Gregoriou, Greg N. & Kooli, Maher - Hedge Fund Replication

Palgrave Macmillan, 2012, [Finance] Grade ★★★

Even though many types of hedge funds (HFs) didn't live up to expectations in the 2008 financial crisis and the pure alpha – less both traditional and alternative betas - of hedge funds in aggregate has withered to zero during the last few risk-on-risk-off years, the money allocated to HFs has not come to a stop. A hefty allocation to external HFs has become a natural piece of the puzzle that makes up a best practice pension fund. Recently however a buzz-word on the rise has been "the Canadian model", meaning large pension funds who manage so called alternative investments – including HFs – internally. So, can this really be done? Can stuffy old pension funds really manage something that high flying?

This book on hedge fund replication tries to give the answer. There has long been an academic debate whether HFs simply are repackaged betas sold as alpha. If it is a fact that hedge fund performance mainly consists of factor premiums that can be specified by systematic rules, then it would be possible for pension funds to generate the same type of returns without the need to suffer the opacity, illiquidity and high fees of HFs. No wonder the topic of hedge fund replication created quite a hype when it first emerged ten years ago. This hype quickly died out when the first generation of replication techniques proved to generate inadequate results. The first generation attempts focused on the factor premiums, (value, small cap and momentum premiums, FX carry, commodity future's, volatility arbitrage, high yield spreads etc.) and in a back test regression worked out which combination of these that, together with traditional beta exposure, would have produced a targeted risk and return. That was all very well, but out of sample this static mix of factor exposures turned out results that didn't follow the sequential returns path of hedge funds very closely at all.

The problem was that the strategy didn't take the very flexible nature of HFs into account. HFs vary their leverage and their long-short balance, they use stop-losses, derivatives and change tactics in mid-stream. The returns show a non-linear correlation to the factor premiums above, not a linear one. Entrance, hedge fund replications 2.0. By using statistical techniques such as computer learning during rolling time frames, adding a number of rules (tied to for example VIX, terms spreads etc.) that trigger changes in factor exposures the results suddenly improve dramatically. The verdict has changed from "didn't work" to "does work if done properly". The new methods in some way also blur the distinction between HF replication and HF creation.

This hardly an entertaining book. It consists of a number of short papers from mainly European academics and there are plenty of "Greek letters". Most of the authors present their version of the recipe of how to cook a HF or a HF-index. One is using a Kalman filter, the other a Markow switching model etc. and I'm frankly not the man to judge on the suitability of all those statistical models. The results the authors presents vary but a majority of them produce out of sample results that often not only clone HFs but even surpass the risk/reward of those. I think it's safe to say that the returns of HFs mainly consist of a stack of betas. As I'm not really qualified to judge the quality of the work done it's also really hard to grade this book. The results might be ground breaking and I wouldn't know it. What I do know is that the lure of the Canadian model clearly increases if the results are robust.

Considering that HF-indexes due to survivorship bias, selection bias and backfilling bias are estimated to overstate returns with 2 – 3 percentage points per year the hurdle for hedge fund replication might actually be low enough even for the stuffy old pension funds. This would in a way be a huge negative as the collective salary level of asset management business would be threatened - and I plan to work for a few more years - but it would be good for the pensioners.

Mats Larsson, May 26, 2012