

Risk and the

INSTITUTIONAL INVESTOR

in the hedge fund arena

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The hedge fund industry is experiencing a critical change to its DNA. The underlying makeup of the industry, the assets under management, is undergoing a genetic alteration, from being dominated by wealthy individual investors to being dominated by institutions. Institutional funds have increasingly accepted the merits that hedge funds are a key element to enhancing risk-adjusted returns; especially as hedge funds are lowly correlated to other asset classes. Given this development, it is urgent to understand how these institutional investors will make their respective hedge fund allocations, as well as what issues their investment consultants deem relevant.

So let us start at the beginning and consider how these relatively new participants in the hedge fund arena go about assessing all the respective risk attributes before making allocations, as well as what is important to these new participants regarding issues of risk, post investment.

First, many pension funds are looking at their asset classes not in terms of traditional and alternative, but rather in terms of beta and alpha components; the latter being the area in which has brought about interest in hedge funds. Importantly, their asset construction is being driven by a liability 'plus' objective. This liability 'plus' objective is the magnetic north for all pension trustees as well as their asset consultants, as they will always go back to liability 'plus' as their ultimate strategic objective.

So, the usual approach would be some kind of risk budget that the asset consultant and trustees formulate, that they feel adequately addresses their liability 'plus' objective. This gives rise to some kind of benchmark, which finally ties back to the liability driven objective. This benchmark can often be relative and not only absolute, as one would expect when talking about hedge funds. These risk budgets are constructed in a number of ways and will most likely include all the respective asset classes, i.e. traditional and alternative, even if the final representation is done in an alpha/beta format.

Thereafter, the choices of managers are considered for each component of the final asset solution. One of the many problems that pension funds face when considering fund of hedge funds is simply the vast number available.

Most pension funds will not allocate directly to the underlying hedge funds but invest through fund of funds. The total number of fund of hedge fund products reporting into well-known databases is well more than 1,000. There are an estimated further 700 or more that do not report to databases, but are open for investment, and are actively soliciting third party monies! This excludes the multitude of multi-strategy hedge funds, which are highly akin to fund of hedge funds.

So where does this leave the poor pension fund trustees who have a full time job other than investments? And it still begs the question as to how one goes about who, out of the plentiful universe, should be the chosen ones.

We should take a few steps back and assess this landscape relative to stocks to demonstrate how daunting this task of fund of hedge fund selection really is. The MSCI World Equity index is composed of 1,500 stocks. The London Exchange has approximately 200 stocks at best, that one can consider due to liquidity constraints that come into play once a reasonably sized pension portfolio is put on the table. Given this relatively small universe of stocks, net of liquidity considerations, the pension fund trustees with the help of their investment consultants go about selecting a number of equity managers, who in turn could be specialist growth, value, large, mid or small cap managers. These managers are then mandated to come up with the best mix of stocks in a relatively small universe.

However, when looking at fund of hedge funds, the pension trustee must choose one or two out of a universe of 1,000. To think that these fund of hedge funds are the same is simply naive. They differ dramatically in terms of strategy allocation, manager selection, and liquidity.

Given that US\$300bn of pension money is expected to flow into fund of hedge funds over the next four years, one should always expect that many of the review and assessment methodologies employed by consultants and trustees on the traditional side, will strongly influence their chosen assessment methodology when it comes to the hedge side as well.

It is therefore imperative that fund of hedge fund managers understand how they will be evaluated by prospective pension fund investors and their investment consultants. Furthermore, should the fund of hedge fund managers intend to keep the business gained from the pension industry, then they need to remain savvy as to the evaluation methodologies employed by their investors, which in itself is ever-changing.

Pension fund investors are continuously citing robust risk measurement and management regimens, as the cornerstone of all appointments. So where to from here? We must drill down and establish what the risk ratios or measurement yardsticks are that these prospective investors deem to be important in finally assessing whether the objectives have been met.

Once the initial considerations of experience, track record, and depth of team have been addressed, pension funds then consider a number of key issues -the foremost being compliance. This includes strong regulatory compliance, governance and operational compliance. Thereafter, consideration will be given to the establishment of risk parameters, expected returns, ongoing transparency, liquidity constraints, stress tested scenario analysis, evidence of low correlation to traditional asset classes, and evidence of actual alpha being produced.

Compliance

This is singularly the most critical issue that will be evaluated by pension fund trustees. If a fund of hedge funds does not score full marks in this regard, at the onset, the firm won't even be considered. The issues that managers should report back on here should include a detailed compliance check list that covers some of the following issues:

- evidence of compliance being a management priority;
- evidence of strong governance within the organisation, such as the existence of remuneration and audit committees, and non-executive directors;

- ongoing adherence to the legal, structural, and cross border regulatory terms;
- the necessary indemnity insurance cover in place;
- written compliance policy;
- registered, qualified and independent service providers surrounding the fund structure, such as the custodians, administrators and auditors;
- evidence of adequate and compliant take-on procedures;
- audited financials of the adviser as well as fund structure; and
- an independent compliance officer within the organisation.

This is an area where trustees will be most concerned, given the fact that hedge funds are not regulated in the same manner as the traditional investment industry.

Risk parameters

The most basic traditional risk measures that investors commonly look at are predicated on the possibility of expected returns not materialising. These investors have come to believe that risk equates to the possibility of not achieving expected returns, and/or loss of capital. Therefore, the greater the variability or dispersion of returns, the greater the risk.

These basic risk ratios such as standard deviation and Sharpe ratios are limited in a number of ways, primarily due to the assumption that the underlying distribution of return is normally distributed, which is not generally accurate when evaluating hedge fund returns. Coupled with having asymmetrical returns, is the fact that these ratios do not allow for the order of these returns to play a part in the overall evaluation process. This is an area where investment consultants now focus and invariably alert the client, after reviewing the usual one page performance summary that most hedge fund managers publish, which in turn is littered with standard deviations, Sharpe ratios and other dispersion of return ratios. (One of the main reasons for this preferred form of presentation is that those ratios allow the hedge

managers to look terrific when compared to traditional managers or asset classes.)

So, if that is the case, what are the risk ratios that are gaining institutional acceptance? The Omega Function is at the top of the list, which provides a visual comparison of the distribution of returns of different assets.

Corresponding Omega Functions¹ for various assets are plotted on Exhibit 1 to compare their mean return, standard deviation, skewness and kurtosis. Standard deviations are limited to the mean return and variance around that mean return. They do not consider determining the extent to which an asset's returns are positively or negatively skewed or the fatness of the tails, thus indicating a riskier asset.

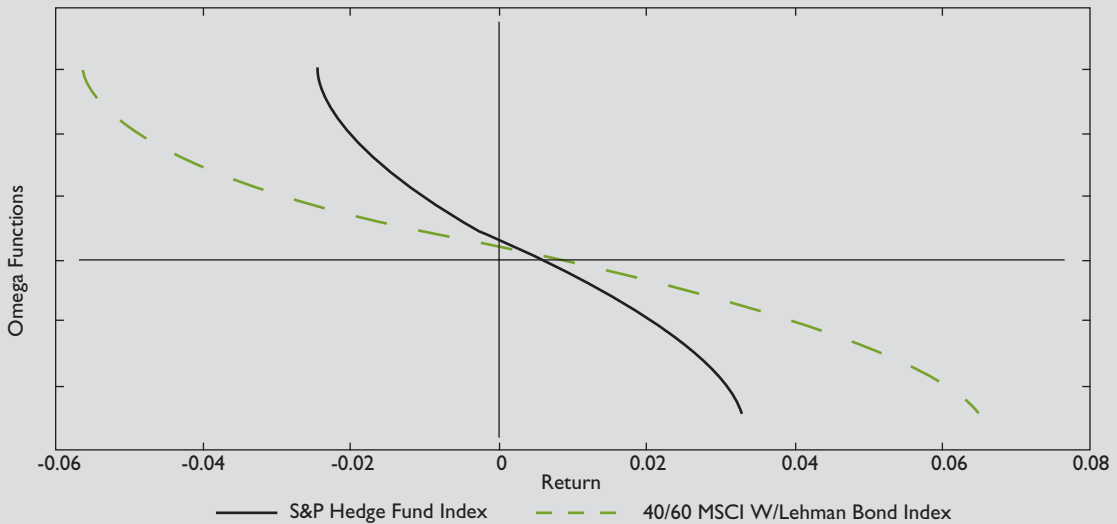
Omega Functions have the following properties:

- The point at which the Omega Function crosses the horizontal axis (X-axis) corresponds to the mean return of the asset.
- The overall steepness of the Omega Function characterises the volatility of the asset. The steeper the Omega Function in terms of its vertical distribution, the less volatile the asset's returns and the less possibility of extreme returns or losses.
- If the Omega Function of one asset is above the Omega Function of a second asset on the positive side of X-axis, it implies that the first asset has a distribution with heavier positive tail.
- The opposite is true if the first asset is below the second asset on the negative side of X-axis, indicating the first asset has a distribution with heavier negative tails.

If we compare the S&P Hedge Fund Index with a traditional benchmark, say 40% equity and 60% bonds (see Exhibit 1), one is able to take the skew and tails into account, and not only the mean average return and deviation around that mean average return. This is typically how a number of investment consultants will approach this kind of comparison, especially when a risk budget has been put in place, most often comprising a mix of traditional asset classes.

Omega Functions: S&P Hedge Fund Index vs. 40/60 MSCI World Bond Index (Sep-2002 - Jan-2005)

Exhibit 1



Source: Octane Fund Holding

- 40/60 MSCI World/Lehman Bond Index has slightly higher expected return than the S&P HFI (as measured by the intersection of the x-axis).
- 40/60 MSCI World/Lehman Bond Index has much higher standard deviation than the S&P HFI (as measured by the slope of Omega Function: the flatter the Omega Function the higher is standard deviation).
- S&P HFI provides much better downside protection (its Omega Function is above on the negative side).
- However, S&P HFI also has smaller upside potential (its Omega Function is below on the positive side).

Other risk/return characteristics that the investment consultants will look at will comprise the following on a fund by fund basis. Basic risk/return statistics:

- average return, standard deviation, skewness and kurtosis;
- rolling annual return and standard deviation;
- rolling Sharpe ratio;

- rolling alpha and beta with respect to a relevant benchmark (e.g. HFRI indices and MSCI World Index);
- rolling tracking error;
- VaR estimation;
- drawdowns: the largest historical drawdowns and the time to recovery; and
- correlations: funds are analysed according to their correlation to the major indices.

PORTFOLIO COMPLIANCE

Mandate compliance: are the specifics as set out in the mandate being followed? This is where the trustees and their consultants evaluate whether the fund of hedge fund manager is in fact adhering to what they said they would.

- clear investment mandates from clients (risk/return tradeoffs);

- strategy allocation bands/constraints;
- manager allocation bands/constraints;
- leverage policy;
- reporting formats;
- independent pricing;
- timeliness of reported NAVs;
- limits on large allocations to managers; and
- other agreed upon specifics with the clients.

STRESS TESTING

Trustees were caught by surprise in 2000 and 2001 when equity devaluations occurred across all the equity markets. As a result of this, a number of European pension funds now have to make close to an 80% return, in order to be restored to where they were before the peak of 2000. Given this, a number of European pensions are wanting detailed stress testing as well as some come of worst case scenario should things go wrong, or put differently, what the maximum loss will be in a worse case scenario.

This could be what happens if there is a catastrophic event such as September 11, a 1987, where there is a drop of 27% in the equity markets within a few days, or sovereign default by one of the emerging market countries. A number of models, both statistical and multi-factor, can be built to address these concerns.

TRANSPARENCY AND FEES

The old days where clients, particularly high net worth clients, settled for no transparency or black box type management are fast coming to an end. We are all aware that position level transparency at regular intervals is difficult to obtain, and that a number of hedge funds will tell you take your money somewhere else should you demand transparency. The new institutional types of monies can be seen demanding basic information, such

as daily estimated third party pricing and tailored reporting requirements. But many institutional investors will end up asking for position level information. And like all efficient markets, there will be a portion of the alternative industry that shall cater to the needs of these investors; it is a question for behavioural finance as to how this affects the high net worth investor, who may begin to demand similar information.

The pension fund allocation comes with a price tag. Fund of hedge fund fees shall be open to negotiation, given the size of assets in a single allocation. This focus on fees is the hammer of the consultants, for lowering fees is the simplest way to add value without too much risk!

SOFT ISSUES

How fund of hedge fund managers present themselves to trustee boards is often poorly understood and very often plays a meaningful part in how pension fund trustees' view the hedge fund industry. More specifically, the hedge fund product providers have done a very poor job in understanding and addressing the concerns of the institutional decision-maker. One would be surprised at the unanimity of issues raised by institutional decision-makers irrespective of their differing geographical roots.

Who are the decision-makers?

Trustees often have executive responsibilities relating to their business and are not full time investment professionals. Whilst the head of finance probably has a degree in accounting, he or she probably knows little about alternatives. Trustees do understand the traditional asset classes. When the hedge fund salesman starts with intensive industry jargon, he has lost the game. One needs to be humble and move up a rung on the jargon curve only when prompted. Bear in mind that trustees generally do not invest, if they do not feel comfortable that they have grasped the

investment strategy! Understanding is always the first step before relative evaluations can be performed.

Hedge funds as a fourth asset class

This adds to the mystique of the asset class which does not allow for decision-makers to grasp what this nebulous new asset class ultimately means.

Approaching hedge funds from the perspective of what decision-makers know makes more sense. They understand equities, bonds, value, growth, small, medium and large cap investing. Therefore, saying that hedge fund managers actually invest in these instruments can alleviate trustees' anxiety. One can then point out that the difference is merely that hedge funds have fewer rules and more flexibility to make money using the same instruments as traditional managers. Any trustee will understand these arguments and relate. This author heard a good analogy given to trustees when describing the differences between hedge funds and traditional asset management. Assume Tiger Woods has to play Ernie Els, and that Tiger only gets to choose two clubs with which to play. Ernie on the other hand has all the clubs available to him. Who has a better chance of winning? This analogy may appear to be inappropriate for a board of trustees, but it helps decision-makers in getting to grips with grasping the differences.

Hedge funds always make money in up and down markets

If only we had a dime for every time a hedge fund salesman makes that statement! It is critical to ensure that investors understand that hedge funds can make money irrespective of market direction, but hedge funds can also lose money. The message here is that the severity of the loss in a well-diversified hedge fund product is often insignificant when compared to other asset classes. A recent article from a highly respected financial journalist stated that the hedge fund industry has experienced three consecutive

losing months this year and seems to be in big trouble. The cumulative loss for that period was 1.6%. Wow – let's get real! But when the hedge fund industry sells itself as always making money, people misunderstand what to expect from hedge funds, especially during difficult markets.

The 'hedge fund bubble'!

Look what happened to the NASDAQ. The best way to address this nonsense is to use the same example of the NASDAQ. The NASDAQ was driven up by too much money chasing a number of stocks until valuations became stratospheric. What if too much money flows into hedge funds, will the hedge fund industry collapse by 50%? This theory is nonsense - the only result will probably be that hedge funds will underperform their long-term historical average.

There will be more blow ups in the future!

Of course there will be. With over 7,000 hedge funds out there, there will be some spectacular failures to come. Make sure the trustees understand this; so that when a hedge fund blows up the pensions do not all panic. It happens on the long only side all the time, WorldCom, Enron etc. Address expectations and cut some slack.

CONSULTANT BUY-IN!

The gatekeepers have been static, slow movers in the alternatives area. This makes good business sense. The consulting community is being asked to do more work for the same monies, effectively being asked to assume more risk for the same return. It is no wonder that consultants do not wish to strongly endorse alternative investments. The alternative industry must embrace these investment kin and be their right hand, sharing some of the financial burdens placed by pension funds without compromising the independence of the consulting cousins.

CONCLUSION

So what are the salient points a reader should take from this article?

1. There is a seismic shift occurring in the type of assets being managed in the hedge fund business, from high net worth to pension fund assets.
2. The basic investment needs of the new monies are driven by liability planning.
3. The key factors for pension funds' investments are compliance, reporting, and a risk-driven approach.
4. The hedge fund industry is being re-branded by the new inflows, from being an exotic factor to being a familiar component of a well-diversified portfolio.
5. Portions of the hedge fund industry will respond to the needs of pension funds while other sections will not, yet these new client requirements will loom over all hedge fund providers.

Pension fund trustees' view on risk fundamentally alters the manner in which hedge fund of funds manage their business.

Note:

1. William Shadwick "quote the name of the paper and organisation"



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