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Man Group

Expands quant powerhouse

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(L-R): Matthew Sargaison, CIO, AHL/MSS and Sandy Rattray, CEO, AHL/MSS

Man Expands Quant Powerhouse

AHL/MSS accessing new markets and adding new strategies

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The Hedge Fund Journal's contributing editor, Hamlin Lovell, interviewed AHL/MSS CIO Matthew Sargaison, and CEO Sandy Rattray at Man Group's Riverbank House offices in London.

News-flow around Man Group is full of paradoxes. Although often perceived, and sometimes caricatured, as a marketing machine, many of its fastest growing and best performing strategies are not in fact being actively or widely marketed. Some have been incubated internally for years before being opened to any external allocations. Man may be most famous for AHL's trend following – which still dominates flagship strategies – but it also deploys a whole suite of non-trend signals in distinct and separate strategies. Obituaries of trend following are already being written, yet Man remains devout, finding that the strategy generates extremely strong returns in less easily accessible markets. While Man is renowned for allocating across multiple asset classes, it also offers strategies focused only on equities, currencies, commodities, fixed income or volatility. Furthermore, although Man is best known for hedge fund strategies, it has also developed long-only strategies designed to beat benchmarks by adding alpha.

Headlines are often dominated by outflows from its retail structured products, yet most other parts of its institutional and retail businesses, including three ETFs and three UCITS funds, are receiving net inflows. "Historically success at marketing structured products to retail investors distinguished us from other CTAs," says CEO Sandy Rattray – although he now plainly admits that this business is effectively in run-off. Whilst these structured products had high fees, and hence made a disproportionate contribution to company profits, Man is now completely reconciled to accepting lower fees as it shifts its client mix towards stickier institutional money.

Institutional trend

AHL/MSS's institutional assets under management are growing, says CIO Matthew Sargaison, who notes that "institutional investors like pension funds have recognised trend following as one of the few hedge fund strategies uncorrelated to equities." Rattray argues that "if you have a reversal in equities – perhaps not a violent short-term reversal – there is a high expectation CTAs will be profitable."

He admits that the futures trend train has gone nowhere performance-wise since 2009, but thinks "being flat is OK" because "most other strategies that made money in 2008 [such as short credit or naïve long volatility] have lost a fortune since." So, Man thinks that "thoughtful institutional investors would want trend following as part of their portfolio, even if aggressive investors chasing recent performance may not."

Three competing theories seeking to explain why futures trend following has not performed well post-2008 are declining scalability, diminishing diversification, and distorting intervention. Man has distinct views on each thesis. The simple argument that the scale of the CTA industry has arbitraged away the opportunities is not a theory Man subscribes to, perhaps because the managed futures industry's $300 billion assets are still small versus financial markets. Whereas the drop in diversification between risk assets has made trend following tougher, due to risk assets trading in lock-step, the solution for AHL has been an active pursuit of liquidity in (mostly OTC) markets outside the traditional CTA universe, providing new sources of diversification, both geographically and by asset class.

Man does, however, see validity in the argument that QE has muddied the waters for trend canoes. "The stop/start interventions are of a scale of magnitude not seen before," says Sargaison, who explains that QE has often "deadened downwards pressure on equities." The periodicity of interventions has been particularly challenging for medium-term trend followers. AHL follows trends over one to three-month periods, which have corresponded closely with the frequency of QE interventions. This has often resulted in markets turning around as soon as positions have been built up.

Seeking out new and differentiated markets

Yet rear-view mirror allocators should note that trend following has continued to perform well post-crisis in non-traditional CTA markets which, on a stand-alone basis, have registered eight consecutive years of positive returns ("one of those things you feel fear about," says Rattray!) annualising at over 15% with similar volatility to end October 2013. Man's strategy trading these instruments has won several awards including *The Hedge Fund Journal's* Europe 50 award for "Best Performing Managed Futures Fund" in 2012.

Buy-side alpha from sell-side brokers

Man now runs the largest active equity ETF in the world; this feat has been attained against the odds. That the ETF happens to be listed in Europe perhaps makes the achievement all the more impressive, when Europe's ETF markets are somewhat fragmented, and 10 years behind the US. The asset growth is also significant set against the backdrop of European equities' underperformance since its launch date in 2011. This product is Man's most transparent, disclosing all holdings with a small time lag. Although the offices of Man's discretionary trading arm, GLG, at Number One Curzon Street are several miles away from Man's in the City, this product bridges synergies between GLG's years as a consumer of equity research and Man's quant expertise. The alpha-generation engine here is broker recommendations, but only the buy tips because GLG found no alpha content in the sell tips. Many filters are used to determine how much confidence Man places in the tips – and thereby how large positions are sized. The specific analyst generating the tip can be important, as can the broking house it emanates from, and how far it deviates from consensus opinion.

In fact, even after applying all these (and many more) layers of discriminating quantitative analysis, the buy tips only outperform by an average of 1.5% – and there is an optimal half life for exploiting these signals. Wait too long and the broker idea will already being baked in; hold too long and again the alpha can decay away or even turn negative. This type of "tortoise" strategy, trying to pick up lots of small profits from hundreds of trades, is quite typical of Man's strategies. Across hundreds of trades, the alpha can add up to 5% or 6% per year – the strategy has beaten its benchmark by 17% since inception. Clearly, any strategy that can deliver alpha of this order of magnitude will be well into the top decile of active equity managers. Whereas many enhanced equity index strategies, including equal weighting and some fundamental approaches, increase weightings in smaller stocks, Man's strategy sticks to the most liquid names and so has estimated capacity of €5 billion to €10 billion. An Asian version of the approach was rolled out in August. Separately, Man has also developed long-only strategies that are designed to outperform commodity indices, using a mix of trend, carry and fundamental signals.

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While the size and scope of futures markets has expanded enormously from their origins in a few commodities, there remain many huge commodity, currency and financial markets that are still untouched by futures exchanges. Electricity, credit, certain equity sectors, and interest rate swaps in emerging markets are all examples of multi-billion-dollar-size markets that do not currently trade as futures. In 2013 AHL has started trading others including iron ore, coal and agency mortgages. These markets correlate lowly with other instruments for sound intuitive reasons. For instance, Brazil's interest rate cycle, which saw six consecutive raises in policy rates last year, is driven by local inflation, with little bearing on developed markets where the liquid government bond futures are highly correlated.

Man believes it is unique in this space. "We genuinely think nobody else does this," says Rattray, who has yet to witness anybody in a conference audience rising to his challenge of disclosing that they, too, are following trends in such markets. The strategy has only been open to direct investments since the end of 2012, having previously just been a sleeve, currently weighted at around 25% within the AHL trend following and the multi-strat strategies. Investors' appetite for differentiated products is clear: it filled its capacity-driven 2013 target of raising $1 billion of external money, and has not faced any pressure to reduce fees of 2 and 20.

Man think they are exploring what is uncharted territory for competitors, due to "the amount of investment required in mid and back offices, execution platforms, and broker relationships," says Sargaison, underlining that the mechanics of placing, confirming and settling trades are no simple matter in these markets. "A human touch is often needed on the execution side and there are no FIX engine solutions for most of these markets," stresses Rattray. Another apparent barrier to entry is simply gathering the data needed to understand liquidity. "You cannot go onto Bloomberg and find the open interest on a five-year Polish government swap," Sargaison points out. A significant logistical exercise is entailed in "setting up pathways so that data from multiple sources is meaningful and predictable in terms of liquidity and capacity," he adds.

Pioneering voluntary central clearing

Man is acutely conscious of liquidity in all markets traded, even if markets like iron ore and coal are giant global markets, with the USA now a net exporter of coal. From its outset, trading such markets was not the product of front-office research but a back-office initiative to consolidate over-the-counter trades under the umbrella of one vehicle, to avoid the need for each and every fund or managed account to set up separate ISDAs with counterparties. So, years before the Dodd Frank/EMIR regulatory imperatives for central clearing, Man had created its own centralised clearing counterparties (CCP) for both credit and interest rate swaps. That the non-futures markets started to show better trends than futures markets was, like so many eureka moments in scientific endeavour, an accidental by-product of research that began with a quite different agenda.

Man set up CCPs because it did not want to fall prey to the "nodal" bilateral liquidity constraint familiar to scholars of the Amaranth case study. When it comes to closing trades, Man does not want to be at the mercy of – or dependent on the solvency of – the counterparty that trades are initiated with. Man insists on being able to enter trades with one counterpart, give them up to the CCP, and then be able to exit with at least six other counterparts and sometimes as many as 12 – turning traditional bilateral OTC trading into a multilateral arena. This panoramic perspective on market liquidity can bring tremendous benefits – particularly during times of market stress. In May and June 2013, Man noticed that individual counterparties' bid-offer spreads had widened, as is normal during a market rout. Yet because these two-way quotes are often over-lapping, Man's "inside spread", meaning the best available bid and offer, actually narrowed, possibly because different brokers had different positions. Occasionally Man's London head of trade execution, Rob Catterall, notices under-lapping spreads where offer prices are lower than bid prices, which creates a theoretical arbitrage opportunity. This is not, however, something that Man would ever seek to exploit. Scalping has never been Man's style – high-frequency trading is one of a few areas where Man has decided not to develop strategies. More importantly, taking advantage of temporary mis-pricings in this way could alienate brokers and Catterall cultivates good and honest relationships with counterparties. If a bank is not content with the amount of business it is winning from Man, Catterall

Tail protection strategies

AHL's trend following strategies were always intended to be an independent source of alpha, but it has turned out to be a relatively cheap tail hedge, Man contends. Sargaison still argues that the worst drawdowns of 15-20% seen in CTAs are far smaller than the 50-70% registered by equities – and also smaller than drawdowns suffered by other hedge fund strategies.

Yet these drawdowns in equities and hedge funds are also the inspiration for a strategy explicitly intended to provide portfolio insurance. Man's tail protection strategy was originally developed within the Man Multi-Manager fund of funds unit, where one of *The Hedge Fund Journal's* Leading 50 Women In Hedge Funds, Michelle McCloskey, has been head of hedge fund research.

The tail protection strategy is one of the largest around, with assets over $700 million, partly because some other long volatility strategies have experienced catastrophic losses of value from the magic of negative compounding. Tail protection is generally expected to incur some insurance cost in calm or rising markets, as it has in 2013, but this cost is controlled through careful and dynamic structuring. Man's Pfäffikon-based researchers identified variance swaps, and forward starting variance swaps, as being the lowest-cost instruments. The strategy is designed to help soften the blow of financial markets that could cause a double-digit loss for hedge fund strategies, and simulations suggest that the strategy could have generated double-digit returns during events such as the Asian crisis of 1998 or the Lehman crisis of 2008. Most recently in April 2010, the strategy made over 20% during the Greek crisis, and it was also up more than 25% in 2011. This "forward volatility" component of the strategy has in-built disciplines to lock in profits after a volatility surge because volatility tends to calm down after a spike.

The tail protection strategy came directly out of Man's collaboration with Oxford University via the Oxford Man Institute of Quantitative Finance, which was founded by Professor Neil Shephard, now professor of economics and statistics at Harvard University. Shephard specialises in realised intraday volatility measures and developed ways of forecasting volatility over two-day windows that are more accurate than extrapolating daily returns from 100-day look-backs. This research feeds into another component of the strategy, "spike detection", which opportunistically adds to volatility positions ahead of anticipated rises.

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likes to bluntly tell them why: their quotes are not the most competitive on offer. All of this investment into execution efficiency has helped Man keep OTC transaction costs at levels very comparable to those of its futures trading strategies.

Clearing of OTC derivatives is starting to increase pricing transparency in some markets, Rattray concedes – but there are still plenty that cannot be cleared. The search for new sources of diversification never stops with Man adding as many as 30 or 40 markets per year to its flagship offerings. Rattray thinks it would take rivals years to catch up.

Non-finance quants and the giant iPad

"We are competing with Google and Twitter, not Goldman Sachs and J.P. Morgan" in the battle for quant talent, says Sargaison. Man wants to create the most sought-after environment for quants from diverse backgrounds to work together. One adviser straddles academia and Man: professor of finance at Duke University, Campbell R. Harvey, who served as editor of the *Journal of Finance* for six years between 2006 and 2012, devotes 20% of his time to advising Man. Some hedge funds exclusively hire finance PhDs but Man does not insist on either a PhD or a finance background; neither Rattray nor Sargaison has a PhD, and they feel it is healthy to have researchers who can look at problems with completely fresh eyes, free from any preconceptions from previous study. So only 31 of the 86 researchers have PhDs, and only seven of those 31 did their doctorate in finance or economics. The environment is collaborative with human and algorithmic traders sharing an open-plan office. The pooling of knowledge is embodied by what is termed "the giant iPad", an enormous touch-sensitive TV screen visible to all that displays data capture and trades in what Sargaison describes as a "fantastic visualisation process that awes the team". Quants are also attracted by the volume of data at their disposal and how fast it can be retrieved and manipulated; by the Python-based research and technology platform, and by high-performance computing capacity. Most of all, it is perhaps the spontaneous cross-fertilisation of thought that lures quants to Man. "Happy accidents often happen at the coffee machine," says Rattray, who recalls how his own co-invention of the VIX volatility index back in 2003 arose accidentally over a late-night coffee.

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Tail risks in bond markets

Man has several ripostes to the argument that trend followers have largely benefited from a 30-year bond bull market. Says Sargaison, "There is no structural bias to being long of bonds, this is just coincidental." And shorts can make big contributions: Rattray points out that although trend followers were long of equities for most of the 'noughties', it was short positions between 2000 and 2002 that made the most money. Most compellingly the 2013 pull-back in bonds has not arrested performance on the fund featuring non-traditional CTA markets; last year shorts in German electricity and Rotterdam coal were big winners.

In contrast, Rattray argues that some CTAs' response to lacklustre returns from futures trend following was to diversify more heavily into strategies that have produced return profiles similar to "carry trades" involving long exposure to bonds or high-yielding currencies – and some incurred substantial losses in 2013 from market reversals. Clearly CTAs following a quasi-risk parity approach, of sizing positions inverse to recent volatility, will have ended up with very large long bond positions. With interest rates still so near zero in many markets, Man's view is clear: Sargaison expounds, "You have to realise that there is an asymmetry in the payoff profile with downside risk in the tails."

Avoiding this lopsided payoff distribution is one objective of Man's daily dealing fixed income fund, launched in June 2013. The investment team leader, Andre Rzym, introduced interest rate swaps, credit default swaps and cash bond trading to AHL. Whereas traditional fixed income arbitrage strategies have a negatively skewed return profile, with a long left tail, Man's product aims for a roughly symmetrical return pattern. Man's strategy also eschews balance sheet leverage, and liquidity risk premium approaches – both of which have contributed to historical casualties in fixed income strategies. Instead, the fund pursues a mix of trend, mean reversion and carry trading strategies utilised in different ways across asset classes and instruments. So, Man has found trend following works better in some parts of the bond market whereas counter-trend has higher hit rates in other areas of the yield curve. And carry trades are only switched on opportunistically when the market climate is more conducive to them. Around two-thirds of the models had been used pre-launch in other Man strategies. In total over 300 signals per day are generated across 77 money markets, currencies and interest rates.

Non-trend also on the menu

Man retains long-term faith in trend following, but some of its investors want something different. While some CTAs have diversified their core strategy away from trend following, Man and many of its investors do not want to reduce the 80% trend weighting of its flagship strategies. The solution was simply to offer a separate multi-strategy quant fund with an even blend of trading styles. "Anything can go into this strategy so long as it is additive," says Rattray, and the split is around two-thirds non-trend, and one-third trend. As well as momentum, technical indicators can revolve around mean reversion, seasonal, event or volatility themes. Additionally systematic fundamental models might, for instance, aim to capture carry not only in currencies but also in bonds and commodities, or they could use signals from one asset class to predict moves in another.

Another offering that predominantly uses non-trend models and that has not always been widely marketed on a stand-alone basis is the recently re-opened stand-alone currency strategy. The momentum allocation here is 25%. Carry is also set at 25%, with macroeconomic inputs aside from interest rates feeding into fundamental models making up another 25%. The "alternative" models draw on some of the same themes found in Man's multi-strategy quant offering, such as short-term mean reversion, seasonality, and inter-asset indicators. The investment universe is comprised of 30 currencies with 50% being G10 and 50% emerging markets, where AHL was one of the first CTAs to trade the Brazilian real and Korean won.

Academic perspectives on trend following

Despite diversifying into multiple quantitative strategies, Man's flagship funds stay true to its 1980s origins in trend following. Man's faith in trend following is based both on beliefs about innate features of human nature and on more than a century of financial market history. Rattray says that "only a small minority of people will sell in response to rising prices, while most will use a price rise as an affirmation of something they want to own." Recalling his time on Goldman's trading floor, Rattray says it was very hard to get traders excited about buying into falling prices. Moving to performance, Man cites a paper, *Patience and Finance*, written by Andrew Haldane, executive director of the Bank of England Financial Stability unit, that calculated how a trend strategy would have turned one dollar into 50,000 since 1880. In contrast, the same paper suggested a simple value investing rule would have turned the dollar into 11 cents. Haldane also identifies two of the largest

(L-R): Sandy Rattray, CEO, AHL/MSS and Matthew Sargaison, CIO, AHL/MSS

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puzzles in financial markets as being serial correlation – another term for momentum – and what he terms "excess volatility", meaning that financial markets are far more volatile than fundamentals decree. Both of these phenomena play into the hands of trend followers. Recently Rattray points out how US pension funds' suspension of rebalancing programmes in 2008 helped to heighten trends. Instead of counter-cyclically selling bonds to buy equities in order to maintain constant weightings, pension funds did the reverse. Meanwhile the advent of academic journals now dedicated entirely to behavioural finance shows how this once esoteric discipline has moved into the mainstream – as well as becoming compulsory reading for the CFA and CAIA curriculum. Man's chief scientist, Dr Anthony Ledford, cites Kahneman and Tversky's seminal work on heuristics and prospect theory as providing a psychological rationale for herding. Rattray summarises, "There is something fundamental about why trend works – it's a permanent and behavioural feature of markets."

Man views the past five years as an aberration from the multi-decade pattern of profitability for trend following in futures markets, and not a regime change, so Man does not intend to dilute the core trend flavour of its flagship strategies. "This is the interlude – it's not the new normal," says Rattray. **THFJ**