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Hedge Fund Math: Why Fees Matter

A past edition (Feb 2007) of *Economics and Portfolio Strategy*, a newsletter published by Peter Bernstein for institutional investors, contained a study entitled "Portfolio Efficiency with Performance Fees." This presentation was prepared by Mark Kritzman, President & CEO of Windham Capital Management and an instructor in financial engineering at the Sloan School of Business at MIT where he teaches a graduate course in finance.

This article focuses on the fees charged by hedge funds and their effect on the investor. The fee structure under discussion is popularly referred to as "two and twenty," which includes fees on 2% of assets under management and 20% of profits above a predetermined benchmark such as LIBOR (the London Interbank Offering Rate). The paper asks if these fee structures matter to overall profit realization by the investor. In other words, do clients "win" with such fee structures or are they better off with more traditional arrangements, such as index funds?

To answer this question, Kriztman put together a theoretical portfolio. He divided his capital among 10 hypothetical hedge funds, each of which was assumed to earn seven hundred basis points over LIBOR before fees. Under his scenario, the "two and twenty" fee schedule cost the portfolio 380 basis points (3.8%) per year, thereby producing an incremental return of only 320 basis points on top of LIBOR's then current level of 5.4%. In other words, returns after fees were only 8.6% versus a gross return of 12.4%.[1]

Based on these results, the question is this: how much capital should a rational investor allocate to Kriztman's hypothetical portfolio of 10 hedge funds if the choice also exists to invest in more traditional options, such as stock index funds and bond index funds?

For Kriztman to calculate the optimal allocation between hedge funds and stock/bond index funds required him to make a number of assumptions about the two index funds, such as how much they would earn, how volatile their returns would be and how their returns would correlate with each other and with those of his hypothetical group of hedge funds. Once those assumptions were made, it was easy to calculate which allocation

[1] For his math to work, he assumes a gross return before fixed management fees of 2% to be 3.4%. Returns above 3.4% are subject to the carry rate of 20%.

produced the greatest long-term return relative to the amount of risk incurred along the way.

Based on this set of assumptions, Kriztman's advice to the investor was unambiguous: allocate nothing to the hedge fund set and everything to the index funds.

The key factor that led to this conclusion was the asymmetric nature of the hedge funds' fee schedule. Here, we are referring to the aforementioned "two and twenty" scenario. Under this and other similar fee structures, hedge funds do not share in investor losses, but reap a large share of the profits. This set-up has a compounding effect, considering that the returns on a hedge fund investment are likely to be suboptimal when compared to index fund returns.

If one were to poke holes in Kriztman's study, one could argue the hedge fund returns were too low given the ten-year data from Hedge Fund Research in Chicago. The average number reported by Hedge Fund Research is 10.6% versus the 8.6% used by Kriztman. However, this 10.6% contains substantial "survivor bias" given that it does not include data from hedge funds that have performed poorly. These failed hedge funds do not report their numbers and are therefore not included in Hedge Fund Research's aggregate performance data. What's more, hundreds of these funds are now closing with each passing year, leaving a significant blind spot in Hedge Fund Research's estimates.

To return to the crux of our discussion, it is important to note that the outcome of Kriztman's study was driven almost exclusively by hedge fund fee structure. Specifically, if hedge funds did not charge the "carry" (the 20% of profits under the "two and twenty" fee structure), the author's recommended allocation of assets would have been very different: despite an above average fee of 2% on assets under management, the model would have allocated 74% to the hedge funds and 26% to the index funds.

Our main point is this: fee structures matter and hedge fund fee structures matter a lot. Because of the asymmetry of their fee architecture, hedge funds share in investors' profits but not in their losses. As a result, the investor almost always gets the raw end of the deal. This translates to 100% of capital losses plus a 2% management fee under a worst-case scenario, or 80% of the profits less a 2% management fee when things go well.

Here's another way to look at the "two and twenty" structure, this time considering the 2% aspect of the equation. Most investors are aware that the global economy produces a "free ante" (i.e. real economic growth) over time.[2] Since real economic growth increases at a rate of 3% or so per year over multiple decades, why pay for this component in the form of a 2% management fee? The way we see it, this 3% ante is essentially free to the investor via index funds. Especially when one considers the positive effects of globalization on total market return, it becomes abundantly clearly that the hedge fund investor is investing in Alpha (the hedge fund manager's purported investment insights)

[2] See our white paper "An Alternative Strategy for Seekers of Absolute Return" from June 6, 2005, www.eipny.com.

when he could be getting Beta (the free lunch resulting from global economic growth) for free. By investing in hedge funds, the investor is also paying for leverage: something he would be wise to pursue independently, rather than over-pay a hedge fund to do it for him.

In summary, we believe Kritzman's conclusions are invaluable to the informed investor, and his presentation entitled, "Performance Fees, Portable Alpha, and Portfolio Efficiency" is included as an attachment. Today's investment landscape is becoming increasingly complex and, in many cases, increasingly antagonistic to investor interests. Nowhere is this more evident than in the asymmetric fee structures employed by hedge funds. Our advice is this: avoid asymmetric fee schedules. They work against the investor's long term interest.

From our point of view, by identifying those companies that generate free cash flow and deploy that free cash flow intelligently for shareholder value creation, results in the most likely way to capture better than average returns at reasonable risk levels. Such a policy should ensure a robust return (superior to that of index funds) at a reasonable and non-asymmetric fee schedule.

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