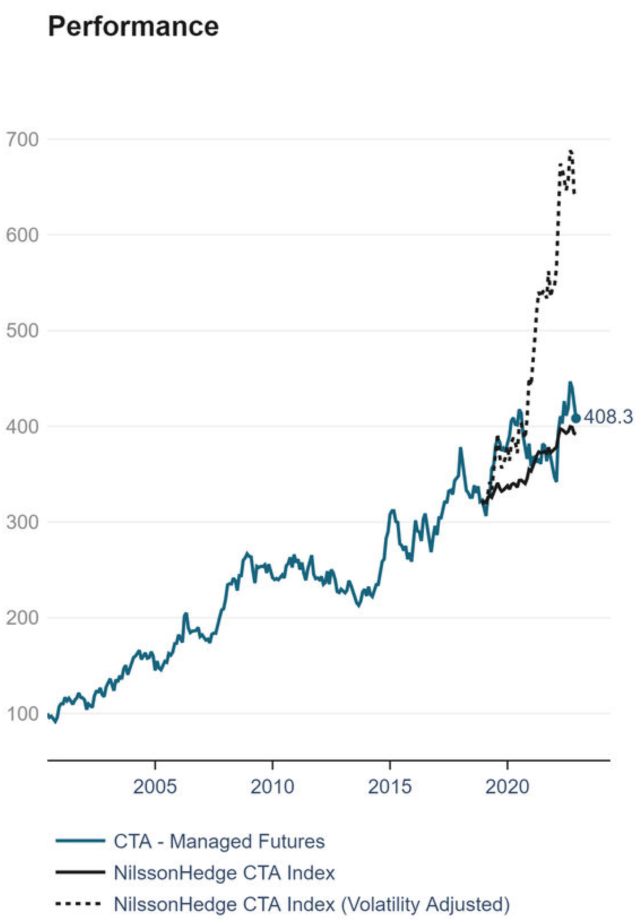
interest rates persist the precision of the scaling will deteriorate.

In this manner, you have created a fair representation for a Managed Futures program, where the interest rate earning may be a significant component. The immediate drawback here, is that this an ex-post adjustment. But you are likely to only have access to "after the fact" information, so the problem is somewhat hard to circumvent.

We observe that not all CTAs treat interest rate earnings in a consistent manner. Preferably you want returns from a fund or a fully funded account rather than a composite. A composite may be compiled based on accounts with different funding levels which may cause different interest rate earnings than expected. This is generally a second order effect and for most exercises an approximation is correct.

That's the easy way of benchmarking. Here we note that an index almost always has the benefit of having

Figure 1 Risk Adjusted Performance (Volatility Scaled)



exposure to diversified strategies and managers need to compensate for the diversification benefit with higher quality returns.Scaled)

FACTORS

In prior articles, we have done some work explaining how factors can be used to dynamically extract the alpha profile of a particular manager. There are several different approaches that can be used, and for most Hedge Funds a risk premia / factor exposure library is highly recommended. This will help you to understand implicit exposure to known strategies and how much residual alpha that is generated.

In an academic setting, the Fama-French factors are commonly used. For Trend Following, various types of momentum rules can form the basis for a factor library.

The factor loadings and the "residual" alpha can be calculated using various regression techniques. We have described a method in previous articles. Alpha is not necessarily the same as better returns than peers but may yield interesting findings.

PEER GROUPS

Dispersion measures the range of outcomes. Typically, we are interested in the median, upper and lower quartile performance, or any other measure of reasonable variability.

Box plots is one of the more classical ways to illustrate dispersion relative to peers. It gives a quick impression of the performance compared to competitors but is usually only applied to a specific time period. In the chart, we look at annualized performance.

In the example above, we observe the large variability in relative ranking, indicating that the manager may offer some diversification benefits.

Our approach to benchmarking is to generalize the boxplot and take the analysis a step further, by combining cumulative boundaries for the complete peer group's performance and compare to the result of an investment opportunity. This gives the user an easy to interpret analysis of when a manager is doing better than peers, and when they are doing worse.

In the chart below, we can clearly see when manager is performing below expectations, compared to a universe of peers (here 705 CTAs). In this example, we have a manager that is struggling to be persistently above the median. We are convinced that this gives more information compared to performance cones (i.e. expected returns compared against standard

Figure 2 Alpha adjusted for Fama French Factors

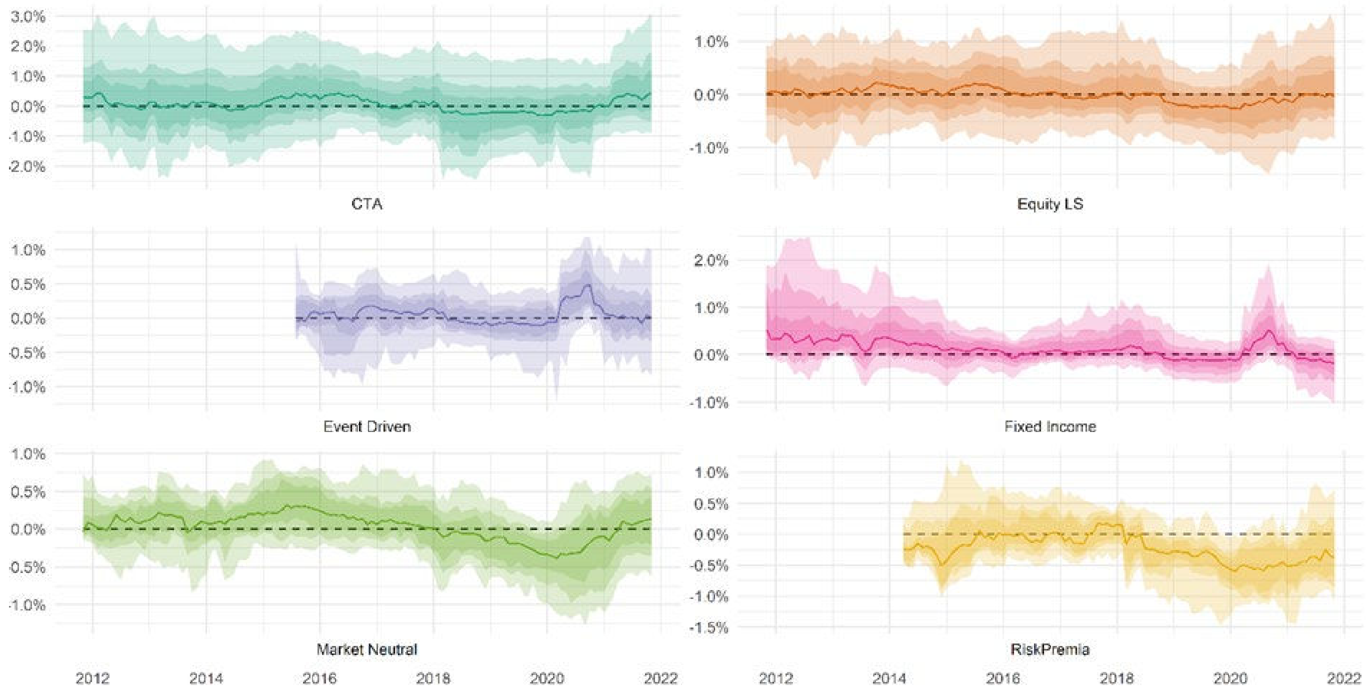


Figure 3 - Annual box plots illustrating dispersion around the median

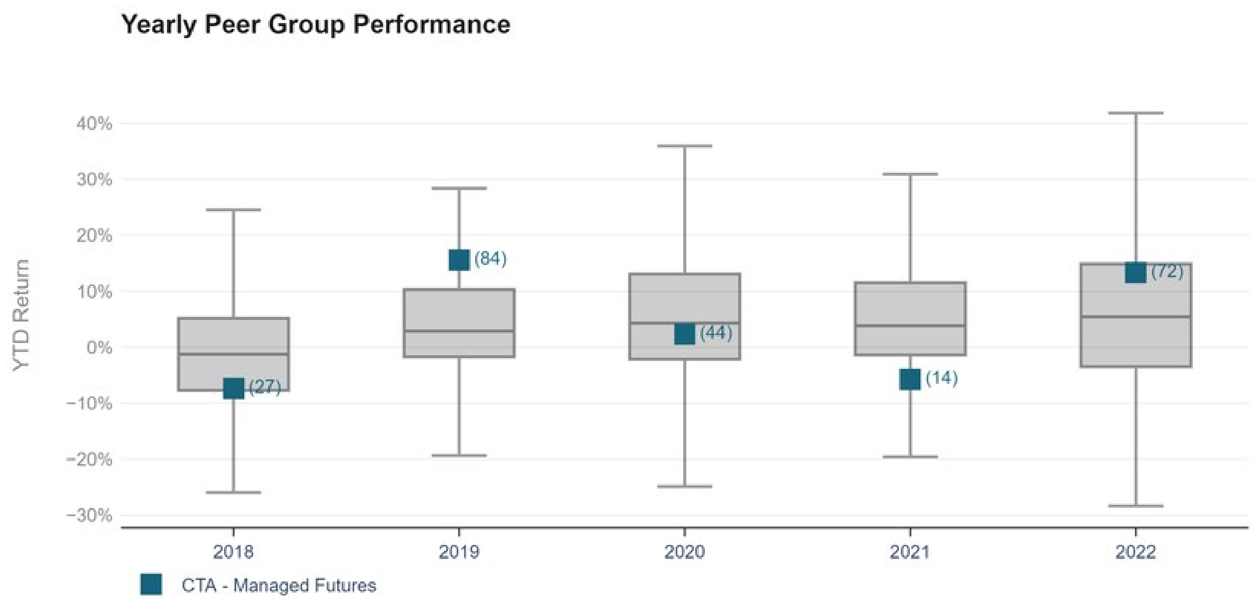
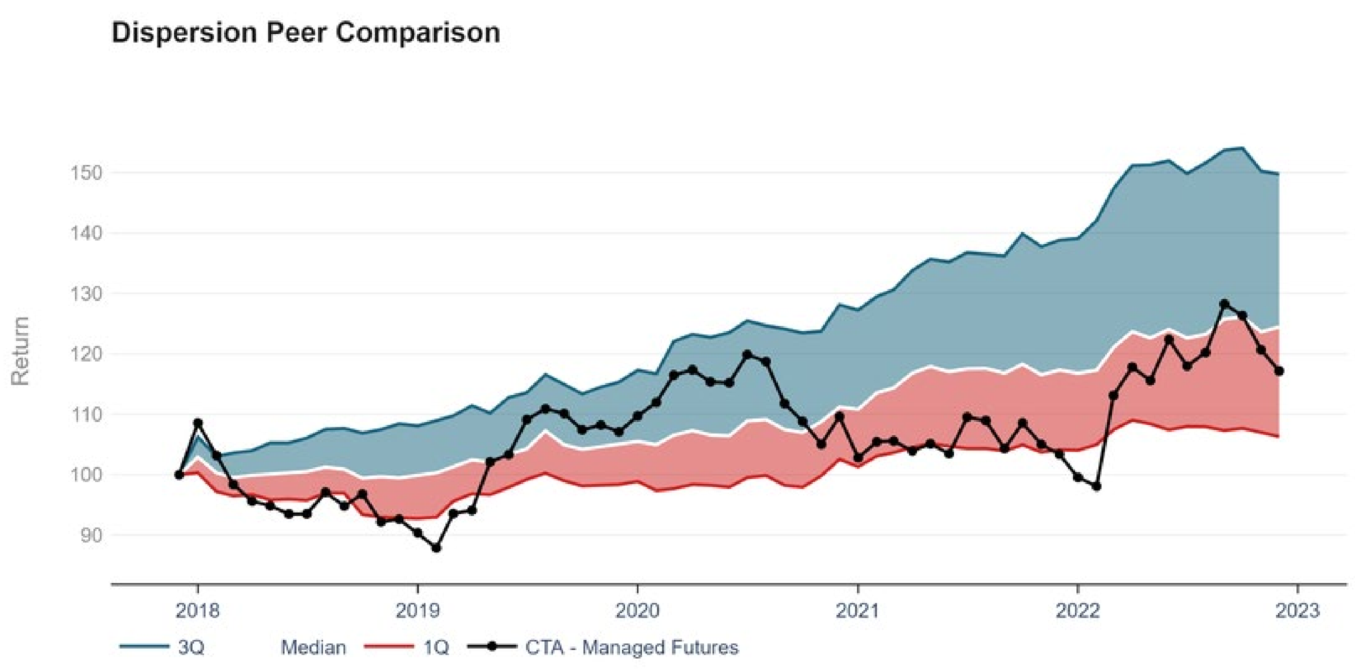


Figure 4 Dispersion against a large Peer Group



deviation boundaries), boxplots or compared to a hedge fund index.

It allows you to focus your analysis on why and when you are expected do better and likewise explain in which environments you have underperformed.

In summary, there are multiple ways of analyzing performance, but it can rarely be analyzed on a stand-alone basis or using one method. The more data you have access to, the better you can judge the potential opportunity set. Your performance is always relative.

Linus Nilsson is the founder of NilssonHedge. He has served as the CIO and partner for a hedge fund, founded an emerging hedge fund, and worked as a hedge fund analyst for several international investors, and as a risk specialist for a major bank.

He founded NilssonHedge, a database with a focus on CTAs and other Liquid Alternatives. Nilsson has lived in six different countries and has published articles in industry journals and appeared as a speaker and moderator at industry conferences. In academic terms, he holds two master's degrees from the Chalmers University of Technology and Gothenburg University..

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Bringing Back "Crisis Alpha"

By Alan Dunne & Niels Kaastrup-Larsen
Top Traders Unplugged

Alan Dunne

"While most large CTAs aim to produce the typical return characteristics of Managed Futures… they were first and foremost aiming to generate absolute returns as "consistently" as possible."

2022 was in some ways a reminder of why Managed Futures strategies, particularly Trend Following became known as Crisis Alpha strategies. The SG Trend Index was up 27% while both bonds and equities suffered double digit losses.

The term "Crisis Alpha" was coined by Kathryn Kaminski following the Global Financial Crisis in 2008, in response to a question by a big pension fund wanting to understand why Managed Futures did well during the crisis.

This was an exciting development for our industry as suddenly we had a simple term to describe one of the most desirable features of Trend Following, a term with the added benefit of being so simple that analysts could remember it and repeat it during investment committee meetings.

After a successful adoption of the term Crisis Alpha, and the resulting inflow of institutional capital to our industry, it became clear, that perhaps it was too good to be true. Many managers, found themselves explaining why their "Crisis Alpha" strategies did not perform well during the periods when equity markets wobbled, culminating in "Volmageddon" in February 2018, when stocks sold off sharply over a two-week period and CTAs also had drawdowns.

In many respects, this was probably the turning point for many investors, who simple lost patience and the belief that Managed Futures or Trend Following would deliver the return profile they had been "promised"; redemptions from the industry gathered pace.

WHAT DOES CRISIS ALPHA REALLY MEAN?

But in the last couple weeks, as part of a series of conversations with the largest CTAs on the TopTradersUnplugged Podcast, we caught up with Kathryn Kaminski to revisit "Crisis Alpha" and it seems that it may have gotten lost in translation.

As Katy explained… the original question was: "what is it that makes a strategy succeed during stress?"

Well, there are a few features. Number one: liquidity; number two: it has to be opportunistic and number three: it should have No bias.

First, liquidity is important because if you have liquid strategies, when things are difficult, you can reposition your portfolio quickly and efficiently.

Second, if you have a strategy that is opportunistic, it means you can be long and short different markets depending on the opportunity set. For example, during COVID, the best trade was to short energy and long bonds while during the Ukraine/Inflation crisis, it was the opposite.

And lack of bias is extremely important. Trend Followers had been riding the long bond trade for a long time and very successfully. But in the aftermath of the COVID crisis, when it became evident from the price action that bond yields had seen their low and prices started

Niels Kaastrup-Larsen

to fall, Trend Following strategies (unemotionally) went short and capitalized on the bond bear market.

So, as we bring back "Crisis Alpha" in our narrative and conversations with investors, we should remind them that it is a simple term that is there to help our understanding of which strategies have the potential to perform during stressful periods and their characteristics. Trend Following and Managed Futures are some of a small set of strategies that have characteristics (liquid, opportunistic and unbiased), which give them the potential to generate Crisis Alpha.

HOW IMPORTANT IS CRISIS ALPHA FOR CTAS?

The discussion around Crisis Alpha, and how Managed Futures can deliver it, has been back to the fore, ever since Cliff Asness wrote a paper last year called "The Raisons d'être of Managed Futures".

In the paper Asness argued that some Trend Following, and Managed Futures managers may be moving away from what he called the implicit dual mandates of:

(1) delivering positive returns on average; and

(2) generating especially attractive returns during large equity drawdowns (i.e. Crisis Alpha).

Using data from the SG Trend Index, the paper highlighted that in the last 13 years trend followers had appeared to be successful in delivering on mandate 1 but less successful in delivering on mandate 2.

Notwithstanding some methodological issues with the paper, such as the fact that the composition of the SG Trend index has shifted over time, Asness was raising a reasonable question:

HAVE MANY OF THE LARGEST TREND FOLLOWERS BECOME MORE FOCUSED ON DELIVERING MORE CONSISTENT RETURNS AND A HIGHER SHARPE RATIO AND LESS ON DELIVERING CRISIS ALPHA?

We were naturally keen to get the perspective of other managers in the SG CTA index when we spoke to them.

The consensus that emerged was that while most large CTAs aim to produce the typical return characteristics of Managed Futures (positive returns over time, low correlation to equities, positive performance in equity drawdowns etc.) they were first and foremost aiming to generate absolute returns as "consistently" as possible.

Positive performance in equity drawdowns was seen as a favourable characteristic, probably not an explicit part of the mandate, but perhaps something which has evolved to become a secondary part of the mandate.

The sentiment was summed up nicely by Russell Korgaonkar, CIO at Man AHL: "I think trend followers going into 2008 didn't consider in particular performance during negative equity markets. I think they thought here is a system that tends to work, it tends to have nice return properties and that was the focus.

I think if you talk to most institutional investors they care about both. Clearly, they care about the returns, but they also do care about the Crisis Alpha or being generally diversifying… It's one of those things it was never the original intention, but as time has gone one and perhaps as what people value has changed, it has become part of the lexicon."

In that regard, a key point raised by many managers has been the challenge of staying true to a pure Trend Following approach, given the difficulty investors experience in staying invested in a pure Trend Following program over the long term.

When we spoke with Marty Lueck of Aspect he described how Aspect Capital approach this: "We

"…one of the themes that emerged from our discussions was that the pursuit of Crisis Alpha can impact a number of choices CTAs make when designing Managed Futures programs."

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offer Trend in a number of different formats. The motivation for that is the passionate belief that the trend utility is so useful in investors' portfolio … trend is the medicine that is good for investors, and all of the diversification around it – the non-trend strategies – is an effort to make the medicine more palatable because that utility, that convexity that Cliff Asness is highlighting, can be hard to hold."

That is not necessarily a bad thing, as long as the allocator knows that they are getting a diversified offering and that the program does not have some inherent bond or equity beta, which is not being divulged.

MORE CHOICES, MORE DECISIONS

Arguably a second shortcoming of the Asness argument is that while the SG Trend index includes the largest program of each of the managers, many CTAs have evolved to offer multiple programs to investors including pure trend, diversified trend or a multi-strategy. Large quant managers increasingly see themselves as solutions providers blending different strategies in different ways.

As Kevin Cole CEO and CIO of Campbell explained: "Across our programs we want to deliver strong absolute return, low correlation or diversification to traditional assets and a stable level of risk. Now depending on the particular program and the way it is packaged that weight we put on each of these can vary.

In our flagship program….we are laser focused on delivering the strongest risk-adjusted return, the highest Sharpe over the long term, a stable level of risk of about 10 vol, low correlation to stocks and bonds, and meaningful alpha above and beyond alt risk premia factors…. We also offer standalone trend strategies that are primarily for institutional investors looking for that more trend specific profile. Strong returns are an important part of that but also, we would have a greater emphasis on delivering that complementarity to traditional assets and that could be what you call Crisis Alpha or risk mitigation."

Indeed, if an investor places a high value on Crisis Alpha even at the detriment of long-term returns, CTAs can offer programs that limit the equity exposure, or cap the equity beta in an effort to avoid significant drawdowns at times of reversal during an equity rally.

One such manager is Graham Capital. Ed Tricker CIO of Quant Strategies at Graham commented: "Reducing equity exposure is interesting because … if markets have gone up a lot and then all of a sudden, they go down a lot, it takes a while to turn around. By not having that long exposure, you turn around more quickly. It's sort of analogous to speeding up the system.

The problem is you do incur an opportunity cost along the way. Now, historically, that opportunity cost has been about equivalent to the diversification benefit that you get, so it's really been a wash. One could argue that fixed income is no longer the reliable friend it once was. I think, probably, that calculus has improved somewhat. There's probably a little more utility to a capped beta version of Trend Following, for example, that looks a little bit more like fixed income used to."

From that perspective the trade-off between return and Crisis Alpha is one that is increasingly acknowledged by managers, but it is a trade-off which is being left to the investor to decide on depending on their own utility function and portfolio requirements.

SPEED AND SIZING

While the Asness paper focused on the strategy mix, and specifically the use of carry, as the possible culprit for returns showing less Crisis Alpha, one of the themes that emerged from our discussions was that the pursuit of Crisis Alpha can impact a number of choices CTAs make when designing Managed Futures programs.

For example, the desire to deliver Crisis Alpha can be a consideration in the aggregate speed of the trend system and the desirability of having at least some allocation to faster trend systems. But that may come at a cost in terms of overall performance.

Marty Bergin, President at DUNN Capital Management explained: "What we've found over the years in research is shorter timeframes or shorter lookback periods can mitigate drawdowns. But we also know that from a performance standpoint, the performance is not as good. But it's become aware to us that institutional clients aren't necessarily looking for the knock-the-ball out-of-the-park kind of performance. They're more concerned about that drawdown."

Another variable which may impact the extent to which a program can deliver Crisis Alpha is volatility sizing, a topic which often elicits emotional debate amongst trend followers. The "old school" way of running a Trend Following was to size positions at entry based on volatility, but to keep that position until exit without adjusting the position size as market volatility changes.

The benefit of this approach, from the perspective of delivering Crisis Alpha, is that the program can benefit significantly from positions in markets which are trending and where volatility is expanding rapidly. Philosophically, the idea is that the program should have higher risk where markets are really starting to move.

However, in our conversations with the largest CTAs there was an almost universal preference for dynamically adjusting position size for changes in market volatility.

As Svante Bergström Co-Founder and CEO at Lynx put it "I think it's old-school. I think if you look at a year like last year, for example, or 2008, the less sophisticated you are, the better actually. When you keep big positions, you don't care about volatility increasing. You just ride the trend and make a lot of money. But it's in market environments where you struggle that you need to adjust to make sure that you don't take too much risk and use that in a risk management context."

Indeed, the strong performance of the SG Trend index last year, is arguably proof that the more modern approach to position sizing is still very effective in delivering Crisis Alpha.

LOOKING AHEAD

The introduction of the term "Crisis Alpha" into the investment lexicon was a helpful addition but over time may have been misconstrued. Yes, Managed Futures strategies and Trend Following have at times delivered Crisis Alpha, largely because the strategies are opportunistic, unbiased and liquid.

But that is not a promise that these strategies will always deliver positive returns in crisis periods, but instead it's the fact that Managed Futures have these characteristics that increase the likelihood of delivering Crisis Alpha, while at the same time generating returns in other time periods.

Many investors have historically relied on long bonds or long Volatility for their Crisis Alpha, but we saw in 2022 that these strategies can be unreliable in delivering Crisis Alpha. Given that neither of them have all three characteristics (opportunistic, unbiased and liquid) they should not be solely relied on by investors for their risk mitigation.

Perhaps, when all is said and done, particularly during the major crises and equity drawdowns, Trend Following and Managed Futures stacks up very favorably versus the alternatives in delivering "Crisis Alpha" after all.

Alan Dunne is Founder and CEO at Archive Capital, a boutique alternative investments and investment research firm focused on the use of Global Macro and Managed Futures strategies in asset allocation. Alan is a co-Host of the Top Traders Unplugged Podcast.

Niels Kaastrup-Larsen has spent more than 30 years in the Managed Futures industry, and is the Managing Director of DUNN Capital (Europe) as well as the Founder of the Top Traders Unplugged Podcast.

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November 2022 CTA Round Table Discussion

By Eugeniu Guzun – HedgeNordic

Participants, left to right: Kamran Ghalitschi (HedgeNordic), Jeremy Taylor (ISAM), Jason Sher (ISAM), Razvan Remsing (Aspect Capital), Christoph Junge (Velliv), Patrik Säfvenblad (Volt), Harold de Boer (Transtrend), Mikael Stenbom (RPM), Martin Källström (Lynx), Keith Jarvis (Aspect Capital), André Honig (Transtrend)

There was plenty to talk about at HedgeNordic's CTA round table in November of 2022. Managed futures once again made the case that they should be a part of every well-diversified, institutional portfolio. After a decade of anemic performance, trend-following CTA managers enjoyed a banner year in 2022 amidst turmoil for traditional asset classes and portfolios. Trend-followers offered tail hedge, diversification, and crisis alpha.

RETURN TO NORMALITY

In 2020, Velliv's Head of Alternatives Christoph Junge co-authored a paper on alternative investments during times of crisis, in which he found that "CTAs as a group has been the only asset class in our study that consistently performed in each crisis since 1980." After performing well throughout the market sell-offs of 2000-2002, 2008, and the first quarter of 2020, CTAs came to the rescue yet again in a year when both stocks and bonds simultaneously incurred losses in the face of inflation and monetary policy tightening.

The 2010s were characterized by a set of macroeconomic forces in the wake of the Great Financial Crisis that created an unfruitful environment for persistent price trends and trend followers. In 2022, macroeconomic uncertainty and market volatility rose due to high inflation persistence, a rapid and aggressive shift in central banks' policies, and the unexpected Russian invasion of Ukraine. 2022 was all about a big lack of equilibrium across regions and asset classes, according to Razvan Remsing from Aspect Capital. "The journey from a lack of equilibrium to steady-state creates trends."

"On a global level, we had a lot of multi-decade themes that have been thrust into reverse," added Remsing. "We see deglobalization in supply chains, the return of inflation, the renormalization of interest rates, and big dislocations within energy markets with Europe at the center of it, all having ramifications globally." This journey to a "new equilibrium" created a divergent set of persistent price trends, which explains why 2022 was one of the best years for many trend-following CTAs.

Patrik Säfvenblad of Swedish Volt Capital Management agreed with Remsing, saying that we were adjusting to a new normal in market by market. According to Säfvenblad, the beauty of trend-following lies in the ability to capture multi-year trends that happen once every six to seven years. "Whenever CTAs are doing well, it's one thing happening and this one thing is that investors across different markets are adjusting to a new normal."

Lynx Asset Management's Martin Källström added that one of the most important developments of 2022 was the pullback from the stimulative central banking policies. "Taking away monetary stimulus means removing the safety net that investors have become so dependent upon," explained Källström, who has the role of steering Lynx Asset Management alongside founder Svante Bergström. "We built our strategy to capitalize on cognitive and emotional biases, which have had an increasing influence on investor behavior since inflation started to be a threat."

Although Harold de Boer of Transtrend agreed that there is one big driving trend in markets in the form of returning inflation, he observed that "this driver is going through different phases, manifesting itself in a different way in different markets in different phases of the trend." According to de Boer, "this results in increased diversification for trend-followers, as well as healthy dispersion among trend followers."

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RPM founder Mikael Stenbom said that "we are going back to an environment that looked more like the period before the great financial crisis." Back in the 2000s, "we had what one can possibly call the normal regime with trends coming and going, and markets going up, down or sideways," according to Stenbom. "After a decade of what one might call the central bank regime, we are starting to see some similar patterns from the pre-financial crisis environment evolving."

While 2022 was a banner year for trend-following CTAs, Jeremy Taylor from ISAM argued that 2022 is not that instructive of a year for looking at the CTA universe. "It has obviously been a great year for reminding people of why CTAs are useful in a portfolio, but I actually don't think it's that instructive a year for looking at what drives and differentiates CTAs," said Taylor. "There have been some strong trends across sectors, but they have actually been quite concentrated and quite easily accessible trends, so almost everyone has done well." Taylor suggested looking further back to get a more informed perspective on how trend-following managers work.

And yet, 2022 offered some interesting episodes for trend followers. Trend-following vehicles, for instance, acted as a better diversifier than bonds in a period of turmoil, partly because of short positions betting on falling bond prices. "By successfully shorting bonds early in the year, we have delivered strong returns in an asset class that some doubted whether trend-following could perform in a bear market," said Källström.

CAN ONE TREND FOLLOW A TREND-FOLLOWER?

"There is a big misconception out there, and the biggest question we get asked is, have we missed it?," said Remsing in late 2022. "Just because we have had a very fruitful environment with highly dislocated moves, it does not mean we cannot go through a number of years where trading opportunities for CTAs are above average," according to Remsing. "You can't really trend follow a trend follower," he argued. But can anyone? Christoph Junge has been considering research into defining a regime-switching model that would help identify a trendy or

non-trendy environment and asked the experienced group of managers for their thoughts.

"I am very skeptical of the ability to time trend," considered Jeremy Taylor. "Ultimately all of us in the room, if we could time trend, we would probably have done that inside our own strategies," he elaborated. "The purpose of trend-following within a portfolio is not its standalone input on the P&L, but rather to offer protection to the long exposure to equities and bonds in periods of stress," explained Säfvenblad. "Perhaps you are going to be able to time the allocation to this strategy somewhat, but you are not buying into trend-following for its individual alpha but for the correlation benefits to the portfolio," he elaborated. "You risk hurting your correlation-based protection by timing trend-following."

PERFORMANCE DISPERSION AND EVOLUTION

Despite the market environment being fertile for trend-followers, one should still expect performance dispersion among trend-following CTAs. The dispersion in recent returns confirms that trend-following is not a "generic" strategy and manager selection is important. Dispersion among CTA managers is essential, argued de Boer.

"The CTA universe does well when all of us make different choices every time, that is what makes us strong. Biodiversity is also something that we should want in this industry," emphasized de Boer. "Through research and innovation, all of us should make different concept choices that are reflecting what is happening in this changing world. This development is very healthy for the industry and investors."

There are strong reasons to consider trend-following as a strategic part of a diversified asset allocation. However, investors need to be well aware of why CTAs do what they do, why trend-following works, and how it can improve diversification, risk control, and returns in a broader portfolio. "Doing that homework is very important," argued Säfvenblad. "If you haven't done that homework and suddenly see a P&L number that is out of the ordinary on the positive or negative side, you are going to be questioning your initial analysis and decision. That's when you are going to be walking away from the portfolio benefits of a CTA allocation before it has done its job."

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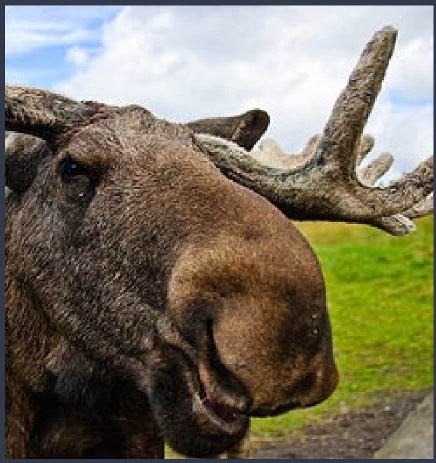

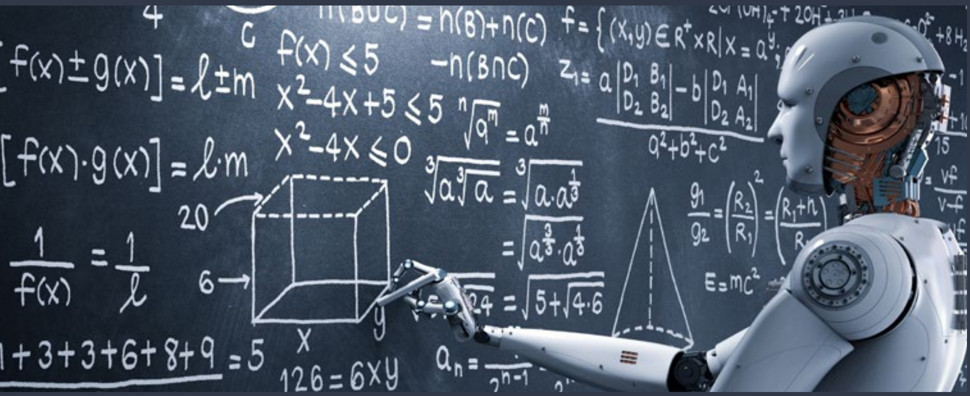

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