A LEOPARD DOES NOT CHANGE HIS SPOTS– EVIDENCE OF ACTIVISM PERSISTENCE IN THE HEDGE FUND INDUSTRY

ORLY SADE

Jerusalem School of Business, Hebrew University

orlysade@mscc.huji.ac.il

EMANUEL ZUR

Zicklin School of Business, Baruch College

Emanuel.Zur@baruch.cuny.edu

This Draft: September 1 2010

We have benefited from comments by Stephen Brown, Robert Whitelaw and Yishay Yafeh. Sade thanks the Krueger Center for Finance at the Hebrew University of Jerusalem for partial financial support. Large part of this paper was done while Sade visited Stern School of Business, NYU. Sade thanks the Finance department at Stern for its warm hospitality and support.

A LEOPARD DOES NOT CHANGE HIS SPOTS– EVIDENCE OF ACTIVISM PERSISTENCE IN THE HEDGE FUND INDUSTRY

Abstract

This paper investigates hedge fund performance persistence through an examination of actual fund behavior rather than self-reported returns. We propose new activism indexes. We show that past activism is positively correlated with fund orientation toward confrontational activist behavior with respect to future purchases. We show that hedge fund activism is positively correlated with the size of the required minimum investment and with managers who graduated from a top MBA program.

1. Introduction

This paper investigates performance persistence among hedge funds by studying their direct actions. Specifically, we investigate whether there is persistence in activism strategy and whether this persistence influences investment profitability.

The question of the existence of persistence outperformance in professional investment management lies at the heart of the market efficiency literature. Numerous papers investigate mutual fund performance persistence (see, Grinblatt and Titman (1992), Droms and Walker (1994), Brown and Goetzmann (1995), and Carhart (1997), among others) and conclude that mutual funds, on average, underperform passive investments and those that outperform do not have persistent performance. However, does this finding imply that professional money managers do not, on average, persistently outperform the market? One may argue that results from the mutual fund industry should not be generalized to all money managers, as there are several legal constraints that these managers face.

A better laboratory for investigating performance persistence and manager skill might be the hedge fund industry. Unlike their mutual fund counterparts, hedge fund managers do not aim to track benchmark performances, have fewer legal restrictions on the potential investment opportunity set, have discretion with respect to the level of reporting of their strategies and results, and have a compensation structure that provides a greater incentive to perform well.

However, studies on hedge fund performance persistence yield conflicting conclusions. For example, there is some evidence of short term persistence among individual hedge funds (See Agarwal and Naik (2000). However, Brown, Goetzmann, and Ibbotson (1999), and Brown and Goetzmann (2003). find no evidence of performance persistence investigating yearly returns and long term performance and

Boyson (2008) in a recent paper finds no evidence of persistence (short or long-term) when funds are selected based on past performance alone and claims that style factors explain the previous findings of short-term persistence. [1]

In comparing the conflicting results on the persistence of hedge fund performance, it is important to note that there is no one database that contains data on the whole universe of hedge fund industry activity. The three main hedge fund database providers used in academic research are: CISDM, HFR and TASS; because each contains a self-reported sample, bias is created when using these samples for research.[2] Moreover, the academic literature that focuses on investigating persistence in the hedge fund industry uses a range of return measures—either raw return measures (pre- or post-fee) or risk-adjusted return measures (Sharpe ratio or alpha). One of the main criticisms of the use of various return measures in the hedge fund industry to investigate performance persistence is that there are biases in the documented returns (and their indices) because these returns are self-reported by hedge funds (for the documentation of bias in hedge funds returns, see Getmansky, Lo and Makarov (2004), Boyson, Stahel, and Stulz (2006), and Billio, Getmansky and Pelizzon (2009), among others). [3]

While there are many open questions with respect to hedge funds' total activity persistence, the focus of this paper is different. We do not search for persistence in funds' returns but rather persistence in **activism.** Since it was previously documented in the literature that activism actions are correlated with abnormal returns (see for example Brav et al. (2008), and Klein and Zur (2009a, 2009b)), we use the action and intent of actions as our measure. In this paper we ask if an investor that

[1] For a review of the literature on hedge fund persistence, see Eling (2008)
[2] Liang (2000) documents survivorship bias in the TASS and HFR databases.
[3] For documentation about persistence in private equity, see Kaplan and Schoar (2005); for a discussion of the limitation of the data in the private equity database see Phalippou and Gottschalg, 2009.

consider selecting a particular hedge fund for an investment should investigate its past activism record. If indeed past activism is an indicative of future activism and total results, then, there is value to investigate and to collect this information.

In order to overcome self-selection bias and bias in self-reported returns, we hand-collected data from a subsample of the hedge fund industry along with a focus on published activities.

While the advantages of this approach are clear - a cleaner sample and the ability to focus on real actions rather than incentive-driven, self-reported data - there is a disadvantage in the small size of the subsample of the hedge fund universe. Hence we limit our conclusions to the hedge fund activism type of fund investigated, rather than hedge funds in general. Moreover we limit our conclusion about persistence to activism activity rather than to persistence in the total return. Nevertheless, since there is neither an institutional nor a regulatory definition of a hedge fund and since the literature characterizes hedge funds simply as pooled investment vehicles open to only a limited group of investors[4] that generally invest capital on a collective basis, and since there is a documentation that controlling for style is important in the study of hedge fund persistence, we feel that there is room to focus on a subsample of this universe based on shared characteristics of the funds and that the advantages of hand-collected data compensate for the lack of generalizability.[5]

We begin with a description of the hand-collected data. This study examines a comprehensive sample of activism campaigns[6] by 117 hedge funds that engaged in

[4] The investments are organized as "3(c)(1)" or "3(c)(7)" funds, referring to exemptions from mutual fund registration. Funds organized as 3(c)(1) funds are limited to 99 "accredited" investors. Section 3(c)(7) funds may have up to 499 "qualified" investors, but the net worth requirement is higher.

[5] For a description of the different investment styles of hedge funds see Brown and Goetzmann, 2003

[6] Shareholder activism is a broad concept that encompasses, among other things, confrontational and non-confrontational campaigns. This study captures shareholder activism in a limited sense based on the activist's choice of required SEC filing. Hence, a shareholder activist is any investment entity that files a Schedule 13D with the SEC.

695 active investments during the period 1994–2006. We identify hedge fund activism based on fund choices among required Securities and Exchange Commission (SEC) filings.[7] The Securities and Exchange Act of 1934 requires a person or group of persons to publicly disclose stockholdings exceeding a threshold of 5% of a firm's outstanding shares or any class of shares within 10 days of reaching that threshold. When a hedge fund has specific plans to influence the target firm, or when it is unwilling to forfeit the option of influencing the firm in the future, the fund must file a Schedule 13D.[8]

Our first contribution to the literature is to suggest several indexes which can be used to investigate past activism performance and to document their explanatory power with respect to future hedge fund activity. The first proposed index is based on relative activism, or actual, published fund activism versus the total number of fund investments (total activity). Based on the literature on hedge fund activism, we focus on Section 13D filings, board appointments, and the threat of proxy fights. We give each of these factors equal weight (1/3). In order to control for the total activity of each fund, each variable is divided by the total number of investments undertaken by that fund.

The second index uses the same three activism indicators, but goes on to capture performance relative to the peer group (other hedge funds in the same year). We show that the two indexes are highly correlated to one another.

We investigate the determinants of the levels of our activism indexes. We find that minimum investment requirements are positively correlated with all indexes. That

[7] The definition of hedge fund activism and investment in this paper is consistent with the definition in Brav et al. (2008) and Clifford (2008) but not with Klein and Zur (2009), who examine confrontational activism only.

[8] If the party acquiring the stake in the firm in the regular course of business does not intend to influence the management or control of the firm, the Securities and Exchange Act of 1934 permits the party to submit a Schedule 13G filing, a shorter and less burdensome filing that requires less information from the filing party.

is, those funds that require a high minimum investment from their participants have relatively higher levels of activism. Incentive fee is also positively correlated with activism, yet its significance is sensitive to the specific activism index. We also find that hedge fund activism indexes are positively and significantly correlated with a manager's attendance at top MBA programs; however, the indexes are not significantly correlated with managerial education at Ivy League schools.

We show that past activism is positively correlated with movements toward confrontational activism in future fund investments. We also show that this relation is significant even after controlling for the specific characteristics of the acquired firm. We show that while other commonly used firm characteristics explain less than 1% of the decision to adopt a confrontational investment strategy, our relative activism index explains 33% of this decision.[9]

One may ask why they should be so concerned with what predicts confrontational investment? Recent research consistently shows positive returns of 7-10% around the filing of the Schedule 13D, which indicates that there are short-term gains associated with hedge fund activism.[10] Moreover, Clifford (2008) shows that firms targeted by hedge funds with non-confrontational investment purposes earn significantly lower returns compared to firms targeted by hedge funds with confrontational investment purposes.

Once it has been established that past activism activity is positively correlated with confrontational investment styles, we then show that recent activity is correlated with abnormal returns.

[9] Finding persistence in documented actions is consistent with the recent work of Gompers, Kovner, Lerner and Scharfstein (2009) who document performance persistence in entrepreneurship. They show that entrepreneurs with a track record of success are much more likely to succeed than first-time entrepreneurs and those who have previously failed.

[10] E.g. Brav et al., 2008; Klein and Zur, 2009.

This paper is organized as follows. Section 2 describes the sample selection and the data. In section 3 we propose and discuss the activism indexes, and show that activism predicts confrontational investment in section 4. Section 5 contains concluding remarks.

2. Sample Selection and Data Description

2.1 Hand-Collected Data

Since there is neither an institutional nor a regulatory definition of a hedge fund, we rely on the procedure used in the recent hedge fund activism literature (e.g., Brav et al. (2008), Clifford (2008), Klein and Zur (2009a, 2009b)) to identify activist hedge funds and the companies targeted by them. Our investigation spans the period 1994–2006.

We use a two-step procedure to create a database of activist hedge funds and their investments. In the first stage, through a search on Factiva (formerly Dow Jones Interactive) using the terms "hedge fund," "activism," and "activist" (as in Brav et al. (2008)) we assemble a comprehensive list of activist hedge funds that engaged in large investments (over 5% of the target firm equity) during the period 1994–2006. The data is verified through confirmation from several other sources, including fund web sites and investor journals. This process yields 117 hedge funds for our database.[11]

The second stage consists of collecting information on the companies targeted by the funds in our database. We identify activist hedge fund investments based on a fund's choice among required SEC filings. The Securities and Exchange Act of 1934

[11] The database refers to all the funds in one hedge fund family as one group, and does not divide them according to the different funds. For example, the various hedge funds managed by the Tudor Hedge Fund family (i.e., Tudor Capital and Tudor BVI Global Fund) are both considered as part of Tudor Investment Corp.

requires a person or group of persons to publicly disclose large stockholdings within 10 days after the holdings exceed a threshold of 5% of the firm's outstanding shares or of a class of the firm's equity securities. When a hedge fund has specific plans to influence the target firm, or when it is unwilling to forfeit the option of influencing the firm in the future, the fund files a Schedule 13D. When a hedge fund acquires a stake in a firm merely as a passive investor purchasing the securities in the regular course of business with no intent to influence the management or control the firm, the Securities and Exchange Act of 1934 permits submission of a Schedule 13G, a shorter and less burdensome filing that requires less information from the filing party. For each hedge fund, we collect all first-time 13D filings for each targeted firm (available via EDGAR); in other words, a specific fund is included in our sample after it submits its first 13D or 13G filing for a particular target firm. We include no amendments submitted after the initial filing that result in a holding of more than 5%. For a graphical description of the timeline of 13D and 13G filings and an illustration of the data that is included in our sample, see Figure 1. It is important to note that prior to 1996 there was no obligation to file either a 13D or a 13G, as their filing only became mandatory beginning in 1996.[12]

Using the SEC EDGAR database, we compile all 13D hedge fund filings submitted during the 1994–2006 period. From each filing, we collect both the SEC filing date and the date on which the fund crossed the 5% ownership threshold. We

[12] This is taken from the EDGAR website: In early 1993 the SEC began to mandate electronic filing of forms 10-K and 10-Q for a test group of firms. All firms were phased in to EDGAR (the Electronic Data Gathering, Analysis, and Retrieval system) over a 3-year period, ending May 6, 1996. As of that date, all public domestic companies were required to make their filings on EDGAR, except for filings made in paper because of a hardship exemption. When filed in EDGAR the financial reports are generally available to the public within one business day of the filing. Prior to the availability of EDGAR obtaining the annual and quarterly financial reports involved considerable search costs in the form of going to the SEC offices, requesting the reports from the firm or purchasing them from a third party. The filing of the SEC reports is not a publicized event and is not commonly discussed in the press. However, as most firms file their SEC reports on the last days of the statutory period, the SEC filing dates are easy to forecast.

repeat this exercise for all 13G filings. In our sample, we specifically note those cases where "Purpose of Transaction" in the hedge fund Schedule 13D filing includes a specific aggressive purpose (e.g., change board of director composition, replace the CEO) as opposed to where the investment's purpose is passive. Those cases in which the 13D filing includes specific aggressive purposes are referred to as "ACT" investments.

The third stage of data collection involves gathering information about the activist action pursued by each fund. Information about the board and threats to start a proxy fight are obtained from the popular press and by using the Factiva database (formerly Dow Jones Interactive). For example, on 28 February 2003 it was reported that Cobra Electronics Corporation, a leading global manufacturer of mobile communications products, announced that Barry Rosenstein, founder and managing partner of Jana Partners LLC, had been named to the firm's board of directors for a term expiring 2005. Further, Rosenstein's appointment expands Cobra's board to eight members. In our database, this event is coded as *board member* under Jana hedge fund. Another example for *board member* is from 27 March 2001, when Hallmark Financial Services, Inc. (Amex: HAF.EC) (HFS) announced: "the addition of Mark E. Schwarz and Scott T. Berlin to its board of directors. The expansion of the board is part of a continued effort to enhance the Firm's emphasis on growth and improved shareholder value. Mr. Schwarz and Mr. Berlin each have the expertise to effectively serve as Board members, as well as a personal interest in and commitment to the Firm." Since Mr. **Schwarz** is the founder and sole general partner of Newcastle Partners, L.P., in our database we code this event as a *board addition* under Newcastle Partners.

Hand collection of this data is necessary because there is no central database of activist hedge funds, and the publicly available hedge fund databases (i.e., TASS and CISDM) are self-reported and do not comprehensively cover the activist segment of the hedge fund industry (Brav et al. (2008) claim that only 20–25% of their sample is listed on TASS or CISDM). We later match our sample with CISDM and conduct part of the analysis on the joint subsample (Table 1.B provides a description of this subsample).

Since in this project we are interested in creating a yearly/bi-yearly measure of fund activism, for each fund and calendar year we sum the total fund activity. That is, for each fund and for each calendar year, we sum the number of 13D and 13G filings, board member nominations, and proxy fight threats.

Though we rely on the procedure used in the recent hedge fund activism literature to construct the sample, there are some differences between the sample of hedge fund activists investigated in this project and the samples in Brav et al. (2008), Greenwood and Schor (2009), and Klein and Zur (2009a).

Klein and Zur (2009a) research only those confrontational activist campaigns in which the activist clearly states in the "purpose" statement of the filing that its goal is to redirect managements' efforts, whereas we consider all Schedule 13D filings. Greenwood and Schor (2009) restrict their sample by cross-referencing 13D filings with a list of managers that have filed a Schedule 13F institutional holdings form with the SEC.

The data set in this paper uses a longer time series than Klein and Zur (2009a) and Brav et al. (2008): 13 years versus 3 and 6 years, respectively. In addition, while Brav et al. (2008) focus only on 13D filings, we also collect 13G filings. While Brav et al. (2008) include several cases of acquisitions of less than 5%, where they felt that

it was appropriate to do so, for consistency we include only those cases that exceed 5% ownership.

While our database may not constitute an exhaustive set of all hedge fund activist events that occurred during the period 1994–2006, we believe that we cover the most important events. This becomes evident when we run numerous robustness tests and receive similar fundamental results (such as qualitative results regarding the trend in the buy-and-hold -10 +10 CAR returns) that are consistent with the literature (such as Brav et al. (2008), whose database was collected independently of ours).

We hand-collect information about the management skills of 62 fund managers (total of 439 observations) from hedge fund web sites, investor journals, Factiva, and newspaper and magazine articles. This information includes whether the manager earned an MBA, the manager's Alma Mater, years of experience, and age.

We find that 37 managers earned MBAs, and that 31 of these earned their MBAs from a leading business school.[13] Interestingly, 9 of the 31 MBA graduates (~30%) earned their MBAs from Harvard Business School, including Alexander J. Roepers from Atlantic Investment Management, William Ackman from Pershing Square Capital Management, David Berkowitz from Gotham Partners and Eric Rosenfeld from Crescendo Partners II. We also find that seven of the managers graduated from law school. Out of the 62 managers, 24 (~38%) earned their undergraduate degree from one of the Ivy League colleges (mainly Harvard, Princeton and University of Pennsylvania). Yet, two of the managers did not earn an undergraduate degree: Kirk Kerkorian from Tracinda dropped out of school in the eighth grade, and Daniel Snyder from Red Zone dropped out of the University of Maryland.

[13] We classify a leading business school as a school that is among the top-30 business schools according to the Business Week ranking.

2.2. Data from Other Databases

The accounting data is taken from the Compustat Database, and we use data during (for flows) or at the end of (for balances) the year prior to the filing of the initial Schedule 13D. (Cash + Short-term Investments) / Assets (Cash) is the cash and short-term investments (in millions of US$) to total assets ratio, and is calculated as data#1/data#6. Total Debt / Assets is the sum of long and short-tem debt to total assets ratio, and is calculated as (data#9 + data#34) / data#6. EBITDA/Assets is earnings before interest, taxes, depreciation and amortization, and is calculated as data#13/data#6.

In order to calculate buy-and-hold returns, we use the CRSP database. We specifically use the market-adjusted return, which is the target's buy-and-hold return minus the value-weighted NYSE/AMEX/NASDAQ index from CRSP.

Nevertheless, due to the hand-collected nature of our sample, the matching process is not trivial; we are able to match 88% of our sample with the database provided by Compustat and CRSP.

Table 1 describes the number of observations that are matched with the CRSP database per year in our sample. While the sample is collected over the period 1994–2006, 44% of the observations occur during the period 2003–2005. Although the proportion of "ACT" (those 13D filings that set forth specific activism actions) observations out of total observations varies each year from 35% in 1999 to 85% in 1997, the annual average ratio of this variable is 54%.

We also use the CISDM hedge fund database to collect information about the minimum initial investment policy of each fund, the management fee (the percentage that the fund is charged by the investment manager), and the incentive fee (the annual

incentive compensation, as a percentage, that the fund manager receives on new profits). As documented in the literature, the CISDM is self-reported by hedge funds and as a result, it includes only a subsample of the hedge funds that are relevant to this research. We are able to match 26% of our sample with the CISDM data. Table 2 describes the characteristics of our sample. It shows that on average, the sample funds charge a 1.5% management fee on the total investment (maximum fee is 4%). The table also indicates that the sample funds charge an average incentive fee of approximately 17.7% on all new profits, with some funds charging up to 23%, and on average a $1 million minimum investment is required from fund investors.

3. Measuring Past Activism

The literature on hedge fund activism focuses on three main variables as indicators of activism: 13D filings, appointments of board members, and threats of proxy fights. Since the focus of this paper is investigation of the effects of past fund activism on future activism and its consequences, we must first provide an indicator of fund activism. In this section, we provide several different indicators that measure hedge fund activism and compare them to each other. We also propose two activism indexes and investigate their predictive ability.

3.1. Persistence Index Construction

In this section, we propose two activism indexes that consist of the three activism variables already used in the academic literature. The first index is based on relative activism, or in other words, activism activity versus number of investments (total activity). The second index captures performance relative to the peer group

(other hedge funds in similar year). The construction of each index is described below.

The yearly relative activism index (YRAI) measures the level of activism compared with the total number of investments for each fund for each year that it is represented in the sample. The construction of this index is relatively straightforward:

(1) $YRAI_{it}$ = 1/3 * (Number of 13D filed $_{i,t}$ / Number of Investments $_{i,t}$) + 1/3 * (Number of Boards $_{i,t}$ / Number of Investments $_{i,t}$) + (1/3 * Number of Proxy Threats $_{i,t}$ / Number of Investments $_{i,t}$),

where:

i = specific hedge fund family, i = 1…117

t = specific year, t = 1994…2006

Number of 13D filed = Number of initial 13D filings that year

Number of Proxy Threats = Number of proxy fight threats initiated by fund family

Number of Boards = Number of firms for which the fund influenced composition of board of directors during that year

Number of Investments = Total number of 13D and 13G filings during that year

Our two-year relative activism index (2YRAI) measures the level of activism compared with the total number of investments for each fund in each consecutive 2-year period represented in our sample. Again, the construction of this index is relatively straightforward:

(2) $YRAI_{i,t-t+1}$ = 1/3 * (Number of 13D filed $_{i,t-t+1}$ / Number of Investments $_{i,t-t+1}$) + 1/3 * (Number of Boards $_{i,t-t+1}$ / Number of Investments $_{i,t-t+1}$) + (1/3 * Number of Proxy Threats $_{i,t-t+1}$ / Number of Investments $_{i,t-t+1}$),

where

i = specific hedge fund family, i = 1…117

t - t+1 = specific 2 years, t = 1994…2005, t+1 = 1995…2006

Number of 13D filed = The number of initial 13Ds submitted during these 2 years

Number of proxy fights = The number of proxy fight threats initiated by the fund family during these 2 years

Number of Boards = The number of firms in which the fund influenced composition of the board of directors during these 2 years

Number of Investments = The total number of 13D and 13G filings during these 2 years

The decision to give each of the activism measures equal weight is obviously arbitrary. While such a simple weighting for these activities makes no attempt to accurately reflect the relative impact of each activity, it has the advantage of being transparent and not driven by a data mining process. The strategy of using an equal-weighted, straightforward index is consistent with the approach of the Gompers, Ishii and Metrick (2003) corporate governance paper.

Our yearly total activism index (YTAI) is formulated to capture the effect of the absolute total of activism activity of each fund compared with other funds' total activism activity, but without standardizing to the total number of investments as we did with the YRAI index. In order to achieve this, we create a measure that enables us to control for the fact that each variable has an entirely different initial distribution. Our proposed index overcomes this problem. For each year, we sum the total 13D submissions, board appointments, and proxy fights. Then, for each year we calculate the distribution of these activities. If a fund in a particular year was in the top 25% of the distribution in the total number of 13D submissions, the number of board appointments, or the number of proxy fight threats for that particular year, the fund is

assigned the value "1" for that category and "0" otherwise. In any particular year in our sample, a specific fund may receive the value "1" in any one category, in any two categories, in all three categories or in none of the categories. Again we choose to give equal weighting to each of the three components.

(3) $YTAI_{it} = 1/3 * (\text{Top 25\% } 13D_{i,t}) + 1/3 * (\text{Top 25\% } Board_{i,t}) + (1/3 * \text{Top 25\% } Proxy_{i,t})$,

where:

i = specific hedge fund family, i = 1…117

t = specific year, t = 1994…2006

Top 25% 13D = Receives the value "1" if in that year the total number of 13D submissions made by that fund was in the top 25% of 13D submissions (equal or greater than) made by all the funds during that year, and "0" otherwise

Top 25% Board = Receives the value "1" if in that year the total number of "Board" appointments made by that fund was in the top 25% of board appointments (equal or greater than) made by all funds during that year, and "0" otherwise

Top 25% Proxy = Receives the value "1" if in that year the total number of "proxy" fight threats was in the top 25% of proxy threats made by all funds (equal or greater than), and "0" otherwise

We repeat the same exercise over a 2-year window in order to flesh out the two-year total activism index (2TAI):

(4) $2YTAI_{it} = 1/3 * (\text{Top 25\% } 13D_{i,t-t+1}) + 1/3 * (\text{Top 25\% } Board_{i,t-t+1}) + (1/3 * \text{Top 25\% } Proxy_{i,t-t+1})$,

where:

i = specific hedge fund family, i = 1…117

t - t+1 = specific 2 years, t = 1994…2005, t+1 = 1995…2006

Top 25% 13D = Receives the value "1" if in the 2 consecutive years t and t+1, the total number of 13D submissions made by that fund is in the top 25% of 13D submissions (equal or greater than) made by all funds during this period, and "0" otherwise

Top 25% Board = Receives the value "1" if in the 2 consecutive years t and t+1, the total number of "Board" appointments made by that fund is in the top 25% of board appointments (equal or greater than) made by all funds during this period, and "0" otherwise

Top 25% Proxy = Receives the value "1" if in the 2 consecutive years t and t+1, the total number of "proxy" fight threats is in the top 25% of proxy threats made by all funds (equal or greater than) during this period, and "0" otherwise

Table 3 summarizes the various indexes, tabulating the relative and total activism indexes. The indexes are calculated over 1- and 2-year horizons for each hedge fund year. The mean relative 1- (2-) year index is significantly positive and equal to 0.302 (0.324). The table also describes the mean total 1- (2-) year activism index, and reports a significantly positive index equal to 0.266 (0.259). Finally, we present the mean 13D submissions (average of 1.952), board appointments (average of 1.782), and proxy threats (average of 0.533) per year per fund in our sample.

3.2. Index Relationships

Table 4 presents the correlations between the various indexes and variables. The upper (lower) diagonal in Table 4 reports Pearson (Spearman) correlations. The number presented represents clear evidence of high correlation between any two

variables investigated. With regard to the four indexes, the table shows significant positive correlation between the 1- and 2-year activism indexes and between the relative and total activism indexes. The high correlations between the relative and total indexes are related to the documentation that hedge funds are able to pursue many of the stated objectives within a year. Given the high correlation between all the suggested indexes, we present the remainder of our investigation using the 1-year relative index and the 1-year ranked index.

Table 5 lists the names of extreme funds in each activism category. The table first lists the three hedge funds that have, on average, the highest (lowest) 1-year index. For example, Pirate Capital made nine 13D filings during the years 2004–2006. Out of those nine investments, in three different events the fund publicly threatened to start proxy fights, and in three different events managed to appoint a member to the board of the target. Cannell Capital, on the other hand, invested during the years 1999–2006 in 98 firms. However, in only three cases did this hedge fund file a Schedule 13D, and in the other 95 cases the fund filed Schedule 13G. When analyzing this fund's strategy and success during these years, we find that the fund never publicly threatened to start a proxy fight and in only one investment did it manage to appoint a member to the board.

It is interesting to observe that different funds dominate different styles of activism, and yet for example, Steel Partners II appears in the top-three funds of more than one category.

3.3. Activism Indexes, Fund and Manager Characteristics

In analyzing the hedge fund industry, Ackermann, McEnally, and Ravenscraft (1999) examine whether performance can be explained through characteristics of the

hedge fund; they find that incentive fees are positively related to performance, and that fixed management fees are negatively related to performance. Liang (1999) finds that hedge fund size, lockup periods, and incentive fees are positively related to performance and that fund age is negatively related to performance. Edwards and Caglayan (2001) also find that performance is positively related to incentive fees. We confine our examination to the relationship among activism and incentive fees, management fees, and minimum investment in a subsample of funds that are represented in the CISDM database. We find that management fees, incentive fees and minimum investments are positively related to the various measures of activism (Table 6). Yet, regardless of the activism measure that we use, minimum investment is the most significant variable. Since the activism activities of funds are relatively observable, those funds that can demand higher fees and higher initial investments, are indeed more active.

In the mutual fund arena, there is well-established research that examines whether management skills and fund characteristics such as incentive fees, management fees, size, and age can explain fund performance. Golec (1996) finds that mutual fund performance is significantly impacted by management characteristics, and that funds run by managers with MBA degrees perform better. Golec (1996) also finds that a high management fee is associated with better performance, because a high fee is a signal of superior investment skills. Chevalier and Ellison (1999) examine the cross-sectional relation between mutual fund performance and characteristics of fund managers, and they also find that managers with MBAs outperform managers without MBAs. However, they attribute the significantly higher returns to greater holdings of systematic risk.

In addition, a 1994 study by Morningstar, Inc. on the mutual fund industry reported in *Business Week* (July 4, 1994, page 6) that mutual funds managed by "Ivy League" graduates achieved significantly higher raw returns than those of funds managed by non–Ivy league graduates over a 5-year period. Chevalier and Ellison (1999) use average SAT score as an indicator for the quality of undergraduate education, and they find that managers who graduated from higher-SAT-scoring institutions produced higher returns.

We find (Table 6A) that hedge fund activism indexes are positively and significantly correlated with a manager's graduation from an MBA program at a top school; however, they are not significantly correlated with a manager's education at "Ivy League" schools.

4. Persistence: Predicting Confrontational Investment

When a hedge fund has specific plans to influence the target firm, or when it is unwilling to forfeit the option of influencing the firm in the future, the fund must file a Schedule 13D.[14] We define confrontational investment as present if one, the fund files a 13D (and not a 13G) and two, the fund reveals in the "purpose" section of the 13D that it intends to proactively influence future management decisions. If either of these two conditions is not met, we define the investment as a non-confrontational investment.

In this section, we investigate the question of what predicts confrontational investment as opposed to non-confrontational investment. First, we conduct a "horse race" between the various possible activism measures in order to learn which better

[14] If the party acquiring the stake in the firm in the normal course of business and does not intend to influence the management or to control the firm, the Securities and Exchange Act of 1934 permits submission of a Schedule 13G filing, which is a shorter and less burdensome filing that requires less information from the filing party.

predicts the decision to undertake confrontational investment. Accordingly, we utilize the following probit estimation:

(5) $ACT = \alpha + \beta i * \text{past activism measures} + \mu$,

where:

ACT is a dummy variable that takes the value 1 if the fund files a 13D and reveals that it intends to proactively influence future management decisions regarding firm activities, and 0 otherwise

13D/NUMOFINV is the total number of Schedule 13Ds each fund files in each calendar year, divided by the total number of investments the fund files in the same year

13D is the total number of Schedule 13Ds each fund files in each calendar year

BOARD/NUMOFINV is the number of times the hedge fund successfully appoints a member to the board of one of its investments in each calendar year, divided by the total number of investments the hedge fund files in the same year

BOARD is the number of times the hedge fund successfully appoints a member to the board of one of its investments in each calendar year

PROXY/NOMOFINV is the number of times the hedge fund publicly threatens a proxy fight against one of its investments in each calendar year, divided by the total number of investments the hedge fund files in the same year

PROXY is the number of times the hedge fund publicly threatens a proxy fight against one of its investments in each calendar year

ONEYEARINDEX is the yearly activism index

ONEYEARRANK is the yearly relative activism index.

We find that models that contain either the number of 13D filings divided by the number of investments, the1-year index or the three variables from which the index is constructed (without the 1/3 constraint), provide the highest explanatory power (approximately 33–36%).

Next, as a natural robustness check, we investigate whether the activism explanatory power persists after controlling for appropriate firm characteristics. In order to investigate this, we estimate the following probit model:

(6) $ACT = \alpha + \beta i * YRA + \beta j *$ target characteristics $+ \mu$,

where:

ACT is a dummy variable that takes the value 1 if the fund files a 13D and reveals that it intends to proactively influence future managements' decisions regarding firm activities

YRA is the yearly relative index

The target's characteristics include the following variables:

MKTYPBOOK is the ratio of the firm's stock market value to the difference in the value of total assets and total liabilities in the end of the fiscal year prior to the hedge fund investment.

CASHANDINV is the ratio of the sum of cash plus short-term investments to total assets in the end of the fiscal year prior to the hedge fund investment.

TOTDEBTBYASSET is the ratio of the sum of long- and short-term debt to total assets in the end of the fiscal year prior to the hedge fund investment.

ADJTOTDEBTBYASSET is the difference between the firm's TOTDEBTBYASSET and the median value for all firms in the firm's Fama and

French (1997) 48-industry classification in the end of the fiscal year prior to the hedge fund investment.

ADJCASHANDINV is the difference between the firm's CASHANDINV and the median value for all firms in the firm's Fama and French (1997) 48-industry classification in the end of the fiscal year prior to the hedge fund investment.

Table 8 presents five models of estimation. The explanatory power of past activism activity is striking. We show that while other common firm characteristics explain less than 1% of the decision to adopt a confrontational investment style, our relative activism index explains 33% of this decision.

We estimate whether past performance is positively correlated with the positive (on average) cumulative abnormal return (-10, +10) that is documented in the activism literature. We find indeed positive and significant relation even after controlling for other documented firm accounting-related variables.

5. Conclusion

This paper contributes to the literature by documenting that a past record of activism on the part of a hedge fund is a good predictor of future confrontational investment. In other words, activism is persistent in our sample of hedge funds. We use an extensive, hand-collected data set from several sources to propose activism indexes. Specifically, we examine 117 hedge funds that engaged in 695 active investments during the period 1994–2006. The variables used to construct the indexes are: 13D submissions, board appointments, and threats to initiate proxy fights. The first index that we propose is based on relative activism, or in other words, published actual activist fund activity versus a fund's total number of investments (total

activity). We give each factor an equal weighting (1/3). The second index uses a similar set of three activist actions yet it captures relative performance to the peer group (other hedge funds in the same year). We show that the various indexes are highly correlated to one another.

In addition to documenting that past activism is positively correlated with future fund intention of confrontational activist activity in future purchases, we show that hedge fund activism is positively correlated with minimum investment amounts and a manager's attendance at a top MBA program.

We leave for future research the connection between and consequences of activism persistence and the associated reputation that a particular hedge fund acquires.

References

Ackermann, C., R. McEnally, and D. Ravenscraft, 1999. The performance of hedge funds: Risk, return and incentives. *Journal of Finance* 54(3), 833-874.

Agarwal, V., and N.Y. Naik, 2000. Multi-period performance persistence analysis of hedge funds. *Journal of Financial and Quantitative Analysis* 35, 327-342.

Billio, M., M. Getmansky, and L. Pelizzon, 2009. Dynamic risk exposure in hedge funds. Working paper, University of Massachusetts, Amherst, MA.

Boyson, N. M., C. W. Stahel, and R. M. Stulz, 2006. Is there hedge fund contagion? NBER working paper no. 12090.

Boyson, N. M. (2008). Do hedge funds exhibit performance persistence? A new approach. Financial Analysts Journal, 64(6), 27–44

Brav, A., W. Jiang, F. Partnoy, and R. Thomas, 2008. Hedge fund activism, corporate governance, and firm performance. *Journal of Finance* 63, 1729-1776.

Brown, S.J., and W.N. Goetzmann, 1995. Performance persistence. *Journal of Finance* 50, 679-698.

Brown, S.J., and W.N. Goetzmann, 2003. Hedge Funds with Style, *Journal of Portfolio Management,* 2003, 29(2), 101 - 112

Brown, S.J, W. Goetzmann, and R. Ibbotson, 1999. Offshore hedge funds: Survival and performance, 1989-1995. *Journal of Business* 72, 91-117.

Carhart, M., 1997. On persistence in mutual fund performance. *Journal of Finance* 52, 57-82.

Chevalier, J. A., and G. D. Ellison, 1999. Career concerns of mutual fund managers. *Quarterly Journal of Economics* 114, 389-432.

Clifford, C., 2008. Value creation or destruction? Hedge funds as shareholder activists. *Journal of Corporate Finance* 14, 323-336.

Droms, W. G., and D. A. Walker, 1994. Investment performance of international mutual funds. *Journal of Financial Research* 18(1), 1-14.

Edwards, F. R., and M.O. Caglayan, 2001. "Hedge fund performance and manager skill," *Journal of Futures Markets* 21 (11), 1003-1028.

Eling, Martin, 2007, Does Hedge Fund Performance Persist? Overview and New Empirical Evidence, *University of St. Gallen, Risk Management and Insurance Working Paper No.37.*

Fama, E., and K. French, 1997. Industry costs of equity. *Journal of Financial Economics* 43, 153-193.

Getmansky, M., A. Lo, and I. Makarov, 2004. An econometric model of serial correlation and illiquidity of hedge fund returns. *Journal of Financial Economics* 74, 529-610.

Golec, J. H., 1996. The effects of mutual fund managers' characteristics on their portfolio performance, risk and fees. *Financial Services Review* 5, 133-148.

Gompers, P. A., J. Ishii and A. Metrick, 2003. Corporate Governance and Equity Prices, *Quarterly Journal of Economics* 118, 107-155

Gompers, P. A., K.,Anna J., Lerner, and D., S. Scharfstein. 2010. Performance Persistence in Entrepreneurship. *Journal of Financial Economics* 96, 18–32

Greenwood, R., and M. Schor, 2009. Investor activism and takeovers. *Journal of Financial Economics* 92, 362-375.

Grinblatt, M. and S. Titman, 1992. The persistence of mutual fund performance. *Journal of Finance* 47, 1977-1984.

Kaplan, S., Schoar, A., 2005. Private equity performance: returns, persistence and capital. *Journal of Finance* 60, 1791–1823.

Klein, A., and E. Zur, 2009a. Entrepreneurial shareholder activism: Hedge funds and other private investors. *Journal of Finance* 64, 187-230.

Klein, A., and E. Zur, 2009b. The impact of hedge fund activism on the target firm's existing bondholders. Working paper, New York University.

Liang, B., 1999. On the performance of hedge funds. *Financial Analysts Journal* 55(4), 72-85.

Phalippou L., and O. Gottschalg, 2009. The Performance of Private Equity Funds, *Review of Financial Studies*, 22(4), 1747-1776.

Figure 1

Figure 1 describes the procedure for the data collection. Observations are collected at the point where the holdings of the hedge fund surpass the 5% barrier for the first time.

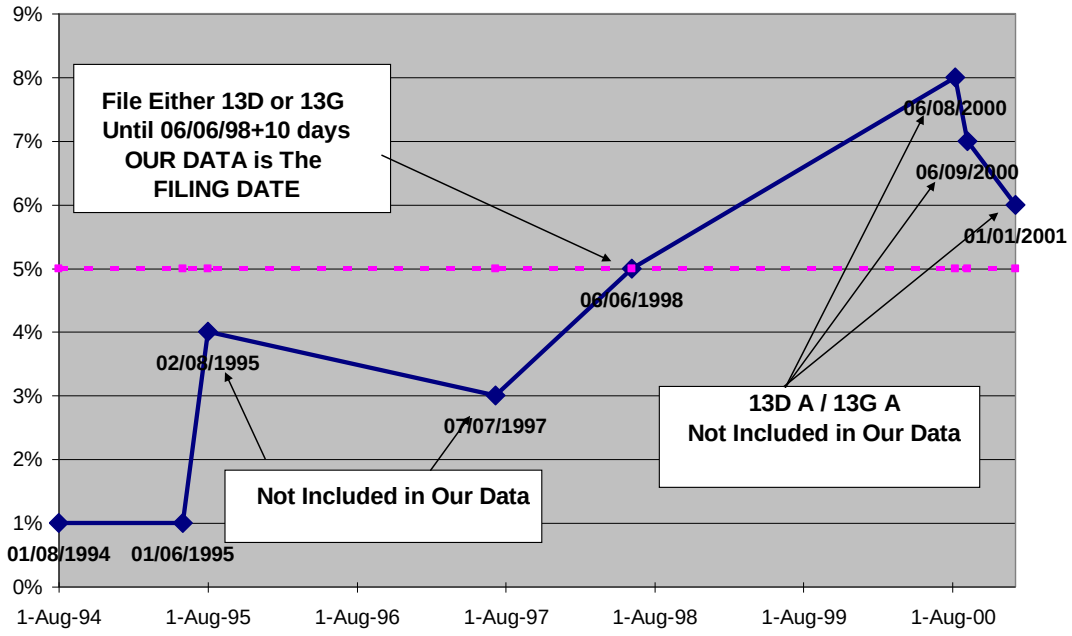

Table 1

This table reports descriptive statistics for the final sample of hedge funds and target firms. Panel A summarizes the number of firms targeted in each year by hedge fund activists. Panel B summarizes the number of firms targeted in each year by hedge fund activists that are covered in the CISDM database. Total Number of Observation is the total number of filings (Schedule 13G and Schedule 13D) in each year in our sample. Total Number of 13D filings is the number of Schedule 13D filings only in each year of our sample. ACT is the total number of confrontational filings in which the hedge fund clearly states in the "purpose" statement of the Schedule 13D filing that its goal is to redirect management's efforts.

Panel A: Descriptive Statistics: Number of Observations per Year Used to Construct the Index

Year	Total Number of Observations	Total Number of 13D Filings	ACT
1994	6	5	4
1995	27	25	22
1996	34	31	24
1997	69	60	59
1998	75	49	42
1999	99	43	35
2000	90	42	34
2001	84	38	32
2002	92	58	41
2003	130	66	56
2004	152	76	62
2005	229	104	89
2006	177	109	51

Panel B. Descriptive Statistics: Number of Observations per Year in the Subsample of CISDM

Year	Total Number of Observations	Total Number of 13D Filings	ACT
1994	0	0	0
1995	6	6	4
1996	9	7	5
1997	23	20	19
1998	26	19	14
1999	33	21	10
2000	31	24	13
2001	34	21	16
2002	39	29	16
2003	54	43	21
2004	53	41	27
2005	82	59	33
2006	13	10	8

Table 2

Fund Characteristics

This tables reports descriptive statistics of hedge fund characteristics in the sample based on the CISDM database. For each variable, the mean, median, minimum and maximum values are reported. Management Fee (%) is the percentage that the fund is charged by the investment manager. Incentive Fee (%) is the annual percentage incentive compensation that the fund manager will receive on new profits. Minimum Investment (M$$) is the minimum amount in millions of dollars that the fund requires from any individual investor. Funds' Press Coverage is the number of articles in Factiva containing the hedge fund's name in the 1 month period prior to "day zero."

Variable	Mean	Median	Minimum	Maximum
Management Fee (%)	0.015	0.010	0.000	0.040
Incentive Fee (%)	0.177	0.150	0.050	0.230
Minimum Investment (M$$)	1	1	0.25	5
Funds' Press Coverage	31.640	22.000	0.000	1162.000
N	358	358	358	358

Table 3

Activism Index – Descriptive Statistics

This table reports descriptive statistics for the final sample of hedge funds, and presents mean, median, minimum and maximum values of the different descriptive variables. $YRAI_{i,t}$ is the yearly relative activism index calculated as $YRAI_{it}$ = 1/3 * (Number of 13D filed $_{i,t}$ / Number of Investments $_{i,t}$) + 1/3 * (Number of Boards $_{i,t}$ / Number of Investments $_{i,t}$) + (1/3 * Number of Proxy Threats $_{i,t}$ / Number of Investments $_{i,t}$). $YTAI_{i,t}$ is the yearly total activism index calculated as, $YTAI_{it}$ = 1/3 * (Top 25% $13D_{i,t}$) + 1/3 * (Top 25% $Board_{i,t}$) + (1/3 * Top 25% $Proxy_{i,t}$), $YRAI_{i,t-t+1}$ is the two-year relative activism index, calculated as $YRAI_{i,t-t+1}$ = 1/3 * (Number of 13D filed $_{i,t-t+1}$ / Number of Investments $_{i,t-t+1}$) + 1/3 * (Number of Boards $_{i,t-t+1}$ / Number of Investments $_{i,t-t+1}$) + (1/3 * Number of Proxy Threats $_{i,t-t+1}$ / Number of Investments $_{i,t-t+1}$), $YTAI_{i,t-t+1}$ is the two-year total activism index, calculated as $YTAI_{it}$ = 1/3 * (Top 25% $13D_{i,t-t+1}$) + 1/3 * (Top 25% $Board_{i,t-t+1}$) + (1/3 * Top 25% $Proxy_{i,t-t+1}$). 13D is the total number of Schedule 13Ds a hedge fund files each calendar year. Board is the number of times the hedge fund successfully appoints a member to the board of one of its investments in each calendar year. Proxy is the number of times the hedge fund publicly threatens a proxy fight against one of its investments in each calendar year. *, **, *** correspond to significantly different from zero at the 10%, 5%, and 1% levels, two-tailed, respectively.

Variable	Mean	Median	Minimum	Maximum
$YRAI_{i,t}$	0.302***	0.280***	0.000	1.000
$YRAI_{i,t-t+1}$	0.324***	0.335***	0.000	1.000
$YTAI_{i,t}$	0.266***	0.000	0.000	1.000
$YTAI_{i,t-t+1}$	0.259***	0.000	0.000	1.000
13D	1.952***	1.000***	0.000	10.000
Board	1.782***	1.000***	0.000	5.000
Proxy	0.533	0.000	0.000	3.000

Table 4

Activism Indexes – Correlation Table

This table presents a correlation table for the various activism indexes. The upper (lower) diagonal in this table reports Pearson (Spearman) correlations. $YRAI_{i,t}$ is the yearly relative activism index calculated as $YRAI_{it}$ = 1/3 * (Number of 13D filed $_{i,t}$ / Number of Investments $_{i,t}$) + 1/3 * (Number of Boards $_{i,t}$ / Number of Investments $_{i,t}$) + (1/3 * Number of Proxy Threats $_{i,t}$ / Number of Investments $_{i,t}$). $YTAI_{i,t}$ is the yearly total activism index calculated as, $YTAI_{it}$ = 1/3 * (Top 25% $13D_{i,t}$) + 1/3 * (Top 25% $Board_{i,t}$) + (1/3 * Top 25% $Proxy_{i,t}$), $YRAI_{i,t-t+1}$ is the two-year relative activism index, calculated as $YRAI_{i,t-t+1}$ = 1/3 * (Number of 13D filed $_{i,t-t+1}$ / Number of Investments $_{i,t-t+1}$) + 1/3 * (Number of Boards $_{i,t-t+1}$ / Number of Investments $_{i,t-t+1}$) + (1/3 * Number of Proxy Threats $_{i,t-t+1}$ / Number of Investments $_{i,t-t+1}$), $YTAI_{i,t-t+1}$ is the two-year total activism index, calculated as $YTAI_{it}$ = 1/3 * (Top 25% $13D_{i,t-t+1}$) + 1/3 * (Top 25% $Board_{i,t-t+1}$) + (1/3 * Top 25% $Proxy_{i,t-t+1}$). 13D is the total number of Schedule 13Ds a hedge fund files each calendar year. Board is the number of times the hedge fund successfully appoints a member to the board of one of its investments in each calendar year. Proxy is the number of times the hedge fund publicly threatens a proxy fight against one of its investments in each calendar year. *, **, *** correspond to correlations that are significant at the 10%, 5%, and 1% levels, two-tailed, respectively.

	$YRAI_{i,t}$	$YRAI_{i,t-t+1}$	$YTAI_{i,t}$	$YTAI_{i,t-t+1}$	13D	Proxy	Board
$YRAI_{i,t}$		0.740***	0.649***	0.477***	0.582***	0.592***	0.564***
$YRAI_{i,t-t+1}$	0.722***		0.487***	0.472***	0.748***	0.724***	0.738***
$YTAI_{i,t}$	0.697***	0.525***		0.706***	0.501***	0.475***	0.443***
$YTAI_{i,t-t+1}$	0.550***	0.543***	0.700***		0.639***	0.681***	0.663***
13D	0.578***	0.737***	0.483***	0.659***		0.581*	0.796
Proxy	0.584***	0.717***	0.489***	0.663***	0.595*		0.446
Board	0.558***	0.721***	0.432***	0.641***	0.808	0.425	

Table 5

Ranking Descriptive Statistics

This table reports for each descriptive variable the three highest- and lowest-ranking hedge funds in the sample. For each variable, the table presents the mean, median and the number of years the hedge fund appears in our sample. $YRAI_{i,t}$ is the yearly relative activism index calculated as $YRAI_{it}$ = 1/3 * (Number of 13D filed $_{i,t}$ / Number of Investments $_{i,t}$) + 1/3 * (Number of Boards $_{i,t}$ / Number of Investments $_{i,t}$) + (1/3 * Number of Proxy Threats $_{i,t}$ / Number of Investments $_{i,t}$). 13D is the total number of Schedule 13Ds a hedge fund files each calendar year. Proxy is the number of times the hedge fund publicly threatens a proxy fight against one of its investments in each calendar year. Board is the number of times the hedge fund successfully appoints a member to the board of one of its investments in each calendar year.

Hedge Fund	Mean ($YRAI_{i,t}$)	Median	No. of Years
High Ranked Hedge Funds			
Pirate Capital	0.725	0.670	3
Liberation Investment Group	0.690	0.670	3
D.E. Shaw Group	0.670	0.615	4
Low-Ranked Hedge Funds			
Cannell Capital	0.009	0.020	8
Tyndall Capital Partners	0.038	0.000	3
O.S.S. Capital	0.037	0.111	3

Hedge Fund	Mean (13D)	Median	No. of Years
High-Ranked Hedge Funds			
Loeb Partners	6.200	5	5
Hummingbird Management	5.000	4	5
Steel Partner II	4.750	4	11
Low Ranked Hedge Funds			
Everest Capital	0.100	0.000	5
Contrarian Capital Management	0.0400	0.000	3
Dolphin LTD	0.400	0.000	3

Hedge Fund	Mean (Proxy)	Median	No. of Years
High Ranked Hedge Funds			
Steel Partner II	1.583	1.000	11
Farallon Capital Management	1.428	1.000	7
Pirate Capital	1.241	1.000	3
Low Ranked Hedge Funds			
Everest Capital	0.000	0.000	5
Contrarian Capital Management	0.000	0.000	3
Accipiter Capital Management	0.000	0.000	3

Hedge Fund	Mean (Board)	Median	No. of Years
High Ranked Hedge Funds			
Steel Partner II	2.667	2.000	11
Hummingbird Management	1.900	2.000	5
VA Partners	1.833	2.000	6
Low Ranked Hedge Funds			
O.S.S. Capital	0.000	0.000	3
Cannell Capital	0.000	0.000	8
Contrarian Capital Management	0.000	0.000	3

Table 6

Fund Fees and Minimum Investment and Activism

This table reports the results of regressions of the hedge funds in our sample. Column 1 uses the total number of Schedule 13Ds each hedge fund files each calendar year as the dependent variable. Column 2 uses the number of times the hedge fund successfully appoints a member to the board of one of its investments in each calendar year as the dependent variable. Column 3 uses the number of times the hedge fund publicly threatens a proxy fight against one of its investments in each calendar year as the dependant variable. Column 4 uses the yearly relative activism index as the dependant variable. Column 5 uses the yearly relative activism index as the dependent variable. Min Investment is the minimum amount that the fund requires from any individual investor in the fund. Mgmt Fee is the percentage that the fund is charged by the investment manager. Incentive Fee is the annual percentage incentive compensation that the fund manager will receive on new profits. Min Investment, Mgmt Fee and Incentive Fee are all taken from the CISDM database. The table shows the coefficients and *P*-values. ***significant at the 0.01 level; **significant at the 0.05 level; *significant at the 0.10 level.

	Sum of 13D (Poisson Count)	Sum of Boards (Poisson Count)	Sum of Proxy (Poisson Count)	Yearly Index (Tobit)	Yearly Ranked Index (Tobit)
Constant	-0.570 (0.0002)	-1.282 (0.0000)	-0.846 (0.0068)	-0.030 (0.646)	-0.0154 (0.878)
Min Investment	3.42 E-7 (0.0000)	3.85 E-07 (0.0000)	3.21 E-07 (0.0000)	9.23 E-08 (0.0000)	1.62 E-07 (0.0000)
Mgmt Fee	17.649 (0.0000)	6.617 (0.3875)	-68.416 (0.000)	-1.902 (0.0571)	-9.497 (0.0017)
Incentive Fee	1.816 (0.0004)	0.806 (0.2931)	2.839 (0.011)	0.296 (0.0003)	0.567 (0.202)
P-value	0.0000 (LR test)	0.0000 (LR test)	0.0000 (LR test)	0.0000	0.0000
Adj R^2	0.42	0.43	0.37	0.24	0.38
No	358	358	358	358	358

Table 6A

Manager's Education and Activism

This table reports the results of regressions of the different hedge funds in our sample. Column 1 uses the total number of Schedule 13Ds each hedge fund files each calendar year as the dependent variable. Column 2 uses the number of times a hedge fund successfully appoints a member to the board of one of its investments in each calendar year as the dependent variable. Column 3 uses the number of times the hedge fund publicly threatens a proxy fight against one of its investments in each calendar year as the dependant variable. Column 4 uses the yearly relative activism index as the dependant variable. Column 5 uses the yearly relative activism index as the dependent variable. TOP-MBA is an indicator variable that takes the value 1 if the hedge fund manager earned an MBA from a top-30 business school, and 0 otherwise. Ivy League is an indicator variable that takes the value 1 if the hedge fund manager's alma mater is one of the eight Ivy League schools, and 0 otherwise. Information on the skill levels of fund managers is collected from the hedge funds' respective internet web sites, investor journals and Factiva. The table shows the coefficients and *P*-values. ***significant at the 0.01 level; **significant at the 0.05 level; *significant at the 0.10 level.

	Sum of 13D (Poisson Count)	Sum of Boards (Poisson Count)	Sum of Proxy (Poisson Count)	Yearly Index (Tobit)	Yearly Ranked Index (Tobit)
Constant	-1.074 (0.0000)	0.574 (0.0000)	-0.173 (0.0008)	0.141 (0.0000)	0.185 (0.0000)
Top-MBA	2.655 (0.0023)	0.788 (0.0174)	0.710 (0.0072)	0.303 (0.0000)	0.387 (0.0000)
Ivy League	0.147 (0.3031)	0.136 (0.1674)	0.046 (0.3084)	-0.015 (0.2806)	-0.009 (0.634)
P-value	0.0000	0.0000	0.0000	0.0000	0.0000
Adj R^2	0.25	0.19	0.22	0.31	0.26
No.	327	327	327	327	327

Table 7

Probit Estimation of Decision to Become a Confrontational Investor

"Horse Race" – Different Measures

This table reports the results of probit regressions of firms targeted by hedge fund activists. The models (1 through 5) use a hedge fund's investment decision as the dependent variable. The dependent variable equals 1 when the hedge fund intends to undertake a confrontational activist campaign against the firm and 0 otherwise. 13/NUMOFINV is the total number of Schedule 13Ds each hedge fund files each calendar year, divided by the total number of investments the hedge fund files in the same year. 13D is the total number of Schedule 13Ds each hedge fund files each calendar year. BOARD/NUMOFINV is the number of times the hedge fund successfully appoints a member to the board of one of its investments in each calendar year, divided by the total number of investments the hedge fund files in the same year. Board is the number of times the hedge fund successfully appoints a member to the board of one of its investments in each calendar year. PROXY/NOMOFINV is the number of times the hedge fund publicly threatens a proxy fight against one of its investments in each calendar year, divided by the total number of investments the hedge fund files in the same year. PROXY is the number of times the hedge fund publicly threatens a proxy fight against one of its investments in each calendar year. ONEYEARINDEX is the yearly activism index. ONEYEARRANK is the yearly relative activism index.

Model	1	2	3	4	5
Constant	-1.45 (0.000)	-1.29 (0.000)	-0.56 (0.000)	-0.43 (0.000)	-0.49 (0.000)
13D/NUMOFINV	2.356 (0.000)				
13D		0.206 (0.000)			
BOARD/NUMOFINV			2.007 (0.000)		
BOARD				0.725 (0.000)	
PROXY/NUMOFINV					2.448 (0.000)
PROXY					
ONEYEARINDEX					
ONEYEARRANKED					
Probability (LR stat)	0.000	0.000	0.000	0.000	0.000
McFadden R-Square	0.363	0.115	0.121	0.053	0.119
No. of Observations	907	907	907	907	907

Model	6	7	8	9
Constant	-0.49 (0.000)	-1.29 (0.000)	-0.709 (0.000)	-1.461 (0.000)
13D/NUMOFINV				2.167 (0.000)
13D				
BOARD/NUMOFINV				0.146 (0.497)
BOARD				
PROXY/NUMOFINV				0.578 (0.0198)
PROXY	0.615 (0.000)			
ONEYEARINDEX		3.89 (0.000)		
ONEYEARRANKED			1.388 (0.000)	
Probability (LR stat)	0.000	0.000	0.000	0.000
McFadden R-Square	0.100	0.331	0.115	0.369
No. of Observations	907	907	907	907

Table 8

Probit Estimation of Decision to Become a Confrontational Investor

Which is the Better Predictor: Fund History or Firm Characteristics?

Full Database

No. of INV > 0

(*P*-value)

This table reports the results of probit regressions of firms targeted by hedge fund activists. The models (1 through 5) use the hedge fund's investment decision (confrontational investment) as the dependent variable. The dependent variable equals 1 when the hedge fund intends to undertake a confrontational activist campaign against the firm and 0 otherwise. ONEYEARINDEX is the yearly relative activism index. MKTYPBOOK is the ratio of the stock's market value to the difference in the value of total assets and total liabilities. CASHANDINV is the ratio of the sum of cash plus short-term investments to total assets. TOTDEBTBYASSET is the ratio of the sum of the long and short-term debt to total assets. ADJTOTDEBTBYASSET is the difference in the firm's TOTDEBTBYASSET and the median value for all firms in the firm's Fama and French (1997) 48-industry classification. ADJCASHANDINV is the difference in the firm's CASHANDINV and the median value for all firms in the firm's Fama and French (1997) 48-industry classification.

Model	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	-1.21 (0.000)	-1.22 (0.000)	-1.22 (0.000)	-0.07 (0.229)	-1.29 (0.000)
ONEYEARINDEX	4.05 (0.000)	4.04 (0.000)	4.05 (0.000)		3.89 (0.000)
MKTYPBOOK	-0.04 (0.07)	-0.04 (0.081)	-0.04 (0.081)	-0.05 (0.014)	
CASHANDINV	-1.5E-5 (0.901)	-1.49E-5 (0.904)			
TOTDEBTBYASSET	-0.08 (0.621)				
ADJTOTDEBTBYASSET		-0.12 (0.509)	-0.12 (0.509)	-0.08 (0.606)	
ADJCASHANDINV			-2.75E-5 (0.773)	-4.79E-5 (0.428)	
Probability (LR stat)	0.0000	0.0000	0.0000	0.036	0.0000
McFadden R-Square	0.347	0.347	0.347	0.008	0.331
No. of Observations	818	818	818	818	907