



ROCKWOOD WEALTH MANAGEMENT

Important Considerations

Rockwood Wealth Management

Hedge Funds: Eight Considerations

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As the members of a wealth management firm specializing in working with high net-worth clients, we are often asked for our opinion about hedge funds and which ones make the most sense today. People are often surprised by our views, but we truly believe that if investors understood what was driving the returns behind hedge fund strategies and the risks they entailed, they would choose to avoid them categorically.

Our sensitivity to hedge fund risk was heightened greatly when a very well respected investor sought our counsel on how his assets should be invested. We cogently explained that a balanced, globally-diverse, low-cost, tax-aware portfolio would help best align his assets with his goals. He politely listened, but then said that our approach made sense, although it was a little too basic for *him* – the glamour of the hedge fund universe was a gravitational pull form which he could not escape. In fact, he invested the bulk of his funds in a hedge fund with a famous manager. This manager's credentials were impeccable and when asked about the strategy of his fund, the manager would say that he was speculating on stocks, bonds, currencies and futures. The manager claimed to be one of the top-rated commodity traders in the United States. Admittedly, it sounded impressive...

Unfortunately, the fund imploded with the Asian Financial Crisis and this gentleman lost his full investment of \$5 million in the fund. That loss was not a routine market fluctuation that would recover in time; these funds were lost irrevocably. Many hedge fund investors have learned similarly expensive lessons – one's they are often not proud to share. We find value in learning from their misfortune. Accordingly, here are a few considerations we would like to share with you.

1. Hedge Funds are not an Asset Class – They are a Compensation Structure

The small and mid-sized business 401(k) market is fraught with nearly as many complexities as it is terrible options for plan providers. We have witnessed woefully inadequate and shamefully expensive 401(k) plans proffered by companies that aggressively market to the small and mid-sized business demographic. That list includes, but is not limited to: Nationwide, John Hancock,

Great Western, Wells Fargo, ING, Paychex, Principal, and ADP. *It is safe to assume that if you come across a plan provided by an insurance company, broker, or a payroll company, that it is a bad sign for employer and employees alike.*

Insurance and payroll companies found that by increasing the fees associated with the employee investment options they could administer these retirement plans quite profitably, as the business owner never has to pay the fees directly. The fees are paid indirectly – by participant accounts that hemorrhage dollars via mutual funds with unconscionably high fees.

In these plans, mutual funds are not admitted to the plan under a fiduciary lens in pursuit of the best interests of the employees. Instead, they are selected by the willingness of various mutual fund companies to pay "sweetener" fees to the insurance company for their funds to be included in their plan. For example: American Funds will pay the Principal Group a fee (a percentage of the annual mutual fund fee) so that its funds are included in a retirement plan.

The investment community often speaks of hedge funds as if they were an asset class –that is, a collection of securities with common risk characteristics (e.g., large cap stocks, small cap stocks, international stocks, bonds, etc.). The industry has advanced the asset class idea by further refining hedge fund descriptions and inventing a convoluted set of names to describe specific strategies, such as convertible arbitrage, global macro, distressed securities, merger arbitrage, and market neutral.

However, the wide disparity in actual returns implies that hedge funds are a very heterogeneous group and not a discrete asset class at all. Intuition might suggest that funds classified in the same hedge fund category would generate similar returns. Unfortunately this is not the case, as the correlations of hedge fund returns within a category are quite low—almost as low as the return correlations of funds in different hedge fund categories.¹ Therefore, a classification system does not imply that funds in the same group are expected to generate similar results, and it appears difficult to label hedge funds as a discrete asset class.

While not an asset class, hedge funds are similar in the way they escape many of the normal regulations that apply to mutual funds. As long as they restrict access to only "sophisticated" investors, hedge funds can avoid making their performance public or having their numbers audited. But some of the most noteworthy characteristics unique to hedge funds are their use of leverage and their often-complex fee structures.

The most common compensation structure in the hedge fund business is the so-called "two and twenty," where the manager charges a 2% annual fee and receives 20% of profits. This fee structure, which has produced astronomical manager compensation, is one of the stark dividing lines between hedge funds and mutual funds.

Here's an example of how fees add up, which is adapted from *The Big Investment Lie*.² Let's say you invest \$1 million in a hedge fund that earns 10% on average over a two-year period. The fees are 4% per year (i.e., 2% + 20% x 10%), right? Wrong! You must consider the variation in returns from year to year. The math looks quite different if the hedge fund earned its 10% average return by gaining 60% in year one and then losing 25% in year two.

In the first year you would pay 14% in fees (2% + 20% x 60%) and in the second year you would simply pay 2%, for an average fee over the two years of 8% . . . on a 10% average return! In dollar terms, your \$1 million investment would be worth \$1,064,280 at the end of the two-year period, for a gain of \$64,280, but you would have paid fees over this time frame of \$173,720!³

2. Hedge Funds Have Option-like Qualities that Create an Incentive for Volatility

Recall the basics of option pricing. When you buy a call option you get the upside but not the downside in exchange for the price of the option. The price (or value) of the option is higher if the underlying security is more volatile, while an option on a riskless security is worth nothing!

The two and twenty fee structure noted above has option-like qualities, since the 20% performance fee is similar to the hedge fund manager buying a call option.

However, the manager gets the option for free and the investor pays the manager a 2% fee for the privilege of granting it. The result of the option-like compensation structure is an increased incentive for volatility. University of Chicago professor John Cochrane presented the following example:⁴

	Expected Outcome (gross of fees)	Expected Return	Expected Fee
Scenario A The manager does nothing.	\$1,000	\$0	\$20
Scenario B The manager makes a bet with a 50% chance of winning \$500 and a 50% chance of losing \$500.	\$1,000	\$0	\$70 ¹
Scenario C The manager makes a bet with a 99% chance of winning \$1,000 and a 1% chance of losing \$100,000.	\$990 ²	-\$10	\$237.60³

¹Expected fee = $[50\% \times 2\% \times \$500] + [50\% \times (2\% \times \$1,500 + 20\% \times \$500)] = \70 .
²Expected outcome (gross of fees) = $[99\% \times \$2,000] + [1\% \times (-\$99,000)] = \$990$.
³Expected fee = $[99\% \times (2\% \times \$2,000 + 20\% \times \$1,000)] + [1\% \times 0] = \237.60 .

Assumptions: You invest \$1,000 in a hedge fund. Management fees = 2% + 20% of any profits. As you can see, a negative expected return bet gets the manager a \$237 fee with 99% probability!

3. The Available Data on Hedge Funds are Far From Perfect

Hedge funds are currently under no obligation to disclose their results. Consequently, hedge fund databases are of very low quality and are filled with backfill bias (managers only report after they have good performance) and survivorship bias (data vendors only supply data on funds that are still in operation). These two factors can compromise any analysis of hedge fund returns, with some studies concluding that survivorship bias alone overestimates returns by 2-4% and underestimates risk by 10-20%.⁵

Furthermore, since most data vendors only started collecting data on hedge funds in 1994, the available data set is very limited. As Eugene Fama often notes at our introductory financial advisor conferences, it takes roughly forty years of stock market data before the

equity risk premium is statistically significant. Needless to say, it will be a long time before we can draw any meaningful conclusions about hedge fund returns.

4. Analyzing the Performance of Hedge Funds is Difficult at Best

A common claim from hedge fund managers is that their strategy offers substantial diversification benefits by virtue of being uncorrelated with anything. This claim generates two positive outcomes for the managers. Firstly, the diversification story is a central part of the sales pitch, and secondly, there is no way to effectively evaluate results if performance is indeed uncorrelated with anything.

Fortunately (and unfortunately), many hedge funds may not in fact be uncorrelated with anything, as reported hedge fund correlations are suspect. The underlying securities in a hedge fund portfolio are often subject to what is referred to as "stale pricing." Since hedge funds frequently own securities that are very illiquid, considerable time may have passed since the last reported trade. If a security is valued at the price of the last trade — and the security has not traded for a while — there may have been significant market movements without any apparent impact on the value of the illiquid security. In this case, as with securities in the portfolio that don't trade at all, the hedge fund manager may eventually mark it to market by estimating the value. The price that is set and the timing of the adjustment can lead to the potential for "managed prices."

Stale pricing and managed prices create the illusion of low correlations, which appear jointly to the investor as diversification and alpha. However, Cliff Asness in *Journal of Portfolio Management*, has documented that when compared to a simple lagged market model that is designed to pick up the effects of stale prices, hedge fund correlation with the US equity market increases dramatically (betas go from 0.37 to 0.84) and alphas disappear (going from 2.6% to -4.5%).⁶

As a result, stale and/or managed prices can produce misleading manager alphas and understate the true risk of hedge funds.

5. Hidden Risks Can Lurk Behind a Veil of Secrecy

There is generally a lack of overall disclosure in the hedge fund industry. Managers often guard their "proprietary" models so closely that a prospective investor can only evaluate the fee structure and historical performance, which, almost by definition, will be good due to backfill and survivorship bias. Unfortunately for many hedge fund investors, historical data alone do little to uncover the hidden risks associated with the investment strategy that generated those ex-post returns.

MIT professor Andrew Lo produced the example of a hypothetical fund, Capital Decimation Partners, to illustrate the potential for hidden risk in hedge fund returns.⁷ This fund earned tantalizing returns over an eight-year period from 1992 – 1999, generating a total return of 2,721.3% versus 367.1% for the S&P 500. If the total return wasn't eye-catching enough, the fund earned this return with (apparently) much less risk than the market. The fund's Sharpe ratio was 1.94 versus 0.98 for the S&P 500 and it experienced only six negative monthly returns (out of 96 months) versus 36 for the S&P 500. A normal response to such eye-catching historical returns is "Where do I sign?" but a more rational reaction might be "What is the catch?"

Here's the catch: The fund simply followed a strategy of shorting out-of-the-money S&P 500 put options on each monthly expiry date for maturities less than or equal to three months, with strike prices approximately 7% out of the money. How many clients would be ready to sign up if they knew the secret to this enormously successful track record? When you consider that the fund's losses would have been catastrophic had US stocks taken a big enough drop at some point during this eight-year run, I suspect most investors wouldn't hold this hypothetical fund for free, let alone pay two and twenty to own it.

But how will investors know what they are actually investing in, even with access to holdings information? A manager can easily disguise naked put writing with an assortment of innocuous-looking securities that replicate the strategy. Forensic accounting in the future may be the only business more lucrative than the hedge fund industry has been in the past!

6. Hedge Fund Manager Selection is No Easy Task

Many investors select managers based on their historical track record, although it is **not** necessarily the case that managers who have done well in the past are more likely to do well in the future. The lack of performance persistence exhibited by professional money managers has been well documented for over four decades. Although the data for hedge fund managers are not as robust as for mutual fund managers, some early results indicate their performance may also be fleeting.

Furthermore, successfully picking hedge fund managers requires a high level of accuracy—a level not easily attained when you consider that one of the primary selection criteria, past performance, is such an ephemeral attribute. From 1994-2001 (a period containing both remarkably good and bad equity market returns), an equally weighted portfolio of randomly selected hedge funds generated a mean return of almost 3% higher than the average fund of funds, which, by definition, are claiming to add value through manager selection. This underperformance is roughly equivalent to the additional fees charged by the fund of funds managers which, anecdotally at least, suggests their hedge fund picking activities did not result in higher returns.⁸

7. The Scarce Resource Captures the Rents

Let's assume one can identify manager skill in the world of alternative investments. Who is likely to benefit from that skill, your clients or the skillful hedge fund manager? A fundamental principle of economics is that the scarce resource captures the rents. While there is an abundance of capital flowing into various investment strategies around the world, manager skill that is both persistent and easy to identify (in advance) seems in short supply. As Ken French has frequently noted in his talk *Equilibrium Markets*, if the manager's skill is the scarce resource, she will likely capture the rents by either raising ever larger sums of money to invest, or by increasing her fees—or both.

A manager who has successfully pursued a strategy that is capacity constrained and cannot be exploited with larger sums of money would effectively dilute the results of all her investors should she choose to keep the fund open to new money. However, closing the fund to new

According to Nobel laureate Bill Sharpe, "A fund of actively managed mutual funds is really a stock index fund. But what you probably own with a fund of hedge funds is the equivalent of Treasury bills."⁹

investors also limits the manager's ability to be remunerated for actual skill. As an alternative, she might choose to close the fund but increase fees. Either way, the rents go to the scarce resource—manager skill — and not to the limited partners who supplied the capital.

8. Hedge Fund Diversification is Not a Free Lunch

This makes hedge fund manager selection an even more daunting task. You not only need to identify a skillful manager but also must find one that is somewhat charitable and willing to close the fund to new investors, when appropriate, without raising fees commensurately. The Catch-22 is that, should these managers exist, you will need to find them before the skill (and charitable inclination) is readily apparent. Otherwise, it may be too late for your clients to get in.

It is often said that diversification is the only free lunch. By properly diversifying an equity portfolio, you can eliminate uncompensated risks, which results in lower portfolio risk without a reduction in expected returns. Why would hedge fund diversification not work equally well?

Consider what your expected return would be if you invested in a portfolio of actively managed equity mutual funds, long only by definition, that are fully invested in stocks. The more funds you hold, the more likely it is that your stock portfolio in aggregate looks like the market as

a whole, with the good stock picks (i.e., good luck) of one manager offsetting the bad stock picks (i.e., bad luck) of another manager. Your expected return in this scenario is effectively the stock market return minus the fees and expenses of the funds in your portfolio.

On the other hand, if you invest in a portfolio of hedge funds (i.e., a fund of funds), you are not necessarily left with a portfolio that in aggregate represents the market. The good luck of one manager may still offset the bad luck of another, but your expected return in this scenario is no longer the market return minus fees.⁹

Why? Because a number of strategies seek to hedge as many risks as possible (including market risk) in order to isolate a specific bet, and then leverage these small bets in an attempt to generate big returns. For example, a merger-arbitrage manager might make a specific bet on the likelihood that a merger will close, while also

attempting to eliminate any commingled market exposure. When most of the risks not pertaining to the specific bet are eliminated, the manager expects to earn a premium over the risk-free rate if, on average, he makes the right bet. Some managers will bet right and others will bet wrong, but if the outcomes are random and not directly attributable to skill, as appears to be the case with other types of professional money managers (i.e., mutual funds), the expected return of the portfolio of hedge funds is more like T-bills minus fees and expenses.

In this scenario, there are two levels of fees and expenses—those of the underlying hedge funds and those charged by the fund of funds they comprise. Therefore, given current interest rates, the outcome is an expected net return close to zero. It once again appears that investors get what they don't pay for!

¹Harry M. Kat, "10 Things Investors Should Know about Hedge Funds," *Journal of Wealth Management* 5, no. 4 (Spring 2003): 72-81.

²Adapted from Michael Edesess, *The Big Investment Lie* (San Francisco: Berrett-Koehler

³Some hedge funds mitigate the effects of annual variation by establishing a high-water mark whereby the performance fee does not take effect until the fund surpasses its previous high or some other threshold. However, many funds do not have high-water marks or are doing away with them. Even when adopted, the high-water mark does not entirely solve the problem as funds that are well below this level simply shut down and reemerge under a different name, a strategy facilitated by the fact that hedge funds are not required to report their results. This phenomenon has also led to incredibly high levels of hedge fund survivorship bias.

⁴John H. Cochrane, "Betas, Options, and Portfolios of Hedge Funds" (presentation, Dimensional Annual Investment Symposium, September 2005).

⁵Harry M. Kat, "10 Things Investors Should Know about Hedge Funds," *Journal of Wealth Management* 5, no. 4 (Spring 2003): 72-81.

⁶Cliff Asness, Robert Krail, and John Liew, "Do Hedge Funds Hedge?" *Journal of Portfolio Management*, Fall 2001: 6-19.

⁷Andrew Lo, "Risk Management for Hedge Funds: Introduction and Overview," *Financial Analysts Journal* 57, no. 6 (November/December 2001): 16-33.

⁸Harry M. Kat, "10 Things Investors Should Know about Hedge Funds," *Journal of Wealth Management* 5, no. 4 (Spring 2003): 72-81.

⁹If the expected return of a fund of funds is the market return minus fees, you would have been paying high fees for what amounts to market beta that could have been obtained at a relatively low cost. While a true hedge fund has no market exposure, most of them have some. In this case, the expected return above Treasury bills of the fund of funds would be explained by the nominal amount of beta in the portfolio.