

Blending CTAs with Equities

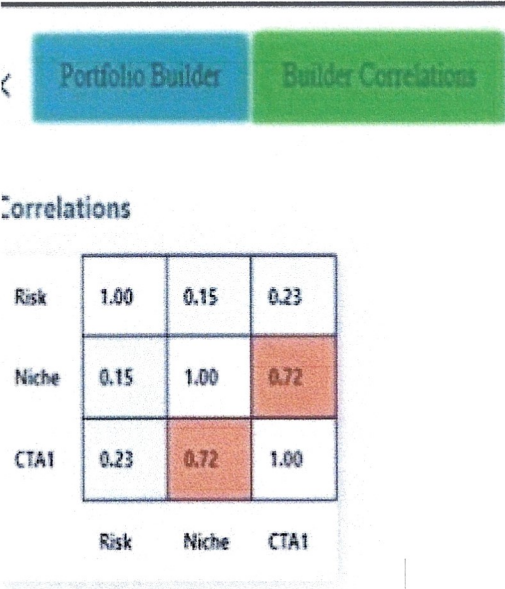
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At a recent hedge fund conference sponsored by Soc Gen, an analysis was presented that looked at two portfolios from 1992 to 2020. One portfolio consisted of 50% equities + 50% Bonds, the second was 50% Equities + 50% CTAs or managed futures. The conclusion of the analysis was that the portfolio that comprised 50% managed futures + 50% equities produced a better absolute return and a superior risk adjusted return than that of the portfolio that comprised 50% equities + 50% fixed income.

Using the Sandbox software, I conducted a similar experiment using just three CTAs or managed futures strategies with long track records back to at least 2005. My premise was that these strategies would combine well based on their different capital allocation processes, time horizons, return drivers, levels of diversification and some unique risk management protocols. For the sake of clarity, we have labelled these three strategies, CTA1, Niche, and Risk On.

Here is a matrix of their respective correlations with each other taken from Sigma Sandbox software:



The data above is calculated from May 2005 to March 2024, a total of 18.9 years. Over this period, CTA1, and Risk On have a realized volatility that is close to 16%, while Niche has a realized vol of 19%. Two of the CTAs have maximum drawdowns of 34% and one a maximum drawdown of 22%.

When constructing the CTA Mix, we wanted to avoid any accusations of optimization, that is why the splits are kept the same as well as the rebalancing. One can of course 'squeeze' the data to optimize for return, drawdown, volatility etc. But we wanted to keep it simple to avoid any suggestions of massaging the data.

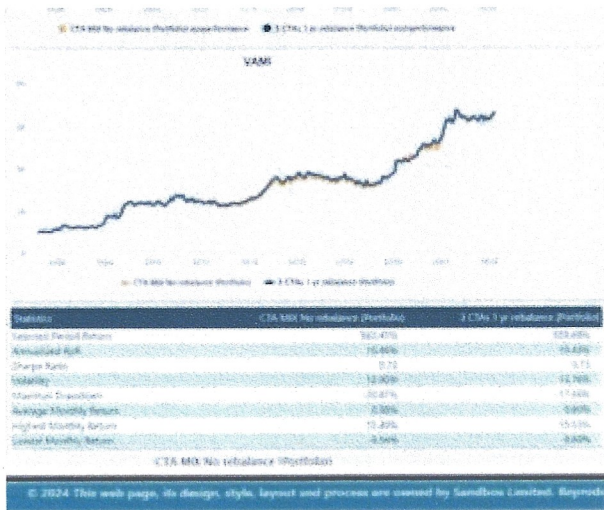
The same process was followed when we blended the CTA Mix into the S&P500TR. When combined in one portfolio with equal splits (1/3 + 1/3 + 1/3) the resulting portfolio looks like this:

Blue Line CTA Mix



The maximum drawn down has improved and volatility is lower with an absolute return that is just 0.2% higher than equities. When you combine the three CTA strategies with an equal allocation to the S&P500 TR index (50% CTA + 50% S&P500TR) this what you get:

Blended Portfolio: Blue Line is 12-Month Rebalance; Yellow line is No Rebalance



Summary Statistics	AnnRoR	Sharpe	Max DD	Vol
CTA Mix	10.4	0.73	-18%	12.75
SCP 500	10.2	0.72	-51%	15.19
Blend CTA + SCP 500	11.1	1.33	-11%	8.26

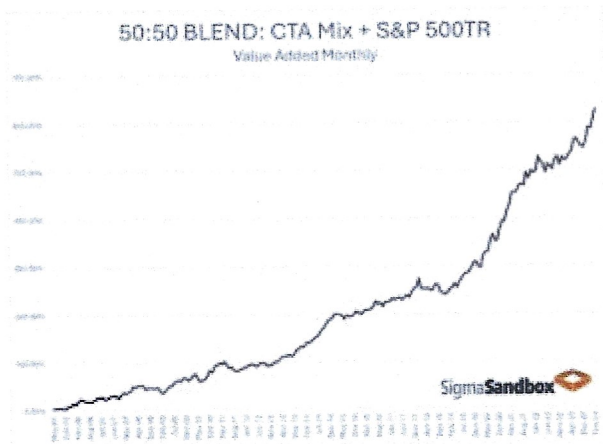
The volatility of the S&P500TR over this period is 15.1 %, which is in line with the long-term historical volatility of the index. When you combine the S&P500TR with CTAs, equally weighted and rebalanced annually, you get an absolute return that is higher, (11.1%) and a maximum drawdown that is much lower than the CTA strategies combined at -11%.

What is most striking is that the volatility of the Blended CTA +S&P500 falls sharply to 8.2%. The reduction in volatility demonstrates clearly why the two separate return streams are so compatible. Equities tend to go through long periods of steady consistent returns, with occasional sharp and sometimes breathtaking drawdowns. The CTA mix goes through periods of up to two or even three years or more of nearly flat to slight down returns, with occasional sharp and equally dramatic gains. And less frequently there are periods when both the CTA Mix and the S&P 500TR can generate positive gains at the same time. This can easily be seen in the VAMI chart below:

Value-Added Monthly Index CTA Mix vs. S&P500TR



And, when you combine the two into one portfolio (50% Equities + 50% CTAs) this is the VAMI you get:



James Rider is with FxVolResearch which produces low risk, high-value option based trade and hedge ideas based on in-house statistical research.