A Guide to Operational Due Diligence

Introduction
The ODD Process
Organisation/Entity Structure
AUM and Capacity
Legal & Compliance
Risk Management
Pricing and Liquidity
Trade and Reconciliation Process
Cash Controls
Counterparties
Administrator
IT Infrastructure and BCP
Transparency
Financial Statement Analysis
Summary

Introduction

There are many reasons why investment managers fail, however it is evident that operational inadequacy is a key risk leading to fund failures. Just one look at table 1 below, which lists the reasons for some high profile fund failures, highlights the need for a robust operational due diligence ("ODD") process.

Fund Failures	
2002 Beacon Hill	**Issue:** Fraud resulting in an estimated loss of $300m **Lesson:** Ensure there is independent valuation and verification
2005 Bayou Group	**Issue:** Fraud resulting in an estimated loss of $450m **Lesson:** Ensure there is independent valuation and and third party service providers
2006 Amaranth Advisors	**Issue:** Trading losses resulting in an estimated loss of $6bn **Lesson:** Ensure there is adequate risk management around concentration levels
2008 Madoff	**Issue:** Fraud resulting in an estimated loss of $65bn **Lesson:** Ensure there is independent valuation and third party service providers
2009 Weavering Capital	**Issue:** Fraud resulting in estimated loss of $530m **Lesson:** Ensure there is an independent board, monitor concentration and counterparty risk
2013 Premium Point	**Issue:** Securities fraud resulting in inflated asset values **Lesson:** Ensure valuation of illiquid positions is properly controlled with credible and independent sources.
2016 Visium	**Issue:** Insider trading and mismarking of positions **Lesson:** Ensure there are robust controls around the use of expert networks and political consultants. Where broker quotes are used there should be sufficient independence and consistency of sources
2016 Contrarian Capital	**Issue:** Wire fraud resulting in embezzlement of $12m **Lesson:** Ensure wire controls include multiple levels of authorization and secure electronic payment methods

Exhibit 1 –Fund Failures, Source: Stenham, Deutsche Bank

As a result of such failures, there is ever increasing demand for improved governance, regulation and transparency, which in turn requires high quality infrastructure and processes to support that. The ODD process is more detailed and in-depth than ever with ODD teams being given increasing authorisation over investment decisions.

Stenham prides itself on its sophisticated and robust ODD process, which has been established and enhanced during the 30 years the firm has been in operation. It is testament to this process that we have avoided the many frauds and blow ups listed above. We place such importance on avoiding operational failure that our ODD team has power of veto over all investment decisions.

Below we discuss what information is required as part of an ODD review including case studies where our ODD team has vetoed an investment. While obtaining all the documentation is vital, the key to a robust process is verification. Onsite visits must be conducted to ensure that all the information provided can be fully verified. There is simply no justification for not meeting with key operational staff onsite since this is where any potential gaps in the process are often exposed.

The ODD Process

The process of reviewing an investment manager can vary depending on the strategy and level of complexity, however the overriding aim is to ensure that the manager is acting with integrity. It is normal to start with the collection of all relevant documents to create a report and to then use the onsite visit to verify the systems and controls. Background checks have become increasingly important and a strong network is vital for independent references. Best in class service providers are essential to avoid secondary risk, a lesson learned from the collapse of Lehman Brothers. Finally ongoing monitoring is essential to monitor turnover, AUM change and liquidity to name but a few. Below is a step by step guide of each part of the business that should be assessed before approving an investment.

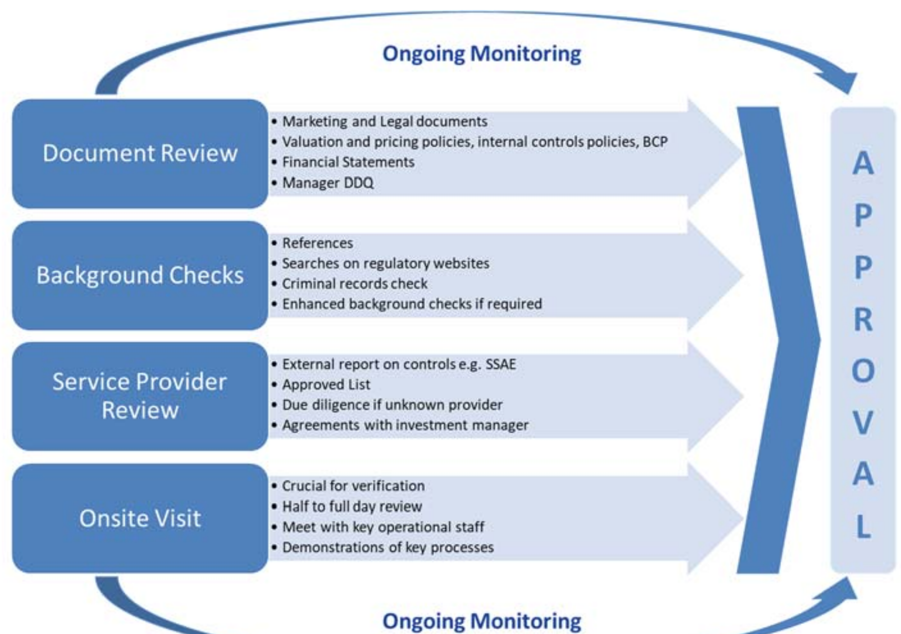

Exhibit 2 – The ODD process, Source: Stenham

Organisation / Entity Structure

Corporate governance has become increasingly important and being part of a large organisation with superior governance and controls is preferred. Smaller businesses have inherently more risk, therefore the better the governance and policies in place at an early stage, the more likely the business will succeed. While managers with longer track records are preferred, this is not always possible when looking to invest in high quality new launches, therefore there should be additional focus on processes and policies in place. Independent boards should be a requirement and the directors on the board should be sufficiently qualified to provide adequate oversight to the activities of the fund. While the board may comprise both affiliated and independent directors, we would suggest a majority of independent directors to better protect investors. Boards are involved in many fund decisions including the rights to implement gates, create side pockets and suspend redemptions, therefore one should be able to take comfort that decisions are made in the best interests of investors.

As regulation increases, managers that are registered with a regulatory body are viewed as more transparent with good controls in place. It is a red flag if a manager actively avoids registration for example by changing jurisdiction. Some managers will have been investigated by a regulator, either as a matter of routine or related to a specific incident. They should be willing to share the findings of such investigations and provide a plan for resolving any issues highlighted.

Background checks are essential. These can be conducted in a number of ways, from using a dedicated system, such as Dow Jones Risk & Compliance, checking regulatory websites or detailed reference checking. When conducting reference checks it is important to progress outside of the references provided, for example using networks for independent references and cross checking previous employers or colleagues. This will ensure a mix of both investor and peer references are obtained. Often the information gathered from peers can be the most enlightening part of this process.

Finally, a qualitative assessment of the business is critical. Examples include whether the manager was able to provide all documents requested and clearly explain their policies and procedures. Reviews of staff turnover are conducted including the competency of the staff employed. Questions regarding staff compensation determine whether staff members are well incentivised and whether the manager has sufficient resources to continue to compensate them in the near future. Other considerations might include whether there is a good culture of compliance and integrity, or whether there has been consistent rumours of less than best practice, even if this has never been founded. Often the reputational risk alone means it is worth avoiding the risk and moving on to the next opportunity.

AUM and Capacity

Whether a fund has just launched or has an established track record, it is key to understand whether there is an adequate level of AUM to manage the business and deploy the strategy effectively. However, size alone is not indicative of how stable AUM has been. Ensuring that fund assets are not concentrated into one or a small group of investors is vital. Key staff members should also be invested in the fund, aligning interests with investors. It is also important to consider the proportion of the fund the investment will represent. It is standard to have a limit of 10%, although in some cases this limit can be higher if investing in the early stages of a fund's life, as long as AUM is increasing. In understanding the stability of the AUM, other considerations include whether the manager has previously had to gate or suspend redemptions or whether the redemption terms of the fund match the liquidity of the underlying investments.

Large AUM may have an adverse effect on capacity constrained strategies. It is essential to understand the impact of AUM on both the business and the strategy

Legal and Compliance

Unprecedented regulatory change requires increased transparency and improved procedures to meet reporting requirements and protect investors.

With increasing focus on regulation, which only looks set to continue, compliance is of increasing importance. Many managers report the highest level of expansion has been in their legal and compliance departments in order to meet both reporting and implementing of regulatory requirements. Increasingly managers have large dedicated legal and compliance teams and present an overriding strong culture of compliance. Firms should have an up to date compliance manual that is available for review and staff should undergo regular compliance training. Key issues include PA dealing, insider trading, trade surveillance, money laundering and the use of expert networks. There should be clear policies in place to ensure best practice is being adhered to with respect to each of these. From a legal perspective there should not be any outstanding legal or litigation issues that might have an adverse impact on the fund.

Risk Management

Similar to the increasing focus on compliance, the requirement for independent risk management has become more important. Risk management spans both investment and business risk with guidelines and controls expected in both areas. Best practice is to ensure that the portfolio managers do not have sole control and that an independent risk management team has the ability to cut risk in line with the stated guidelines. This can include concentration/size limits, stop losses, overall leverage or price targets. Risk limits set should be appropriate for the strategy and the systems in place should be adequate to monitor those risks. Many managers provide real time risk exposures or at least produce a daily report that contains all risk metrics that are important for that strategy. Finally, since the collapse of Lehman Brothers, monitoring counterparty exposure has become increasingly important.

All risk reports should be presented to the board for review at regular intervals as well as having a risk management committee that meets regularly to review business risk.

Case Study #1: Amaranth

Amaranth was a multi-strategy fund that initially had expertise in convertible bonds and later added merger arbitrage, long/short equity and other strategies such as energy trading. By 2006, over half of the capital was allocated to energy trading and it accounted to almost 75% of profits. Leverage was also high. When the prices of the natural gas contracts moved in contraction to their expectations, they were faced with margin calls they could not meet. The fund eventually collapsed after suffering trading losses of an estimated $6bn.

Lesson: There are multiple lessons here but all are focused on risk management. If concentration risk is excessive, exacerbated by high leverage, losses can be too large and swift to recover. One could also consider style drift given the manager's move from a multi-strategy fund to the focus on energy trading.

Pricing and Liquidity

The credit crisis in 2008 highlighted liquidity mismatches that a number of funds were running based on the underlying liquidity of the instruments as compared to the redemption terms they were offering investors. As a result many funds had to gate or suspend redemptions resulting in the creation of side pockets for the illiquid portion of the portfolio, some of which are still in existence today. There has been a move towards improved liquidity analysis and monitoring the percentage of illiquid assets a fund can hold. The ODD process includes an in-depth liquidity and cash flow analysis taking account of any gates, side pockets and suspended redemptions and excluding potential subscriptions. At the underlying fund level liquidity is monitored through a thorough review of the manager's monthly reports, the administrator transparency reports and the financial statements. Managers should be able to demonstrate their ability to liquidate their portfolios in both normal and stressed environments. Assets can be classified under the ASC 820 (previously known as FAS 157) fair value measurements with clarification and review of any illiquid LIII instruments.

Common Valuation Issues

- *Lack of independence*
- *Increasing exposure to Level III*
- *Hard to value assets*
- *Unclear or lack of valuation policy*
- *NAV restatement*
- *Single broker quotes*
- *Managers estimates that regularly vary widely from administrator finals*

Case Study #2: Credit Manager

The ODD team was asked to review an Asian credit fund trading high yield, distressed and credit long/short opportunities. It uncovered a serious flaw with the verification process performed by the administrator regarding the pricing of a substantial portion of the portfolio. Onsite Investigation unearthed that the administrator was requested to sit in the manager's office and 'tick-back' trader screen snapshots. This was deemed entirely insufficient and a weak control process.

Lesson: Administrators must have a robust process which is entirely independent from the manager. The process above highlights how the pricing of the NAV was open to manipulation since the administrator could not source the quotes directly themselves.

Lack of independent pricing is one of the largest red flags to be considered when conducting an operational review. As a minimum there must be an independent administrator to verify the existence of assets and provide confirmation of the percentage of the portfolio they have independently priced. It is important to verify the valuation policy that has been provided by the manager, ensuring that the manager is not providing the administrator with prices for any of the instruments in the portfolio. Reviewing the track record can determine whether the NAV has ever been restated. It is best practice to also have a valuation committee that is independent from the front office to remove the possibility of an open debate around the pricing of certain hard-to-value instruments.

Trade and Reconciliation Process

Trade generation and execution has benefited from improved automation resulting in firms having an electronic process for sending trades to brokers. During an onsite review a complete walk through of the lifecycle of a trade should be demonstrated. Segregation of duties in the process is paramount. Compliance plays a key role in the trade process often with pre- and post-trade compliance checks in place. Detailed audit trails for communications between portfolio managers and traders should be in place with sufficient controls over the input and authorisation of investment orders. Trade positions and cash should be reconciled by the fund daily and at least weekly by the administrator. Best practice is to have a daily, three-way reconciliation process between the administrator, prime broker and the fund.

Cash Controls

Cash management came under increasing scrutiny post the credit crisis when the phrase "cash is king" became a favourite buzz phrase. Poor controls around cash management can, at worst, result in fraud and it is therefore essential to ensure there is a robust process in place to avoid collusion. In order to fully understand the controls around cash movement, policies and processes should be verified with the administrator and it is best practice to include administrator approval for all third party payments. Segregation of duties is a preventative control and it is critical to have at least two authorised signatories for cash movements, one of whom should be the Chief Operating Officer. Separating responsibilities ensures there is a cross check in place which reduces the chance of concealment unless there is collusion.

Counterparties

The collapse of Lehman Brothers in 2008 highlighted the importance of managing counterparty risk. Funds that used Lehman as a sole prime broker were left with assets they could not access and claims in a complex bankruptcy process. That resulted in the suspension of redemptions and creation of side pockets. It is now common to expect managers to have multiple prime broker relationships and to assess the credit quality of each prime broker before entering into an agreement. Active management of the counterparty exposure is required and having diversification between counterparties is preferred. Funds should be able to provide a counterparty exposure report on a regular basis to ensure investors are aware of any secondary risk they are running. If new counterparties are to be added, there should be a formal process, including extensive due diligence before sign off.

With respect to other service providers such as auditors, external counsel and administrators, using reputable, top tier firms is preferred. For example in the case of auditors, look for one of the big four firms. It is not unusual for funds to be vetoed on the basis of using an unknown or poorly regarded service provider. In the case of an unknown service provider, due diligence should be conducted to assess their internal processes and controls are sufficient for the services they provide to the fund before proceeding with an investment.

The Administrator

The role of the administrator is of such importance that we have dedicated a separate section to it. Self-administration is no longer seen to be acceptable. A list of “Approved Administrators” is maintained and compiled following onsite visits with each administrator. Due diligence on the administrator includes a review of the company history, background checks, regulatory checks as well as a review of their SSAE internal controls report (previously known as SAS70). Different administrators may have different capabilities that are more suited to one strategy than another.

When assessing a new fund, it is not enough to just confirm that the administrator is on the Approved List. The service provided to that specific fund needs to be verified directly with the administrator, looking at the length and nature of the services provided, the history of the NAV calculation and whether it has ever been restated.

Top 10 Administrators

		Client Funds’ Gross Assets Under Management ($mil)	
	Administrator	1Q -18	% of total
1	State Street	1,232,476	20.3
2	SS&C GlobeOp	1,187,797	19.6
3	Citco	1,066,836	17.6
4	BNY Mellon	491,375	8.1
5	Northern Trust	417,191	6.9
6	Morgan Stanley	372,470	6.1
7	SEI	286,415	4.7
8	Hedgeserv	225,316	3.7
9	MUFG	137,142	2.3
10	J.P. Morgan	92,449	1.5

The top 10 administrators make up 73% of the total of clients funds administered with the top 3 totalling 40%.

Exhibit 3 –Source: Hedge Fund Alert

There should not be any issues or conflicts of interest that might impair the administrator’s independence or objectivity with regards to fund pricing. The relationship between the manager and the administrator should also be assessed. As a minimum the manager should visit the administrator once a year to review the operation of controls outsourced to their provider. Changes in administrator, NAV restatements or disagreements which have required escalation to the Board will be challenged. All of these would be a flag and require further investigation in order to gain comfort. Finally with the increasing focus on transparency, the administrator should be able to provide a regular transparency report detailing the existence of holdings and, where available, counterparty exposure.

Case Study #3: Long Only Manager

A long only manager was reviewed by the ODD team. The initial due diligence noted a small, unknown administrator being deployed by the fund. An onsite visit was therefore performed to review the controls and processes at the administrator. It became apparent that the administrator was unsophisticated in comparison to its peers, they did not produce a controls report and their total AuA was small which meant they were operating at the margins.

Lesson: Administrators must be approved and follow best practices. They must be entirely independent and have sufficient resources to deploy best-in-class operational processes and controls. Lack of the necessary SSAE controls report is a red flag.

IT Infrastructure and BCP

As automation continues to increase, having efficient technology, well-resourced IT teams and robust business continuity plans are essential. Funds have been known to fail as a result of inadequate resources including technology. Focusing the review on the IT infrastructure and whether or not there is a dedicated support team, either internal or outsourced, will ensure the smooth operation of all systems. If the function is outsourced a review of the provider and service is conducted. The key is to understand the processes the manager has in place should there be a technological failure. There should also be a documented disaster recovery plan available for review. All employees should be aware of what to do in the event of a disaster. Daily backups should be kept off site and all backups should be tested by restoring data periodically. It is not often that a disaster recovery plan has to be put to the test as a result of a real event, therefore it is essential to understand if tests have taken place and if any flaws or failings found during testing have been rectified. Cyber security issues are a growing problem, therefore part of the assessment of the IT process should include whether there has been history of attacks, data breaches or lack of/compromised access. All employees should undergo regular training to be able to identify and report phishing, suspicious e-mails or fraudulent phone calls. Regular penetration testing has also become the norm.

Transparency

There has been a marked improvement in transparency since 2008, with funds often being rejected for not meeting minimum transparency requirements. A lack of transparency does not inspire investor confidence, raising questions about what a manager has to hide. The level of transparency required differs from strategy to strategy. For example a very complex strategy with hundreds of line items might not disclose every single position, but will rather report the key risk exposures required to allow analysts to accurately monitor the fund. As a minimum, managers should provide a monthly risk report outlining key exposures, AUM, performance attribution, leverage employed, top positions and liquidity. Investors should have enough information to be able to model the portfolios and to aggregate risk exposures by asset class. Failure to do so could result in underestimating or completely misrepresenting risks being taken. Fortunately the majority of investment managers understand the need for transparency and have significantly improved their reporting capabilities to meet investor requirements.

Case Study #4: Madoff

No study on the need for operational due diligence would be complete without mentioning the failure of all failures, Madoff, the Ponzi scheme that is considered the largest financial fraud of all time. In this case failings were found across multiple areas, something which any robust ODD investigation should have uncovered. Bernie Madoff raised money from investors, claiming to invest in a split-strike conversion strategy generating highly consistent positive returns. Instead he defrauded investors and deposited the funds into a bank account, funding redemptions by raising capital from new investors. However in 2008, the financial crisis led to large redemption requests meaning he could no longer maintain the fraud. He was convicted of a series of crimes including securities and wire fraud, money laundering and perjury and has since been sentenced to 150 years in prison.

Lessons: There are multiple lessons and levels of operational failure in this case as outlined below:

Third party oversight: Madoff did not have an independent administrator to verify monthly NAVs.

Independent Counterparties: Madoff used a small, relatively unknown accounting firm and his own company acted as custodian for the majority of the book. This highlights the importance of having reputable counterparties for trading and settlement, custody, audits and legal counsel.

Broker-Dealer: Madoff operated its own broker dealer which raises issues for valuation, commission sharing and collusion.

There were other, perhaps softer, red flags in the Madoff case, but the points noted above mean there is a lack of independent checks and balances, which is what enabled Madoff to conduct his fraudulent activities. Any one of the above being present in a fund, should be a serious red flag with strong consideration being given to veto the investment.

Financial Statement Analysis

Conducting a review of the financial statements of the fund is essential for the verification of NAVs, instruments traded and overall exposures. In the case of an established fund, it is recommended to obtain and review audited financial statements for at least the last two completed fiscal years of the fund, or since inception of the fund if that is shorter. Checks include ensuring the accounts have been given an unqualified opinion, ensuring the published NAVs from the fund tie to the financial statements, understanding significant issues raised in the notes and ensuring that all instruments listed in the 'Schedule of investments' are consistent with the strategy of the fund per their risk reports. We have discussed liquidity above and the fund's exposure to Level III assets should be monitored and verified. The accounts also highlight additional expenses charged to the fund, over and above the manager's 'headline fees'. An analysis of the total expenses, amongst other key ratios, adds an additional level of scrutiny when assessing the fund.

Summary

All of the above highlights the need for a thorough ODD process to identify non-investment risks that could potentially lead to the blow up of a fund. ODD teams should have power of veto in the manager approval process to ensure that the risk of operational failure is not overridden by the lure of attractive returns or opportunity set. The reputational risk of being involved in a fraud or blow up cannot be underestimated. ODD teams now employ highly seasoned professionals including ex auditors and lawyers who employ not just a tick box approach, but are experienced enough to assess funds more subjectively. For this reason many firms choose to outsource this function to a firm with a dedicated ODD team that already has a well-defined and well tested process in place.

Any robust ODD process will unearth red flags. The seriousness of these flags will vary but all should have mitigating factors that help gain comfort in order to invest. However red flags that cannot be resolved should not be ignored and any funds with significant red flags should not be approved for investment, without exception.

Finally, we cannot overstate the importance of verification and onsite visits. Solely conducting a review of documentation is inadequate and will almost certainly result in red flags being missed. Transparency during this entire process is vital and managers who are open and proactively respond to questions during the due diligence process will help build a positive view of the manager's integrity giving investors the comfort required to approve the fund. Ongoing monitoring is equally important to assess any changes that might impact the initial evaluation.

For further information please contact Rishi Patel, Nicola Sills or Lynda Stoelker

Rishi Patel
Co-Head of Operational Due Diligence
E-mail: rishi.patel@stenham.com
Tel: +44 20 7079 6695

Nicola Sills
Co-Head of Operational Due Diligence
E-mail: nicola.sills@stenham.com
Tel: +44 20 7079 6699

Lynda Stoelker
Director and Head of Investor Relations
E-mail: lynda.stoelker@stenham.com
Tel: +44 20 7079 6625

Disclaimer

This communication is issued by Stenham Advisors Plc, which is authorised and regulated by the UK Financial Conduct Authority (FCA). Stenham Advisors Plc makes no express or implied warranties or representations with respect to the information contained in this communication and hereby expressly disclaim all warranties of accuracy, completeness or fitness for a particular purpose. This communication is intended solely for the person to whom it has been addressed and who is defined as a "professional client" or "eligible counterparty" (as defined by the FCA). If you are not the intended recipient, please do not read, copy or use this communication for any purpose. This communication does not constitute an offer to sell or the solicitation of an offer to purchase any security or investment product in any jurisdiction and is for information purposes only. Past performance is not indicative of future results. The investments discussed may fluctuate in value and investors may not get back the amount invested. The information stated, opinions expressed and estimates given are subject to change without prior notice. Stenham Advisors Plc will not be responsible for any liability resulting from loss pertaining to the use of the data.