Centurion Onsite – 10/21/14 – Milwaukee, WI – Stefan Behling (CIO, PM), Umran Zia (CEO, IR), MH, TR

STRATEGY

* Best environment = sustained expansion of volatility in markets
* Worst environment = 1) when vol increases for a few hours then reverses without follow through, false breakouts with v shaped movements, 2) declining vol within a market over a 10 day period, to combat this the program will reduce risk exposure to the market by up to 25% (reduction is linear as vol level declines)
* Strategy launched using 29 models, today at 83, could grow to 150
  + Always tilted towards momentum over mean reversion, approx. 75/25
* Allocation to models is determined by 1) the number of models and 2) sharpe ratio analysis
  + No limit on weights between momentum and mean reversion – just works out to 75/25
* 2-year trailing Sharpe ratio analysis on models = called the “pattern multiplier”
  + Above +1 = increase allocation up to 50% above “full allocation” weighting
  + 0 to +1 sharpe = full allocation
  + 0 to -0.5 sharpe = linearly reduce allocation (-0.1 is 20% reduction, -0.2 is 40%...)
  + Below -0.5 = temporarily removed and added back at the reduce weight when it improves above -0.5
* Stefan chose 2 year as the sharpe look back period because it provides a meaningful number of observations, but is still short enough that underperforming strategies are removed in a timely manner. Shorter look backs would “chase the equity curve.”
* Sharpe analysis is run weekly using live data (not paper portfolio data) and model weights are adjusted weekly – CONFIRM THIS
* Sharpe analysis was added to reduce drawdowns, it was added 3 months into live trading
  + Crabel did not have a systematic process to reduce model allocations
* Stop loss limits and profit targets are fixed, even if a trade is at 98% of its profit target the stop loss limit remains the same
  + Some models will use a time decay stop – which tightens the stop as the time limit on the trade nears – confirm when this is used? All or just some models?
* Simple moving averages and breakouts are used to create the models, these were not used at Crabel, but Stefan believes that these are knowns in the market that can be taken advantage of
* New ideas come from “observed price action” and can come from Stefan or the traders. They can come from traders seeing patterns as they trade, or realizing that they did not participate in a market in a certain environment
  + When adding a new model they also evaluate slippage and how much the new model is cannibalizing from the existing models
* An idea that has been verified by the research analysts must have a correlation < 0.35 to the portfolio to be considered for addition into the program.
  + Current research is on intraday momentum models
* There are systematic daily risk limits at the market, sector and portfolio level; market risk is limited to 37 bps per day, sector risk is limited to 100 bps per day, and portfolio risk is limited to 270 bps per day at which point no new trades are put on.
  + In this context, “Sector” is really “correlated sector” – a dynamic group of correlated markets using a 10-day look back – i.e. gold could be added with interest rates
* Stefan grades the 57% winning trades since inception as an A- and would consider 52-53% “good” for the strategy over time
* Data – primary source is CQG, also used tickdata.com and Bloomberg
  + Ideas are tested using 5-minute historical tick data
  + Live portfolio is traded on real tick data
* Not HFT, but want to be as fast as possible
  + Stefan did a study at Crabel and found no advantage to being co-located at the exchange
* Expects to soft close at $350 or $400mm

TEAM

* Stefan believes that traders must be grown in house – 3 of the 4 traders were trained by him at Crabel and the 4th was trained at Centurion coming right out of college
  + They do NOT hire people with experience in other short term strategies
  + There is a business risk with this approach given the importance of the trading role – add value through execution and coming up with ideas for new models/improving existing models – but they feel that the risk is limited given their location (lack of competitors and people’s desire to stay in the area)(all have a typical 1 year non-compete)
    - Stefan noted the traders have added value over trade simulations but could not quantify the amount
* They seek to outsource anything not related to the investment process, including back office
* All cloud based systems, no servers in house, can work from anywhere
* Compensation is team based, not on individual contributions
  + Revenue sharing arrangements are in place for Bill, John and head developer (Jillian?)
* Centurion team member qualities
  + Young, right out of school, able to be shaped without bias
  + athletes, people who can be coached, handle stress, team players
  + people who really want to be in the hedge fund business
  + right personality mix with rest of team
* Stefan is removed from trading unless is needed temporarily for coverage, stays focused on research

SYSTEMS

* All created in house with c sharp
* Research platform, signal generator, order management