FULCRUM
Asset Management

ALTERNATIVE BETA – OR ALTERNATIVE BETA PLUS?

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February 2008

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1. Hedge funds have now arrived on the institutional investment scene, if not as an "asset class", then certainly as a core component of many pensions fund, insurance company and family office balance sheets. This is because they play a vital role in diversified asset portfolios -- they provide uncorrelated sources of return, and therefore shift the risk/return frontier in a desirable direction, compared with traditional portfolios which utilize nothing more than plain vanilla stocks, bonds, cash and real assets. Often described as providing equity-like returns with bond-like volatility, hedge funds have increasingly proved intoxicating for institutional managers who were previously concerned about their high fees, opaque governance and lack of liquidity. The arrival of professional institutional investors into the industry is testimony to the fact that hedge funds offer genuine benefits to diversified portfolios, but it has also led to a forensic examination of where these benefits come from, and whether they can be replicated without paying hedge fund fees.

2. In order to understand whether hedge fund-type returns can be acquired more cheaply than by investing in hedge funds themselves, we need to ask how the hedge funds derive their returns. Studies have shown that individual hedge funds, or funds of funds, provide clients with a mixture of genuine alpha and alternative beta. Both of these are valuable in a diversified bond/equity portfolio, since both improve the risk/return trade off. There is a debate about whether hedge funds create any worthwhile alpha over time. Our conclusion is that some of them do, though it takes skill and effort to find them, which is why the fund of fund industry can earn its fees. Genuine skill-based alpha is certainly the holy grail, since it is uncorrelated with anything else, and therefore it is worth paying a lot of money for this. However, alternative beta is also valuable, since many investors cannot do the things that hedge funds can do to access this beta. For example, hedge funds typically access more sources of risk, they use leverage, they use derivatives, and they trade extremely actively. Traditional portfolios have not in the past been able to take advantage of all of these opportunities.

3. Alternative beta is therefore valuable, but investors do not have to pay as much for this as they pay to access alpha. Extremely sophisticated investors might be able to develop strategies which access these returns directly, for example by creating their own currency carry strategies, or volatility trading strategies. Many investors, however, will not want to do this themselves, even though they have an appetite for cheaper access to hedge fund-type returns. This has created an opportunity for providers of passive "alternative beta" funds, which seek to replicate the return and risk characteristics of the hedge fund industry. The arrival of these passive funds is analogous to what happened in the long only world in the 1970s, when indexed funds began to grow at the expense of active equity managers. Investors

recognised that beta is an essential ingredient of any portfolio, but that you do not have to pay as much for it as you pay for alpha. Therefore passive products developed to provide beta more cheaply than active managers, and these products now account for as much as 25% of the entire industry in equity management.

4. The same is now starting to happen in the hedge fund universe. Passive alternative beta products can potentially provide some of the same benefits for balanced portfolios which have until now been available only through buying hedge funds directly. However, the playing field is only now beginning to take shape, and passive hedge fund strategies are far more complex, and controversial, than indexing strategies in the long only space. This is in part a reflection of the relative immaturity of the hedge fund industry, and in part a consequence of the huge variety and complexity of hedge fund strategies, compared to the long only world.

5. There are two main approaches for acquiring alternative beta in a passive manner. The first is hedge fund replication via regression techniques. This takes a few generic sources of risk, usually around 5 to 10 (including equity risk and bond duration risk), and regresses hedge fund returns over the previous 24 months against these risk streams. The weights derived from this regression are then used to construct a portfolio for the month ahead. The advantage of this approach is that it is simple, and enables the fund provider to construct a very liquid fund which holds many of the risks which hedge funds may be holding at any given point in time. However, the approach also has considerable disadvantages. The regression technique is backward looking, so there is no guarantee that the hedge funds are still holding the risks which the technique suggests. For this reason, it will probably not do very well at market turning points, when real life hedge fund managers may switch out of risk streams more rapidly than the technique can cope with. In addition, the risk streams which are actually held by the hedge fund industry may be much more complex than the simple replicators typically include. For example, they may well create non linear relationships between hedge fund returns and the market risk streams. In practice, we have found that regression techniques have worked fairly well since 2004, when risk assets have been rising strongly, with only a few interruptions, but the technique did not work equally well for several years before that. We find this very worrying.

6. The second approach is the risk stream approach. This does not attempt to replicate returns on a month by month basis, but does attempt to produce a similar or better pattern of returns and risk than hedge funds over a period of quarters. The risk streams used in this approach are usually greater in number than in the regression approach, and are often far more complex, involving non linear techniques or derivative overlays to try to match or improve upon the risk/return pattern of hedge funds over lengthy periods of time. There is no “industry standard” determining which risk streams should be included in these portfolios, or on how they should be weighted to construct a portfolio. The advantage of this approach is that it is possible to develop proprietary risk streams which are quite close to what the hedge funds do in practice, and to do this without paying high fees and with low trading costs. The disadvantage is that it is unclear how the weights on the risk streams should be initially set, and varied through time, though techniques are being developed to answer these questions.

7. Either of these approaches can be used to provide a passive "reserve asset" in the Harry Kat replication methodology. This combines the reserve asset with an investor’s original portfolio so as to replicate closely the risk characteristics of any given hedge fund, in relationship to the original portfolio. As Professor Kat will probably explain at the conference, this can be useful, if investors are eager to replicate the risk characteristics of a particular hedge fund over a period of time (though not on a month by month basis). However, in our opinion the methodology used to select the reserve asset is more important than the precise replication of a hedge fund's risk/return/correlation pattern, because most investors care more about good returns than they do about exact replication. You can only achieve both if you select the right reserve asset to use in conjunction with the Kat methodology.

8. So far, all of the approaches discussed have tried to replicate or replace hedge funds’ alternative beta in a fairly passive way, without making any attempt to improve the risk/return characteristics of the fund by replicating the trading skills which can often create positive alpha in real hedge funds. This amounts to an admission that human trading skills cannot be easily replicated. However, it may be possible to achieve at least some of the advantages of the best human traders by designing trading algorithms which are typically used in systematic trading funds. These tend to rely on asset price momentum of various types, volatility and stop loss signals. If we include trading systems in the portfolio which utilize

these rules for a large selection of the most commonly traded assets in the hedge fund universe, we may be able to create some trading alpha to add to the passive alternative beta risk streams which are already included in many replicators. This represents the "plus" in "alternative beta plus". Apart from providing a new source of returns for the replicator, the inclusion of these trading rules enables the fund to shift its risk among asset classes and among individual assets in ways which are flexible, and which mimic the actions of intelligent human hedge fund managers. For example, when Brazilian equities are a hot asset class, they are likely to be selected by these trading rules, and when a risk melt-down is taking place, the trading rules will rapidly shift risk back towards cash (as they did in August 2007).

9. After experimenting extensively with all of these approaches, Fulcrum's FAB+ fund (UCITs 3) has been introduced to replace some of the risk which asset allocators may otherwise devote to actual hedge funds. In FAB+, we have included a large number of alternative beta risk streams, suitably weighted together, and have also included a portfolio of assets which are selected by active systematic trading strategies. We believe that this approach is able to improve upon the major hedge fund indices over time, both in terms of overall returns and Sharpe ratios. Because the approach includes all of the major passive strategies which hedge funds use, and because it systematically varies risk between and inside asset classes, we believe that it avoids some of the disadvantages of competing methodologies. On top of these advantages, the fund is highly liquid, and intends to charge much lower fees than hedge funds or fund of funds.

10. Will alternative beta funds replace either direct investments in hedge funds, or indirect investments via fund of funds? We would argue that all of these investment approaches are likely to find a role, and indeed are likely to grow in parallel relative to traditional assets like bonds and equities. The alternative beta funds have considerable advantages over other hedge funds, including lower fees, better netting of fees, greater liquidity and greater transparency. However, portfolios of actual hedge funds may have advantages of their own, including diversification of individual fund risk, greater likelihood of achieving alpha, and a greater ability to react quickly to the emergence of new opportunities. There is no reason to suppose that any of these approaches will become so dominant that it will knock out all of the others.

February, 2008