Evolution of Risk

HEDGE FUNDS EXAMINED
BY SARA GRILLO
Evolution of risk in the hedge fund industry.

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Since the first funds appeared in 1949 to the advent of hedge fund giant George Soros in 1969, the boom of the late 1990s and the bust of the early 2000s, few sectors have seen more change than the hedge fund industry. With tenfold growth over the last decade, hedge funds are becoming more than just an investment vehicle for high net worth spending money. Attitudes towards hedge fund risk are poised to change, and the evolution will have positive results for the industry. This paper will examine proposed improvements in risk measurement, as well as the consequences of risk on portfolio performance. We predict that regulatory scrutiny will be the catalyst that forces risk levels down and ultimately drives the industry toward a period of maturity. Within this more stable environment, inflows from retail and institutional investors will surge, leading to the emergence of hedge funds as a more popular investment choice amongst the investing public.

Strong Demand

The retailisation of the hedge fund industry has created a preponderance of SEC-registered 1940 Act vehicles. Many advisors are hoping to market their funds with lower investment minimums by couching the offering within a 1940 Act open-end or closed-end mutual fund vehicle. This would allow investment minimums to hover as low as $25,000, which increases distribution potential. This structural innovation is a sign of increased demand from the investing public. The most important driver of growth in the hedge fund industry will be the throttling demand from institutional investors such as pension funds and endowments. Of the $52 trillion of financial assets that exist worldwide, $25 trillion of that is institutional money. The burst tech bubble has left many defined benefit plans facing lackluster equity returns and bulging pension benefit obligations. They look to hedge funds to come to the rescue with potentially stable returns hedged from market downturns. Experts project that institutional cash flow to the industry will increase from $60 bn to $300 bn within five years.

While hedge funds may seem fortuitously poised to capture surging institutional demand, the challenge is risk. Most pension funds do not trust or understand the hedge fund industry. In a 2003 survey of US plan sponsors conducted by Fidelity Investments, 56 per cent of plan sponsors that invest in alternative investments say they “do not understand the risks they are taking.” Hedge fund and pensions are at odds in other ways; hedge funds often fail to meet a fiduciary’s need for complete transparency, low management fees, seamless client service, and strong operational and risk controls. The need for transparent and understandable risk monitoring is a call that hedge funds must hear and respond to.

The Risk Obstacle

Events such as the collapse of Long Term Capital Management and the Asian currency crisis in the late 1990’s have cast doubt on the integrity of the industry as a whole. The true performance of hedge funds is often obscured by the flaws in the statistical parameters that define it. As a result, due diligence in the hedge fund industry is highly qualitative and even the most trustworthy of parameters can be gamed. The articulation of risk in this dynamic industry is a virtual Christmas tree of confounding factors: lack of legal constraint, suboptimal performance reporting standards, and inadequate risk measures. Hedge fund managers are free from many of the legal constraints that regulate other vehicles such as 1940 Act registered mutual funds. Prospectus requirements that would protect a mutual fund investor are not present, creating a virtual “black box” of investment policy. The investor must rely completely on the discretion of the manager to decide how the underlying investment is weighted, or the degree of leverage. Moreover, the lack of a prospectus-defined investment allocation erodes the predictive value of any historical risk measure.

Manager opinion can present a large risk as diversification may be compromised and allocations can change freely. The individual nature of these investments obscures trends and leads to low fund correlations across and even within categories. Lack of performance standards detracts from reporting credibility. Indices are replete with survivorship and selection bias. Many times only the performance of surviving hedge funds is recorded. The indices that do exist, CSFB Tremont for example, can only offer data from managers who have opted to report. The Darwinian result is a possible upward bias in data measurement that could potentially skew investment performance. Industry experts hypothesise that this bias could be as much as 3 per cent annually, which is significantly misleading to a retail investor. Additionally, the surge of fund launches in the early 2000s has created a plethora of young funds, many with track records of less than four years. The performance of these funds may be skewed by lack of persistent market conditions over the period. There is a need for industry standards to eliminate these biases. Risk metrics themselves fail to capture the true nuances of these funds and bias can plague even correctly calculated measurements. Multicollinearity may undermine diversification, particularly in a Fund of Funds where the underlying managers may be subject to common risk factors. Traditional linear measures such as VaR misstate or fail to capture this risk at all. Leverage causes non-linear exposure to risk factors, which distorts risk statistics. Moreover, intentional manipulation can occur. For example, hedge funds have figured out how to use derivatives to optimise the Sharpe Ratio. Effectively truncating the right tail of their return distribution and shifting this return to worse performing periods, they can smooth volatility while keeping total return constant. Quantitative measures such as stress testing, Monte Carlo simulations, and scenario analysis are necessary tools to understand the reality of hedge fund risk.

We predict that regulatory scrutiny will be the catalyst that forces risk levels down and ultimately drives the industry toward a period of maturity.
**Striving for Normalcy**

Industry experts have recommended several risk parameters that may capture risk more accurately. One such metric, the Bernardo-Ledoit Gain-Loss Ratio, is “the ratio of the expectation of the positive portion of the returns divided by the expectation of the negative portion.” This measure would be more predictive than the Sharpe Ratio because of its forward-looking nature. Others suggest weighting funds by beta, which forms a “BVAR,” or Beta and Volatility Adjusted Returns ratio. This enables “a fund that has a lower return but is uncorrelated to the market [to] be appropriately compared with a fund that achieves a higher return but is highly correlated with the market.” Academics have also proposed a Conditional VaR measurement, which would express the likelihood that an expected loss would occur in an amount greater than the VaR. We should perhaps consider estimating a fund’s risk by analysing its style. By evaluating the historical cal布 of certain style categories, perhaps we can reach a more accurate measure of the true risks associated with each style. We may adjust the positive bias present in statistical parameters that define it. Carlo analysis, and VaR suffer equally as deleterious pitfalls.

**Inevitable Collapse in the Long Term**

Herzberg and Mozes’ research would imply that risk and return levels in the hedge fund industry are headed for mean reversion as regulators catch on to hedge fund shenanigans. As the SEC requires hedge fund registration by February 2006, data vendors will be exposed to more information which they will sell to the investing public. As reporting becomes more standardised, the value of being a younger or smaller fund will erode. Informational inefficiencies will be harder to identify and exploit. We may predict that the value of size and age factors will erode, and the level of risk will emerge as the dominant factor in determining performance. Consequently, skill-focused managers will persist over bet takers, driving down volatility levels. Volatility will decrease, and the industry will segregate into broad style categories, much as the mutual fund industry has done.

This reversion to mean standards will only occur after an equilibrium point is reached. Growth in international demand will occur from privatisation of pension schemes in Europe and Asia. Exposure to more trustworthy data will lead retail investors to feel more confident investing in hedge funds. As institutional and retail investment surges, new funds will launch. New players will enter the foray until the industry arrives at a saturation level where the capital supply is exhausted.

Market efficiency will result, with profits levelling off, eventually causing firms to merge and the weaker players to exit. The industry will bifurcate into smaller niche funds and large investment houses. This will be the ultimate maturity level at which the asset class will persist in the long term.

**Conclusion**

The show is not over yet. In fact, it is just beginning. As attitudes towards risk evolve, there is still plenty more room for the industry to grow. Although industry scandals have left many investors sceptical, as risk and return levels converge, market participants will begin to believe that risk and return will be appropriately compared with a fund that has a lower return but is uncorrelated to the market. Increased scrutiny by industry watchdogs will lead to the normalisation of risk and return, which will ultimately decrease the level of hedge fund volatility. As volatility levels normalise, hedge funds will become more popular with retail investors and pension funds. This surge in demand will propel the industry through its lifecycle until it reaches its ultimate maturation level.

Regulatory developments and their effect on risk will be the catalyst that leads to the emergence of hedge funds as a prominent investment option amongst the investing public at large.

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**References**

We at Rochdale Investment Management congratulate our colleague Sara Grillo on her prestigious award in the Investor Services Journal Essay Competition. Ms. Grillo is an integral member of the team of investment professionals conducting due diligence for Rochdale’s alternative investment offerings.

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