



MITIGATING HEDGE FUND OPERATIONAL RISK REQUIRES DILIGENT ATTENTION

By Mathieu Larochelle, CAIA
Senior Hedge Fund Research Analyst

Start-up hedge fund managers are typically small businesses trading complex and illiquid financial instruments. Pioneers in financial engineering, empowered with broad investment mandates, hedge funds have been known to trade arcane securities and derivatives such as ASCOTs (asset swapped convertible option transactions), CoCos (contingent convertibles), EETCs (enhanced equipment trust certificates), life settlements, and credit default swaptions. Separately, while the individuals running these firms might have accumulated a stellar track record in terms of investment performance, they may have little to no experience running a business, having likely worked under the umbrella of large financial institutions with significant resources. Segregation of duties between the front office, back office and compliance functions is of crucial importance in a hedge fund, much like in any asset management firm.

While much has changed in the last few years through institutionalization of processes and advancements in technology, investing in hedge funds, like other investment structures, still carries a level of investment and operational risk. The objective of this article is to explain operational risk, show the evolution of operational due diligence (ODD) and demonstrate the importance of ODD in the manager selection process. We also explore two key areas of a typical ODD review.

Defining operational risk

Stemming from many sources, operational or non-investment risk has been defined by *The Basel Committee on Banking Supervision* as “the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.” Therefore, operational risk can be qualified as both internal and external to the firm. Internal risks include business risk, system risk and valuation risk, while external risks encompass service provider risk, counterparty risk, regulatory risk and reputational or headline risk.

Investors can never completely inoculate themselves from

operational risk. However understanding, mitigating and monitoring the source of such risks is key to a successful ODD program.

Operational risk failures

ODD gained prominence over the years following some catastrophic operational failures among hedge funds, including Bayou, Lancer, Lipper, Amaranth and Long-Term Capital Management, culminating with the Bernard Madoff Ponzi scheme in 2008. Historically, research¹ has shown that the most common causes of operational failure were “theft and asset misappropriation”, followed by “existence of assets” where the manager owns bogus securities, i.e., reported assets do not exist and redemptions are funded with subscriptions. Surprisingly perhaps, the most common hedge fund strategies vulnerable to operational failure are long/short equity followed by managed futures. Traditionally, investors have viewed holding largely liquid, exchange-traded securities as straightforward with low operational risk, but this clearly isn’t the case.

A 2003 *Capco Institute* study of hedge fund blow-ups found that 50% of hedge fund failures occurred because of operational issues and 6% failed due to business issues—compared to 38% that failed because of investment risks². Despite the well-publicized and, at times, spectacular failures, fraud is not widespread across the hedge fund industry and these cases are still relatively rare.

The Madoff crisis pushed operational risk front and center for institutional investors who were previously reluctant to embrace the benefits of ODD due to high costs. Today, ODD is an integral and necessary part of the manager selection process.

Where does ODD fit into the selection process?

The evaluation of a hedge fund involves two main areas: investment due diligence and ODD.

While there is some overlap, the objective of investment due diligence is to determine whether or not the firm has

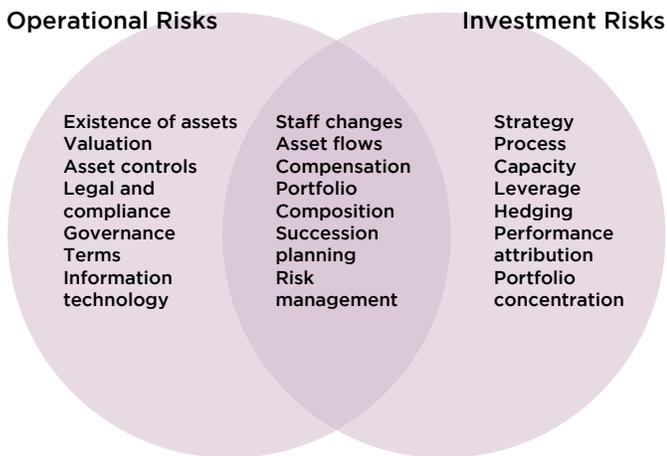
¹Castle Hall Alternatives , From Manhattan to Madoff: The Causes and Lessons of Hedge Fund Operational Failure 2009. Retrieved from: <http://www.opalesque.com/files/ManhattantoMadoff.pdf>

²Feffer. S., and C. Kundro, 2003, ‘Understanding and mitigating operational risk in hedge fund investing,’ white paper series, Capco Institute, March 2003.

a sustainable edge within its strategy. This is accomplished by reviewing the investment team, process and track record. In comparison, for the operational component, the objective is to evaluate, irrespective of performance, whether a hedge fund manager has taken adequate steps to mitigate operational risks surrounding its business, the management of its funds and whether the funds are subject to appropriate external oversight.

Investment due diligence and ODD must always be conducted separately. However, given the overlap between the two and the desire for increased efficiency (see Figure 1), it is advisable to initiate the ODD process as early as possible in the manager selection process. Identifying problems early in the process gives the manager time to make any required improvements and thus improve the prospect of being approved. Effective communication between members of the investment due diligence and ODD teams is of paramount importance throughout the process.

Figure 1: Overlap examples between operational and investment due diligence



Conducting ODD

ODD on prospective managers should be tailored, with more attention directed towards managers deemed as “higher risk”, such as hedge fund managers with:

- i) little or no track record;
- ii) using unrecognized service providers; or
- iii) with low assets under management (< \$500 million).

As part of the process, the ODD practitioner must review firm and fund documentation, conduct an on-site interview at the manager’s offices and perform a service provider check, as appropriate. A list of sample topics discussed during the interview is found in *Figure 2*. All findings must be documented and discussed with the investor’s investment

committee, with the operational team having the ability to veto a potential allocation or force a redemption due to unresolvable operational concerns.

Figure 2: Sample list of topics discussed in an ODD interview

- Financial Viability
- Service Providers
- Internal Capital
- Back Office Structure
- Key Person Risk
- Succession Planning
- Compensation
- Compliance Infrastructure
- Regulatory Inspections
- Background Checks
- Side Letters / Preferential Terms
- Corporate Governance
- Portfolio Accounting / Trade
- Information Technology
- Employee Turnover
- Reconciliation
- Managed Accounts
- Trading Controls
- Asset Controls
- Fees and Expenses
- Affiliated Businesses
- Valuation and Net Asset Value Calculation
- Fund Organizational Structure

External controls

The basic tenets of a review revolve around establishing and understanding key business risks, asset existence and the corresponding valuation of the fund’s assets and liabilities.

To prevent fraud at the fund level, investors must satisfy themselves by answering the following basic questions:

1. At each net asset value calculation period, can the third-party administrator independently prove that the assets exist?
2. Can the pricing inputs for each position in the portfolio be vouched for by the fund administrator independently from the manager?
3. Are there adequate controls over cash transfers for the fund?

There are three main external controls over a hedge fund’s operations: the fund administrator, the auditor, and corporate governance (the fund’s board of directors, or the advisory committee of the general partner or managing member depending on the entity’s structure).

While offshore hedge funds have engaged an independent fund administrator in some capacity for years, only following the Madoff scandal has it become the norm for U.S.-domiciled hedge funds to engage a third-party administrator. These third parties oversee tasks such as investor subscriptions (including anti-money laundering and know your client procedures), portfolio accounting and reconciliation, NAV calculation, share registration/capital accounting records and valuation. As an example of the rising importance of the hedge fund administration business, Figure 3 provides a list of the largest fund administrators

Two areas of an ODD review: valuation, and fees and expenses.

Valuation

Understanding where the valuation risks lie for complex strategies is key to the ODD process. Valuation risk can be quantified by looking at the percentage of the portfolio that cannot be priced independently by the external fund administrator, such as “hard to value” assets where there is no direct observable market input (commonly referred to as Level 3 assets under the U.S. GAAP ASC 820 accounting framework). No one will argue the price source of Apple common shares, but private or other assets with no significant pricing input can be significantly more challenging to value. Following the credit crisis, many hedge funds have notably reduced or eradicated the percentage of their portfolios attributable to such illiquid assets. Alternatively, managers have elected to place these assets in side pockets (which cannot be redeemed by the investor until a realization event) from which the investor can usually elect to opt out.

Broadly, the ODD practitioner must examine the valuation process from two perspectives: that of the hedge fund manager and of the independent fund administrator appointed to the fund. It is important to compare and contrast the two perspectives to identify any servicing gaps or inconsistencies.

At the manager level, the ODD process involves reviewing the firm’s valuation policy to ensure that 1) internal and external roles are defined and 2) a pricing matrix addresses all portfolio asset types present in the portfolio. Additionally, it should be noted if the hedge fund manager has established a valuation committee to oversee the pricing process. If so, the ODD process should evaluate the committee’s involvement and practical independence from the portfolio management team. Next, the ODD practitioner should attempt to understand the actual day-to-day valuation process. Who has practical responsibility? Is the valuation process

Figure 3: Direct hedge funds - The largest fund administrators as of Q4 2013

Hedge Fund AUA Q4 2013	HF AUA (USD B) Q4 2013	Growth since Q2 2013	Hedge Funds	Average Fund Size (USD M)
State Street Alternative Investment Solutions	\$ 708.00	3.81%	2,100	\$ 337.14
Citco Fund Services	\$ 576.00	8.27%	1,437	\$ 400.84
BNY Mellon Alternative Investment Services	\$ 464.65	7.09%	1,878	\$ 247.42
SS&C GlobeOp	\$ 436.00	10.38%		
Citi	\$ 297.73	20.03%	1,007	\$ 295.66
Morgan Stanley Fund Services, Inc.	\$ 196.40	14.21%		
Northern Trust ¹	\$ 154.15	-2.89%	783	\$ 196.87
HedgeServ	\$ 138.00	10.40%		
SEI	\$ 129.80	11.61%		
J.P. Morgan Global Fund Services ²	\$ 108.99		350	\$ 311.39
Mitsubishi UFJ Fund Services	\$ 93.00		601	\$ 154.74
U.S. Bancorp Fund Services, LLC	\$ 54.32	6.89%	703	\$ 77.27
BNP Paribas Securities Services	\$ 41.89	0.12%		
NAV Consulting ³	\$ 39.26	1.32%	560	\$ 70.11
Harmonic Fund Services	\$ 28.13	27.73%	88	\$ 319.67
RBC Investor & Treasury Services ²	\$ 27.58			
CACEIS Investor Services ⁴	\$ 26.76	-5.34%	338	\$ 79.16
Custom House Global Fund Services ⁵	\$ 26.74	11.82%	229	\$ 116.77
Cortland Fund Services	\$ 26.00	13.04%	195	\$ 133.33
Viteos Fund Services Limited	\$ 21.37	15.93%		
Maples Fund Services	\$ 20.21	10.72%	208	\$ 97.17
Apex Fund Services Ltd	\$ 19.58	23.36%		
Stone Coast Fund Services	\$ 18.57	28.44%	117	\$ 158.75
Deutsche Bank Alternative Fund Services	\$ 17.62	9.08%	278	\$ 63.37
Kaufman Rossin Fund Services	\$ 17.20	1.18%	246	\$ 69.92
Conifer/Vastardis (Merger Pending) ⁶	\$ 14.97	22.09%		
Equinox Alternative Investment Services	\$ 12.13	9.14%	161	\$ 75.33
ALPS, A DST Company	\$ 12.00	20.00%	273	\$ 43.96
Admiral Administration	\$ 11.85	-8.14%		
Meridian Fund Services	\$ 10.38	8.74%	181	\$ 57.37
UMB Fund Services	\$ 9.54	-0.95%		
Opus Fund Services	\$ 7.61	33.28%	212	\$ 35.91
Michael J. Liccar & Co., CPAs ⁵	\$ 7.35	1.56%	216	\$ 34.01
Investment Data Services Group (IDS)	\$ 5.55	16.54%	167	\$ 33.22
EisnerAmper Fund Services, LLC	\$ 2.72	4.52%	53	\$ 51.32
ISIS Fund Services	\$ 2.71	-5.15%	26	\$ 104.14
Circle Partners	\$ 2.33	50.35%	88	\$ 26.52
Yulish & Associates	\$ 1.40	7.35%	113	\$ 12.37
ODB Fund Services, LLC	\$ 1.31	6.95%	19	\$ 68.87
Unkar Systems Inc.	\$ 0.78	7.52%	28	\$ 27.97
Gemini Fund Services	\$ 0.63	24.27%	17	\$ 37.13
Total	\$ 3,791		12,672	

¹ Figures as of Sep-30-2013 and growth from Q2 to Q3 2013, ² Figures as of Jun-30-2013, ³ Figures include FoHF and PE assets, ⁴ Provisional figures, ⁵ Figures include separately managed account assets, ⁶ Pro forma figures pending merger

Source: eVestment, LLC

consistent at each reporting period (i.e. month-end)? Other topics of discussion can include utilization of broker runs, quotes or fair valuation and modeling techniques, as well as third-party valuation expert firms, if applicable. For smaller or more niche managers, additional valuation verification procedures can be performed, at the discretion of the ODD practitioner.

At the fund administrator level, a discussion with the administrator's valuation team should be held to validate the information gathered from the hedge fund manager interview and if there have been issues in pricing the portfolio or calculating the final net asset value. The practitioner should also review "Investor Transparency Reports" whenever possible from the fund administrator to determine any potential valuation risk. These reports vary from administrator to administrator, but typically identify the percentage of assets and liabilities not tested for existence or where pricing inputs were not directly received from an independent third party.

Fees and expenses

Fees and expenses are an extremely sensitive issue for every institutional investor. According to the 2013 NACUBO - *Commonfund Study*³, which surveyed 662 endowments, institutions generally underestimate the total ratio of fees paid to asset managers. Fees charged by a hedge fund can go unnoticed as they are not always well disclosed in the manager's documentation or are deeply buried in audited financial statements. In addition, the fund's offering documentation typically provides extensive latitude to the manager in its ability to charge various fees to the fund in addition to the ubiquitous management and performance fees.

For example, while audit, legal, fund administrator, tax and regulatory reporting fees are customary, research and travel expenses (whether paid using soft or hard dollars), marketing expenses, system and technology expenses, and even certain recharging of staff salaries, can quickly become a problem. Despite good performance, and especially with

the absence of a cap, these fees creep up rapidly and unbeknownst to the investor. As a result, the fund's "true expense ratio" must be carefully monitored. It is interesting to note that some large hedge fund managers have adopted the "pass through concept" for their funds, where the manager does not levy a management fee; however, all trading, operational and staff compensation costs are recharged to the fund. In addition to being conceptually against typical market practices, this approach has proven costly to investors, with total fees (excluding performance compensation) having exceeded the "standard" 2% management fee by a wide margin.

Dynamic and on-going monitoring process

Once initial due diligence is successfully completed and an allocation has been made, the ongoing monitoring of the manager's operations begins. The monitoring process is as important, if not more, as the initial due diligence process in order to reduce "operational drag" on performance. Monitoring activities performed by the ODD practitioner include periodic discussions and on-site visits with the hedge fund managers, annual review of audited financial statements, review of updated firm and fund documentation, as well as update discussions with service providers.

Conclusion

In conclusion, we highlight that conducting ODD on a hedge fund does not provide any guarantee against an investment loss. However, the implementation of a well-designed and thorough ODD program will help the investor significantly to avoid potential operational failures and, concurrently, identify hedge fund managers with best-in-class operational infrastructures.



Inquiries or comments concerning this article may be addressed to:

Mathieu Larochelle, CAIA

Senior Hedge Fund Research Analyst

mlarochelle@pavilioncorp.com

³http://www.nacubo.org/Research/NACUBO-Commonfund_Study_of_Endowments.html

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