RISK MANAGEMENT IN HEDGE FUND

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TABLE OF CONTENT

1. INTRODUCTION: RISK MANAGEMENT IN HEDGE FUND
2. TYPES OF RISK IN HEDGE FUND
   2-1. PORTFOLIO RISK
   2-2. COUNTERPARTY RISK
   2-3. OPERATIONAL RISK
3. CONCLUSION
4. REFERENCES
1. INTRODUCTION: RISK MANAGEMENT IN HEDGE FUND

Risk management is an essential part of hedge funds that have consistent return and longevity as its core principles. Hedge fund industry is synonymous with absolute returns, regardless of the overall market conditions. That was until the recent financial meltdown and demolition of hundreds of hedge fund has forced many hedge funds to monitor and assess the opposite of return---risk.

While the goal of most hedge funds remains maximizing returns, the importance of mitigating risk should not be overlooked. Classic examples while risk management is more valuable in long-run than absolute return objective, is the story of Madoff Fund, Long Term Capital Management and Tiger Fund---the massive losses proved to be their demise and showed that achieving absolute returns without proper risk management is bad strategy for hedge funds, hedge fund institutional investors, and managers alike.

Originally hedge funds were in practice of hedging or reducing risk but the purpose of most hedge funds is to maximize return on investment. In fact, the name hedge fund is a reference to the first hedge funds’ attempt to hedge against the downside risk of a bear market by shorting the market. However is no longer appropriate to say that hedge funds hedge against risk; because hedge funds use different strategies and given that managers make speculative investments, hedge funds can potentially be riskier than the overall market. The thought that all systematic risks are diversified away doesn’t relate to hedge funds, with the Hedge Fund returns, in reality, representing a combination of superior management of market inefficiencies and careful exposure to some specific systematic risks. Thus, only the systematic risks that are unattractive from a strategic stand point are diversified away. In essence, hedge funds, in actuality, are not wholly hedged.

Furthermore, the sufficient measure in terms of risk management exposure moves from the area of excess risk in comparison to a benchmark to a total risk approach. Total return here is what matters for managers and investors and not a comparison of the hedge fund performance to some benchmark, like in other types of funds. The poor risk management of hedge fund industry has led to increasing demand of oversight by the public, government and investors. The regulation of hedge fund industry that’s worth $2.5 trillion at its peak in 2008 is still an issue that has no resolution in sight. Since the invention of hedge fund by Alfred Jones in 1948, in an effort to maximize returns, many funds turned away from Jones’ strategy (stock picking coupled with hedging) and chose instead to use riskier strategies based on long-term leverage. These tactics led to heavy losses in 1969-70, followed by a number of hedge fund closures during the bear market of 1973-74. In 1998, Long Term Capital Management collapsed, followed by another massive collapse and fraud conviction of Bernard Madoff Investment Securities in 2008.
As the media focused on the recent failure of some hedge funds, there has been an increasing move towards their regulation. In 2004, the Securities and Exchange Commission adopted changes that require hedge fund managers and sponsors to register as investment advisors under the Investment Advisor’s Act of 1940. This greatly increases the number of requirements placed on hedge funds, including keeping up-to-date performance records, hiring a compliance officer and creating a code of ethics. All hedge funds that fall under the new SEC rules must be registered by Feb 1, 2006. The requirement, with minor exceptions, applied to firms managing in excess of US$25,000,000 with over 14 investors.

The new rule was controversial, with two commissioners dissenting. The rule change was challenged in court by a hedge fund manager – Phillip Goldstein, and in June 2006, the U.S. Court of Appeals for the District of Columbia overturned it and sent it back to the agency to be reviewed. Although the hedge fund industry won the ruling on regulation, the question now, is it for better or worst; given the massive losses and fraud cases in the hedge fund industry?
2. TYPES OF RISK IN HEDGE FUND

There are three major types of risk commonly associated with the hedge fund industry:
1) Portfolio risk
2) Counterparty risk and
3) Operational risk.

2-1. PORTFOLIO RISK

The risk that is related to a portfolio or grouping of assets. Portfolio risk or market risk is the risk of monetary loss arising from an adverse move in market prices or rates (includes traded credit risk). It refers to the risk common to all securities - except for selling short as noted below, systematic risk cannot be diversified away (within one market). Within the market portfolio, asset specific risk will be diversified away to the extent possible. Systematic risk is therefore equated with the risk (standard deviation) of the market portfolio. An investor can reduce portfolio risk simply by holding combinations of instruments which are not perfectly positively correlated (correlation coefficient -1<r<0). In other words, investors can reduce their exposure to individual asset risk by holding a diversified portfolio of assets. Diversification will permit for the same portfolio return with reduced risk.

The current market volatility uncovered some of the disadvantages of the legacy technology used by many hedge funds to identify their portfolio risk. Managers were forced to navigate the markets with systems that could only offer old-fashioned views (typically end-of-day reports) of risk and return. These legacy portfolio management systems struggle with real-time reporting because they pre-date the invention of the FIX (Financial Information Exchange) protocol and therefore cannot display the synchronized impact of executions on a fund's risk and return profile. This lack of real-time transparency can no longer be tolerated. Instantaneous portfolio management systems place the FIX protocol at the center of their activities and ensure that a manager has an execution-by-execution real-time view of risk and return.
Counterparty risk is the risk to each party of a contract that the counterparty will not live up to its contractual obligations. Counterparty risk as a risk to both parties and should be considered when evaluating a contract. Counterparty risk, otherwise known as default risk, is the risk that an organization does not pay out on a credit derivative, credit default swap, credit contract, or other trade or transaction when it is supposed to. Even organizations who think that they have hedged their bets by buying credit insurance of some sort still face the risk that the insurer will be unable to pay, either due to temporary liquidity issues or longer term systemic issues.

Large insurers are counterparties to many transactions, and thus this is the kind of risk that prompts financial regulators to act, e.g., the bailout of insurer AIG. The failure of Bear Stearns and Merrill Lynch, and the bankruptcy of Lehman Brothers in 2008, immediately brought the issue of counter-party risk to center stage. Overnight multiple prime broker relationships have become a prerequisite for all funds no matter the size. To attract (or retain) assets a fund must now demonstrate that they have diversified their counter-party risk.

The operational complexity (and cost) involved in building a multi-prime infrastructure should not be underestimated (the requirement to collect and aggregate the disparate cash, position, and transaction information, across multiple custodians). Additionally, the infrastructure must be flexible enough to support new, in vogue, risk-reducing structures, such as tri-party arrangements and separately managed accounts. Counterparty risk can be affected by wrong way risk, namely the risk that different risk factors be correlated in the most harmful direction.
2-3. OPERATIONAL RISK

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. An operational risk is a risk arising from execution of a company's business functions. As such, it is a very broad concept including e.g. fraud risks, legal risks, business disruption and systems failures, physical or environmental risks, execution, delivery, and process management, employment practices and workplace safety.

It is relatively clear-cut for an organization to set and examine specific, measurable levels of market risk and credit risk. In contrast, it is relatively difficult to identify or assess levels of operational risk and its many sources. Traditionally organizations have accepted operational risk as an unavoidable cost of doing business.

Investors' operational due diligence has become gradually more stringent since the crisis. A fund must demonstrate that they have acquired an official middle and back-office functionality. Investors need to feel that the internal workings of the fund are completely transparent and that any area where there is potential for conflict (e.g. valuation or administration) is handled by an independent third-party.

Any implication that a manager is relying too greatly on unproven processes or unsuitable infrastructure, such as Microsoft Excel, will result in the investor simply moving on to the next investment opportunity. Hedge fund managers can reduce operational risk by being proactive not reactive, creating risk management culture, aligning interests (the “free put”), having independence and authority, and finally by establishing credibility and trust.
3. CONCLUSION

To address portfolio risk or market risk, hedge funds should look to use risk controls such as using trading limits; Risk-based; VaR, Stress. Nominal based risk control; Gross/Net positions, GMV, NMV, Concentration, and Liquidity. And the third trading limits risk control, P/L volatility related can be achieve through portfolio stop and drawdown. Sensitivities (e.g., bpv, options) can also help contain portfolio risk.

Portfolio risk can be monitor and reduced by having dialogue – which is more important than limits. Dialogues like; is that really correlated? Is it in the price already? Portfolio risk can diminish by reducing trading errors. Hedge funds can reduce portfolio risk simply by holding combinations of instruments which are not perfectly positively correlated (correlation coefficient $-1 < r < 0$). In other words, investors can reduce their exposure to individual asset risk by holding a diversified portfolio of assets. Diversification will permit for the same portfolio return with reduced risk.

Hedge funds can handle counterparty risk by establishing overnight multiple prime broker relationships, which have become a prerequisite for all funds no matter the size. To attract (or retain) assets a fund must now demonstrate that they have diversified their counter-party risk. Additionally, the infrastructure must be flexible enough to support new, in vogue, risk-reducing structures, such as tri-party arrangements and separately managed accounts.

Due to the relative difficulties involved in identifying or assessing levels of operational risk and its many sources. It is unacceptable for hedge funds to accept operational risk as an unavoidable cost of doing business. A fund must demonstrate that they have acquired an official middle and back-office functionality. Investors need to feel that the internal workings of the fund are completely transparent and that any area where there is potential for conflict (e.g. valuation or administration) is handled by an independent third-party. Hedge fund managers can reduce operational risk by being proactive not reactive, creating risk management culture, aligning interests (the “free put”), having independence and authority, and finally by establishing credibility and trust.

In order for hedge funds to implement a successful risk controls and risk management programs, hedge fund managers need to quantify or measure risk properly. The need for an initial and constant due diligence and managerial tracking surges as the most important issue from an investor’s or fund of funds' perspective. Here, the obligation of full portfolio transparency should be mandatory for the successful risk manager. Other types of risk commonly non-addressed through quantitative methodologies, (e.g. the liquidity barriers
established through long “lock-up” periods) can't also be underestimated. Once aware of the official conditions offered by a hedge fund manager, knowing your manager's style thoroughly and keeping frequent meetings and discussions based on updated full portfolio/single positions disclosures is the key to avoiding pitfalls as individual or institutional investors of hedge funds, funds of funds or funds of hedge funds. Finally, is essential that hedge funds control and manage their risks properly by hiring capable managers, who are able to understand range and magnitude of risks (Hidden risks such as equity factors), recognize what they don't know (Vol swap and economic derivatives), and most importantly capable of communicating issues clearly (how to say “no” and speaking the language in a sense).
4. REFERENCES


Hedge-fund investors and managers often dismiss risk management as secondary, with "alpha" or return as the main objective. However, if there is one lasting insight that modern finance has given us, it is the inexorable trade-off between risk and expected return; hence, one cannot be considered without reference to the other. This is summarized neatly in the old Street wisdom that "one of the best ways to make money is not to lose it." More formally, consider the case of a manager with a fund that has an annual expected return, $E[R]$, and an annual volatility, $SD[R]$, of 75 percent, a rather mediocre fund that few hedge-fund investors would consider seriously. Hedging and risk management; Margin trading in all liquid assets; Constant monitoring and expansion of the instruments spectrum. If the company deposits funds, for example, an insurance company or a financial company that makes loans or credits, it will enter into derivatives contracts to hedge against interest rates decline. Renesource Capital provides the opportunity to hedge interest rates risk using interest rates swaps, FRA (forward rate agreement) contracts, options and options strategies. Since Hedge Funds/Fund of Funds report on a monthly basis usually within 10 days after the month end, monitoring and managing (hedging) potential risks is quite a difficult task. Having done some research, there seems to be some solutions to this problem. Let's just say that there is a FoF, under which there are around 50 HF s with different strategies. Managing risk can be done on a FoF level as well as on each HF level. The latter is more tedious but offers better understanding (as in if a particular HF is a Long/Short Equity fund, its obvious that they are exposed to equity risk). Thus Hedge funds offer great opportunities for those who can afford to invest in them, but what strategies do the fund managers use? Find out in this guide. These can become highly profitable investment vehicles when managed carefully and, to do this, hedge fund managers use a number of trading strategies that we'll go on to examine so you can learn from them too. But first, a little about the history and nature of hedge funds. The very first of these was launched as an experiment as long ago as 1949 by a man called Alfred Winslow Jones through his business A.W. Jones & Co. He wanted to explore whether it would be effective if he balanced the holding of long-term investments with short-selling other, poorly performing, stocks. Hedge fund managers are in charge of the investments made by their hedge funds. For hedge fund managers to be successful in business, it is important that they come up with a competitive advantage which is to have a well-defined investment strategy. By using this technique, they can get a high amount of capital, a great marketing plan and a workable risk management plan. Those who become successful in the hedge fund ventures make quite a large sum of money. Here are the highest-paid hedge fund managers as of a financial assessment conducted on February 1, 2017. The list comes in a descending o