

# An Alternative Future: Part II

*An exploration of the role of hedge funds.*

Clifford Asness

One definition of hedge funds may resonate with many investors: Hedge funds are investment pools that are relatively unconstrained in what they do. They are relatively unregulated (for now), charge very high fees, will not necessarily give you your money back when you want it, and will generally not tell you what they do. They are supposed to make money all the time, and when they fail at this, their investors redeem and go to someone else who has recently been making money. Every three or four years they deliver a one-in-a-hundred year flood. They are generally run for rich people in Geneva, Switzerland, by rich people in Greenwich, Connecticut.

This does not sound like something that would take the institutional investing world by storm. Yet flows to hedge funds have been off the charts for the last few years. Going forward, many predict hedge funds to be the future of investment management. Despite my tongue-in-cheek definition above, I agree.

In Asness [2004], I articulated a bright future for hedge fund investing. My reasons there were not the more common ones, such as a belief that hedge fund managers are investment rock stars and that their investors are savvy and in-the-know, but instead more mundane issues of structure. In particular, hedge fund investing breaks the tie-in sale of investment skill and index exposure, something that has benefits for portfolio construction, performance attribution, fee transparency, and risk control.

I also distinguished between hedge fund strategies

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that are skill-based (or provide alpha) and those that provide exposure to hedge fund betas. These hedge fund betas are systematic and fairly well-known strategies that generally provide liquidity to those wanting more and take risk from those wanting less, something the hedge fund investor gets compensated for doing. I argued strongly that many of these hedge fund betas would not be feasible without tools like short-selling, leverage, and derivatives, tools that come part and parcel with the hedge fund framework.

All in all, in Asness [2004], I articulated a positive vision of hedge funds, but referred readers to this follow-on article for the caveats. A positive vision sees the combination of traditional index funds and hedge funds improving investor portfolios, improving capital markets in general, and eventually substantially replacing the arbitrary constrained construct of traditional active management. At the end of the day, I stand behind those optimistic conclusions if many problems in the hedge fund world are addressed and many needed evolutionary changes occur.<sup>1</sup>

All is not wine and roses in the hedge fund world. Active stock-picking, which in all likelihood on net subtracts value from mutual funds, does not come from planet Krypton in the case of a hedge fund. With an influx of capital, the returns on many long-standing hedge fund strategies going forward will not be what they have been.

Furthermore, hedge funds are subject to some potential dangers, and not just the simple potential for fraud. Some of these include mismarked portfolios that cause the risks of hedge fund investing to be understated by standard statistical tests; a hot money culture that hurts investors and managers alike; and potential exaggeration of track records by option writing, both implied and actual. In addition, fees should become more rational in terms of separate and different payment for alpha and beta, and best practices must improve (e.g., no soft-dollarizing the Porsche). Finally, as for any change in the financial landscape that can be incredibly lucrative for some, there is a good chance expectations are too high, given the realities of the hedge fund landscape going forward.

While the hurdles I articulate here are challenging, and the needed evolutionary changes will not be accomplished in a day, the potential benefits of hedge fund investing (particularly a combination of hedge funds and traditional index funds) are great.

I first follow the framework in Asness [2004] to critically analyze hedge fund fees. Next I investigate the dark sides of hedge fund investing. These include areas of potential malfeasance and misrepresentation, risks that

might not be appreciated, and in general behavior dangerous to the potentially bright future for hedge funds. Finally, I outline evolutionary changes that are necessary to allow hedge funds to fulfill their promise.

## THOSE PESKY FEES

A simple examination of hedge fund fees is often misleading. For instance, if hedge funds that focus on stock selection are providing alpha, and a more aggressive version of alpha than typical in the tracking error versus the index of traditional long-only managers, their fees per dollar under management should be higher than fees for traditional managers. Prices that cause sticker-shock might actually be fair. I do not provide any complete empirical or theoretical study of the fair fees for hedge funds, as that would involve empirically estimating their risk and degree of market-neutrality, but I can raise quite a few issues where we need to shed more light.

First, split the investing world into three tiers of strategies:

1. Traditional betas  
(market exposure is the most well known).
2. Hedge fund betas.
3. True alpha.

It seems readily apparent that fees (per unit of volatility) should rise as we move down the list. Obviously, traditional market index funds offering traditional betas are available, and should be available, at fees that are quite low. Also fairly obvious is that true alpha should be relatively expensive. It is not widely available and materially improves any portfolio. The more interesting case is then the middle strategy, hedge fund betas.

Hedge fund beta strategies clearly resemble traditional index fund strategies, as we can write rules for how to implement them, and these rules are not secret.<sup>2</sup> Yet hedge fund practices are not as straightforward to implement as just buying and holding stocks. The very acts of shorting and levering and the understanding of complex derivatives are skills needed to implement these strategies, and can vary widely from manager to manager.<sup>3</sup> In addition, in a young field, determining who has the best index for a given strategy will not be generally agreed upon. Thus, while the path for hedge fund fees is clearly downward as these skills become more widespread, it seems unarguable that the fees for implementing hedge fund beta strategies should be significantly higher than fees

for traditional index funds.

We often hear in hedge fund circles that institutions are coming to the hedge fund world, so fees must fall, as institutions are fee-sensitive. Can this be the world's first example of predicting that massive demand for a product will lower fees?

In the short run, this prediction is as silly as it sounds. In the long run, though, it will probably be proven accurate, as supply (of the skills necessary to implement hedge fund betas) grows to meet demand; as the influx of capital reduces future expected returns to the strategies themselves (making high fees less palatable); and as investors and managers learn to better differentiate hedge fund alpha from beta, and price both accordingly, an effort institutions are familiar with from the traditional investment world.

Another interesting issue regarding hedge fund fees is the traditional split into fixed and performance fees. While there are many combinations, perhaps the canonical hedge fund fee is a 1% fixed fee plus a 20% performance fee (1-and-20). One open question is why traditional active management fees are largely fixed, but in the hedge fund world performance fees are far more common.

At first, the answers seem obvious. Typical responses are that hedge fund managers should be given the incentive to perform well, or even that hedge fund managers deserve their high fees only if they perform well. While there is some truth in them, such sentiments are not precise. An example in Asness [2004] shows that if traditional active management is worth a fixed fee of 65 basis points, the fair *fixed* hedge fund fee is near 200 basis points simply due to leverage. This might seem undeservedly high at first glance, but it means the hedge fund is delivering a more concentrated version of the same strategy for which the active manager charges 65 basis points.<sup>4</sup> It seems strange that the traditional fee of 65 basis points is palatable, but the fixed hedge fund fee is not.

Furthermore, there might be some truth in the claim that hedge fund managers will try harder because they are on performance fees, rather than equivalent expected value fixed fees, but the argument is weaker than it first appears. For instance, any money manager, hedge fund or traditional, can tell you there is no such thing as a non-performance fee; it is just delayed. If you do not perform for long enough, your investors take the money back. If you perform well this year, assets under management grow, and fixed fees are higher next year. Essentially, the distinction between fixed and performance fees fades

somewhat when we start considering a multiyear path. (Why traditional active managers would not also respond to incentives is another question.)

Next, consider the expected fee a rational hedge fund manager will demand considering only a single year. Under an all fixed-fee structure, the expected fee is clearly just the fixed fee itself, but under a performance fee structure the question is more complicated. It depends on the expected return of the strategy, the volatility taken, the shape of the distribution of strategy returns, and the fact that performance fees are an option on performance (meaning managers get up side without down side, and their expected fee is higher than their fee at their expected performance).

Assume a hedge fund manager charging a mix of fixed plus performance fees has some expectation of what she will make in a given year. Now imagine this same manager has the option of charging only a fixed fee. The interesting question is whether this fixed fee would be higher or lower than what the manager demanded as an expected fee under the fixed-plus-performance fee structure. For example, if the total expected fee for a fixed-plus-performance fee (say, 1% and 20%) manager is 2% of assets, would this manager be willing to work for a pure fixed fee lower, higher, or equal to this number?

It seems clear the manager would accept a lower pure fixed fee. Most hedge fund managers have much of their capital (human and financial) invested in their own strategy. Simple portfolio theory says that anything that exposes them further to this same risk must be less attractive than something without this extra exposure. Thus, in all likelihood, a rational hedge fund manager must charge more in an expected sense in the fixed-plus-performance structure than in an all fixed-fee arrangement.

Of course, this is detrimental to the investor, who bears no such concentrated risk in this strategy. This diversified investor would in all likelihood be better off with the lower expected fee. This argues that performance fees should take a back seat to fixed fees, but of course there is another side.

The argument that managers will try harder because they are on performance fees definitely has merit in one instance. Interestingly, it is not because managers literally try extra hard when subject to performance fees (although they may). Rather, it is because there may be a principal/agent problem with fixed fees that can cause managers not to try hard enough; the all fixed-fee structure may induce them to take too little risk.

True alpha strategies often degrade the more risk you

take or the more return you try to produce from them. Keeping managers on performance fees means they bear part of the cost of this degradation naturally, while putting them on fixed fees increases their incentive to degrade the strategy through size. This must be balanced with the tendency of performance fees to also bias managers to charge higher expected fees due to the undiversified bet forced on them, and a judgment needs to be made in each case.

Of course, the principal/agent argument may be applicable to hedge fund beta strategies, but it is much weaker than for alpha strategies. It is far less likely that one manager's investments have global influence on the attractiveness of beta, so the argument for fixed fees is clearly stronger for hedge fund beta than for alpha.

Why then do performance fees dominate the hedge fund world to such a degree? First and foremost, the arguments I have made above are simply not believed. There is widespread belief that managers try much harder when they can obtain performance fees, and deserve big money only when they perform well. In fact, reliance on performance fees (and the disparagement of fixed fees) is endemic to the hedge fund world. Again, perhaps this would be ameliorated if a multiyear outlook were used, but that is clearly not the norm.<sup>5</sup>

Perhaps the most important reason for the dominance of performance fees is optics. Forgetting what fee is economically justifiable, it simply looks better and feels better to pay very high fees only when the manager is making you money. To go before a board and say we paid this manager 3% of assets for losing money simply looks and feels stupid. This is the case even if over the long term you would be better off paying a pure 3% fixed fee than 1-and-20 when the good years are also considered. Conversely, to pay a manager a huge 5% as a combination of fixed and performance fee, when you made 20% net in that year, feels just fine to most.

One final reason performance fees may dominate is that hedge fund managers understand all the above, but performance fees are set so attractively high, perhaps because investors underestimate the optionality issue, that they have little incentive to push for what would be much lower total expected fees if they went the pure fixed fee route.

Finally, when optics are considered, the argument that performance fees apply better to alpha and fixed fees better to hedge fund beta, is even stronger. The criticism that managers probably charge a higher expected fee under a performance fee structure applies equally well to both alpha and beta, although the optics are very different for the two. As investors become more comfortable

with the idea of some hedge fund strategies as beta, it seems logical that they would also have less need for optics in paying for beta. Once a strategy is seen as beta, there is less of a perception that the return in a given year is because a manager tried harder or was smarter than normal. For Vanguard to charge a performance fee on its S&P 500 index fund would make little economic sense.

In addition, as discussed earlier, the total expected fee level is probably lower for beta than for alpha, so the higher expected fees induced by performance fees are more onerous. And again, any one manager's influence (through size) on the attractiveness of beta is likely small, so the principal/agent problem is not great.

Thus, the clearest prediction is that fixed fees will make headway in the world of hedge fund beta, but much less so in the world of alpha.

## DARK SIDES

When I argue that the combination of hedge funds and traditional index funds is the future of investment management, that does not mean all is fine and dandy. I'll next review a non-exhaustive list of risks, dangers, biases, abusive practices, misrepresentations, and in general bad habits. The term, dark side, may be too dramatic for some of these, and just right for others, but they all represent conditions that are not as they should be, or simply not well understood. I also include a short discussion of taxes.

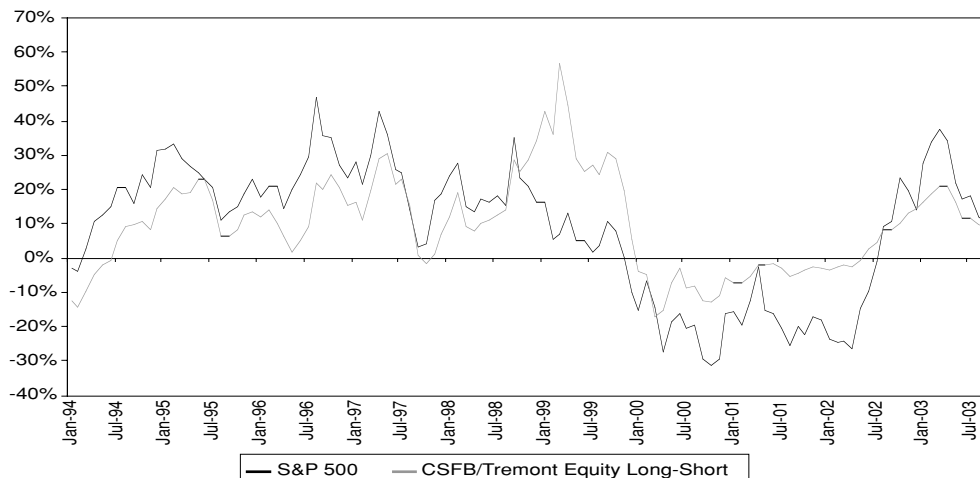
### Lags in Mark-to-Market

To examine whether hedge fund returns are correlated with stock market returns, many have run regressions where the left-hand side is this month's hedge fund return, and the right-hand side this month's stock market return. While the result is usually not zero, most of these tests have found broad indexes of hedge funds to have relatively low betas or correlations with the stock market. Asness, Krail, and Liew [2001] (AKL), however, show that this month's reported hedge fund index return is a function of not just this month's stock market return, but also of its return over the prior few months. Similarly, hedge fund returns appear positively autocorrelated, meaning that good months tend to follow good months and bad months follow bad months a little more than pure random chance would dictate.

AKL interpret both these results as meaning that hedge fund portfolios, on average across funds, are not being marked to market in a completely timely fashion. This would certainly cause the relation between this

## EXHIBIT

### Rolling 1-Year Returns versus T-Bills



month's hedge fund return and prior market returns. Imagine that we hear good news for the stock market and for the hedge fund's position. Lags in mark-to-market means some of the hedge fund's securities that benefit from this good news rise immediately with the market, but some do not, following later at a lag. This has an important effect on reported hedge fund returns.

Why are there such lags? First and foremost, because many hedge funds trade in securities that are less liquid than traditional large-cap equity indexes. If hedge fund managers trade such securities, it is very possible their betas and volatilities are understated through no fault of their own. Another possibility is more worrisome. Hedge fund managers would generally like to report low correlations or betas with the stock market, and low volatilities in general. Obviously, one way to achieve this is to not mark all the securities in the portfolio in a timely manner.

In some cases, such as over-the-counter fixed-income securities or private securities of many kinds, hedge fund managers have some latitude regarding how assets are priced each month. This latitude allows for the marking of securities to smooth monthly returns.

To the extent lagged marking is widespread, hedge fund risk (whether viewed alone as volatility or in terms of market risk as beta) is understated if it is inferred, as is often the case, from historical monthly data. Furthermore, if risk is understated, it follows immediately that historical risk-adjusted performance is overstated. Asness, Krail, and Liew suggest some concrete tests to measure this effect at both the hedge fund index and individual fund level.

### Hedge Fund Betas/Correlations

Even without considering lags in marking to market (which increases estimated betas significantly), hedge fund returns are not unrelated to stock market returns. As an example (admittedly one of the more extreme ones), the Exhibit plots the rolling one-year return over T-bills to the CSFB/Tremont index of long/short equity hedge fund managers and the S&P 500 from January 1994 through August of 2004.

More formally, in a regression run for the period, where the left-hand side is the quarterly excess return over T-bills of the CSFB/Tremont long-short equity hedge fund index, and the right-hand side is the quarterly excess return of the S&P 500 index (t-statistics adjusted for overlapping observations are in parentheses;  $R^2$  values are adjusted for degrees of freedom), the results are:<sup>6</sup>

$$\text{LS Equity} = 0.36\% + 0.48 \times \text{S\&P 500} \quad R^2 = 35.7\%$$

(1.48)    (8.19) (1)

There is clear evidence that long-short equity funds, and hedge funds in general, have positive stock market betas.<sup>7</sup> The relationship is, of course, not perfect, but it should be clear from the regression, or just casual observation of the Exhibit, that there is some serious beta to this strategy.

### Momentum Strategies

Hedge funds as a whole follow a momentum style of investing with regard to their market exposure. This is not

necessarily a down side for hedge fund managers or investors, as the momentum strategy may be effective (commodity trading advisor strategies for one explicitly pursue momentum). There are ways, however, that this is a dark side.

An implicit argument throughout Asness [2004] is that one positive benefit of hedge fund investing for the world at large is that hedge funds take risky positions that others do not want (sometimes this can be thought of as providing insurance to others) and provide liquidity that others need. Consider, for instance, the statistical arbitrage strategy where hedge fund managers buy short-term losers and sell short-term winners. This is a liquidity-providing strategy, as hedge fund managers are generally buying in response to other investors' desire to sell, and vice versa.

What about an investor pursuing the opposite strategy, trying to buy very recent winners and sell very recent losers, hoping the trends will continue?<sup>8</sup> Well, in the reverse of statistical arbitrage, which reduces transaction costs to a continued seller (through lowering what is called market impact), the short-term momentum trader raises the same cost.

Now consider the long-short equity hedge funds examined in Equation (1). The average market exposure of these funds is positive. Now we ask whether this exposure varies through time, and specifically whether it varies with the prior performance of the market.

A simple model for the conditional beta of long-short equity managers is:

$$\beta = \gamma + \delta \times \text{TREND} \quad (2)$$

where TREND is the prior year's performance of the S&P 500. The idea is that hedge fund managers can consciously set their betas going forward by choosing to vary their net exposure to stocks, and we want to measure if they are generally going longer (higher beta) *after* the market has gone up, and vice versa. If  $\delta$  is significantly positive, it can be clearly interpreted that hedge fund managers follow momentum in their market exposure (going longer *after* the market has gone up and shorter *after* the market has fallen).<sup>9</sup>

Let's start with a symbolic version of the standard market model equation estimated in Equation (1):

$$\text{LS Equity} = \alpha + \beta \times \text{S\&P 500} \quad (3)$$

To estimate  $\gamma$  and  $\delta$  we plug Equation (2) into (3):

$$\text{LS Equity} = \alpha + \gamma \times \text{S\&P 500} + \delta \times \text{TREND} \times \text{S\&P 500} \quad (4)$$

In other words, in (4) we run a regression of hedge fund returns not just on this quarter's stock market return, but also on this quarter's stock market return multiplied by the stock market's return over the prior year. If  $\delta$  is significantly different from zero, we say that the hedge fund managers are moving their market exposure with the market's recent past performance.

Equation (5) estimates (4) using data again from January 1994 through August of 2004, and shows an R<sup>2</sup> of 42% and coefficients as follows:

$$\text{LS Equity} = 0.21\% + 0.46 \times \text{S\&P 500} + 14.22 \times \text{S\&P 500} \times \text{TREND} \quad (5)$$

(0.93)      (12.86)                      (4.69)

Clearly there is strong statistical evidence that these funds follow the recent market trend in setting their market exposure going forward.<sup>10</sup> In fact, the coefficients in (5) can be used to estimate the market beta of long-short equity managers based on the prior market performance by forming fitted betas from applying the coefficients estimated in Equation (5) to Equation (2). In this case, the fitted beta varies from a low of 0.06 in December of 2001 following a bad year for the stock market to a high of 0.92 in October of 1997 following a strong year. On average, long-short equity managers are clearly expecting the market to continue to do what it has done for the prior year, and they are varying their net exposures significantly with this expectation.

Another potential dark side of momentum, particularly if investors are unaware of the momentum trading going on, is the implication for hedge fund risk in different environments. Momentum strategies by definition do worst in markets that show sharp reversals after long trends.

Consider, for instance, the difference between hedge fund performance in the short sharp Russian debt/Long-Term Capital Management crisis of 1998, and then in the bear stock market of 2000-2002. In 1998, hedge fund performance was quite disappointing. In 2000-2002, hedge funds did not in aggregate post high positive returns, but also did not suffer greatly. This latter performance is actually quite impressive if one believes hedge funds on average show a positive beta, as 2000-2002 was a savage bear market.

The difference may be that 2000-2002 was a relatively drawn-out process, and by following the trend

hedge funds lowered their betas radically over this period, something they were given time to do. One can imagine a much sharper crash in March of 2000 causing far greater pain in the long-short equity hedge fund community and for hedge funds in general.

Again, there is nothing inherently wrong with a momentum strategy, but it is a dark side if this risk profile is not fully understood by investors.

### **Survivorship Bias**

Survivorship bias occurs when the historical track record of a portfolio of hedge funds is constructed using only hedge funds that have survived to the end of the period (see, for instance, Brown et al. [1992]). It is a pretty safe bet that hedge funds that are no longer around on average did not do very well (quitting while on top is the exception, not the rule). The historical track record of such a biased collection overstates average return and understates risk going forward. Given the difficulty of obtaining hedge fund information, it is quite possible this is more of a problem for hedge funds than for many other investments.

### **Option Writing**

To evaluate a hedge fund, it is common to calculate historical realized Sharpe ratios (average returns over cash divided by realized standard deviation). One strategy that often achieves a high Sharpe ratio is writing out-of-the-money options (see, for instance, Weisman and Anthony [2000]).

Imagine every month I write an option that pays me if the market does not crash next month, but ruins me if it does. Say the market crashes only every 25 years or so. It is not hard to imagine that over the next five years I have no down months and an incredibly high Sharpe ratio. But, assuming these options are fairly priced, I have added no value; I deserve no fee; and I am taking incredible risks with your money.

The case of a single put option written like this would be fairly obvious, but real life is trickier than that. Options can be embedded in complex securities that obscure their presence. Certain strategies such as some types of momentum trading can exhibit option-like behavior. There are even securities that look nothing like options in structure but can have option-like payoffs in that they often win a little (perhaps through positive carry), but lose big occasionally (i.e., big bets on credit).

Combining some lags in marking to market with some invisible option writing can produce one heck of a historical Sharpe ratio, but a potentially toxic combination going forward.

### **Performance Fee Option Maximization**

If a hedge fund manager with truly no alpha, or no particular skill at implementing beta, manages to convince someone to invest and pay a performance fee, it may be optimal (in the same way a bank robber has an optimal safe-cracking strategy) for the manager to take an extreme amount of volatility, as this behavior maximizes the value of the performance fee option. That is, the manager gets paid a lot if she gets very lucky but does not have to pay anything (except get fired) if she gets horribly unlucky.

This is not an attractive plan for a manager confident in her value-added, as getting fired is very costly. Not so for the manager who knows she is unskilled, as before too long she expects to be fired anyway. Thus, the manager with no potential for value-added is encouraged to take the most volatility.

This is another potential down side of performance fees. Under a pure fixed fee, the manager who has no skill would tend to take the least risk. As the saying goes, it is better to remain silent and have the world think you a fool, than to speak and remove all doubt.

### **Taxes**

I have taken the perspective of a non-taxable investor (non-U.S. investors or non-taxable institutional investors like endowments, foundations, and pension plans, and perhaps even 401(k) plans as hedge funds reach this market). That is appropriate, given the economic significance of these investors. A U.S. taxable investor faces different challenges and may come to different conclusions about whether hedge funds plus index funds represent the future of investing.

The first response would seem to be that taxable investors should avoid hedge funds. In reality, the answer is less clear, at least when hedge funds are compared to traditional active management (index funds start out ahead of both active management and hedge funds when taxes are considered). For instance, to the extent certain hedge funds (macro, CTAs) use futures, they may receive favorable long-term capital gains tax treatment.

Perhaps more relevant, consider the combination of a traditional S&P 500 index fund and a market-neutral

equity hedge fund versus a traditional long-only active portfolio. In the case of the index fund plus hedge fund scenario, the additional tax burden comes primarily from the capital gains on the hedge fund alpha. In the case of the traditional long-only active portfolio, enough turnover can actually result in the investor paying short-term capital gains not only on the manager's alpha, but also on the return on the market (see Arnott and Jeffrey [1993]).

Given the amount of investment that is not tax-sensitive, and because some of the issues for taxable investors are less clear-cut than a cursory examination reveals, taxes would not seem to derail hedge funds from taking a significant future role in modern portfolios.

### Spotty Historical Track Record

Asness, Krail, and Liew [2001] look at the realized alpha of hedge funds after adjusting for market beta, including accounting for the lags in marking to market that can cause traditional techniques to understate beta. In an update through early 2004, AKL find that average hedge fund alpha is positive, but not very strong.<sup>11</sup>

In some sense, this is not surprising, as it is a stretch to think that the average of any large group will reveal tremendous skill after fees. True skill is a zero-sum game; if hedge fund managers as a whole demonstrate it, somebody else somewhere must be demonstrating the opposite (or more than the opposite, net of fees).

The plausibility that hedge fund betas (not skill-based alphas) can deliver positive risk premiums over time is not nearly as weak, however. If these betas represent a risk hedge managers take that others do not want, it is plausible hedge funds could in equilibrium be paid in the form of excess returns for bearing this risk. Indeed, there is evidence strategies such as merger arbitrage and convertible arbitrage, two strategies with a clear beta component, have historically delivered high realized risk-adjusted returns.

I have described hedge funds as a way to turn skill into a stand-alone investment, and also as a way to obtain exposure to systematic hedge fund betas unavailable in traditional constructs. That skill is difficult to detect in broad averages should give one pause, but not lead to despair. To believe in skill is to believe in active management. The only consistent way to believe in active management is to believe you can find the good managers (why you believe that is another question between you and Gene Fama).

And of course by "good" I mean managers rationally expected to be good in the future, as many studies have

shown little persistence in winners and losers—simply observing past performance is not enough. Thus, almost by definition, active managers have to be chosen actively with forward-looking judgment, as the average of them, or even a subset that simply have outperformed in the past, is not necessarily going to outperform in the future.

### Hot Money

Most of these dark side worries relate to the investor's perspective. Let's examine instead a characteristic of hedge fund investors that is a dark side for hedge fund managers (and for other hedge fund investors who do not share this affliction). The term *hot money* refers to investors who are always pursuing the funds doing well recently and leaving those doing poorly. The odds are very strong that hot money hurts itself long term, but the odds are 100% that it hurts the hedge fund community at large.

How? Transaction costs are an obvious start. Although it would be rational that penalty fees for hot money transactions would go to a fund to compensate it for the trading induced by rapid inflows and outflows, such fees are still the exception, not the rule. By inducing costs, hot money punishes hedge fund investors in general. Hot money can also hurt the whole market as risk-taking or liquidity-providing strategies are starved during or after a crisis, just when they are most needed.

Hot money also hurts the hedge fund community in deeper, more subtle, ways. A hedge fund manager is paid to take risks, and not all those risks can be expected to pay off over a short time horizon. If certain bets are not made, or stop losses (limiting losses by reducing positions going against you) are implemented too quickly, average risk and return is reduced. This penalizes hedge fund managers and, more important, hedge fund investors in general.

The hot money culture clearly adds incentive for hedge fund managers to mark their portfolios at a lag, thus smoothing returns because the manager fears any dip will cause a hot money exodus. This is not to excuse any hedge fund manager, but one can see that hot money can contribute to another evil in the hedge fund world.

This is a good time to make an important point about hedge fund lock-ups. Some interpret the reason for lock-ups as the illiquidity of certain hedge fund investments. This certainly is part of it, but I would argue the more compelling reason for lock-ups is to better align the time horizon of commitment to a strategy with the time horizon over which the strategy can reasonably be expected to pay off. In fact, it can be argued that a pure



open-ended structure, like most mutual funds, is not conducive to making bets and taking risk in general, as long as there is hot money out there.

### High Water Mark Abuse

Most hedge funds have something called high water marks (HWMs), generally providing that if a fund loses money in a year, managers do not receive any performance fee until after they make back their losses. There are at least two possible ways HWMs can negatively affect the future. First, some managers do not stay in business, even if their clients are willing to stick with them, if they are facing an impossible HWM after a tough period. The manager may just not have the patience or the desire to work without some prospect of a performance fee in the near term, or the manager wishes to stick it out but cannot hold an organization together. If the performance fee is important to retain employees in every given year, a hedge fund organization can feel considerable stress even after only one year without the fee. Second, the high water mark would be a problem if it motivates the underwater manager to take too much risk, with little to lose.

It's hard to be sympathetic if a manager quits when the big payoff is now a few years away because of the HWM, and no one should feel that way at all for the manager who rolls the dice big because she is out of the money. It's different if a manager believes in a strategy and is more than willing to stick it out, but has trouble because of the stress induced by the annual performance fee structure and HWM.

One structure that has promise in this respect is the awarding of a new partial performance fee (say, 50% of the norm) from the new lower base. In this case, after losing, say, 10% out of \$1, the next year the manager receives a performance fee immediately on any growth on the remaining 90 cents, but a lower percentage than if not below the HWM. The original performance fee percentage is not restored until the client is made whole. This preserves some fraction of the year-to-year performance incentive while still guaranteeing that, long term, if the manager ultimately succeeds, the client pays only for net total performance.

This structure makes the most sense when clients believe their managers are in for the long term as the major downside is a the manager has one good year after the bad times (that led to the HWM), and only then folds up without making it all back.

### Structured/Levered/Guaranteed Products

Some structured hedge fund products offer leveraged exposure to a collection of hedge funds, and, more frightening, sometimes a guaranteed floor on a portfolio of hedge fund returns. The standard way to guarantee a floor on returns is to reduce exposure to the risky asset (in this case a portfolio of hedge funds) when the asset loses money. The risk to this strategy is that the market jumps down, and you cannot reduce your exposure fast enough—you literally fall through the floor.

The risk to the market in general is that structures that force liquidation after down periods may cause significant instability, especially in conjunction with the tendency of some hedge fund investors to follow hot money. Financial markets have seen these guaranteed strategies before; they used to be called portfolio insurance. While the extent of the problem is unclear, this dark side represents a risk to the whole hedge fund industry.

My personal term for this potential crisis is "October of 1987 meets August of 1998," as portfolio insurance is applied to an asset class considerably less liquid than the S&P 500 (for which it failed).

### Crowded Strategies

Diverse hedge fund strategies such as merger arbitrage, statistical arbitrage, and convertible arbitrage seem to have few economic links. This is an advantageous property, as it implies their returns will have relatively low correlation (i.e., merger failures might be relatively unrelated to the absence of short-term reversals for individual stocks, which in turn might be relatively unrelated to the effect of implied volatility or credit changes on convertible arbitrage).

While the logical economic links might be few, there is a strong link in who is providing the capital. I have argued that each of these strategies is pursued by investors providing liquidity that others want and taking risks others want to avoid. If at some negative event, investors in general move away from risk-taking and toward desiring more liquidity, many of these strategies can suffer at the same time, even if they are otherwise logically unrelated.

In today's world, these strategies are not only linked by a common risk-taking/liquidity-providing element, but are also more and more pursued by the exact same investors. It is easy to imagine considerably greater potential co-movement in a crisis because of this commonality.

## FUTURE EVOLUTION OF HEDGE FUNDS

I argue that hedge funds represent the investing structure of the future, both for a more efficient implementation of all forms of active management and for exposure to hedge fund betas impossible to achieve with traditional methods. So, let's ask the question every five-year-old knows comes next. Are we there yet?

No. First, with so many dark sides, it stands to reason that fixing or at least ameliorating these going forward is important.

Second, other changes would be helpful to the future development of hedge funds if they are to play the wider role I describe for them. Long-time hedge fund managers and investors might not like many of my suggestions, as they smack of what's often called the institutionalization of hedge funds, something many hedge fund investors and managers fled as part of traditional money management. Yet it is difficult to see the continued growth of hedge funds occurring without them.

### Expectations Must Be Moderated

Many long-time hedge fund investors talk about looking for hedge funds with Sharpe ratios like 2.0 or 3.0. Many hedge funds claim to have such Sharpe ratios.<sup>12</sup>

Let's consider three facts:

- The historical track record of hedge funds in aggregate after adjusting for market exposure (and lags in market exposure) is nowhere near these numbers.
- The inflow of money into hedge funds will probably make the future harder than the past. Money coming into an asset or strategy generally increases current returns, but reduces future expected returns.<sup>13</sup>
- The Sharpe ratio necessary for a reasonably low-correlation hedge fund or collection of hedge funds to improve a traditional portfolio is relatively tiny. This is why hedge funds can still be the future despite the two facts above.

Note that lower Sharpe ratios mean not just lower total returns, but also more frequent losses. This last point is often overlooked with sentiments like "lower returns are fine as long as they are consistent." Of course, in a world of low real interest rates and a low equity risk premium, even these lower Sharpe ratios can still make important

improvements to an overall portfolio. To the extent that investors do not get this, potential investor disappointment, outflows, hot money reactions, and the interaction of all of the above with leveraged portfolio insurance structures all pose a threat to the future of hedge funds.

Consider again merger arbitrage. Say that for the last 20 years unlevered merger arbitrage beta delivered returns 8 percentage points above cash with 4% volatility (a Sharpe ratio of 2.0). Now, imagine that because tremendous money has flowed to the strategy the expected return is now 2 percentage points above cash (a Sharpe ratio of 0.50). This occurs as more and more money attempting to pursue this strategy narrows the spread between target and acquirer much further and much more quickly than it did in the past, thus reducing the potential profits to arbitrage.

An investor examining the past might be very disappointed with a 0.50 Sharpe ratio going forward. An institutional investor sitting on a lot of cash facing low returns everywhere, however, might see 2 percentage points more than cash with risk that is low when diversified away by the rest of the portfolio, and say "gimme some."

This is how the hedge fund world is changing. Whether it is ready for lower Sharpe ratios and hedge funds that lose money more often is a very important question. But, if very big money will accept lower Sharpe ratios, that is what they (and we all) get.

Many hedge fund skeptics fear a hedge fund bubble is being created by the large inflows into and creation of new hedge funds. Perhaps the dot-com, Nasdaq, and general equity insanity culminating in 1999–2000 has made this word all too easy to suggest. A bubble should be a rare happening, when something is priced irrationally high beyond a reasonable doubt—something that is so irrational as to be absolutely unsustainable for the long term.

For example, in 1999–2000 stocks, and tech stocks in particular, were priced so irrationally high that they had a negative expected risk premium, and that is not sustainable long-term. Thus, the word bubble made sense. As of 2004, tech stocks and stocks in general are priced to a low risk premium by historical standards, but not a negative one, which could last forever if investors accept such a low risk premium. The word bubble no longer applies (although "overpriced" might).

It is unlikely the term bubble ever applies very well to true alpha, as more money coming in might reduce it through competition, but it is hard to imagine it going negative (at least in gross terms). Furthermore, some hedge fund beta seems to be currently priced to reward

investors less than it has historically, but not to crazed negative bubble levels. Thus, we should all probably be more cautious about using that b-word.

The combination of overoptimistic expectations and dark sides might cause a hedge fund crisis that would look like a bubble bursting. This is a possibility I do not rule out by any means. If it happens, in all likelihood many of the hedge funds walking on the dark side (taking on high traditional market beta, marking at a lag, selling volatility in a sneaky fashion, catering to the hottest money investors) and many investors engaging in dangerous practices (overlevering, using portfolio insurance on less liquid assets) will not survive. But funds with stable investors and a stable business model, and truly hedged positions, probably will.

This is not necessarily a bad result in the evolutionary course I chart, but rather a survival of the most honest or prudent. Another very real possibility is that returns and volatility going forward simply remain permanently lower, and this is rationally accepted by institutional investors without any blow-up. This second option, survival in equilibrium, is not possible with a true bubble.

In fact, if returns to hedge fund strategies remain positive but low, this news is by no means all bad. If part of the function of hedge funds is to take risk and provide liquidity, lower expected returns mean the cost to society of hedge fund services is effectively lower. After all, one investor's risk premium is often another's cost of capital.

### Capacity Issues

Can enough hedge fund managers be found to handle investment inflows? This is intimately related to the expectations issue, as the real question is whether the hedge fund world can take in such money without reducing future returns further.

First, of course it cannot. Again, money coming in usually depresses future returns. But, again, this must be considered in the context of the future returns necessary to make hedge funds an attractive investment. The capacity issue and the expectations issue are really one and the same, as if expectations are reduced, capacity can be created. It is capacity *at current expectations* that is scarce.

Second, while net inflows are probably quite large, this is not always as clear-cut as it seems. For instance, if investors are moving from traditional active management to index funds plus hedge funds, it is not clear the actual net use of alpha capacity is much more strenuous.

The importance of these issues is best seen in real

life by examining the number of hedge funds that are closed to new investors. Of course, it's an open question whether "closed" always really means closed; it is not uncommon that hedge fund managers call themselves closed as a marketing ploy.<sup>14</sup>

Equally hypocritical, it is not uncommon for hedge fund investors to demand or at least expect their managers to be diligent about truly closing—except of course for these investors themselves. Finally, hot money rears its head yet again as its presence clearly pushes hedge funds to stay open, as if they close, then have a bad period, their opportunity to raise assets may be gone (they didn't make hay while the sun was shining).

The capacity issue brings with it a few real paradoxes. Casual observation seems to show that when a manager leaves a closed fund to set up her own very similar fund, two closed funds are created that together are much larger than the first one. This works for amoebas, but should it work for capacity-constrained hedge funds? Another paradox, or catch-22, is that if your strategy is not unique you do not really control your capacity. If you are careful to limit your size, but another fund is wide open and taking in assets in a strategy similar to yours, you make less than this other fund (as you have fewer assets), and are just as damaged in terms of expected future return. This makes it very hard for a hedge fund manager to stay disciplined about capacity.

Finally, let me end with a proposal. As capacity seems to be limited, and as unrealistic expectations and hot money seem to be a real danger to the future of the hedge fund industry, perhaps a solution is a structure that marries long lock-ups to scarce capacity grants instead of using high fees as a way to ration scarcity. This might not appear to be in the interests of hedge fund managers, as short-term fees will be lower, yet it may very well be in their long-term interests (and of course their clients' interests).

In this case, my argument for fixed versus performance fees must be tempered—performance fees may play a vital role as the principal/agent problem arises again. If fees are all fixed and funds are locked up for a long period, there would be a great temptation for a hedge fund manager to raise extra assets and run at very low volatility (as investors could do nothing about this for a long time).

Performance fees under this structure would have another potential benefit, as the manager could agree to wait until the end of the longer lock-up to charge a performance fee on performance over the whole period. This would greatly mitigate the one-period performance option many investors are short, and a manager who believes in its long-term ability is not giving up much.

## Headline Risk

Individual hedge funds, through either malfeasance or simple error, sometimes incur some spectacularly negative returns (like negative 100%). Not investing in hedge funds because of this possibility is somewhat similar to not investing in common stocks because individual firms can and sometimes do go to zero (although with 500 stocks in the S&P 500 that is a less extreme event). Every year many stocks in the S&P 500 suffer extreme difficulties, and that does not mean equity investing is to be avoided.

Hedge funds are often viewed through a different prism. Investors often report to someone else (think about an investing staff reporting to a committee). When a hedge fund blows up, it is usually big news in the investing world. If an institution has invested in it, when its board members read about it in that morning's paper, *schadenfreude* can quickly be replaced with the desire to blame someone. To the extent this is a barrier to hedge fund investing for some organizations, there is little that can be done about that; concerns other than investment returns and risk are influencing their investments.

## Rational Fees

The hedge fund world needs to better differentiate traditional market beta (very low fees), hedge fund beta (medium fees), and true alpha (high fees). A general migration from performance to fixed fees, particularly for hedge fund beta, is probably warranted. In addition, fixed fees that are proportional to active risk make sense.

## Benchmarking Hedge Funds

Benchmarks are sometimes seen as tyrannical constraints on managers. Institutional investors, however, need ways to judge their hedge fund decision and their particular hedge fund choices. Whether a benchmark is used to stifle creativity or to measure it accurately is in the hands of the user.

Suppose an institution wants to benchmark its overall allocation to hedge funds. Typical benchmarks might be:

1. An absolute number, say, 10%.
2. T-bills plus 5%.
3. 50% T-bills + 50% S&P 500 + 5%.
4. An index of other hedge funds.

All these forms of benchmark are in use. They differ most with respect to time horizon. Benchmark (1) makes sense only over the longest of time horizons when perhaps you might assume cash to be equal to some equilibrium average, but even this is a stretch. Absolute numbers have some intuitive appeal. They appear solid; after all, aren't hedge funds often called absolute return investments? The only problem is that hedge fund managers invest in cash to collateralize their long securities and short securities. If cash falls, so does the expected total return on hedge funds, and vice versa. This is the case unless hedge fund managers somehow get smarter as interest rates go lower.

Benchmark (2) recognizes this and incorporates changing cash levels (inflation or LIBOR is sometimes substituted for T-bills). Benchmark (3) takes the short term a step farther, and also recognizes that hedge funds, despite the goal of providing diversification, have shown some correlation with the stock market. Finally, (4) goes the whole nine yards toward relevant short-term performance measurement by comparing the institution's hedge funds with the current return on other hedge funds.

Dismissing (1), I argue that (2) makes sense at long time horizons to judge the absolute success of your decision to be in hedge funds, while (4) clearly makes sense at long and short horizons to judge only your relative skill in picking hedge funds. These are very different goals, so perhaps two benchmarks are in order.

If your hedge funds outperform your goals in (2) over a long period but fail miserably versus (4), that is interesting information. It means you were right to allocate to hedge funds, but you did it *ex post* poorly. If the opposite occurs, that is interesting also.

## Funds of Funds

Funds of funds (FOFs) are structures that take in investment dollars from clients and invest the money in a collection of outside hedge funds for an additional fee on top of the fees charged by the underlying hedge fund managers. They have traditionally had three purposes:

1. As a starting point for hedge fund investing, allowing investors in the FOF to gain knowledge and initial exposure to a diversified portfolio more safely than picking hedge funds themselves with limited knowledge and little diversification. These can be permanent benefits for investors too small to ever run their own program.

2. To provide cover or protection from the “headline risk” problem.
3. Most important, to discover true alpha managers and add alpha themselves through tactically varying exposure to hedge fund betas.<sup>15</sup> This includes the discovery and exploitation of new betas that look like alpha until they become well known.

Going forward, (3) should always be a legitimate function for those who can do it; (2) should disappear with investor education; and (1) should remain but be diminished in importance. While a primary role for some very large FOFs is to gain exposure to a broad set of hedge funds, in a world of lower expected returns, it's hard to imagine the industry norm will remain a broad-based fund of funds charging high extra fees and owning a tremendous number of well-known funds. Rather, it will be more important to attempt to add alpha (choosing managers and managing hedge fund betas), and the role of education and introduction will abate but remain.

### Transparency Wars

One sticking point between institutional investors and hedge fund managers that is slowing down progress toward the hedge fund-plus index fund world is the lack of transparency in hedge funds (they often do not tell their investors what they are long and short). Many institutions are not comfortable without transparency. Some go as far as to believe a lack of transparency is inconsistent with their roles as fiduciaries.

Let's examine both sides, starting with the hedge fund managers. Here are some of the reasons hedge fund managers give for not wanting to divulge their holdings:

1. Large illiquid positions and short stock positions can get squeezed.
2. The investment process is proprietary and others may try to mimic it.

While there is certainly some truth to each of these, other reasons are far closer to the real ones:

3. Logistics—It is a nuisance to explain positions, especially for the many hedge funds that use complex securities, and to make sure those on the other side understand them.
4. General frustration—Anything divulged seems to fall into a black hole of unuse.

5. Divulging positions risks revealing the basic simplicity behind some hedge fund strategies.

Notice the near mirror opposites of reasons (2) and (5). As for reason (4), hedge fund managers are probably right. Many investors seeking transparency want it either for marketing purposes or for protection from criticism. It's doubtful many actually do much with knowledge of positions.

This is an important issue to be worked out in the evolution and growth of hedge funds. Hedge fund managers need to be a little calmer about reasons (1) and (2), and a little more understanding about (3) to (5); and investors need to better articulate their real reasons for needed transparency. Promising middle-ground solutions to help improve this problem might be mutually agreed upon risk-based transparency (revealing not specific positions but rather major risk exposures and leverage) and the continuing use and expansion of third-party services that aggregate multiple manager positions for a hedge fund client in an anonymous fashion.

### What Constitutes a Hedge Fund

Hedge funds have increasingly moved into various forms of financing that look more like investment banking, private equity, and merchant banking. Event and long-short equity managers are more and more investing in private deals, and some managers specialize in making direct loans.

There is nothing wrong with this, but it should be understood that these activities do not have the liquidity and diversification characteristics traditionally sought in hedge funds. How this will evolve will be interesting to watch in the hedge fund world.

### CONCLUSION

In Asness [2004] I articulated a vision of hedge funds plus traditional index funds replacing traditional active management as the investing model of the future. This is not because hedge funds deliver some kind of magic from genius managers to investors savvy enough to get into supposedly closed funds. Rather, the more mundane fact is that hedge funds plus index funds offer a superior structure. The clean separation of index exposure from skill brings many advantages.

The hedge fund structure also allows liquidity to be provided by those who have it to those who need it, and allows risk to be transferred from those who do not want it to those who do (or, more accurately, who will accept

it in exchange for a positive expected return). These have very real potential benefits. Many of these transfers could not occur or would be more awkward without the tools employed by hedge funds.

Hurdles stand in the way. Some dark sides must be reduced or eliminated, and important evolutionary changes must occur in hedge fund manager practices and hedge fund investor expectations and actions. Without these changes, the benefits of the hedge fund structure will not be fully realized.

I remain an optimist that we can get there, although the road will not be short, and certainly not free of bumps (bump is a euphemism for some people losing a lot of money at some point).

## ENDNOTES

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<sup>1</sup>Space constraints did not permit addressing these two sides in one article, but the two are best read together.

<sup>2</sup>The separation of hedge fund alpha and beta is not always easy to determine, although I argue the exercise of trying almost always increases understanding. One way to think about this is that if it is available from only one or a handful of providers, and it's not a simple process that can be written down (or at least you don't have access to that process), it is closer to alpha than hedge fund beta. If many know about it, and you can basically write down the steps to implement it, it is beta. If the rules do not require hedge fund techniques (e.g., shorting or leverage or derivatives) then it's probably traditional beta, but if they do, it's hedge fund beta.

<sup>3</sup>In fact, a big part of the compelling argument in favor of derivatives in general is that they allow the kind of isolation of desired exposures from undesired exposures that I describe here in the context of hedge funds.

<sup>4</sup>Concentrated in the sense of more alpha or volatility per dollar, not in the sense of more concentrated positions.

<sup>5</sup>A related issue is the lack of diversification forced on

hedge fund managers by the tradition (almost a requirement) that they put a substantial amount of their own wealth in their funds. From a portfolio theory standpoint, this is utter madness; this is already where their human/reputational capital resides. It would rarely be optimal to choose such a portfolio. Furthermore, it can certainly lead to their suboptimal behavior as portfolio managers. How differently will managers pursue a risky opportunity if acting for an institution that gave them 1% of its portfolio (and wants them to take risk), or putting at stake 100% of their own portfolio (where they might be tempted to be more conservative)? Still, there is one strong argument for manager co-investment: the risk of true blowups (i.e., losing most or all of the money through some negligence, whether analytic or operational). While there is an inducement away from risk in general when a manager invests much of its own wealth in its fund, there is a positive incentive added to be incredibly vigilant about preventing these disastrous occurrences. Little focuses the mind more than having all one's eggs in the same basket.

<sup>6</sup>Using quarterly returns captures some, but not all, of the lagged effect of Asness, Krail, and Liew [2001].

<sup>7</sup>The corresponding regression for the entire CSFB/Tremont hedge fund index shows a beta of 0.28, a t-statistic of 4.36, and an r-squared of 22%. This effect is understated by not including a full adjustment for the lags in reported hedge fund returns.

<sup>8</sup>It is, of course, impossible for systematic statistical arbitrage contrarian strategies and their exact opposite to both provide a positive expected return. For practitioners of short-term momentum strategies to also have positive expected returns, they would need to have some additional alpha in their selections. If such momentum managers were able to identify stocks for which the buying or selling forcing the stocks up or down was not over, that could result in alpha to them (and much higher transaction costs to those doing the buying/selling). If the managers identify these stocks through good guesses and astute observation, this is generally called good trading. If they have an actual information advantage, perhaps through receiving the first call about a trade still going on from a dealer, it is generally called front-running.

<sup>9</sup>It can be separately shown that hedge fund managers, and particularly long-short equity managers, follow momentum in their selection of specific stocks, by regressing hedge fund returns on momentum factors, like the UMD factor of Fama and French [1996].

<sup>10</sup>The corresponding regression for the entire CSFB/Tremont hedge fund index shows a t-statistic of 3.79 for the interaction term. A rare exception are short-biased managers who show a negative interaction, meaning after the market goes up they get shorter.

<sup>11</sup>There are many issues in extending the regressions of AKL past the year 2000, as over the last few years hedge fund indexes have exhibited materially lower volatility than ever

before, making such a full-period regression poorly specified. In addition, these regressions do not account for survivorship bias, and lump hedge fund alpha and beta together.

<sup>12</sup>In fact, it is not clear finding a 3.0 Sharpe manager is so great, as she rapidly either kicks you out to run her own money, or raises her fees to 5/30. An interesting mental exercise is to imagine all hedge fund managers wear their true gross Sharpe ratios on their foreheads, and these are known with certainty. It seems clear managers would all charge fees to equilibrate their net Sharpe ratios. So, much like any active investing where the key is to find information you know that the market does not, the key seems to be to find a manager who does not know she is that skillful.

<sup>13</sup>This is generally true for most strategies, but not necessarily all. For example, for some very high-frequency strategies money coming in probably does not increase current returns in the same direct manner, but probably does diminish future returns. Similarly, the implication for momentum strategies is less clear.

<sup>14</sup>A hedge fund joke goes like this: Q: What do you call a hedge fund that says it's closed? A: Open. Q: OK, then what do you call a hedge fund that's open? A: One that cannot raise capital.

<sup>15</sup>The ability to time hedge fund beta is probably a source of potential alpha for both funds of funds and for hedge fund managers themselves.

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