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A GUIDE TO HEDGE FUND BUSINESS & OPERATIONAL DUE DILIGENCE

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INTRODUCTION

Business and operational risks can materially impact a hedge fund investment. Therefore, investors should be aware of the potential effect these risks can have on their portfolios. This paper strives to inform investors of these business and operational risks and emphasize the importance of a thorough due diligence program.

Hedge fund investors grasp that their capital will be subject to loss (or gain) from market and other investment-related risk. However, they must also appreciate that their capital will be susceptible to loss – but never gain – from a number of non-investment related risks. These non-investment related risks are generally categorized as either business or operational risks, which are defined below.

- **Business risk** is the possibility of loss stemming from issues related to the hedge fund management firm that are not directly associated with market movements. Hedge fund business risk can be influenced by several factors, including the management firm's inability to attract sufficient assets under management to cover overhead; its closing from repeated regulatory violations; or its lack of a key personnel succession plan (i.e., the departure of a star portfolio manager because the firm repeatedly refuses to grant the manager an ownership interest).

- **Operational risk** is the risk of loss stemming from issues related to middle and back office functions. These issues range from the misvaluation of a fund's investment portfolio; poor controls on the movement of cash; sloppy trade processing; or even the loss of trading capabilities from a power outage.

How important are these non-investment risks – and how much should investors worry about them? Consider the brief history and research enclosed in this White Paper.

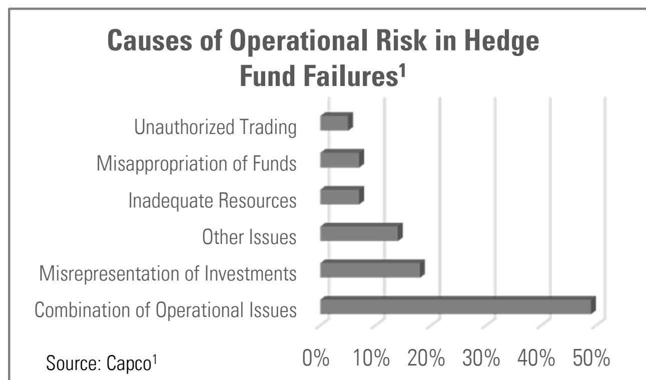
I. Case Studies: Business & Operational Hedge Fund Failures

First, we will take a look at four case studies written by industry experts to highlight the potential impact business and operational risks can present to a hedge fund investment.

50% of hedge fund failures were caused by operational issues alone [1]

Case Study #1: In the 2003 Capital Markets Company, Ltd. ("Capco") White Paper, "Understanding and Mitigating Operational Risk in Hedge Fund Investments,"[1] former partners Christopher Kundro and Stuart Feffer studied the causes of more than 100 hedge fund failures dating back 20 years. The study concluded that 50% of the failures were due to operational risk issues, 38% were due to investment risk issues (market related risks), 6% were due business risk issues and 6% resulted from the combination of multiple risks. The Capco study found that the hedge fund failures caused exclusively by operational risks occurred as a result of the following:

- 5% from unauthorized trading.
- 7% from misappropriation of funds, primarily from fraud/theft.
- 7% from inadequate resources, such as technology, processes and personnel.
- 14% from other issues.
- 18% from misrepresentation of investments, including valuation and/or existence; and,
- 49% from a combination of operational issues.



Fraud has been a prevalent factor in hedge fund failures [2]

Case Study #2: A second study, "Quantification of Hedge Fund Default Risk,"[2] written by Corentin Christory, Stephane Daul and Jean-Rene Giraud was published in the Fall 2006 issue of the Journal of Alternative Investments. The study researched 109 hedge fund failures that took place between 1994-2005 and found that of the 109 failures, 54% were due to fraud, 33% were due to financial issues and 13% were due to operational risks. Classifying fraud as a business risk, the study revealed that two-thirds of the failures reflected business and operational risks. Christory, Daul & Giraud concluded that their research indicated the necessity of a rigorous due diligence process in reducing a portfolio's business and operational risk.

Hedge fund failures caused by operational issues have cost investors $80 billion [3]

Case Study #3: In a 2009 White Paper, "From Manhattan to Madoff: The Causes and Lessons of Hedge Fund Operational Failure,"[3] due diligence consultant Castle Hall Alternatives reviewed 327 hedge fund operational failures through their proprietary database, HedgeEvent, from its inception through June 30, 2009. Using this research, Castle Hall came to the following conclusions:

- Operational failures produced total investor losses of $80 billion ($15 billion excl. Madoff) over the period studied.
- 31 separate operational failures each produced a loss in excess of $100 million.
- The most common causes of operational failure were misappropriation of assets or theft and misrepresentation of the existence of assets.
- The most liquid and simple strategies, including Equity Long/Short and Managed Futures, incurred the most operational failures.
- The misvaluation of fund assets is the most significant operational risk for hedge fund investors.

Madoff further opened investors' eyes to the importance of business & operational DD [4]

Case Study #4: The final case study we will examine, "Madoff: A Riot of Red Flags,"[4] was published in 2009 by the EDHEC Risk and Asset Management Research Centre (Nice, France) and written by finance professors Greg N. Gregoriou of SUNY Plattsburgh and François-Serge Lhabitant of the EDHEC Business School. This study dissected the former Nasdaq chairman's $65 billion fraud and found the following business and operational red flags:

- Affiliated service providers – the broker executing and clearing trades, the entity holding positions and the entity determining valuations – were all controlled by Madoff. The net result: independent checks and balances on what he was doing didn't exist.
- Use of an obscure, two-person audit firm with no institutional client base.
- Family members controlled or were heavily involved in significant areas of the firm's operations, including trading, compliance, administration and legal.
- A tiny staff size relative to a then-disclosed $17 billion in firm-wide assets under management.
- Very limited or denied access to Madoff or his offices for on-site due diligence; nonexistent operational transparency
- Issuance of fraudulent documentation reflecting a lack of independent oversight or verification.

Takeaway:

As this research indicates, a thorough business and operational due diligence program could have potentially discovered these non-investment related risks and saved investors billions. How then, should an investor go about identifying and assessing these non-investment risks?

Before making a hedge fund investment, we suggest employing a robust due diligence program that encompasses the following or similar scope and process. Throughout this White Paper, we will highlight several topics an investor should evaluate prior to an investment, including the Hedge Fund Investment Manager, its Key Personnel, Mid & Back Office Processes, Independent Service Providers, and the Hedge Fund itself. We consider it a model due diligence program for hedge funds as it applies to business and operational issues, although no program is failsafe.

II. What to Assess: The Hedge Fund

What can keep an investor in a hedge fund investment longer than anticipated?

1. Redemption, Restrictions & Impediments

Point of Emphasis: Read the private placement memorandum, or PPM, carefully and don't rely simply on a marketing deck. Identify provisions that could keep the investor in the hedge fund longer than anticipated. Look for red flags and any language that addresses:

- Lock-up periods: When redemptions aren't permitted.
- Gates: A restriction that limits the amount of withdrawals allowed from the fund during a specific redemption period. It helps prevent a run on the fund that potentially could halt its operations and create a large sell-off of asset positions.
- Sidepockets: Also known as "Designated Investments," they are a type of account used in hedge funds to separate illiquid assets from more liquid investments. Once an investment enters such an account, only the hedge fund's present participants are entitled to a share of it.
- Asset/Liability mismatches: Look for any mismatch between investor liquidity terms and liquidity of the fund's investment positions.

It is important to also be aware of:

- Early redemption fees: Charges an investor must pay if redeeming during a lockup period (if permitted). A lockup that permits redemptions during the lockup period is referred to as a "soft lock."
- Key person provisions: Also known as "key man" clauses, they help ensure that critical personnel remain in place and if they leave for any reason, investors may exit the fund or the fund may wind down.
- Preferential liquidity: Pockets of capital with liquidity terms more favorable than those listed in the fund's offering document , i.e., capital that can hit the exits faster than yours can if a problem arises.
- Redemption payout timing: It can differ if the redemption is partial vs. full; look for holdback provisions.
- Significant investor concentrations: They can increase the chance that a redemption gate gets raised or a suspension of redemptions occurs. Assess the size of the largest investors in a fund, as well as pockets of any "hot" money; i.e., investors such as certain types of fund-of-hedge funds that may tend to redeem more frequently than other investor types.
- Significant gross redemptions vs. performance: Be aware of any history of significant gross redemptions that do not correlate to the fund's net performance. If they do not, determine why a significant pocket of investors redeemed en masse when performance was strong. What did they know that others didn't? Get an explanation from the investment manager and then attempt to contact these investors directly to verify the story. The investment manager should be willing to provide contact information for this purpose.
- Pending redemptions: They're not always volunteered by the investment manager, so ask and be aware of them before investing.
- History of paying redemptions "in-kind": Be aware of any history of the fund meeting redemption requests by making payments in noncash form; i.e., in illiquid securities that couldn't be liquidated to meet the redemption request. Also question any historical use of gates or sidepockets or the use of special purpose vehicles to meet redemption requests. These will all delay the liquidation of your investment.

How to Verify Net Assets and Net Performance Histories

INDEPENDENTLY VERIFY FINANCIAL INFORMATION	USE ADMINISTRATOR & AUDITED FINANCIALS	INQUIRE ABOUT THE FUND'S HISTORY
Always independently confirm financial information provided by the investment manager.	Use financial information received independently from the fund's administrator & audited financials.	Ask the fund's administrator about any history of net asset value or performance restatements.

Don't trust, always verify

2. Monthly Net Assets (i.e., capital) and Net Performance Histories

Point of Emphasis: Always independently verify/confirm the financial information provided by the investment manager. Use financial information received independently from the fund's administrator as well as financial information contained in the fund's audited financial statements. Ask the fund's administrator about any history of net asset value and/or net performance restatements, which can be indicative of serious operational issues.

3. Fees Charged by the Hedge Fund

Be aware of the fees charged by the fund. Namely, the management fee and the performance fee (also known as the incentive allocation). Be wary of excessive fees.

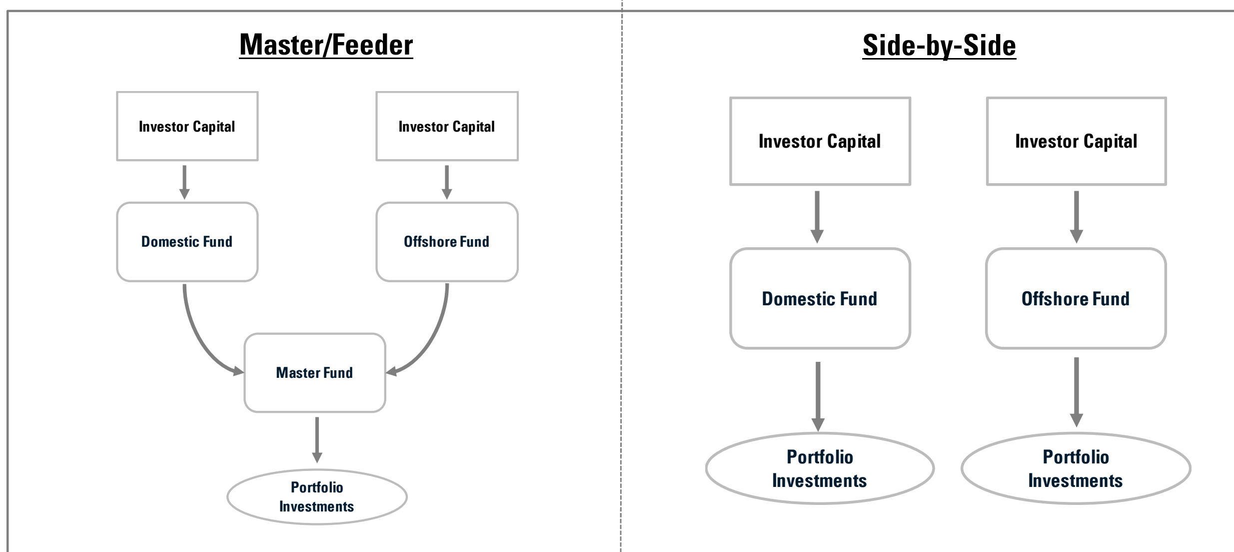
4. Expenses Being Incurred by the Hedge Fund

Point of Emphasis: The investor should pay particular attention to which expenses the investment management company is picking up and which are being charged to the fund (and thus incurred by the investor). Are the latter expenses appropriate (e.g., research-related expenses vs. a marketer's country club membership)? Are they disclosed in the fund's offering documents? The April 2015 suit, SEC versus Alpha Titans et al,[5] demonstrates what can happen when they aren't (i.e., alleged fraudulent failure to disclose expenses, SEC-mandated liquidation of the fund, payment of fines/restitution by the investment management firm, its principals and an audit partner of the fund's external auditing firm).

5. Fund Structure

Most fund compositions are that of "master/feeder" structure. In a master/feeder structure, investor capital is collected by feeder funds comprising onshore and offshore vehicles, the investor capital is then fed to a master fund, which is the trading vehicle. Another typical fund structure is the "side-by-side" structure, with one onshore trading vehicle and one offshore trading vehicle, where each vehicle collects investor capital directly from the investor and not via a feeder fund. For more complex fund structures, for example, "umbrella companies," the investor may wish to engage professional legal counsel to assess additional risks, such as cross-liability. This is the risk that the investor's capital would be called upon to satisfy the debts of a different, though legally related, portfolio structure if that portfolio's assets are insufficient to satisfy its liabilities.

Fund Structure: Master/Feeder vs. Side-by-Side



6. Fund Jurisdiction

Hedge fund investors should be familiar with their rights, for example, in the event of bankruptcy of the invested fund. An investor's rights are legally set forth by that fund's jurisdiction of domicile. An investor's rights are fairly clear for certain standard onshore and offshore fund jurisdictions such as Delaware and the Cayman Islands. However, for certain nonstandard jurisdictions, the investor may wish to engage professional legal counsel to best understand their rights and limitations. Regardless of jurisdiction, investors should always be aware of their rights before making an investment.

7. Fund's General Partner/Board of Directors

Know the identity of the onshore fund's General Partner ("GP") and how that person/entity relates to the investment manager. In most cases, the GP is an affiliated entity. However, the offshore fund's Board of Directors typically comprises a mix of affiliated and independent directors. A Board of Directors comprised of more independent than affiliated directors is preferred. Presumably, investors' rights would be better represented when a more independent Board of Directors is called upon to approve certain decisions, such as whether to approve the investment manager's request to raise a redemption gate amid mounting redemption requests.

III. What to Assess: The Hedge Fund Manager

Are my interests aligned with the manager?

1. Alignment of Interests

Firm ownership:

- Understand and attempt to confirm independently via regulatory filings who controls the investment firm. Check for any external ownership; gauge ownership percentages; understand who the owner is and what the owner does; assess the economic relationship; and identify any actual, potential or apparent conflicts of interest.

Portfolio manager's investment in fund:

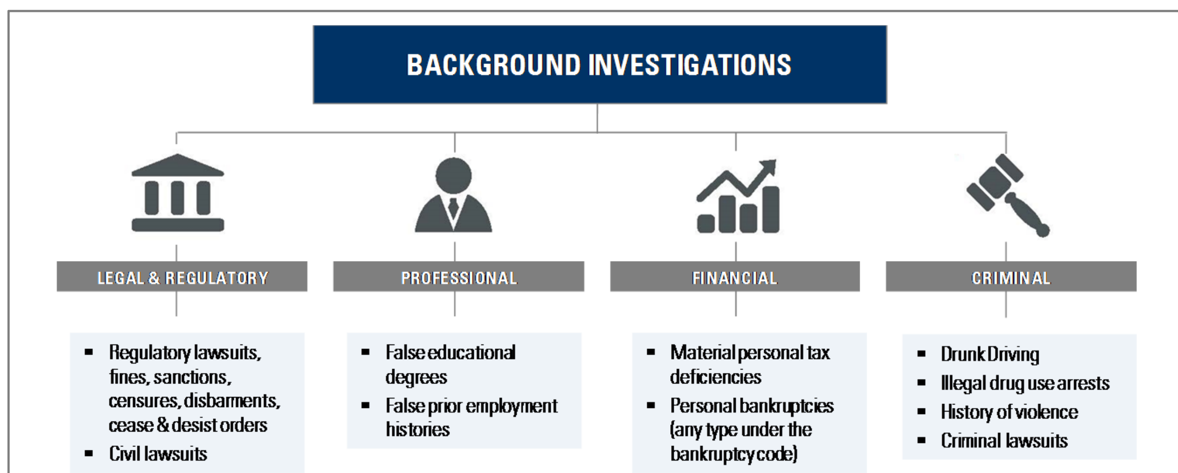
- It is preferable and expected that the fund includes a noteworthy investment by the investment firm's principals and key employees, such as the fund's portfolio manager. Such investment is viewed as an explicit commitment to the fund and demonstrates an alignment of interests with investors.

Can I trust the investment manager?

2. Regulatory & Legal History

Registrations with domestic and international regulatory agencies:

- Confirm which regulatory agencies the investment firm and fund are registered with. Ask the manager for the firm and fund's history of examinations, visits and contacts with regulators. Request to see examination exit letters and reports of findings to determine the significance of any identified issues. Discuss this history and findings with investment firm's General Counsel and/or Chief Compliance Officer rather than Investor Relations personnel that may not be as familiar with such matters.
- Background Investigations:
  <u>*Point of Emphasis:*</u> Always conduct initial and subsequent background investigations of the investment firm, its principals and key persons. The results should coincide with the disclosure of any legal and/or regulatory matters the investment firm has been asked to disclose upfront about these entities/persons. Also run background investigations on any lesser or unknown service providers (e.g., administrator, auditor), as appropriate. Inconsistencies and omissions by a manager must be treated seriously and may indicate integrity issues. Over the years, background investigation have determined a number of significant issues, which are highlighted in the table below:



Always review the size, staffing and systems of the manager.

3. Size

Determine the investment manager's assets under management ("AUM") and the related composition of those assets (i.e., each fund/account being managed and its size). Identify any significant and/or sudden AUM increases/decreases, and then understand how the firm's infrastructure handled them. If there were large increases in AUM, determine if the manager decided to first take in the new capital and then play catch up with its infrastructure, or if it built up its operations proactively before taking in the additional capital. The former increases operational risk.

4. Staffing

- Determine the investment manager's overall staffing as well as its breakdown and adequacy.
  - i.e., size and specialization of staff vs. firmwide AUM; number of trading vehicles; complexity of the strategies traded by those vehicles; and existence of any outsourced support (e.g., outsourced middle/back office, outsourced CCO, etc.).
- Compare staffing to previous points in time to see how it has increased/decreased. Review staff additions and departures over past 24 months.
- Attempt to speak with any key staff members who have departed recently to independently confirm manager's account of departure.
- Determine if any staff is related to each other and, if so, whether this poses any control weaknesses or conflicts of interest.
- Ensure the manager is conducting a background check on prospective employees before hiring them.

5. Operations Staff

- Determine the qualifications of the staff heading the middle office (e.g., Chief Operating Officer) and back office (e.g., Chief Financial Officer).
- Determine if there is any outsourcing of the mid/back office and, if so, the adequacy of the service provider. Conduct background checks on service providers as needed.
- Understand the segregation of duties between the front office (trading and portfolio management), the middle office (trade processing/reconciliation) and back office (valuation/fund accounting). With limited exceptions, the front office shouldn't perform any mid/back office functions, or vice versa.

6. Systems

- Understand what systems support the front office (e.g., execution and order management systems) and the mid/back office (e.g., reconciliation systems, portfolio management systems). Request an on-site demonstration of these systems and ensure that these systems can handle all financial instruments traded or transacted by the hedge fund. Where the systems are proprietary, understand how the systems have evolved, as well as what enhancements have been made over the years and why. Understand who at the firm supports proprietary systems and what happens to the systems should these people leave.
- Always consider the following questions:
  - Is access to the firm's systems appropriately restricted? Can front office personnel make changes in mid/back office systems? Do mid/back office personnel have access to front office systems such that they could execute a trade? These questions should all be considered.

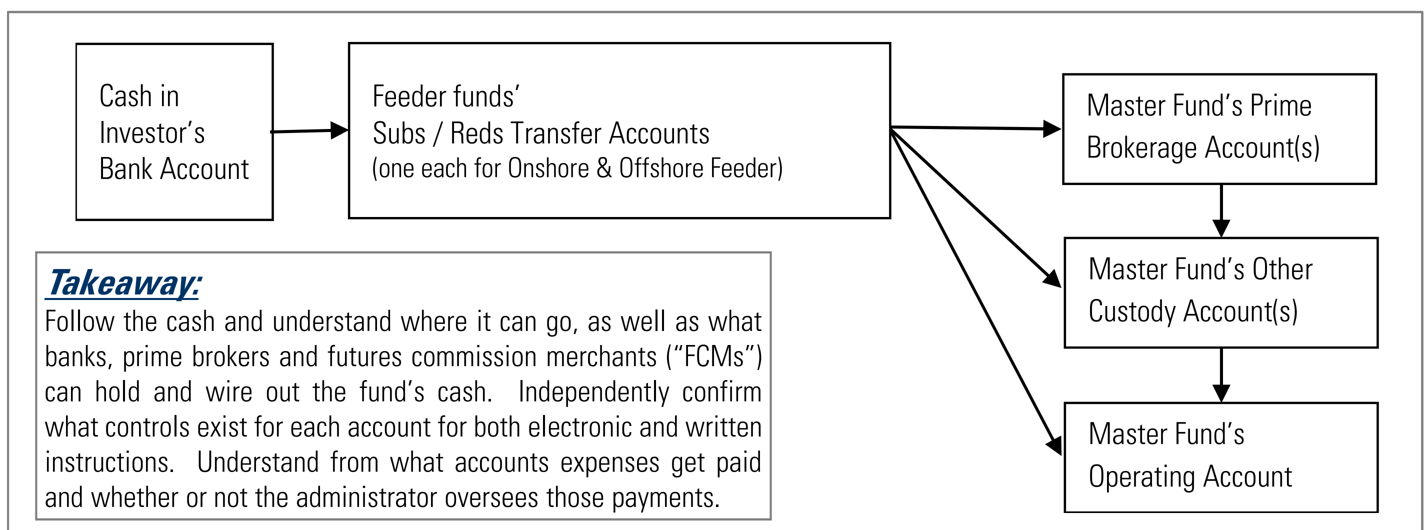
Can my cash be stolen?

7. Controls on Movement of Cash

Point of Emphasis: Always fully understand how cash gets into the hedge fund and how it can leave it. As the research shows, poor cash controls can lead to fraud (e.g., your cash ends up in someone else's personal offshore bank account). Attempt to trace the steps where cash flows and understand what controls are associated with each step. Focus on the following (for a master/feeder fund structure):

- What bank account is an investor's subscription cash sent to and who controls these accounts administratively? With limited exceptions, these feeder fund subscription/redemption accounts should be under the sole administrative control of the fund's administrator. The administrator will conduct its scrubs/checks (e.g., anti-money laundering screens), and then have the cash transferred to the prime brokerage account of the master fund, also known as the trading vehicle.
- Typically, the master fund's securities and cash are kept in the prime brokerage account. And, generally, the investment manager possesses sole control of this account. To wire cash from this account, typically, the prime broker's online payments system is used. It is best practice for this system to require electronic sign-offs by at least two authorized employees of the investment manager before a cash wire is sent.
- The hedge fund investor should understand who can change the two sign-off control configurations (i.e., the number of sign-offs and who they can be) in the prime broker's online payments system. Does the prime broker control this, or can an employee of the investment manager make changes to the requirements?
- If the prime broker's online payments system goes down, or isn't used by the manager, the manager will have to wire cash by written instruction to the prime broker. This can be a fax or an emailed PDF of the letter of authorization. It is best practice that the prime broker ensure that at least two authorized employees of the investment manager sign the document before cash can be wired from the master fund.
- In the case of any payment of expenses from the master and/or feeder funds, check with the administrator to ensure all expenses are reviewed against payments made from the funds to further protect against fraud.
- Perform the same checks outlined above on any other accounts holding the funds' cash (e.g., cash custody accounts in the name of the master fund; sometimes these are used to keep cash away from the prime brokers in an effort to reduce counterparty risk).
- Lastly, confirm the controls that exist on the movement of cash into any direct or indirect subsidiaries of the master fund, or any affiliated vehicles processing payments going to the master fund (e.g., an affiliated trade claims cash disbursements processing vehicle owned by several of the manager's hedge funds).

Cash Controls:



How is the investment manager processing trades?

8. Trade Processing

Have the manager articulate how the front office executes a trade, how the trade flows through the middle office and back office, and then how it gets to the fund's prime brokers and administrator. The investor should see that a three-way reconciliation exists involving the manager, the prime broker(s) and the administrator.

Other areas to understand include:

- The different financial instruments traded or transacted (e.g., over-the-counter ("OTCs")) by the fund.
- Daily trading volume.
- Execution means (electronic vs. voice/Bloomberg messaging).
- Trade affirmation/confirmation/reconciliation systems and procedures.
- Trade allocation policy (i.e., ensuring trades are equitably allocated among the several hedge funds of the same strategy, so that winning trades do not only go to some funds and losing trades only go to others).

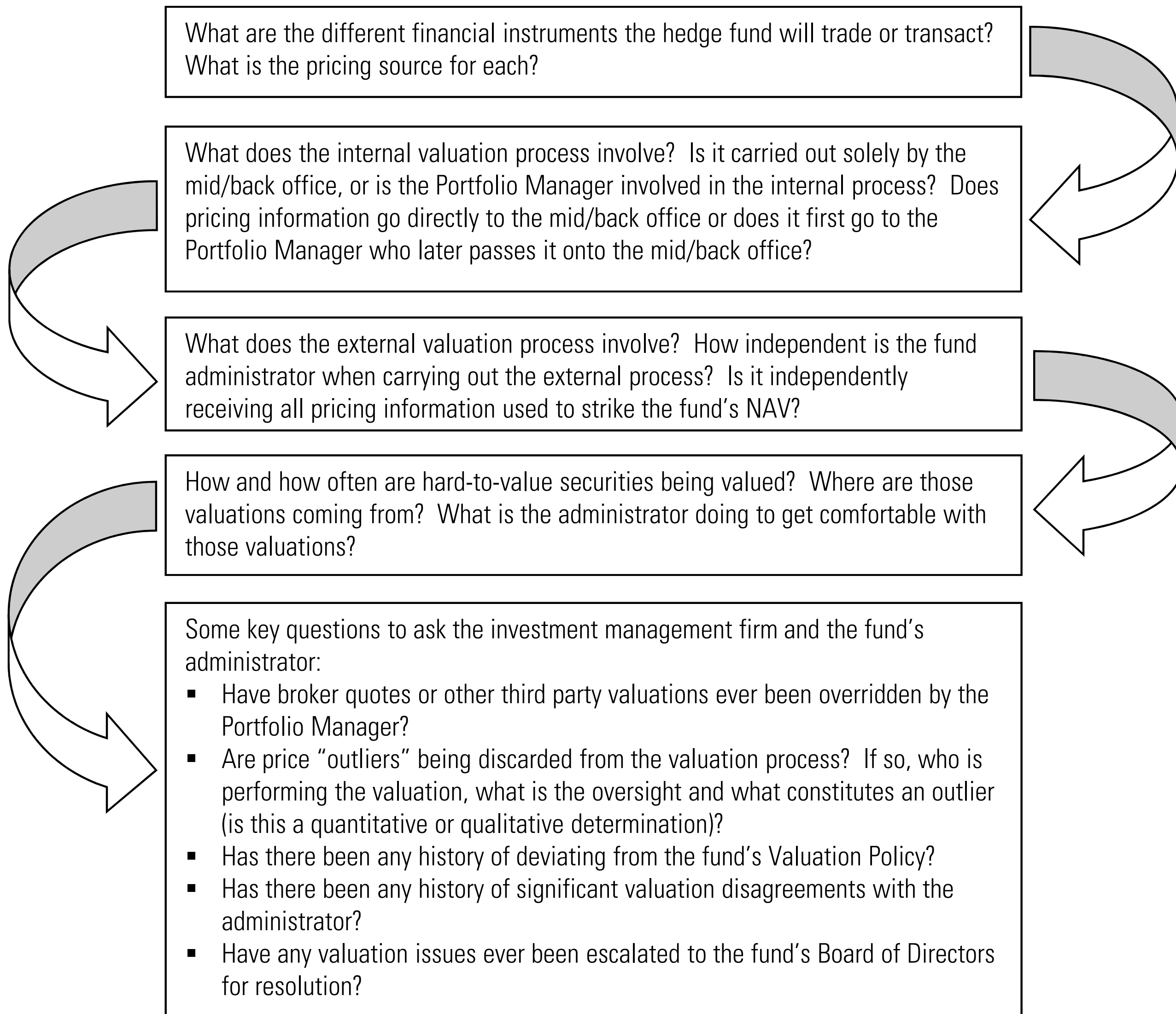
Are valuations being inflated to boost the Portfolio Manager's performance fee payment?

9. Valuation

Point of Emphasis: Along with cash controls, valuation ranks among the most critical areas of operational risk. To best assess the strength of a fund's valuation procedures, consider this framework:

- Obtain and review the fund's formal valuation policy and procedures.
- Reconfirm the different financial instruments traded or transacted (e.g., OTCs) by the fund. Request this information from the manager and then verify with the fund administrator and the audited financial statements.
- Have the manager articulate the internal valuation process, and ask:
  - When and how is the mid/back office pricing the financial instruments traded/transacted by the fund?
  - What is the involvement of the Portfolio Manager in this process? It should be close to zero unless illiquid instruments need to be fair valued in the absence of any third-party pricing.
  - Where broker quotes are required to price the book, are they going directly to the mid/back office or first to the Portfolio Manager/trader? How is pricing determined where multiple quotes are received for the same security, such as the average of the bids or mids?
  - What constitutes a price outlier and what process and oversight is in place to remove outliers from the process?
  - What are the investment manager's ASC 820 classifications for the portfolio? These are the manager's disclosures regarding inputs used to determine portfolio value; a hierarchy scale of 1 to 3 is used, with 1 representing the most observable market inputs and 3 representing the least.
- Determine the fund administrator's role in the valuation process. Important questions to ask of the fund administrator include:
  - Is the administrator performing daily or weekly procedures in addition to its month-end procedures?
  - Is the administrator performing an independent valuation of the fund such that the administrator's pricing determines the fund's month-end net asset value ("NAV")? Or is the administrator performing an independent valuation verification of the fund whereby the administrator determines its pricing for the book, compares that to the manager's pricing and – provided the two aren't materially different – uses the manager's pricing to strike the fund's NAV. If a verification process is used, the investor needs to ask the administrator to disclose its materiality thresholds (at the position, position type and portfolio levels) and then asses how fat or skinny those thresholds are.
  - What valuation sources are used?
  - What aspect of the book, if any, is fair valued by the investment manager in the absence of any third-party pricing?
  - If broker quotes are required, are they independently received by the fund administrator?
  - Is there a history of price overrides by the investment manager (i.e., if broker quotes or vendor prices are received but the manager rejects that pricing in favor of alternate pricing)? Is backup for alternate pricing being received independently by the administrator? Who must determine if the use of alternate pricing is reasonable?
  - Is there a history of deviating from the fund's valuation policy and procedures?
  - Have there been valuation disagreements between the investment manager and fund administrator?
  - Have any valuation issues been escalated to the fund's Board of Directors for resolution?

Here are some questions to consider regarding a hedge fund's valuation:



Where are the assets being held?

10. Prime Brokers, Futures Commission Merchants (FCMs), Custodians

Typically, prime brokers clear and safe-keep a hedge fund's securities and cash. FCMs, generally, clear and hold cash in support of a hedge fund's futures positions. Non-prime broker custodians are used by a hedge fund to hold cash and/or securities from the prime brokers to reduce/diversify overall counterparty risk and eliminate the risk of re-hypothecation, which occurs when a broker-dealer reuses the collateral pledged by clients as collateral for its own borrowing.

The investor should:

- Assess the length of the relationship and type of business being done with each.
- Determine if any such relationships were terminated previously and the reason for termination (attempt to confirm reason with terminated provider if action was recent).
- *Point of Emphasis:* Contact the prime brokers, FCMs and custodians to confirm a relationship exists or has existed in past. Also confirm when the relationship started/stopped. Lastly, confirm the controls on the movement of cash. Note: Some prime brokers/FCMs/custodians may push back initially on confirming cash controls and will only offer a standardized due diligence questionnaire. This often doesn't address cash controls specific to the fund in question. However, with a prod by the investment manager, these service providers will answer specific cash control questions in sufficient detail.

11. Counterparty Risk Management

Identify the fund's active counterparties, who may include counterparties beyond just the prime brokers, such as repurchase agreement ("repo") and over-the-counter ("OTC") counterparties. For each, determine:

- What is being traded/transacted and the associated settlement periods. For any extended settlement periods, determine if daily margining of exposure is being done.
- If the International Swaps and Derivatives Association ("ISDA") agreement governing OTC transactions is bilateral (both sides can call for margin against exposures) or unilateral (only the broker can call for margin but the hedge fund cannot). OTCs transacted under a unilateral ISDA could prove to be problematic for certain strategies, such as arbitrage. An arbitrage hedge fund may need to call for margin on one leg of its trade in order to meet a margin call being made on the other leg. Also determine other key terms of an ISDA agreement, such as NAV decline termination-event triggers, cross-default provisions, and key person provisions.
- Any history of problems with counterparty relationships (missed margin calls, use of cure periods to avoid technical or operational default, relationship terminations).
- How the manager is handling counterparty risk and monitoring the financial health of a fund's counterparties. This should include the regular assessment of a counterparty's credit spreads and not a simple reliance on its credit ratings.
- What is the approval process for new counterparties?

Who is performing independent oversight of the fund and its management?

12. Fund Administrator

Determine the fund's administrator. Ask about previous administrators and/or any periods when the fund was self-administered (i.e., the manager self-valued the fund and self-determined the NAV) or third party-administered on a NAV-lite basis. The latter is when a manager determined all valuations or the administrator struck the NAV using the manager's valuations, without conducting any independent verifications, and then distributed the NAV statement to investors.

Point of Emphasis: Always contact the fund administrator (and, if relevant, the previous administrator), to confirm or provide the following:

- Length of relationship and services provided.
- Fund's monthly net assets and net performance histories for at least the past two years. Compare this to what the manager provided and to year-end figures in the fund's audited financial statements.
- Confirmation that the fund's NAV hasn't ever been restated.
- Involvement and controls that pertain to the movement of the fund's cash.
- Involvement, frequency and procedures that apply to reconciliation of the fund's cash, trades and positions.
- Involvement in fund's valuation process, type of process (i.e., valuation vs. verification), related procedures, materiality thresholds (if verification), deviations from stated valuation policies, history of any override activity, independent receipt of broker quotes and other information needed for valuation, any history of disagreements with investment manager and any history of valuation issues that required escalation to the fund's directors for resolution.
- A Transparency Report showing valuation statistics (for position existence and independent pricing) and counterparty exposure information, if such a report is produced for the fund.
- Where all of the fund's assets are custodied or otherwise held, including prime brokers, custodians and counterparties to which margin/collateral has been posted (e.g., repo, OTC).
- Who – manager or administrator – sends the NAV statement to investors? (Should be the latter).
- Who is the fund's auditor and the date of the last audit?
- Amount of investment in the fund by investment manager's principals and employees.
- Anti-money laundering responsibilities and screening procedures/frequencies.
- SSAE 16 report on the administrator's internal controls (written by a third-party audit firm).

Note: If the fund administrator is unknown, conduct a due diligence investigation, including a background check and a visit or conference call with the service provider.

13. Auditor

Evaluate the fund's auditor and audit history by:

- Assessing the reputation of the auditor and the length of the relationship.
- Evaluating the reputation of any previous auditors and understanding why a switch was made. If it was a recent switch, attempt to contact the former auditor to confirm that the switch was made by the investment manager, as opposed to the audit firm.
- Obtaining and reviewing audited financial statements for at least the previous two fiscal years. Make note of audit opinions and significant or unusual notes. Ensure the audits received apply to the exact legal entities (LLC, Ltd., LP, etc.) for which the investment is being considered.

Note: If a fund's auditor is unknown, conduct due diligence on that auditor, including a background check, as well as a visit or conference call, if possible.

14. External Counsel

Try to assess the reputation of the fund's external law firms that, typically, includes one for onshore and another for offshore. Use of a less reputable firm(s) may be cause for increased scrutiny of the funds' documents (e.g., PPM/OM, Limited Partnership Agreement, Investment Management Agreement) for nonstandard terms, provisions or language.

15. Disaster Recovery / Continuity of Business Plan & Procedures / Cyber Security Preparedeness

Consider what happens to the fund and investment management firm if employees can't access the primary office or systems. This should be well understood by the investor before making an investment. The inability to execute, process or monitor trades for any extended period of time, or the loss of fund or investor data, can prove catastrophic to an investment. All hedge fund investment management firms should have a formal and robust disaster-recovery and business-continuity plan that have been tested significantly. To determine this:

- Obtain and review a copy of the disaster-recovery and business-continuity plan(s). Identify who oversees such planning and determine that person's background and experience for this responsibility.
- If the person in charge has outsourced aspects to a third-party vendor, assess the vendor.
- Identify the manager's short-term vs. long-term plans as they relate to people, critical data, systems and alternate locations should an event occur that impairs access to the primary office and IT production environment. Assess the availability and adequacy of backup systems, alternate work sites and remote access options.
- Determine when plans and backups were last tested, as well as the scope and results of testing. Determine if the manager has been tested by a real-event, such as a power outage, and if one occurred, find out the results of that experience.
- Assess the manager's cyber security policies, procedures and preparedness. Ask about:
    - Employee awareness, training and testing.
    - Projects that apply to inventory access points/means (e.g., mobile devices) to firm's data and systems.
    - Engaging third party IT/CS firms to conduct monitoring and testing for attacks such as denial-of-service, spoofing, sniffing or compromised key attacks.
    - Any history of attacks or data breaches.

16. Compliance Environment

Reflecting increasing regulatory requirements on hedge funds, it is vital that the investment manager keep abreast of compliance requirements and ensure they are followed. A lax compliance environment, or one where no top-down commitment to compliance exists, increases business risk. To gauge an investment manager's compliance environment, determine the:

- Existence of a formal, updated and comprehensive Compliance Manual.
- Existence of a dedicated and qualified Chief Compliance Officer.
- Use of or reliance on a reputable third-party compliance consultant.
- Existence of strong and adequate policies and procedures that address key compliance topics (e.g., personal account trading, anti-money laundering, transactions with affiliates, conflicts of interest, transactions with government officials, trade errors, cross-trading, principal trading, soft dollars, use of expert networks, Alternative Investment Fund Managers Directive ("AIFMD"), Foreign Account Tax Compliance Act ("FATCA"), and "Bad Actors."
- Compliance testing frequency and results.
- Regulatory registrations (domestic/international) for the firm and the fund.
- Past examinations, visits and/or contact by a regulator. Ask to see examination exit letters and report findings.

IV. Process: How to Obtain Information to Make Assessments

How to conduct business & operational due diligence on a hedge fund

To obtain information needed to make assessments about the business and operational risks associated with a hedge fund investment:

A. Have the investment manager complete a significant due diligence questionnaire (AIMA DDQ is industry standard).

B. Have the investment manager forward the following information and materials:

1. The fund's legal documents for onshore and offshore vehicles.
    a. Offering Memorandum / Prospectus.
    b. Investment Management Agreements (offshore).
    c. Limited Partnership Agreements (onshore).
    d. Subscription documents (for onshore and offshore).
    e. Memorandum and Articles of Association (offshore).
    f. Certificates of Incorporation.
2. Organizational chart and biographies of key personnel.
3. Marketing deck for the fund and firm.
4. Fund monthly performance history.
5. Fund monthly net assets history.
6. Firm-wide monthly history of assets under management that provides breakdown of all funds and accounts managed.
7. Last two years of audited financial statements (for feeder and master funds) signed by the auditor.
8. Investor references.
9. List of the brokers/counterparties the fund trades with.
10. Operational Policy & Procedures Manual.
11. Valuation Policy & Procedures.
12. Disaster Recovery/Continuity of Business Policy & Procedures.
13. Trade Allocation Policy & Procedures.
14. Compliance Manual.
15. Manager's internal due diligence questionnaire for the fund and firm.
16. Last four quarter-end transparency reports produced by the administrator.

C. Conduct on-site due diligence visit to:

1. Interview the firm's principals, Chief Operating Officer, Chief Financial Officer, Chief Compliance Officer, Head of IT and an Investor Relations representative.
2. Get a demonstration of front, middle and back office systems.
3. Inspect the firm's server room (if on-site) and determine its security.
4. Tour the office and determine how functions are segregated.

D. Conduct background investigations on the investment management firm, its owners and key persons.

E. Contact prime/clearing brokers and custodians to confirm and verify relationship status, cash controls and any past issues.

F. Contact fund administrator to confirm and verify previously cited information/material.

G. Visit (or conduct conference call) and conduct due diligence (including background checks) on any unknown service providers, such as an auditor, clearing brokers, custodians, fund administrator and/or mid/back office service provider (if outsourced).

H. Complete a written analysis of the non-investment risks to summarize and assess them.

I. Weigh these risks – along with perceived investment-related risks – against the expected return of the investment. Determine the investor's tolerance for these risks.

J. Post-investment, conduct regular monitoring and due diligence, including:

1. Monthly communication with the manager to determine performance drivers, portfolio changes, summary risk information and any significant changes with the firm or fund.
2. Formal weekly/monthly/quarterly risk reporting and monitoring of the investment.
3. Annual or more frequent formal due diligence to reassess business and operational risks, in addition to a formal repeat of the investment due diligence.

Conclusion:

By incorporating this or a similar business and operational due diligence program into an overall investment due diligence framework, hedge fund investors increase their ability to side-step losses stemming from non-investment risks. As history has shown us, such losses can be devastating.

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