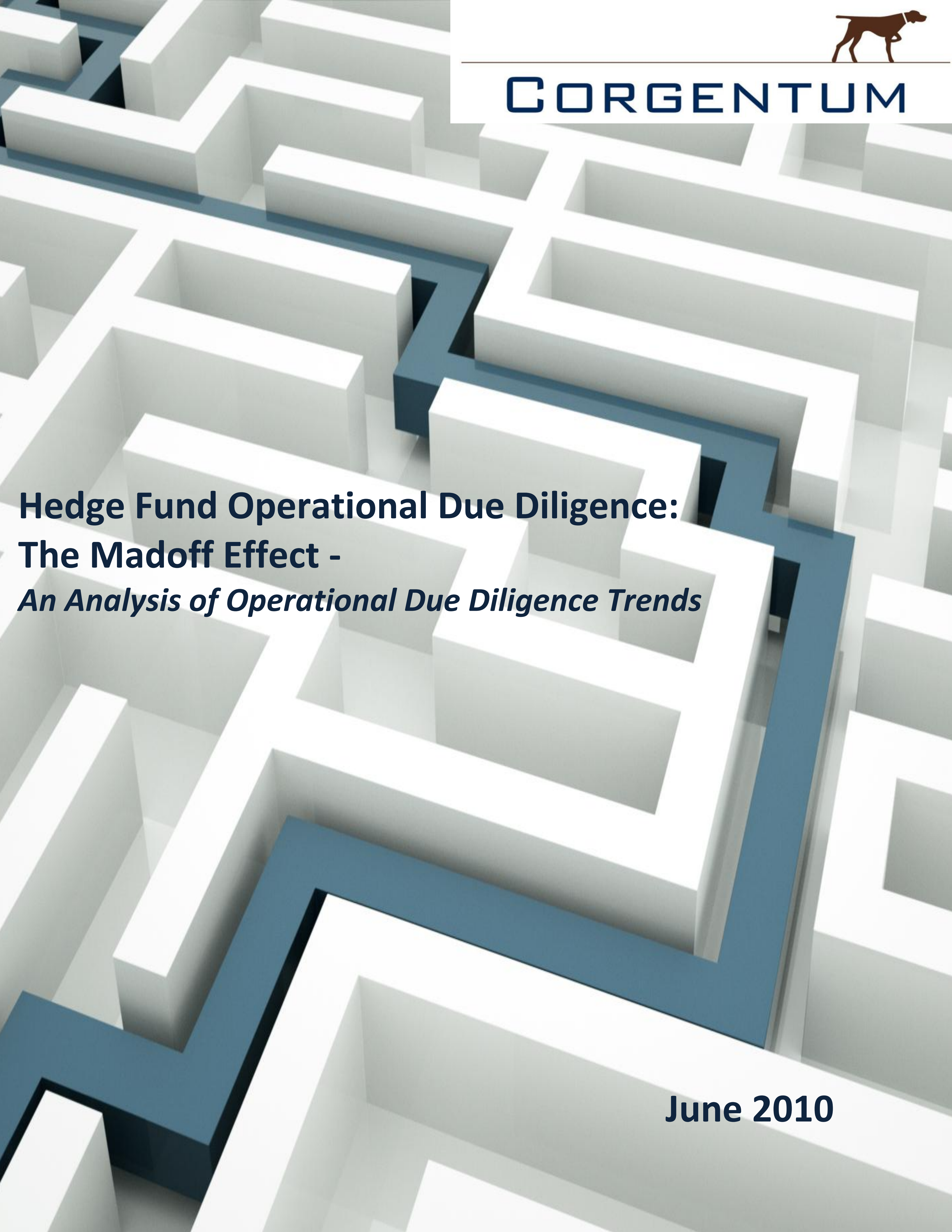

CORGENTUM

Hedge Fund Operational Due Diligence: The Madoff Effect -

An Analysis of Operational Due Diligence Trends

June 2010

When Bernard Madoff turned himself in to authorities on December 11, 2008 hedge fund investors took pause to reassess their approach towards due diligence. Many of the red flags that were present in the Madoff Ponzi scheme, as well as other recent hedge fund frauds, were operational in nature. Indeed recent failures of many legitimate hedge funds, where no fraud was present, can be attributed to inherent and unmitigated operational risks. As a result, many individual and institutional hedge fund investors, including fund of hedge funds, utilized the Madoff fraud as an opportunity to refocus their attention towards operational due diligence. Operational due diligence on hedge funds primarily focuses on diagnosing, analyzing and monitoring the operational or non-investment related risks of a hedge fund manager.

With this renewed and increased focus on operational due diligence, hedge funds reacted with a myriad of responses. Some concentrated on addressing, in due diligence questionnaires and marketing pitchbooks, what they thought would be investors key operational risk concerns. Others, hoping to placate investor concerns, placed their faith in purchased operational risk certifications. A few hedge funds have even pursued traditional manufacturing certifications, normally held by administrators, such as the SAS 70 certification.

This mixed bag of responses by hedge funds has further fostered a lack of uniformity in the type and scope of factors analyzed by investors during the operational due diligence process. As a result, many investors remain unsure which factors are appropriate or important to cover during the operational due diligence process. Making problems worse, those performing operational due diligence have had suffered from a dearth of benchmark data whereby they could effectively determine:

- What operational risks do investors commonly review, during the operational due diligence process?
- What factors are more commonly reviewed than others?
- Do certain operational due diligence frameworks tend to vet more risk factors?
- Are there any operational risk factors that tend to be minimized during the due diligence process?
- How have recent frauds influenced the nature of operational due diligence?
- How has pending financial regulatory reform influenced due diligence?

This study attempts to answer these and other questions by analyzing operational due diligence data collected from over 200 hedge fund allocation organizations. The data shows that in anticipation of stricter hedge fund regulation, investors are focusing the bulk of their due diligence efforts on legal, compliance and regulatory risks. Interestingly, the data also demonstrates a so-called *Madoff Effect*.

Analysis shows that frauds, such as Madoff, have caused investors to tailor their hedge fund operational due diligence process to focus on the red flags of recent frauds.

While this approach has advantages, it assumes that fraud can be modeled and has led to marginalization of other equally important operational risk factors. Introduction A wide variety of approaches are taken by hedge fund allocation organizations that perform operational due diligence reviews of underlying hedge fund managers. Previous research has focused on analyzing the types of operational due diligence frameworks utilized by fund of hedge funds.

Fund of hedge fund operational due diligence frameworks can be classified into four distinct buckets: dedicated, shared, modular and hybrid. This paper focuses on providing an analysis of the number and types of operational factors covered during an operational due diligence review. Brief definitions of each of these frameworks are outlined below for reference:

Dedicated – An operational due diligence framework where a fund of hedge funds has at least one employee whose full time responsibility is vetting the operational risks at hedge fund managers.

Shared – An operational due diligence framework where the responsibility for reviewing the operational risk exposures at hedge funds is shared by the same individuals who have responsibility for investment due diligence. No full time dedicated operational due diligence staff are employed.

Modular – An operational due diligence framework whereby the operational due diligence process is classified into functional components and parsed out among different specialists with relevant domain specific knowledge.

Hybrid – A hybrid operational due diligence framework refers to an approach that encompasses some combination of the three previously described approaches (dedicated, shared, modular) and may incorporate the use of consultants.

Hedge fund allocation organizations can utilize the data in this study to benchmark the comprehensiveness and scope of their operational due diligence processes. Similarly, investors who allocate capital to pooled hedge fund allocators, including fund of hedge funds can utilize the data in this study to evaluate the scope and comprehensiveness of their respective allocator's operational due diligence process.

<u>Organizations That Were Included In This Study</u>

For the purposes of this study, the term fund of hedge funds was defined as an investment organization whose primary purpose is to allocate capital to a portfolio of underlying hedge fund managers. The types of institutions from which data was obtained included those organizations that market themselves as fund of hedge funds, as well as multi-family offices, endowments, foundations, corporate pensions, large independent financial advisory practices and private banking organizations that manage portfolios of hedge funds on behalf of their clients. The hedge fund managers allocated to by the fund of hedge funds could be of any investment strategy. Fund of hedge funds that primarily allocated to funds that were not hedge funds (i.e. - private equity funds, venture capital funds, real estate funds etc.) were not included in this study. Finally, a globally diverse cross-section of fund of hedge funds was included in this study as there were no geographic restrictions.

Number of Fund of Hedge Funds Included in This Study

In order to respect the confidentiality of both those organizations that directly participated in this study or upon which research has been performed, the names of specific organizations have intentionally not been disclosed. Furthermore, the exact number of fund of hedge funds managers utilized in this survey is not specifically disclosed. This is to prevent reverse engineering of the specific identity of any one fund of hedge funds organization included in this survey. A range of the number of fund of hedge funds reviewed has been provided. In this study between 200 and 235 fund of hedge funds were utilized.

Data Sources

The data set utilized for this study was pieced together from several different sources. The primary sources utilized included interviews and surveys with employees working at funds of hedge funds organizations as well as other organizations, as described above, which allocate to hedge funds. Other data was collected from publicly available databases, websites and regulatory archives and via independent research. As a general comment, all percentages stated in this report have been rounded to the nearest whole percent.

Empirical Results: Framework Implication for Factor Analysis

The data demonstrates that across all study participants, regardless of the operational due diligence framework utilized, an average of approximately eight operational factors were analyzed. Within particular frameworks, the number of factors varied in line with expected predictions. For example, fund of hedge funds utilizing dedicated frameworks, on average, analyzed six more operational factors than the framework neutral results, for an average total of 14 operational risk factors. Modular frameworks tied with the framework neutral average, at eight operational risk factors. Hybrid frameworks fell just below the framework neutral average with seven operational risk factors analyzed. Finally shared frameworks, analyzed the least number of operational risk factors at five which was three less than the framework neutral average. These results are summarized in Exhibit 1.

Exhibit 1: Number of Operational Factors Analyzed

Framework	Average Number of Factors Reviewed Within Each Framework*
Across all frameworks	8
Hybrid	7
Dedicated	14
Modular	8
Shared	5

*Number of factors and percentages have been rounded to the nearest whole integer

The Madoff Effect

The next stage of analysis was to examine the effect of fraud on hedge fund operational due diligence trends. In particular, what effect would a large-scale fraud, such as Madoff, have on the type of operational due diligence factors analyzed? Three prominent operational red flags which were inherent in the Madoff fraud were studied. This analysis incorporated data from time periods both prior to the Madoff scandal breaking on December 11, 2008 and the post-Madoff period. This limited example indicates a marked increase among fund of hedge funds in reviewing the operational risk factors which were prevalent in the Madoff fraud during the post-Madoff time period.

Particularly, the data indicated an increase in the category of “Cash controls and management” an increase of 59.87% from the pre-Madoff to the post-Madoff era. This is followed by similar increases of 64.52% for “Quality and length of relationship with service providers” and “Transparency and reporting” at 75.63%. These results are outlined in Exhibit 2.

Exhibit 2: Operational Factors Analysis Shift Pre-Madoff and post-Madoff

Factor Categories	Increase in review frequency post-Madoff
Cash controls and management	59.87%
Quality and length of relationship with service providers	64.52%
Transparency and reporting	75.63%

It should be noted that these increases can represent both increased efforts in these respective risk areas as well as beginning a review in this area anew.

Conclusion

Investors, influenced by recent hedge fund failures, have refocused their due diligence efforts on operational risk areas where leading operational red flags were present. In particular, since the Madoff scandal broke, this study shows that the number of fund of hedge funds reviewing hedge funds cash management policies and controls increased by almost 60%.

Other operational risk areas covered in the Corgentum study that have realized double-digit increases in attention from investors include transparency in reporting and the role of service providers such as auditors and administrators.

Corgentum's analysis also demonstrates that certain operational risk areas continue to be dangerously neglected during the investor due diligence process. Less than 2% of the fund of hedge funds included in this study considered the independence of a hedge fund's board of directors during the due diligence process. Other frequently overlooked operational risk areas included information technology infrastructure, personnel turnover and the quality of overall operations management.

References

Scharfman, Jason, Analyzing Operational Due Diligence Frameworks in Fund of Hedge Funds (May 1, 2009). Available at http://corgentum.com/research/analyzing-operational-due-diligence-frameworks-in-fund-of-hedge-funds.html

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About Corgentum

Corgentum is a provider of comprehensive hedge fund operational due diligence services to the hedge fund investors. Corgentum partners with hedge fund investors to improve upon the efficiency and effectiveness of the operational due diligence process. Our proprietary due diligence methodologies and innovative original research allows our clients to continually manage and mitigate their operational risk exposures. The firm’s unbiased and time-tested approach creates a substantial competitive advantage which enhances the risk management functionality of our clients. Corgentum was founded by Jason Scharfman one leading experts in the field of hedge fund operational due diligence and the author of Hedge Fund Operational Due Diligence: Understanding the Risks (John Wiley & Sons 2008). More information is available at www.Corgentum.com.