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## Risk Management for Hedge Funds

The need for a set of risk management protocols specifically designed for hedge fund investments has never been more pressing

Despite ongoing concerns about the lack of transparency and potential instabilities of hedge fund investment companies, the hedge fund industry continues to grow at a rapid pace. Fuelled by the prospect of double- and triple-digit returns and an unprecedented bull market, investors have committed nearly US\$500 billion in assets to alternative investments, and major institutional investors such as the trend-setting California Public Employees Retirement System are now taking an interest in this emerging asset class. However, many institutional investors are not yet convinced that “alternative investments” is a distinct asset class, i.e., a collection of investments with a reasonably homogeneous set of characteristics that are stable over time. Unlike equities, fixed income instruments, and real estate—asset classes each defined by a common set of legal, institutional, and statistical properties—“alternative investments” is a mongrel categorization that includes private equity, risk arbitrage, commodity futures, convertible bond arbitrage, emerging market equities, statistical arbitrage, foreign currency speculation, and many other strategies, securities, and styles. Therefore, the need for a set of risk management protocols specifically designed for hedge fund investments has never been more pressing.

Part of the gap between institutional investors and hedge fund managers is the very different perspectives that these two groups have on the investment process. The typical manager’s perspective can be characterized by the following statements:

- The manager is the best judge of the appropriate risk/reward trade-off of the portfolio, and should be given broad discretion in making investment decisions.
- Trading strategies are highly proprietary and, therefore, must be jealously guarded lest they be reverse-engineered and copied by others.
- Return is the ultimate and, in most cases, the only objective.
- Risk management is not central to the success of

a hedge fund.

- Regulatory constraints and compliance issues are generally a drag on performance; the whole point of a hedge fund is to avoid these issues.

- There is little intellectual property involved in the fund; the general partner is the fund.

Contrast these statements with the following views of a typical institutional investor:

- As fiduciaries, institutions need to understand the investment process before committing to it.

- Institutions must fully understand the risk exposures of each manager, and may have to circumscribe the manager’s strategies to be consistent with the institution’s investment objectives.

- Performance is not measured solely by return, but also includes other factors (i.e., risk, tracking error relative to a benchmark, and peer-group comparisons).

- Risk management and risk transparency are essential.

- Institutions operate in a highly regulated environment, complying with a number of federal and state laws governing the rights, responsibilities, and liabilities of pension plan sponsors and other fiduciaries.

- Institutions desire structure, stability, and consistency in a well-defined investment process that is institutionalized, not dependent on any single individual.

While there are exceptions to these two sets of views, they represent the gap between hedge fund managers and institutional investors. Despite these differences, they have much to gain from a better understanding of each other’s perspectives, and they do share the common goal of generating superior investment performance for their clients.

The dialogue between hedge fund managers and institutional investors can be enhanced by looking at



several key aspects of risk management for hedge funds:

1. Value-at-Risk and other traditional risk management tools were originally developed for over-the-counter derivatives portfolios and are not sufficient for capturing the myriad risk exposures of hedge fund investments.

2. Hedge fund strategies are typically highly dynamic, hence their risk exposures can change dramatically in response to market conditions. This can lead to unusual types of risks, i.e. a “short put-option” type of exposure in which a strategy is profitable most of the time, but every so often suffers extreme losses. Although these unusual risk exposures are not necessarily inappropriate for some investors, proper disclosure of such exposures is critical.

3. An important selling point for alternative investments is their typically low correlations with traditional market indexes such as the S&P500. However, correlations are linear measures of association that ignore certain nonlinear relations often present among hedge-fund investments. One example is “phase-locking behaviour” in which correlations change substantially in response to market conditions – after the default of Russian government debt in August 1998, the ensuing global flight to quality created widespread positive correlations between otherwise uncorrelated assets. These kinds of nonlinearities should be incorporated into any risk analysis of hedge fund investments.

4. Hedge fund investments present other types of risks that have not yet been subject to quantitative measurement. Liquidity risk, event risk, operational risk, and political risk are key factors for certain hedge fund strategies. For some funds, they are the dominant factors driving performance.

5. Alternative investments are not appropriate for everyone, hence investors considering such investments should reflect on their own risk preferences and those of the individuals for whom they are fiduciaries. This can be a valuable exercise due to the insights that often result from a systematic re-examination of one’s appetite for risk, tolerance for losses, and financial objectives.

Although addressing these issues will create new challenges for the management of alternative investments — some of which are yet to be resolved, even among the most advanced research groups in academia and industry—this also represents an enormous growth opportunity for the industry. As Albert Einstein once replied when criticized for the complexities of his theory of relativity, “A theory should be made as simple as possible, but not simpler.” The same can be said for the risk management of hedge funds. ■

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