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Championing alternative commodities and fixed income trend-following

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GreshamQuant (GQ) was founded in 2016 by Scott Kerson, a pioneer in alternative commodity markets trend-following dating back to his time as a Partner and Head of Commodities at Man-AHL. Kerson, as the architect of the Gresham ACAR Fund, hired Dr. Thomas Babbedge in the spring of 2016 after having previously spent ten years at Winton. Babbedge wrote the code for signals, portfolio construction, cost models and risk management and since 2023 has been the model owner of ACAR and Co-Head alongside Co-Head Jonty Field, another Man-AHL alum. Kerson left GQ earlier this year having assembled an excellent team and was instrumental in recruiting Dr. Yoav Git, former Partner and Head of Fixed Income at Man-AHL, through their shared vision for more diversifying, and higher quality trend in alternative markets.

ACAR was launched in March of 2017 with $50 million of seed capital trading 43 markets. At the time of writing, ACAR trades approximately 150 markets with $1.4bn under management. GQ launched SAFI at the beginning of 2023, also receiving $50 million of seed capital and is currently trading approximately 120 fixed income markets.

GQ made the conscious decision to create separate programs for SAFI and ACAR to ensure each program has specialized research, technology and high touch execution; to ensure performance accountability, and to give clients scope to customize allocations.

Why alternative markets?

The benefits of trend strategies' alpha and, almost uniquely, positive skew, backed up by behavioural economics, are well understood. Mainstream markets are more financialized, more correlated, easier to access and are more crowded by other CTAs. A key takeaway is that alternative markets offer uncorrelated, diversifying alpha. Performance-wise, two asset classes stood out over decades and even post GFC: "Commodities and fixed income exhibit trends that are more prolonged and attractive to CTAs. The phenomenon is structural," says Babbedge.

Hit rates

GQ do not believe their own trend models are superior to other CTAs' models, but rather select markets with a higher propensity to trend. "We do not have a sharper saw, but we cut higher quality wood, and pick up larger trends more frequently. Running our models on a more traditional CTA universe would extract the same trend profits, but less often," explains Babbedge.

Illiquidity, trend and inelasticity

Sceptics may argue that the apparently better returns are mainly caused by illiquidity. GQ acknowledges that less liquid markets with slower price discovery demonstrate more autocorrelation and trend better. "However, illiquidity is a feature, not a selection criterion for markets. What is far more important in commodity markets is who trades them and why. Coal or freight have inelastic demand and supply – it may take years to build a new mine or ship, and loss-making assets can operate for years. Price therefore must do all the heavy lifting," clarifies Babbedge.

Inherently decorrelated commodities

GQ explicitly construct portfolios to maximize heterogeneity, risk factors and diversification, rather than the number of markets. "For commodities, we trade real-life physical assets that must be harvested, extracted or generated. The lack of fungibility provides a higher quality covariance matrix and this goes beyond measuring a low mathematical correlation. There is inherent heterogeneity seasonally, physically and regionally. Nuclear-generated French electricity and the Brazilian corn harvest are not just two numbers on the screen; they stand apart from each other and from most financial instruments," points out Babbedge. Even in some traditional commodities such as Brent crude or West Texas Oil, longer maturities are more physically driven and less financialized.

Energy transition (coal/nuclear/renewables), electrification, the rise of AI datacentres, climate change, re-armament, food security and China are big themes driving ACAR's markets. Babbedge has some personal experience of energy transition – he is a director of Archipelago Yachts, which is developing the first sustainable leisure craft, using recyclable aluminium with methanol-to-hydrogen fuel cells.

Policy and fixed income

Meanwhile, fixed income markets are driven by central bank policy, concerned with the economy rather than profits. "This creates carry trades that drive long term money flows" says Git.

Capacity

Certain individual alternative markets may be larger and more liquid than some traditional futures, but a diversified portfolio of alternative markets is not always scalable. Babbedge argues that, "Some larger alternative CTAs have become more correlated to the typical CTA because they are managing capacity based on their biggest markets, whereas we optimise capacity based on our smallest markets". ACAR is already approaching current capacity, while SAFI can deploy substantially more assets.

Adding and deleting markets

Capacity can be a moving target. ACAR's number of markets has increased from 45 at launch to 150, but at least a few have been removed. "Black Sea wheat became untradable after Russia invaded Ukraine," says Babbedge.

Babbedge has watched developed coal market volumes decline as carbon volumes increased and markets proliferated over the past 7 years. "We constructed a portfolio of regulatory and voluntary carbon markets with an internal correlation of 0.1. For instance, in 2023 California credits rose on regulatory issues while nature-based voluntary credits were in a secular bear market on greenwashing and credibility concerns," says Babbedge.

The China markets tally has grown from 20 to 50, but their overall weighting has not increased from a typical level around one quarter of the book. Liquidity needs to be closely watched in China, since regulatory intervention can vaporize liquidity, as seen in thermal coal in 2021. Swaps are used to mitigate counterparty and political risk.

SAFI currently trades Chinese swaps and FX and is exploring a move into government bonds with counterparties. "We have been engaging with the CSRC in China to suggest changes," says Git.

All potential new markets demand deep liquidity analysis of volumes, open interest and most importantly costs. "We have been proactive in sourcing liquidity. We asked a local Japanese broker to get US registrations to provide additional quotes for an electricity market," says Babbedge. ACAR scours the globe for the most liquid ways to play themes. "Generally, commodity equities are a noisy way to play the commodity, but uranium exposure is obtained via swaps on a physical trust that beats futures liquidity," explains Babbedge.

Frontier markets are being researched for liquidity and must be daily tradable, but even some developed markets fall short: "We have yet to find suitable counterparties for Australian inflation trading. We ideally want at least 3 or 4 quotes," says Git.

BTC and ETH crypto futures on CME have been traded for 5 and 3 years. "More comfort on regulation and counterparty risk would be needed to trade other crypto in ACAR," says Babbedge.

SAFI and tactical fixed income opportunities

A fixed income shop might have seemed the obvious place to launch SAFI, but Git swiftly turned the dream into reality at commodity specialist Gresham. "We have built our unique simulation framework, portfolio construction algorithms, risk management, execution, broker relations and back office," says Git, a life-long fixed income geek. Starting at Credit Suisse he developed the bank's risk models for CDOs, High Yield bonds and mortgage-backed securities.

"The diversification in fixed income is not as natural as in commodities and needs to be created by careful portfolio construction and risk management," points out Git. "The US is so pervasive in fixed income that it is very hard to avoid exposure to US interest rate risk, but our risk management sure tries," says Git. SAFI trades mainly delta one credit, rates, inflation, EM bonds and FX. "Instruments selected need to be operationally feasible to leverage and short, at reasonable cost. Catastrophe bonds are one example of a market not well suited to this, while interest rate swaps are ideal," says Git. SAFI trades both cash and derivative markets, though not the basis.

SAFI is not duration neutral and has in early 2024 been running with a negative duration bias. Unlike ACAR, SAFI is roughly 50% correlated to Société Générale trend index strategies in fixed income and foreign currency markets but has so far outperformed, even during crisis. In March 2023, SAFI lost two thirds of one-year's volatility, whereas the SG CTA Index lost over one year of average volatility. "We were not in the US market when bonds started rallying, though there was some impact from other fixed income markets. The spike in correlations, combined with some faster short term risk indicators, led us to cut risk by 60% in three days. We always look at multiple signals to increase diversification and the strategy has managed risk well in the crisis, performing well over the subsequent year," says Git.

Carry and currencies

"In many ways, trend in fixed income is the art of safely collecting carry premia across diverse markets," says Git. Carry is an important part of fixed income trend following returns and is a strategy in its own right, consuming 10-20% of risk, which Git believes is less than in some other CTAs. "Usually carry and slow momentum are very correlated but carry gets over allocated by SAFI at turning points of curve inversions or sudden rate changes," he explains.

Currencies average about 10-15% of SAFI risk, depending on diversification benefits against rates, inflation and credit. "The last two years have seen a resurgence in currency returns; as different central banks grappled with different inflation cycles, carry (and momentum) have been staging a comeback. We love the economic divergence we finally see in the fixed income space: diversity (and interest rates differentials) is what SAFI thrives on," enthuses Git.

Curves, inflation and volatility

Beyond the predominant price-based trend signals, SAFI models also heed inflation, yield curves, and volatility surfaces both for signal generation and risk management. Liquid options are a small part of SAFI, constructing a more precise implementation of trend, rather than taking a view on volatility.

Inflation risk is likely to average around 5-10% of the book, alongside emerging market macro, developed and emerging market credit, and some other credit subsectors.

Yield curves are a signal, but relative value trades are less interesting as they need more leverage and would eat up more of what is already scarce capacity. Where two related markets or maturities are trending in opposite directions, SAFI can end up with unintended spreads, but carefully ensures that risk is controlled.

Proprietary technology

Babbedge, Git and other researchers do their own coding, but code must also be approved by a peer review process. The platform is shared between ACAR and SAFI, in part to mitigate the risks of overfitting and to foster cross-sector research. The underlying codebase is now more efficient and flexible thanks to the GQ Technology Team, led by CTO Tom Flannaghan, who is ex-Cantab (now GAM Systematic), and who explains, "Most coding is in Python, but we have a bit of Java Script for front end visualisation". His dedicated technology team manages data and operations. Proprietary systems apply to PMS and RMS, but third-party OMS and EMS are used.

Appropriate execution

GQ take the view that liquidity, trading costs and execution matter more for alternative markets. Git's paper, *The Waiting Game*, argues that slower, multi-day, execution algorithms are more appropriate to CTA alpha and trading speeds, especially for alternative, more expensive, markets. GQ believe that execution costs are significant in less liquid markets and can share cost estimates with clients. Specialist execution experts are incentivized to mitigate these costs. Three of GQ's eleven staff work in execution: a Head of Commodities Execution, Scott Klipper, who carried out the first ACAR trade back in 2017, a Head of Fixed Income Execution and a recently hired ex-Citi rates trader.

Diversification benefits and joint vehicle

GQ expect ACAR and SAFI should offer better diversification for a 60/40 portfolio than a traditional CTA and are complementary to traditional trend CTAs.

There is also a strong diversification benefit from combining SAFI and ACAR. Their correlation has been 2% in long run simulation and 13% in live performance. Half of SAFI clients are also invested in ACAR.

It is possible to invest in SAFI and ACAR together with performance fee netting. The allocation split is nominally 50/50, which is nearly equal on a risk basis given SAFI's 15% and ACAR's 12.5% annualized volatility targets. "Our target is to offer allocators flexibility in accessing premium, capital efficient, diversified CTA exposure they cannot access elsewhere," concludes Babbedge. ◆