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# Trust and delegation[☆]

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ABSTRACT

This paper studies operational risk in the hedge fund industry using due diligence reports. Many funds suffer from operational problems, including limited disclosure of legal and regulatory issues. We use direct evidence of inadequate or failed internal processes to derive a canonical correlation-based measure for operational risk consistent with the Basel definition. It controls for selection bias using an extension of Heckman's (1979) procedure. Operational risk increases the likelihood of subsequent poor performance and fund disappearance, but does not influence investors' return-chasing behavior. Our study emphasizes the importance of information verification in the context of financial intermediation.



> The positive proposition that increasing the integrity of a firm will contribute to increasing its value is no different in kind from the positive proposition that the net present value investment rule will lead to value creation—Michael Jensen (2009)

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## 1. Introduction

In the modern era of fund-based asset management, most investment decisions are delegated to agents whose behavior and character are imperfectly observed and known. Trust is thus an essential feature of the principal–agent relationship in the investment industry and integrity is an important factor in delegated fund management. A variety of institutions have developed to mediate the trust relationship, including regulators, independent auditors, third-party due diligence firms, and informal word-of-mouth networks. Each time a manager "touches" one of these institutions, verifiable information is generated. The consistent or contradictory nature of this information has the potential to enhance or reduce the perceived trustworthiness of the manager.

The issue of trust is particularly important in the hedge fund industry. Prior to the Dodd-Frank Act of 2010, many U.S.-domiciled hedge funds registered with the U.S. Securities and Exchange Commission (SEC) on a voluntary basis only. Information about funds is thus often limited to qualified investors who review the fund offering memoranda or the narrow, voluntarily provided information in public databases. Fund advisors have therefore historically relied on trusted referrals as a prime distribution channel. This reliance on referrals and typically limited transparency are potential reasons why the Bernard Madoff scheme lasted so long. Relatively few third-party entities had access to performance statistics and operational information. In an environment lacking multiple, comparable sources of information about an agent's credibility, trust is even more important, as are mechanisms to verify trustworthiness.

Brown, Goetzmann, Liang, and Schwarz (2008b) examine the limited disclosure that most U.S.-based hedge funds were obliged to make due to the requirement to register as investment advisors for a brief period in 2006. The authors show that prior to this date, sophisticated investors already understood the substantive content of subsequently mandated disclosures. Furthermore, by examining the cross-sectional correlates of these disclosures, they derived an indirect measure of operational risk based solely on information contained in public access databases. Brown, Goetzmann, Liang, and Schwarz (2009) validate this measure on an out-of-sample basis by showing that it predicts subsequent poor performance and fund failure.

However, this research does not describe how sophisticated individuals come to understand these operational risk issues prior to the 2006 public disclosure. Also, the Form ADV that each fund submitted to the SEC contained relatively little information. For this reason it is not clear whether this measure of operational risk derived by correlating data from the public access Lipper TASS (TASS) database with data disclosed on Form ADV truly reflects inadequate or failed internal processes. Perhaps it represents a distinct but related phenomenon. In addition, the minimum asset requirement of $25 million to file Form ADV excluded many small, potentially problematic funds that, for example, may not have even been able to afford reputable auditors (Liang, 2003).

This paper uses detailed evidence on failed internal processes, people, and systems to derive a more direct measure of operational risk, consistent with the Basel definition of operational risk. According to the Basel Committee on Banking Supervision (BCBS), operational risk is defined as "the risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events" and is to be distinguished from systemic, strategic, or reputational risk (Basel Committee on Banking Supervision, 2001).

In particular, we analyze a database of due diligence (DD) reports on hedge funds provided by a major DD firm. These DD firms specialize in gathering and verifying information potentially relevant to the assessment of hedge fund operational risk. This information is potentially valuable since, according to Capco (2003), operational risk is responsible for over half of reported hedge fund failures. While the academic literature has widely studied the roles of regulators, auditors, and informal reputation within financial markets, research on third-party investigation is comparatively recent. The novel feature of the DD reports for our purpose is that they document in detail inadequate or failed internal processes, factual misrepresentations, and inconsistencies in statements and materials provided by hedge fund managers. Thus, we are able to use these reports to derive a direct quantitative measure of operational risk.

We find that operational issues do indeed lead to direct and indirect losses, consistent with earlier studies. In addition, we are able to document which internal process failures contribute most to a relevant definition of operational risk. Finally, the general lack of operational transparency and the evidence of operational problems these reports reveal should itself be a source of concern to many investors. Based on the above, this paper considers four broad questions.

First, do hedge fund managers accurately represent material facts to their investors? We focus on statements made about past regulatory and legal problems, and upon verification problems relating to valuation and performance. The former is pertinent to the potential for future operational events, and the latter is important because it is relevant to the reliability of investor returns. We find that reporting issues are significantly associated with measures of operational risk. Second, we ask whether the DD process successfully identifies inadequate or failed internal processes. We find that failure to use a well-known accounting firm, reliance on internal pricing, and inadequate signature controls are associated with operational risk.

Third, we build a simple canonical correlation-based measure of operational risk. Unlike the indirect measure of operational risk used by Brown, Goetzmann, Liang, and Schwarz (2008b), our new measure of operational risk is based on evidence of imperfect or failed internal processes taken directly from the DD reports themselves, including data on informational contradictions and variables related to honesty. We then validate this measure of operational risk by out-of-sample tests that show that exposure to this risk increases the likelihood of poor subsequent performance and fund death.

One important consideration is that we do not have DD reports for every hedge fund in the industry. Generally, investor interest will gravitate toward those funds