

The Returns to Hedge Fund Activism

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Hedge fund activism is a new form of investment strategy. Using a large hand-collected data set from 2001 to 2006 we find that activist hedge funds in the U.S. propose strategic, operational, and financial remedies and attain success or partial success in two-thirds of the cases. The abnormal stock return upon announcement of activism is approximately seven percent, with no reversal during the subsequent year. Target firms experience increases in payout, operating performance, and higher CEO turnover after activism. We also find large positive abnormal return to the self-reported hedge fund activists during our sample period. The abnormal return significantly exceeds the returns to all hedge funds, the returns to equity-oriented hedge funds and is robust to alternative risk adjustments and selection biases.

In this paper we analyze the most extensive and thoroughly documented dataset of hedge fund activism to date, extending from the beginning of 2001 through the end of 2006. We find that hedge funds increasingly engage in a new form of shareholder activism and monitoring that differs fundamentally from previous activist efforts by other institutional investors. In particular, we find that hedge fund activism is a new form of investment strategy that generates large positive abnormal returns for both shareholders in the target companies and those in the activist hedge funds. This strong performance is robust against a range of asset pricing models including controls for size, book to market, and momentum effects.

When we compare the returns to self-reported activist hedge funds with the CRSP value-weight market index and the Russell 2000 Value index, a commonly used benchmark index for

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Author Note: This article is an augmented version of “Hedge Fund Activism, Corporate Governance, and Firm Performance,” forthcoming in the *Journal of Finance*. In this paper, we have primarily added additional analyses on activist hedge fund’s relative performance compared to other types of equity hedge funds and market indices that were not contained in our earlier work.

small/value firms, we find that our activism index tracks the two indices very closely through mid-1998, but then departs significantly upward. Moreover, since 2003, activist funds have outperformed not only both market indices, but also equity-oriented hedge funds. In support of these findings, we further test for selection bias, control for incubation bias and survivorship bias, and find that our results are robust to these additional tests.

Some, but not all, of the positive abnormal returns are from the market's favorable reaction to the announcement of activism, which is consistent with the view that activism creates value. The filing of a Schedule 13D revealing an activist fund's investment in a target firm results in large positive average abnormal returns, in the range of 7 percent to 8 percent, during the (-20,+20) announcement window. The increase in both price and abnormal trading volume of target shares begins about 10 days prior to the 13D's filing. We find that these positive returns at announcement are not reversed over time. Activism that targets the sale of the company or changes in business strategy, such as refocusing and spinning-off noncore assets, is associated with the largest positive abnormal partial effects.

We examine hedge fund strategies in detail in order to analyze the factors that contribute to the large abnormal returns. Hedge fund activists tend to target companies that resemble "value" firms, with low market value relative to book value, although they are profitable with sound operating cash flows and return on assets. Payout at these companies before intervention is lower than that of matched firms. Target companies also have more takeover defenses and pay their CEOs considerably more than comparable companies. For example, we find that target company CEO compensation during the event year is on average \$812,000 higher than CEO compensation at peer companies in the same industry and of similar size and stock valuation. Relatively few targeted companies are large-cap firms. Targets exhibit significantly higher institutional ownership and trading liquidity. These characteristics make it easier for activists to acquire a significant stake quickly.

Once they invest in a targeted firm, activist funds engage in a wide variety of different tactics in an effort to achieve their objectives. To illustrate some of these findings, we include two examples of hedge fund activists' investments in portfolio companies: Pirate Capital's investment in Walter Industries and Relational Investors's investment in Sovereign Bancorp.

The examples illustrate how hedge fund activists have used a variety of strategies and approaches to generate substantial returns, for themselves and other shareholders.

Finally, it is important to emphasize that hedge fund activists are not short-term in focus, as some critics have claimed. Their median holding period for completed deals is about one year, calculated as from the date a hedge fund files a Schedule 13D to the date when the fund no longer holds a significant stake (5 percent) in a target company. Analysis of portfolio turnover rates of the funds in our sample suggests holding periods of closer to 22 months.

The paper proceeds as follows. Section I provides a brief review of the institutional background and key characteristics of the sample. Section II looks at the stock market's reaction to hedge fund activism and target firm average return subsequent to announced activism. Section III analyzes the profitability of activism by measuring fund abnormal return. We present our conclusions in Section IV.

I. Hedge Funds and Shareholder Activism

What is a hedge fund? Although there is no generally agreed-upon definition of a hedge fund, hedge funds usually are identified by four characteristics: (1) they are pooled, privately organized investment vehicles; (2) they are administered by professional investment managers with performance-based compensation and significant investments in the fund; (3) they are not widely available to the public; and (4) they operate outside of securities regulation and registration requirements.² Most crucially, hedge funds avoid much regulation, including the Investment Company Act of 1940, by having a relatively small number of sophisticated investors.

Hedge fund activists have four important advantages over other types of engaged, monitoring investors. First, unlike other institutional investors, hedge fund managers have sharper incentives to generate positive returns than their counterparts at other institutions.³ A

² A Securities and Exchange Commission roundtable discussion on hedge funds considered fourteen different definitions. See SEC Roundtable on Hedge Funds (2003), <http://www.connectlive.com/events/sechedgefunds/>. Partnoy and Thomas (2007) describe the distinguishing characteristics of hedge funds in greater detail.

³ Although private equity and venture capital funds also have powerful incentives to generate positive returns, those funds are distinguished from hedge funds because of their focus on particular private capital markets. Private equity investors typically target private firms or going private transactions, and acquire larger percentage ownership stakes

typical hedge fund charges its investors a fixed annual fee of two percent of its assets plus a twenty percent performance fee based on the fund's annual return. Second, hedge funds may hold undiversified portfolios consisting of large block holdings in individual companies and may use leverage and derivatives, strategies that are prohibited for many institutional investors. Third, hedge funds may require that investors agree to "lock-up" their funds for period of two years or longer, whereas mutual funds are required by law to sell securities within one day of an investor redemption request. Finally, hedge fund managers are unregulated and typically suffer fewer conflicts of interest than managers at other institutions. Each of these factors gives hedge fund managers more freedom to engage in activism than other categories of investors.

A. The Hedge Fund Sample

The lack of a central database of activist hedge funds has hindered research on hedge fund shareholder activism. Private hedge fund databases include primarily non-activist funds, and exclude some activist funds. As a result we were forced to create our own database. Fortunately, we were able to take advantage of two securities law requirements that apply to hedge funds which require them to publicly disclose their holdings in their portfolio firms. First, Section 13(d) of the Securities Exchange Act of 1934 requires that any investor, including a hedge fund, must file a Schedule 13D with the SEC within ten days of acquiring more than five percent of any class of securities of a publicly traded company if they have an interest in influencing the management of the company.⁴ Second, Section 13(f) of the Securities Exchange Act of 1934 provides that institutional investors who manage more than \$100 million must file a Form 13F each calendar quarter setting forth the number of shares they hold in exchange-traded companies. Hedge fund activists with significant assets under management must make quarterly Form 13F filings to report their holdings.

than hedge fund activists. Venture capital investors typically target private firms exclusively, with a view to selling the company, merging, or going public, and therefore they invest at much earlier stages than both private equity and activist hedge funds. There is an overlap among private equity, venture capital, and hedge funds, and some funds pursue multiple strategies.

⁴ In particular, Item 4 of Schedule 13D requires the filer to declare its reasons for acquiring the shares, particularly if the intention is to engage in merger and acquisition activity, seek a sale of any material amount of the issuer's assets, pursue a change in its capitalization or dividend policy, or propose other types of corporate changes.

To construct a comprehensive, independent sample of hedge fund activism based on these securities filings, we first purchased a list of all 11,602 Schedule 13D filers during the period 2001-2006 from LiveEdgar. We culled hedge funds from that list by inspecting the names and descriptions of the filers as reported on these filings, searching the internet, and then telephoning remaining filers we were unable to categorize initially. We excluded filers who made only one Schedule 13D filing during the sample period and did not indicate an explicit purpose, and we also excluded events focused on bankruptcy, risk arbitrage, and closed-end funds.⁵

Given the amount of capital required to acquire a 5 percent stake in a large-cap company, the Schedule 13D-based search could bias the sample toward smaller targets. At very large firms, some hedge funds have engaged in activism with less than a 5 percent stake in the target company. We therefore used the Thomson Financial Form 13F database to add events involving companies with market value of greater than \$1 billion (roughly the median market capitalization of NYSE listed firms during the relevant times), and with ownership by a hedge fund in our sample of greater than two percent.

Our final sample consists of 236 hedge funds we had identified, and their 1,059 events involving 882 target companies. For each event we gathered information about the filing date, ownership, purchase cost, and purpose from the Schedule 13D filings of the fund. We supplemented this data with extensive news searches in Factiva using the hedge fund and target company names as key words. From the news articles, we gathered information that was frequently not available in the securities filings, such as the hedge fund's motive, the target's response, and the development and resolution of the events. At various stages during this process, we have also shown our list of hedge funds to participants in the hedge fund industry and obtained comments and suggestions for additions or deletions. We also used additional SEC filings, such as the Schedule 14A, when they were available to obtain further information on some of the interventions.

⁵ This study focuses on hedge fund activism in regular corporations. See Bradley, Brav, Goldstein, and Jiang (2007) for an exclusive study on shareholder activism in closed-end funds.

B. Objectives of Hedge Fund Activism

Table I summarizes the stated objectives that the activist funds provide when they announce activism in their target firms as well as the associated success (and partial success) rates. Hedge fund activists' professed motives can be classified into five major categories, each containing multiple subcategories. With the exception of the first category, where the hedge fund makes only the general statement that it seeks to maximize shareholder wealth, the objectives are not mutually exclusive as one activist event can target multiple issues. We classify an event as successful if the hedge fund achieves its main stated goal, or as a partial success if the hedge fund and the company reach some settlement through negotiation that partially meets the fund's original goal.

[Insert Table 1 here]

The last four overlapping categories in Table 1 describe four specific objectives: changes to firm capital structure; altering firm business strategy; seeking a sale of the target company; and making improvements to firm corporate governance. The first grouping includes activists pursuing objectives related to payout policy and capital structure. In 12.7 percent of all events, they seek to reduce the target's excess cash, increase leverage, or increase dividends and share repurchases. In an additional 6.1 percent of events, activist hedge funds pursue debt restructuring or recapitalization, or try to stop or reduce new equity offerings.

Category two covers activists seeking changes in business strategy, which we break out into five subcategories. The first of these subgroups covers operational efficiencies, such as cost cutting, which is present in 12.4 percent of events, and goes on to report on activism seeking restructuring and spinoffs in another 9.1 percent of events. Roughly ten percent of the sample involves activists targeting merger decisions, by both acquirers and targets. These events differ from risk arbitrage in that the activist intervenes to press for better terms or to try to stop a deal. Finally, subgroup number five illustrates that in a small number of events, activists make proposals to improve the firm's growth strategy.

The third very important group relates to activists pursuing the sale of the target company. Most of these cases, 14.0 percent of the sample, involve efforts to sell the company or its assets

to a third party. A smaller number (4.2 percent) involves a buyout or going private transaction where the activist is the potential acquirer.

The last and biggest category covers events where the activist targets one or more of a range of governance objectives. The most common focus is on the board independence, where hedge funds seek to install more independent directors, or better investor representation, at targeted firms. This happens in 15.0 percent of all cases in the sample. Other less common corporate governance goals include rescission of takeover defenses, improved disclosure, and improved compensation policies, each of which is found in about 5 percent of the events. Finally, hedge fund activists state that they are seeking to oust the targeted firm's CEO or chairman in 5.6 percent of all events.

Overall, hedge fund activism achieves full or partial success in roughly two-thirds of events in which they announce a specific agenda.⁶ Activists achieve their major stated goals in 40.6 percent of cases, and obtain partial success 25.8 percent of the time. Although not shown in the table, overall success rates in non-hostile cases are roughly comparable to those in hostile cases, although complete success is more likely and partial success is less likely in non-hostile situations. These results suggest that a negotiated compromise is the likely outcome in hostile cases.

C. Targets of Hedge Fund Activism

Turning next to the characteristics of the firms targeted by hedge fund activists, Table 2 shows that hedge fund activists resemble "value investors." The first three columns of Table 2 provide descriptive statistics for selected characteristics of firms targeted by activist hedge funds, while the remaining three columns show the differences between targeted firms and a set of

⁶ For the first category of interventions, where the funds do not announce an agenda, we cannot match their success or failure with the attainment of their stated goals. We therefore computed one year market beta-adjusted excess returns for these cases (from 20 trading days before the event date to 250 trading days afterwards), and found that 52% of those "non-specific" cases have positive excess returns. However, this may not be the right metric because of noise. The average excess return is quite high (24%) because the excess return is right skewed. There are 15.1% of the cases with positive excess returns at the 10% significance level, while the same number for negative excess returns is 7.9%. Roughly speaking, the odds ratio is 1.91:1 in the direction of positive excess returns, consistent with the success ratio of events with specific agenda.

industry/size/book-to-market matched firms for each of these variables.⁷ The targets of activism were firms with lower market value relative to book value, better ROA, better cash flow, lower payouts to shareholders, and more takeover defenses, than comparable non-targeted firms. These firms had greater institutional investor ownership and more analyst coverage, indicating that their shares tend to be in more sophisticated hands and trade in more liquid markets than comparable non-targeted firms. Target firms were profitable with sound operating cash flows and returns, and tended to have low levels of R&D spending plus a higher degree of diversification than non-targeted firms.⁸

[Insert Table 2 here]

Overall, the potential problems that hedge funds identify at targeted firms are more often issues that are generalizable to all firms, such as changes in governance and payout policies, rather than issues that are specific to one or a small number of target firms, such as slipping sales of a particular product. Targeted firms do not seem to suffer from serious operational difficulties.⁹ They are actually profitable and enjoy handsome cash flows. The potential problems that these companies face are likely related to the agency problem of free cash flows, such as relatively low dividend yield and diversifying investments that might not be in the best interest of shareholders. Governance issues, including rescinding takeover defenses, ousting

⁷ Size matching is dropped for *Market Cap* comparison, and book-to-market matching is dropped for *Book-to-Market* analysis.

⁸ As a robustness check, we further examine the 27 events in our sample in which hedge funds held less than a 5% stake in our sample. We identified these events through news search and Form 13F filings. All these cases involve hedge fund activism targeting specific issues. For the comparisons in Table 2, we find that overall, the below 5% cases target much larger firms. These larger firms also tend to be more mature (lower growth, more cash flow), more diversified (lower Herfindahl index), and have higher analyst coverage and institutional ownership. Their capital structure and payout policies do not differ significantly from the 13D sample firms. This comparison indicates that given their capital constraints and diversification considerations, hedge funds are less likely to target the largest (e.g., the top size quintile) listed companies. Furthermore, when they do target these firms, they are more likely to intervene with a lower percentage level of ownership. Throughout the paper, our results are virtually unchanged if we exclude the non-13D events. Moreover, the sample of non-13D events is too small to warrant separate tests.

⁹ We exclude from our sample firms where the hedge funds are engaging in distress-related activism.

CEOs, promoting board independence, and curtailing executive compensation,¹⁰ are also commonly cited as reasons for activism.

These characteristics are important to the results presented here, because they suggest that hedge fund activists are implementing general strategies at well understood firms that market participants are likely to appreciate. Focusing on issues that are generalizable to other potential target firms also helps hedge funds lower the marginal cost of launching activism at a new company (Black (1990)). Hedge funds generally avoid “opaque” and complicated businesses, such as those with high levels of R&D, to avoid delays in the resolution in the market price of the intervention’s impact. This is consistent with the predictions of Kahn and Winton (1998) that investor intervention is most likely at firms where improvements will rapidly be reflected in the share price.

Hedge fund activists almost never acquire control blocks. We find that the overwhelming majority of events involved a purchase of between 5-10 percent of target shares. For the entire sample, the median initial stake of activists is roughly 6 percent of target firm equity securities, costing about \$12 million dollars, in constant 2006 terms. Although some investors prefer to keep their ownership stakes below the 5 percent trigger for Schedule 13D filings (these events are included in our sample if are mentioned in news articles), hedge fund activists generally seek to exceed that level of ownership, in part because Schedule 13D filings frequently generate media interest and publicity, but also because the act of filing, and the potential legal liability associated with any disclosures made in a Schedule 13D, reinforce an activist hedge fund’s credibility with investors. Conversely, hedge fund activists generally prefer not to acquire stakes of 10 percent or more, because 10 percent ownership triggers the short swing profit provisions in section 16 of the 1934 Exchange Act as well as presenting other issues.

Finally, median hedge fund activist holding periods are in the range of one year or more. Focusing on the subsample of the completed events where the fund is reported to have significantly reduced its ownership level below the five percent level of ownership, we find that the median duration from the first Schedule 13D filing to “exit” is 369 days. The 25th and 75th

¹⁰ In results not shown, we find that in the event year, the target companies’ CEO compensation is on average \$914,000 higher ($t = 2.06$) than CEO compensation at peer companies in the same industry and of similar size and stock valuation. For further discussion of the differences in executive compensation and the effect of activism on them, see Brav, Jiang, Partnoy and Thomas (2008).

percentile figures for the full sample are 169 days and 647 days. This, however, excludes 47.6 percent of the sample for which we are unable to find exit information because of the recent nature of the investments. Focusing solely on the events in which hedge funds have exited grossly underestimates the unconditional duration of hedge funds' investment in the target companies. However, even this one-year investment horizon is longer than the short-term trading periods claimed by early critics of hedge fund activism. We conduct an additional analysis using the Form 13F quarterly filings of holdings and find that the median annualized equity long position turnover rate is 55 percent for our sample hedge funds, implying an average holding period of 22 months.¹¹

C. Examples of Hedge Fund Activism

To give the reader a flavor of the boundaries of the activism that we focus on here, we provide a description of two such cases. The first example illustrates a confrontational approach that management partially accommodated. The second example illustrates an initially non-confrontational approach that became progressively hostile when management resisted, and ultimately resulted in capitulation by management. Our data includes numerous events in these categories, as well as other events with varying levels of hostility and accommodation.

C.1 Pirate Capital-Walter Industries

During early 2005, Pirate Capital LLC's funds accumulated shares of Walter Industries Inc. in the \$40 per share range. On May 25, 2005, Pirate Capital filed a Schedule 13D indicating that it owned 5.3% of the common shares of Walter. Daily trading volume of Walter's shares increased significantly surrounding this announcement, as did Walter's share price. The (-20,+20) abnormal return surrounding the filing of the Schedule 13D was 11.99%. The raw share price increase from 10 days before to 10 days after announcement was from \$37.06 to \$43.25.

Pirate stated that it believed Walter's shares were substantially undervalued, in large part because Walter's highly disparate businesses were priced at a "conglomerate discount." In

¹¹ The analyses corresponding to the magnitude of the acquired stake in a target firm and the length of time that hedge funds maintain these stakes are reported in detail in Brav et al (2007).

particular, Pirate believed that Walter's shares did not reflect the high value of its strong natural resources business. Instead, according to Pirate, Walter's share value was reduced because its shares were valued based on poorly performing business, including mortgages and homebuilding. Pirate sought to separate Walter's businesses through a spin-off or restructuring, and thereby unlock value for the company's shareholders.

Managers at Walter Industries resisted a spin-off of the natural resources business, but eventually agreed to spin-off other subsidiaries, including Mueller Water Products, which manufactured valves and hydrants, and U.S. Pipe, which manufactured pipe used in municipal water systems. On October 22, 2005, just five months after Pirate filed its Schedule 13D, Walter Industries announced a spin-off of these water product subsidiaries. Pirate increased its stake at several points during 2005 and by early 2006 held 9.4% of Walter's shares, as well as substantial numbers of call options. Although Pirate Capital encountered difficulties during 2006, including a Securities and Exchange Commission investigation and the loss of staff, its investment in Walter Industries performed well. By early 2007, Pirate had reduced its stake to 2.9%, as Walter's share price continued to increase following the spin-off.

C.2 Relational Investors-Sovereign Bancorp

On April 1, 2005, Relational Investors's funds purchased shares of Sovereign Bancorp, at prices in the \$22 range. On May 18, 2005, Relational filed a Schedule 13D indicating that it owned 5.46% of Sovereign's shares. Relational noted in its Schedule 13D filing that Sovereign's shares "have persistently traded at a severe discount." As reasons for this discount, Relational cited poor operating performance and capital allocation, overpaying for and overleveraging from acquisitions, and a poor corporate governance structure.

Five days later, representatives from Relational met with Sovereign's board and outlined several initiatives, including reducing leverage and restructuring director and officer compensation. Relational was especially critical of Sovereign's director compensation plan, which paid an unusual bonus that was tied to the bonus targets of senior management. The compensation of both directors and officers had been a significant multiple of compensation at Sovereign's peers.

Within one week, the board responded by eliminating the discretionary component of the directors' compensation and it hired a national compensation consultant. Sovereign's CEO/Chairman announced that the board is "very well aligned" and "on the same page" with Relational. The buy-and-hold return for Sovereign shares surrounding the Schedule 13D filing was 8.0%, nearly double the market return for the same period.

By August 2005, Relational had increased its stake to 6.51% and Sovereign had agreed to reduce overall director compensation. Relational increased its stake to 7.29% in October, and called for a special meeting to "address the causes of and possible remedies for Sovereign's persistent share price trading discount." Relational also said it would nominate two of its principals to Sovereign's board. Meanwhile, Sovereign proposed to sell a 19.8% stake to Banco Santander Central Hispano SA and to buy Independence Community Bank Corp. of Brooklyn, N.Y., with the proceeds. Relational opposed the sale and sued to enjoin it. Relational and Sovereign's CEO/Chairman criticized each other's positions publicly and traded increasingly hostile letters to shareholders.

In March 2006, Relational and Sovereign settled their dispute and pledged to work together to build a better bank for Sovereign's shareholders and other constituencies, and to add two directors from Relational to Sovereign's board. The CEO/Chair resigned six months later. By the end of 2006, Sovereign shares were trading in the \$25-26 range. Notwithstanding the credit crisis and the dramatic decline in the value of shares of banks, including Sovereign, Relational continues to hold a significant stake. As of May 2008, Relational owned 7.89% of Sovereign shares.

II. Short- and Long-Run Market Reactions to Hedge Fund Activism

A crucial question about hedge fund activism is whether it achieves its stated goal of creating value for shareholders. In this section, we examine stock market returns, both short-term announcement event-day returns and the long-run returns. Our analysis addresses the question of how the market perceives the effect of hedge fund activism on shareholder value and whether the long-run measures are consistent with the market's perception.

A. Short-Run Market Reactions

Figure 1 plots the average abnormal buy-and-hold return during the (-20, 20) window surrounding the activist hedge funds' Schedule 13D filings.¹² The average abnormal return is 7.2 percent. Sixty-two percent of the events have a positive abnormal return in the (-20, 20) window.

[Insert Figure 1 here]

About half of the total abnormal return, approximately 3.5 percent, is achieved during the ten days prior to filing, which means it takes place before public disclosure of the activist's five percent investment stake, or the public announcement of an activist campaign (for events with less than the five-percent stake). Likewise, abnormal share turnover also is high during this pre-disclosure period. The abnormal return on the filing day and day after filing is another approximately 2.0 percent. Thereafter, the abnormal return increases steadily to a total of 7.2 percent by twenty days after the filing date. On average, information related to hedge fund activism appears to begin to be reflected in stock price and trading volume before the Schedule 13D filing date.

Some hedge funds file a Schedule 13D after publicly announcing their activist intentions while they hold fewer shares, while other funds do not begin engaging in activism until after they have filed a Schedule 13D. To test whether the Schedule 13D filing date is an accurate proxy for the date when activism first becomes publicly known, we separately examined a subsample of 246 events in which the Schedule 13D disclosed new information not previously available. The returns of this sample were similar to those depicted in Figure 1, with a slightly higher abnormal return of 8.4 percent.

The early stock price increases are consistent with the timing of purchases by hedge fund activists who buy during the ten-day window before the filing date, because investors are not required to file Schedule 13Ds until ten days after the transaction that causes them to breach the five percent ownership threshold. However, some critics of hedge fund activism have suggested that the pattern of early abnormal returns, before the filing date, stems from "tipping," in which

¹² The abnormal return is the return in excess of the buy-and-hold return on the value weighted NYSE/AMEX/NASDAQ index from CRSP, from 20 days prior to the Schedule 13D filing date to 20 days subsequent to the filing date.

the hedge fund activist tells a small numbers of investors about its plans before the filing date, or “wolf pack” investing, in which several hedge funds, which do not formally coordinate, learn about the lead hedge fund’s activities before its 13D is filed and buy into the target firm early. Hedge fund activists deny engaging in these activities, and our data and analysis do not permit us to test either theory.¹³

These short-term abnormal returns necessarily underestimate the value of ex post success by hedge fund activists. If share prices increased by the full expected benefit of activism, hedge fund activists would have no incentive to continue to hold their stakes and expend resources on activist strategies. Instead, they would simply sell. Yet hedge fund activists indeed continue to hold and engage in activism. Accordingly, the initial abnormal return reflects the “partial” expected value of activism based on investors’ estimate of the probability that the hedge fund will implement its activist plans. Later, as the hedge fund activist achieves (or fails to achieve) its goals, the target share price will increase (or decrease) accordingly.

B. Longer-Term (One Year) Market Reactions

We next examine whether the short run price reaction is permanent as it is possible that the (-20, 20) abnormal returns are a manifestation of a temporary spike in prices, caused by buying pressure. We do so by running calendar-time portfolio regressions around the Schedule 13D filing date. If the longer-term market reaction is positive and permanent, it is unlikely that the short-term price impact was merely the result of buying pressure from the filing hedge fund or other hedge funds. In other words, if the announcement abnormal returns were due to trading friction, those returns should be reversed during longer windows. Yet, as we show below, they do not.

Table 3 sets forth the results of our calendar-time portfolio regressions. We form portfolios that buy shares of all firms that will be targeted by a hedge fund in the indicated period and then hold those shares throughout the specified window. For example, we form a (-3, -1) portfolio by buying all firms that will be targeted by a hedge fund in three months’ time, and the firms are held for three months before selling. Similarly, we form a (1, 3) portfolio by buying all

¹³ The hedge fund managers that we have spoken with point out that to do so would drive up their costs of accumulating their stake prior to announcing their activism.

firms that were targeted by hedge funds one month earlier, and these firms are held for three months before selling. For each such portfolio we estimate a regression of the portfolio excess returns on the Fama-French RMRF, SMB, and HML factors and the momentum factor, MOM.¹⁴ Panels A and B of Table 3 set forth the results based on four-factor models with equal and value-weighting of firms' returns, while panel C focuses on the sub sample of target firms that belong to the bottom size quintile using NYSE breakpoints.¹⁵ We focus on the regression intercept, the alpha, as evidence for possible mean reversion in prices. Portfolios formed during pre-event windows are not implementable strategies, and are presented for purposes of comparing to the post-event stock return patterns.

[Insert Table 3 here]

The equal-weight model in Panel A shows a statistically significant event month alpha of 5.09 percent. The following (1, 3) month window alpha of 1.11 percent is also significant. The alphas are positive and revert to near zero during the nine months after filing. The pre-event alphas are negative, but not statistically significant. The 13D-filing month alpha for the value-weight model in Panel B is lower and not statistically significant, whereas the pre-event alphas are negative and significant. These results suggest that larger firms receive a less favorable response than smaller targets. This is confirmed in Panel C, where we see that for small firms the event month alpha is 4.24% which is similar to the full sample equal weight estimate of 5.09%. The value weighted alphas revert to near zero during the year after filing.

Overall, the calendar time regressions suggest that the short-term abnormal returns are not market overreactions. Instead, the price that incorporates the event-window abnormal returns is sustained during longer periods of time. The positive market reaction is also consistent with ex post evidence of overall improved performance at target firms. Brav, Jiang, Partnoy and Thomas (2008) find ex post real long-term improvement in return on assets and operating profit margins

¹⁴ We obtain these factor returns and monthly risk-free rates from Ken French's web site at Dartmouth College.

¹⁵ The data for the NYSE market capitalization quintile breakpoints is from Ken French's web site at Dartmouth College.

at target firms two years after intervention, as well as total payout increases and book value leverage increases on average, from the year before to the year after an announcement.

As a robustness check to see if this pattern persists after one year, we estimate one more calendar time regression in which we purchase target firms a year after the announced activism and hold these firms for one more year (unless there is exit by the hedge fund in which case we discard the firm at the end of the month in which exit is made public). We find that the equal weight portfolio generates an insignificant 0.08% alpha (t-statistic= 0.22). The value weight regression yields an intercept of 0.88% (t-statistic = 1.63). We also look at the subsample of “small” firms, defined as firms whose market capitalization in the month prior to the 13D filing places them in the bottom size quintile using NYSE breakpoints. For these firms the equal (value) weight alpha in the second year post-event is -0.34% (-0.36%) but both are insignificant (t-statistics for equal and value weight alpha are -0.78 and -0.97, respectively). Hence, based on the CRSP data that we have access to (ending in December 2007), we conclude that there is no drift even in the second year post-event.

III. Aggregate Returns to Hedge Fund Activists

In addition to examining market reactions to activism, we also consider the returns that activists earn. Given that activist funds bear most of the cost of intervention but only receive a small proportion of the direct gain (the typical holdings of these funds in the target companies are 5-10 percent), it is natural to ask whether such activities are also profitable to the activist funds (and, as a result, to the investors in these hedge funds). If one views activist investing as a new form of investment strategy, this question is interesting for at least two reasons: First, profitability by activist hedge funds is a necessary condition for their survival and long-term viability. Like any other arbitrage strategy, profitability tends to decrease with competition, as the number of hedge funds engaging in activism has been increasing steadily over the past few years. A finding of equilibrium level of profitability ensures that hedge fund activism will remain a staple of corporate governance in the foreseeable future.

Second, if markets are efficient, abnormal returns to an investment strategy should persist only when activists have private information. In the conventional setting, superior information is

about the value of the firm that is assumed to be out of the control of investors (and unknown to the market). In the context of activist investing, the value of the firm could be potentially affected by the activist's action. As a result, the player's superior information about his own intention to intervene becomes valuable. Such information, in contrast to the conventional informed trading, is not proprietary about the firm. Though there is some recent theoretical work analyzing the intervention-related informed trading there is little empirical evidence on the sources of superior returns in this setting.

A. The Alpha Generated by Activism

We explore two sources of data to analyze the returns to our sample of activist hedge funds. We begin by merging two major hedge fund databases. The first is the CISDM, a hedge fund database (covering 8,589 funds) maintained by the University of Massachusetts and available through WRDS to accredited universities. The second is purchased from HedgeFund.net, owned by Channel Capital Group Inc., which is a leading source for hedge fund news and performance data. This database covers 11,530 funds, which is among the largest of all hedge fund data vendors. At the time this paper is written, the CISDM data has been updated through the end of 2005 and the HedgeFund.net has been updated to June 2007. In order to maximize data coverage, we first match our sample hedge funds to HedgeFund.net. For all remaining unmatched funds after this first round, we then match to CISDM. Altogether we are able to match 103 unique funds that have at least 12 months of return data, 95 of which are covered by HedgeFund.net. We retrieve hedge fund returns from January 1995 (or the earliest available date) through June 2007 (or the latest reporting date). Both databases keep a separate file for funds that stopped reporting (including defunct funds and funds that voluntarily stop reporting). The reported portion of these funds is included in our sample whenever possible.

Table 4 compares the main characteristics of activist funds and those of the other equity hedge funds in the Hedgefund.net database. Activist hedge funds are overall older, larger, and take about the same risk level (as measured by monthly returns volatility). Activist funds charge about the same fees, but impose longer lockups. The lockup arrangements are consistent with the median-to-long-term horizon of the activist strategy. The proportion of activist funds that are

in the defunct/stopped-reporting database is 24%, compared to 29% of the full Hedgefund.Net database, suggesting that they are comparable groups over time.

[Insert Table 4 here.]

To analyze the performance of activist hedge funds, we measure their CAPM and four-factor alphas using both all-sample factor loadings and 36-month rolling window factor loadings. Specifically, the first method uses the full-sample return data of a fund to estimate the loadings on the factors and the intercept (alpha). The second method allows time-varying factor loadings on the factors by the hedge funds. For each month we compute the residuals of a fund's monthly returns net of the risk-free rate and returns attributed to the factors, where the estimates of the loadings on the factors are obtained from the previous 36 months of data (or as many months as possible, subject to having at least 12 months of data). The resulting time-series average of this residual is interpreted as the alpha of the fund.

Since our performance measures condition on coverage by the data providers, we seek to benchmark activist performance against that of other self-reported, non-activist, hedge funds. We therefore repeat the measurement of fund alphas for two additional hedge fund samples: the first includes all hedge funds covered by HedgeFund.net; and the second includes all equity-oriented hedge funds in HedgeFund.net.¹⁶ The latter group includes the following three categories of hedge funds: Equity long-only; equity long-short; and equity market neutral. About 70 percent of our sample activist hedge funds fall into these categories. Other categories that include some of our sample funds include "Event driven", "Special situation," etc. To allow flexibility, we keep the comparison with all hedge funds.

Table 5 shows the alphas at the 5th, 25th, 50th (median), 75th, and 95th percentiles of activist hedge funds, all hedge funds and all equity-oriented hedge funds covered by HedgeFund.net. In the last column we also present the comparison of returns between activist funds and their size and age matched peer equity funds. Examining the data, activist hedge funds,

¹⁶ We compare our sample hedge funds to the HedgeFund.net, rather than the CISDM database, because the great majority of our sample funds are matched to HedgeFund.net. Further, HedgeFund.net also covers more hedge funds, and is updated to more recent period, than CISDM. However, the summary statistics from the two databases are very similar. Our conclusions do not change if we use CISDM for comparison.

on average, perform better than the full sample of self-reported hedge funds (and the subset of equity-oriented hedge funds) measured by both one- and four-factor alphas. The average (median) of the one- and four-factor monthly alphas of the sample activist hedge funds is 0.71 percent (0.68 percent) and 0.64 percent (0.63 percent), as compared to all hedge funds with an average (median) of 0.41 percent (0.33 percent) and 0.39 percent (0.29 percent).¹⁷ For the last column, the match is conducted as follows: For each activist fund, we select, among all equity funds that were incepted within a year of the activist fund's inception date, up to four funds that are closest to the activist fund by assets under management in 2006 (or the date of the latest record). Even with this matching procedure we find that activist funds still beat their narrowly classified peer funds, but the premium becomes quite modest. However, a small premium over "peer funds" does not necessarily mean lack of success by activist funds since if size and age are proxies for success, then the last comparison is made against a high benchmark.

The average loadings on the market, size, value, and momentum factors are 0.33 (t-statistic = 8.71), 0.27 (t-statistic = 6.86), 0.17 (t-statistic = 3.74), and 0.04 (t-statistic = 1.38), respectively, indicating that most activist hedge funds over-weight small and value firms, but are not momentum players. Furthermore, the relatively low loading on the market factor indicates that activists probably hold positions beyond purely long-positions in common stocks.¹⁸ The size and value tilt is consistent with the characteristics of the target companies described in Section II. We also conduct the seven-factor analysis as proposed by Fung and Hsieh (2004), and find that our sample funds have virtually zero loadings on the non-equity factors.¹⁹

[Insert Table 5 here.]

¹⁷ In Table 5, *alpha* is averaged at the fund-level before being aggregated to form all-sample summary statistics. Fund-level *alpha* is the average of monthly *alpha* values that are computed using time-varying beta loadings from return data of the past 36 months of return data.

¹⁸ As a robustness check, we checked the average total dollar amount allocated in the 13D filings versus the assets reported to the databases. The average (median) dollar amount allocated in the 13D filings is 68 (13) million dollars. This is a relatively small compared to the average fund size (see Table 4). Further, the holdings reported in 13D filings represent the aggregated holdings of the filing group, which include multiple affiliated or non-affiliated funds in most of the cases.

¹⁹ See Fung and Hsieh (2001). The data used for conducting this robustness check were taken from David Hsieh's website at: <http://faculty.fuqua.duke.edu/~dah7/DataLibrary/TF-FAC.xls>.

Aggregating the returns of all activist funds into an “activism index” provides a simple overview of the time series of these funds’ returns. Figure 2 displays the equal-weighted activist funds monthly return index from January 1995 to June 2007. We use the CRSP value weight market index, the Russell 2000 Value index, a commonly used benchmark index for small/value firms, as well as the average for equity-oriented hedge funds as comparisons. The activism index tracks the two market indices very closely up to mid-1998 (during which period open activist activities were much less common), and then departs significantly from these indices afterwards. During the 2000 to 2007 time period, activist funds that reported to the two hedge fund databases significantly outperformed both market indices, and also outperformed the average equity-oriented hedge funds in the databases since 2003.

In unreported results we find that larger funds perform better than small funds. Since hedge funds typically suffer from diseconomies of scale (Getmansky (2005)), this could be a sign of survivorship bias. We therefore test if the number of defunct funds is very low because the average activist fund is young and hasn't had an opportunity to fail. We find that activist funds are actually slightly older than the universe of Hedgefund.Net equity funds. Furthermore, activist funds’ defunct/stopped-reporting propensity is comparable to that of the database. We therefore conclude that the “young fund” bias does not impact our conclusions. Furthermore, as we noted earlier, our results remain virtually unchanged if we exclude the 27 larger firms in which hedge funds hold less than 5% stakes.

[Insert Figure 2 here.]

B. Testing For Selection Bias

Return analyses based on self-reported hedge fund databases are often subject to criticism for potential selection bias issues, the most serious bias being the correlation between the propensity to report (to a hedge fund data vendor) and return performance (Baquero, ter Horst and Verbeek (2005)).²¹ To date there is no general agreement on the direction of the bias, or the

²¹ In calculating Table 5, we also control for incubation bias by excluding returns that are within 12 months of the fund’s inception (Ackermann, McEnally and Ravenscraft (1999)). We find qualitatively similar results if we exclude the first 18 months of returns.

sign of the correlation. To the extent that the self-reporting bias is no more favorable to activist hedge funds than to other equity hedge funds, Figure 2 and Table 5 indicate that activist hedge funds are among the better performers relative to the sample of self-reporting hedge funds.

We attempt to address the self-reporting issue using two additional data sources. First, as noted above, the market response to announced activism is an informative indicator for the perceived success of the activist fund. In a rational market, the abnormal return during the announcement window should be an unbiased estimate for the value creation brought about by the hedge fund (adjusted for the probability that the hedge fund will carry out the stated agenda and succeed). Among our 229 sample funds, the 103 reporting funds see a 3.90 percent average announcement window abnormal return, while the average announcement return for the 126 non-reporting funds is 6.81 percent.²² The difference is not statistically significant at the 5 percent level due to a high standard deviation of abnormal returns. However, there is no evidence that reporting funds are disproportionately successful funds in terms of generating favorable market reaction upon intervention.

Second, the Thomson Financial 13F filings provide quarterly long equity positions of 147 of our sample funds. We construct the returns from the equity long-only position of our sample funds by assuming that they hold the most recently disclosed positions. This strategy is meant to capture the returns to the insider information possessed by the activist funds, and is not implementable for outside investors given the time lag between the end of the quarter and the filing date (45 days). Table 6 (first column) shows that our sample funds on average outperform by 0.6 percent to 0.9 percent per month (significantly different from zero at the 1 percent level), a sizable premium given the lack of abnormal performance of 13F holding returns for hedge funds (see Griffin and Xu, (2007)). This is consistent with the previous evidence from the returns of self-reporting hedge funds that activist hedge funds are among the better performers.

[Insert Table 6 here.]

²² Note that the abnormal return averaged at the fund level is lower than the returns averaged at the event level. This is because funds that are involved in more events generate higher announcement window returns.

Interestingly, a tradable “copy-cat” strategy that holds the most recent publicly available hedge funds’ 13F holdings yields positive but less impressive alphas. Given that institutions have 45 days after the quarter end to file their 13F forms, we define the most recent publicly available filings as the one with a filing date of at least two month earlier. The copy-cat strategy based on our sample funds would deliver average one- and four-factor alphas in the range of 0.3 percent to 0.6 percent (see the second column of Table 6). The difference between the returns of the copy-cat strategy and the hedge funds’ long positions indicates that some of the superior returns can be attributed to non-public information, and this advantage dissipates as the information is disseminated through the 13F filings.

Among the 147 13F-filing funds, 64 also report to at least one of the two hedge fund databases mentioned earlier. We find that reporting funds on average have somewhat lower returns: their average return in excess of the market is 0.70 percent lower (t-stat = -1.91), their one-factor alpha is 0.63 percent lower (t-stat = -1.78), and their four-factor alpha is 0.73 percent lower (t-stat = -1.40). Again, the differences between the two groups of funds (self-reporting and non-reporting) are not statistically significant. What we can conclude, however, is that the more successful funds (in terms of returns from the long positions in common stocks) are *no more* likely to report to hedge fund databases.

Finally, we analyze cross-sectional variation in the returns of activist hedge funds, and report the results in Table 7. The dependent variables are four- and one-factor alphas, as well as the average announcement window excess returns (the average of which is plotted in Figure 1). All variables are constructed at the fund level. The first two variables are highly correlated (with a correlation coefficient of 0.86), and are weakly positively correlated with the third (about 0.06). There are two sets of independent variables: those capturing the style of launching activism, and those describing the characteristics of the funds. Variables in the first group include: the number of companies that the fund targeted during the 2001-2006 period (in logarithm); the proportion of events launched by the fund that are hostile; and the proportion of events launched by the fund that aim at the sales of the target companies. The last two variables are included because we find that hostile tactics and sales-motivated activism are particularly well-received by the market. Fund characteristics variables include fund age (in number of years as of 2006); average assets under management (in logarithm); management fees (in percentage points); incentive fees (in percentage points); minimum investment (in logarithm); the adoption of a high

watermark; and the presence of a lockup. We include a lockup variable because Aragon (2007) argues that positive alphas of hedge funds can be interpreted as a compensation for holding illiquid fund shares.²³

The last two columns of Table 7 report regressions exploring the cross-sectional variation in market response to shareholder activism. The dependent variable is the abnormal return in the (-20, 20) window around the filing of the Schedule 13D. The same independent variables used in the other columns are included. In order to facilitate the interpretation of the coefficients on the dummy variables, all non-dummy covariates are expressed as the deviation from the mean, and the intercept of the regression is suppressed (because of the full span of the dummy variables). As a result, all the coefficients on the stated-objective dummy variables can be interpreted as the average partial effect on abnormal returns of one particular group of events, assuming that the target firms are of average characteristics.

[Insert Table 7 here.]

The first four columns of Table 7 indicate that fund performance is very difficult to predict from observed characteristics. Most of the independent variables are insignificant except that high-fee firms tend to deliver better performance (after fees). Such a pattern is predicted in theoretical work (Berk and Green (2004)) and confirmed by empirical evidence (Liang (2001)). The coefficients on *Lockup* in the alpha regressions have the desired sign, and are of comparable magnitude to the findings of Aragon (2007), but are not statistically significant.

The last two columns of Table 7 show that the hedge fund's experience in the business (the number of previous targets) and activism aimed at the sale of the target generate statistically significant higher returns for shareholders. The announcement by a hedge fund that it intends to seek a sale of a targeted firm is accompanied by the highest abnormal return, with average abnormal return of 8.781 percent ($t = 2.74$). In results not shown (see Brav, Jiang, Partnoy and

²³ About 59% of the self-reporting activist funds have some forms of lock up restriction, which is higher than the 44% all sample mean of the Hedgefund.net database. This is consistent with the fact that activist investing represents a relatively long-horizon strategy and hence the funds are more likely to impose liquidity restriction on investors.

Thomas (2008)), we also find that business strategy related activism also generates a significant positive abnormal return.

IV. Conclusions

This paper examines hedge fund activism using a large-scale sample over the time period 2001 through 2006. We document the heterogeneity in hedge fund objectives and identify common features of targeted firms. We find positive market reactions to announced hedge fund intervention. Moreover, although critics of hedge fund activism have argued that activists are overly short-term in focus, the median holding period of hedge fund activists has been in the range of one year.

We also find large positive abnormal return to the self-reported hedge fund activists during our sample period. When we compare the returns to self-reported activist hedge funds with those for both the CRSP value-weight market index and the Russell 2000 Value index, a commonly used benchmark index for small/value firms, we find that our activism index tracks the two indices very closely through mid-1998, but then departs significantly upward. Moreover, since 2003, activist funds have outperformed not only both market indices, but also equity-oriented hedge funds.

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Table 1. Summary of Hedge Fund Activism: 2001-2006

	(1)	(2)	(3)	(4)	(5)
Objective categories:	All Events				Num. of Hostile Events
	Num. of Events	% of Sample	% Success	% Partial Success	
1. General undervaluation/maximize shareholder value	511	48.3%	--	--	--
2. Capital Structure					
-- Excess Cash, under-leverage, dividends/repurchases	134	12.7%	32.0%	32.0%	65
-- Equity issuance, restructure debt, recapitalization	65	6.1%	37.3%	35.6%	38
3. Business Strategy					
-- Operational efficiency	131	12.4%	35.6%	27.6%	63
-- Lack of focus, business restructuring and spinning off	96	9.1%	27.8%	38.9%	62
-- M&A: as target (against the deal/for better terms)	79	7.5%	36.7%	19.0%	42
-- M&A: as acquirer (against the deal/for better terms)	25	2.4%	20.0%	52.0%	22
-- Pursue growth strategies	12	1.1%	44.4%	0.0%	0
4. Sale of Target Company					
-- Sell company or main assets to a third party	148	14.0%	37.0%	26.7%	93
-- Take control/Buyout company and/or take it private	44	4.2%	43.2%	25.0%	34
5. Governance					
-- Rescind takeover defenses	60	5.7%	21.7%	43.3%	43
-- Oust CEO, chairman	59	5.6%	39.7%	29.3%	59
-- Board independence and fair representation	159	15.0%	34.4%	35.7%	114
-- More information disclosure/potential fraud	58	5.5%	42.1%	26.3%	42
-- Excess executive compensation/pay for performance	50	4.7%	20.4%	44.9%	38
Sum of categories (2) through (5):	548	51.7%	40.6%	25.8%	286

Notes: The sample includes 1,059 events, sorted by hedge funds' stated objective. Columns (1) and (2) report the number of events, and the percentage among all events, in each category. Columns (3) and (4) list the rate of success (including partial success). Column (5) reports the number of hostile events. Percentages sum up to more than 100% since one event can have multiple objectives (The first category and the other four categories are mutually exclusive).

Table 2. Characteristics of Target Companies

Firm Characteristic	(1)	(2)	(3)	(4)	(5)	(6)
	Summary Statistics			Difference with matched firms		
	Mean	Median	Std Dev	Avg. Diff.	t-stat of Diff.	Wilcoxon
<i>Market Cap (\$Mil)</i>	726.56	160.07	1669.17	-63.54	-1.52	-2.05
<i>Book-to-Market</i>	0.773	0.615	0.914	0.081	4.28	3.93
<i>Sales Growth</i>	0.084	0.041	0.357	-0.057	-4.44	-7.72
<i>ROA (Ebitda/Assets)</i>	0.054	0.085	0.201	0.020	3.12	4.18
<i>Stock Return</i>	0.195	-0.010	1.200	-0.073	-3.11	-5.15
<i>Debt-to-Capital</i>	0.348	0.327	0.297	0.028	2.91	1.70
<i>Dividend Yield</i>	0.007	0.000	0.016	-0.001	-2.13	-5.48
<i>R&D/Assets</i>	0.079	0.029	0.114	-0.010	-2.21	-4.51
<i>HHI(Business Segment)</i>	0.800	1.000	0.251	-0.034	-3.64	-1.93
<i>#Takeover Defense</i>	9.005	9.000	2.702	0.353	2.27	2.33
<i>Cash Flow</i>	0.022	0.047	0.18	0.018	2.86	3.23
<i>%Institutional Ownership</i>	0.447	0.447	0.274	0.083	9.57	8.82
<i>Trading Illiquidity</i>	0.466	0.193	0.699	-0.075	-3.99	-7.65

Notes: This table reports the characteristics of target companies and a comparison to a set of matched companies. The first three columns report the mean, median, and standard deviation of the characteristics for the target companies. Columns (4) through (6) report the average difference between the sample firms and the industry/size/book-to-market matched firms, the t-statistic for the average difference, and the Wilcoxon signed rank statistic, which is asymptotically normal, for the median difference. Size matching is dropped for *Market Cap* comparison, and book-to-market matching is dropped for *Book-to-Market* analysis. Most variables are self-explanatory. *HHI* is the Herfindahl-Hirschman index of sales in different business segments as reported by Compustat. Trading illiquidity is proxied by a measure developed in Amihud (2002), defined as the yearly average (using daily data) of $1000\sqrt{|\text{Return}|/(\text{Dollar Trading Volume})}$.

Table 3. Long-Term Returns of Target Company Portfolios

Panel A: Full sample equal-weight four-factor model													
Window (months)	Alpha		Beta(-1)		Beta		SMB		HML		MOM		R2
	Estimate	t-statistic	Estimate	t-statistic	Estimate	t-statistic	Estimate	t-statistic	Estimate	t-statistic	Estimate	t-statistic	
(-12,-10)	-1.03*	-1.83	0.12	1.05	0.98**	6.81	0.66**	4.39	0.42**	2.42	-0.28**	-3.15	0.58
(-9,-7)	0.28	0.54	0.08	0.66	0.67**	4.93	0.90**	6.67	0.17	1.01	-0.49**	-5.88	0.66
(-6,-4)	-0.52	-1.04	0.25**	2.27	0.80**	6.18	0.85**	6.16	0.32*	1.93	-0.25**	-2.87	0.65
(-3,-1)	-0.67	-1.32	-0.06	-0.50	0.56**	4.39	0.90**	5.20	0.33*	1.87	-0.17*	-1.80	0.52
Event	5.09**	6.71	0.37**	2.00	0.39*	1.87	0.65**	2.47	0.20	0.70	-0.28*	-1.77	0.30
(1,3)	1.11**	2.11	0.15	1.22	0.33**	2.24	0.61**	3.33	0.38*	1.71	-0.60**	-4.90	0.54
(4,6)	0.15	0.35	0.17	1.50	0.77**	5.80	0.97**	6.11	0.47**	2.65	-0.08	-0.76	0.64
(7,9)	-0.25	-0.58	0.11	0.83	0.92**	6.33	0.65**	3.94	0.44**	2.02	-0.15	-1.18	0.61
(10,12)	0.50	0.95	-0.18	-1.11	0.70**	3.87	0.85**	3.96	0.59**	2.04	-0.21	-1.35	0.44

Panel B: Full sample value-weight four-factor model													
Window (months)	Alpha		Beta(-1)		Beta		SMB		HML		MOM		R2
	Estimate	t-statistic	Estimate	t-statistic	Estimate	t-statistic	Estimate	t-statistic	Estimate	t-statistic	Estimate	t-statistic	
(-12,-10)	-2.38**	-3.18	-0.06	-0.38	1.18**	6.19	0.41**	2.04	0.72**	3.11	-0.18	-1.49	0.38
(-9,-7)	-0.26	-0.42	0.16	1.18	1.02**	6.44	0.48**	2.99	0.14	0.71	-0.19*	-1.96	0.54
(-6,-4)	-2.13**	-3.35	0.06	0.40	1.03**	6.32	0.83**	4.80	1.05**	4.98	0.02	0.23	0.46
(-3,-1)	-1.67**	-2.34	0.16	0.99	0.73**	4.06	0.23	0.96	0.49**	1.98	-0.30**	-2.35	0.32
Event	1.60	1.17	0.82**	2.44	0.66*	1.73	0.68	1.45	0.11	0.22	-0.02	-0.07	0.17
(1,3)	0.29	0.58	0.21*	1.79	0.52**	3.80	0.44**	2.56	0.58**	2.74	-0.40**	-3.52	0.50
(4,6)	-0.64	-1.25	0.03	0.20	1.08**	6.85	0.92**	4.90	1.03**	4.93	-0.23*	-1.80	0.63
(7,9)	0.00	-0.01	0.08	0.62	0.79**	5.60	0.57**	3.55	1.02**	4.84	-0.64**	-5.09	0.70
(10,12)	-0.28	-0.63	-0.31**	-2.28	0.92**	6.05	0.97**	5.41	1.06**	4.40	-0.31**	-2.41	0.65

Panel C: Small firm sample value-weight four-factor model													
Window (months)	Alpha		Beta(-1)		Beta		SMB		HML		MOM		R2
	Estimate	t-statistic	Estimate	t-statistic	Estimate	t-statistic	Estimate	t-statistic	Estimate	t-statistic	Estimate	t-statistic	
(-12,-10)	-3.28**	-4.72	0.34**	2.31	1.24**	7.11	0.68**	3.66	0.22	1.00	-0.28**	-2.58	0.63
(-9,-7)	-1.09	-1.39	0.14	0.78	0.71**	3.63	1.08**	5.45	0.21	0.83	-0.29**	-2.31	0.50
(-6,-4)	-3.65**	-5.63	0.02	0.14	0.63**	3.74	1.37**	6.54	0.27	1.28	-0.35**	-3.13	0.60
(-3,-1)	-1.92**	-2.20	0.12	0.62	0.51**	2.17	1.13**	3.90	-0.12	-0.40	0.00	0.02	0.33
Event	4.24**	4.10	0.48	1.64	0.61**	1.97	0.18	0.48	-0.04	-0.07	0.01	0.03	0.08
(1,3)	1.17*	1.71	0.16	1.00	0.27	1.35	0.44*	1.84	0.39	1.32	-0.61**	-3.66	0.36
(4,6)	0.11	0.17	0.00	-0.02	0.92**	4.35	0.91**	3.80	0.30	0.90	0.08	0.39	0.41
(7,9)	-0.27	-0.49	0.14	0.80	0.73**	3.93	0.79**	3.76	-0.05	-0.15	0.07	0.42	0.41
(10,12)	-0.26	-0.43	-0.04	-0.21	0.69**	3.35	0.72**	2.96	0.40	1.23	-0.14	-0.78	0.34

Notes: The table reports regression estimates and t-statistics from equal- and value-weighted calendar-time portfolio regressions. “Window” indicates the buying time relative to the event (hedge fund activism targeting) and the holding period in months. “Alpha” is the estimate of the regression intercept from the factor models. “Beta(-1)” and “Beta” are the factor loading on the lagged and concurrent market excess return (the Fama and French RMRF). “SMB,” “HML,” and “MOM” are the estimates of factor loading on the Fama-French size and book-to-market factors, and the Carhart momentum factor. “R2” is the R-squared from the regressions. Panel A (B) provides equal (value) weight regression results based on the entire sample. Panel C provides value weight regression results based on the subsample of firms classified as “small” (bottom size quintile based on NYSE size cutoffs) at the month preceding the event month. We impose a minimum of five firms in any calendar month. Portfolios are held through December 2007. * and ** indicate statistical significance at the 10% and 5% levels.

Table 4: Characteristics of Activist Hedge Funds

	Activist Funds			Hedgefund.Net Equity Funds		
	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median
Active?	0.76	0.43	1.00	0.71	0.45	1.00
AUM (\$ million)	271	573	67	133	279	39
Age (at 2006)	6.13	4.66	5.00	3.72	3.57	3.00
Management Fees (%)	1.4%	0.5%	1.5%	1.5%	0.9%	1.5%
Incentive Fees (%)	19.3%	3.8%	20.0%	19.3%	4.0%	20.0%
Lockup (months)	10.62	8.71	12.00	7.91	8.70	12.00
Lockup present?	0.60	0.49	1.00	0.44	0.50	0.00
Volatility of monthly returns	3.59%	2.55%	3.06%	4.00%	3.67%	2.96%

Notes: The table reports the summary characteristics of the 103 activist hedge funds, in comparison with all equity hedge funds in the Hedgefund.Net database. The dummy variable for being active in the database (as opposed to defunct/stopped-reporting) and the return volatility variable use the full sample of data; while the rest of the variables adopt the 2006 year-end observations (or the latest records) for each fund.

Table 5. Excess Returns to Activist Equity Hedge Funds, Equity Hedge Funds, and All Hedge Funds

Percentile	Activist Funds		All Hedge Funds		All Equity Funds		Size/Age Matched Funds	
	Alpha1	Alpha4	Alpha1	Alpha4	Alpha1	Alpha4	Alpha1	Alpha4
5%	-0.41%	-0.68%	-0.72%	-0.80%	-0.82%	-0.93%	-0.37%	-0.58%
25%	0.38%	0.30%	0.05%	0.00%	0.03%	-0.01%	0.19%	0.11%
50%	0.68%	0.63%	0.33%	0.29%	0.41%	0.39%	0.51%	0.43%
75%	1.04%	1.00%	0.68%	0.66%	0.83%	0.85%	0.90%	0.85%
95%	1.92%	1.98%	1.74%	1.88%	2.09%	2.33%	2.07%	2.03%
Average	0.71%	0.64%	0.41%	0.39%	0.47%	0.49%	0.65%	0.57%
Standard Dev.	0.68%	0.74%	0.96%	1.09%	1.05%	1.25%	0.90%	0.86%
Number of Funds	102		10,384		3,564		408	

Notes: The table reports the summary statistics of alpha estimates from the CAPM (Alpha1) and the four-factor (Alpha4, defined in Table 3) models for the sample of self-reported activist hedge funds, all hedge funds, equity-oriented hedge funds, and a sub-sample of equity hedge funds that are matched to activist funds by size and age. The beta loadings are estimated using the 36 months prior to the current month. Monthly alphas are calculated using the time-varying beta loadings (estimated using the past 36 monthly returns), and then averaged at the fund level.

Table 6. Returns Based on 13F-Filed Holdings

Percentile	Most recently filed holdings			Holdings filed at least 2 months ago		
	Excess of Market	One-Factor Alpha	Four-Factor Alpha	Excess of Market	One-Factor Alpha	Four-Factor Alpha
5%	-0.53	-0.41	-0.59	-0.54	-1.12	-1.56
25%	0.55	0.49	0.27	0.24	0.13	-0.01
50%	0.99	0.88	0.66	0.65	0.54	0.26
75%	1.49	1.35	1.23	0.96	0.88	0.71
95%	2.82	2.98	2.22	2.13	2.13	1.58
Average	0.96	0.90	0.62	0.65	0.58	0.36
Standard Dev.	2.06	1.85	2.67	1.07	0.93	1.02
Num. of Funds		147			147	

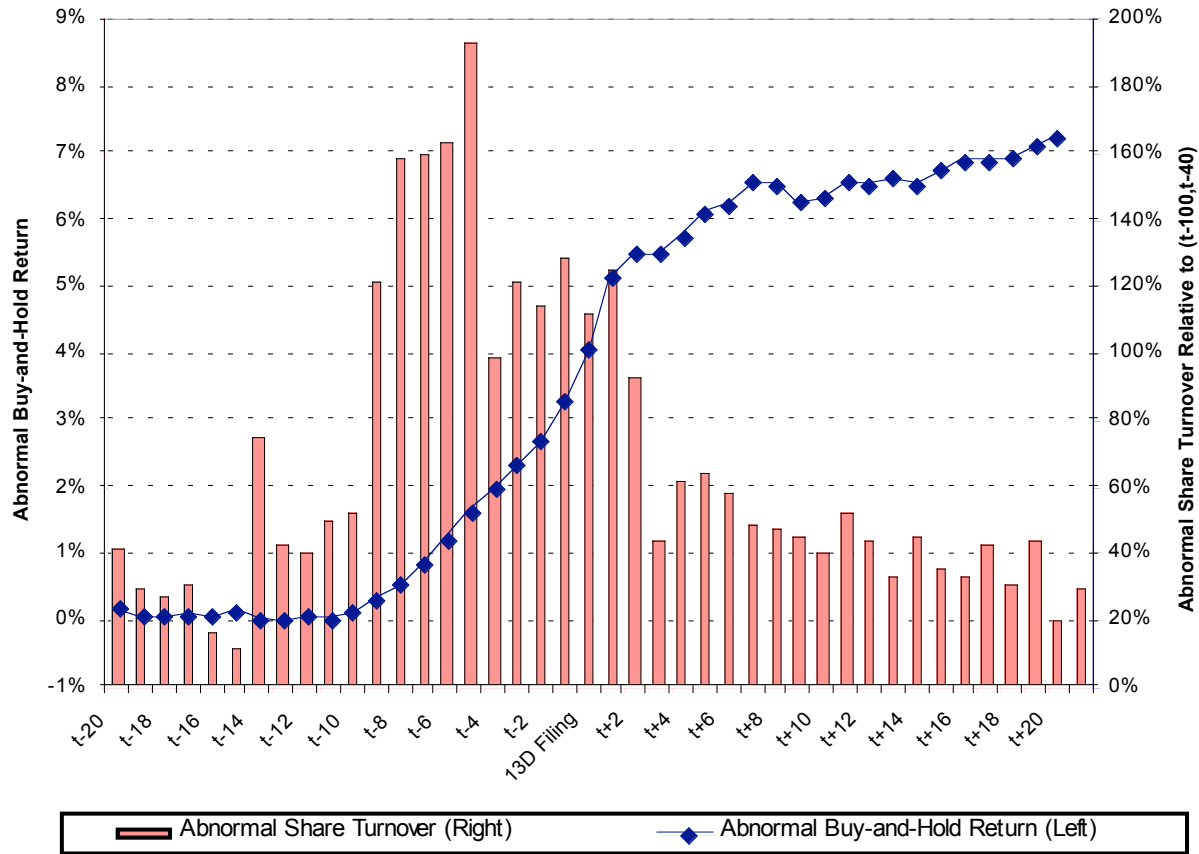
Notes: This table reports the summary statistics of abnormal returns (in terms of excess return over the market, one-factor alpha, and four-factor alpha) of the long-equity positions of sample hedge funds that report quarterly holdings to the Thomson Financial Spectrum database. In the first column, we construct the returns from the equity long-only position by assuming that the hedge funds hold their most recently disclosed positions. In the second column, the returns are imputed on the filings that are at least two months old.

Table 7. Cross-Sections of Activist Hedge Fund Returns

	Four-Factor Alpha		One-Factor Alpha		Avg. Announcement Excess Return	
	COEF	t-stat	COEF	t-stat	COEF	t-stat
Log(#Targets)	0.054	0.93	0.031	0.49	2.428**	2.03
Hostile Tactics	0.038	0.24	0.080	0.41	-0.573	-0.13
Objective: Sale	-0.077	-0.41	-0.049	-0.23	8.781**	2.74
Fund Age	0.000	-1.51	0.000	-1.57	-0.004	-1.56
Log(AUM)	0.050	0.93	0.075	1.27	1.082	1.09
Management Fee (%)	0.186*	1.83	0.049	0.41	-5.802*	-1.69
Incentive Fee (%)	0.051**	3.67	0.060**	3.77	0.386	0.96
Log(Min Invest)	-0.115	-1.24	-0.218*	-1.80	-1.234	-0.29
Watermark present?	0.032	0.12	-0.022	-0.06	4.725	1.23
Lockup present?	0.047	0.44	0.120	0.92	-2.606	-0.60
Constant	-0.325	-1.04	-0.050	-0.14	1.028	0.11
R-sqr and # of Obs	0.20	103	0.20	103	0.17	103

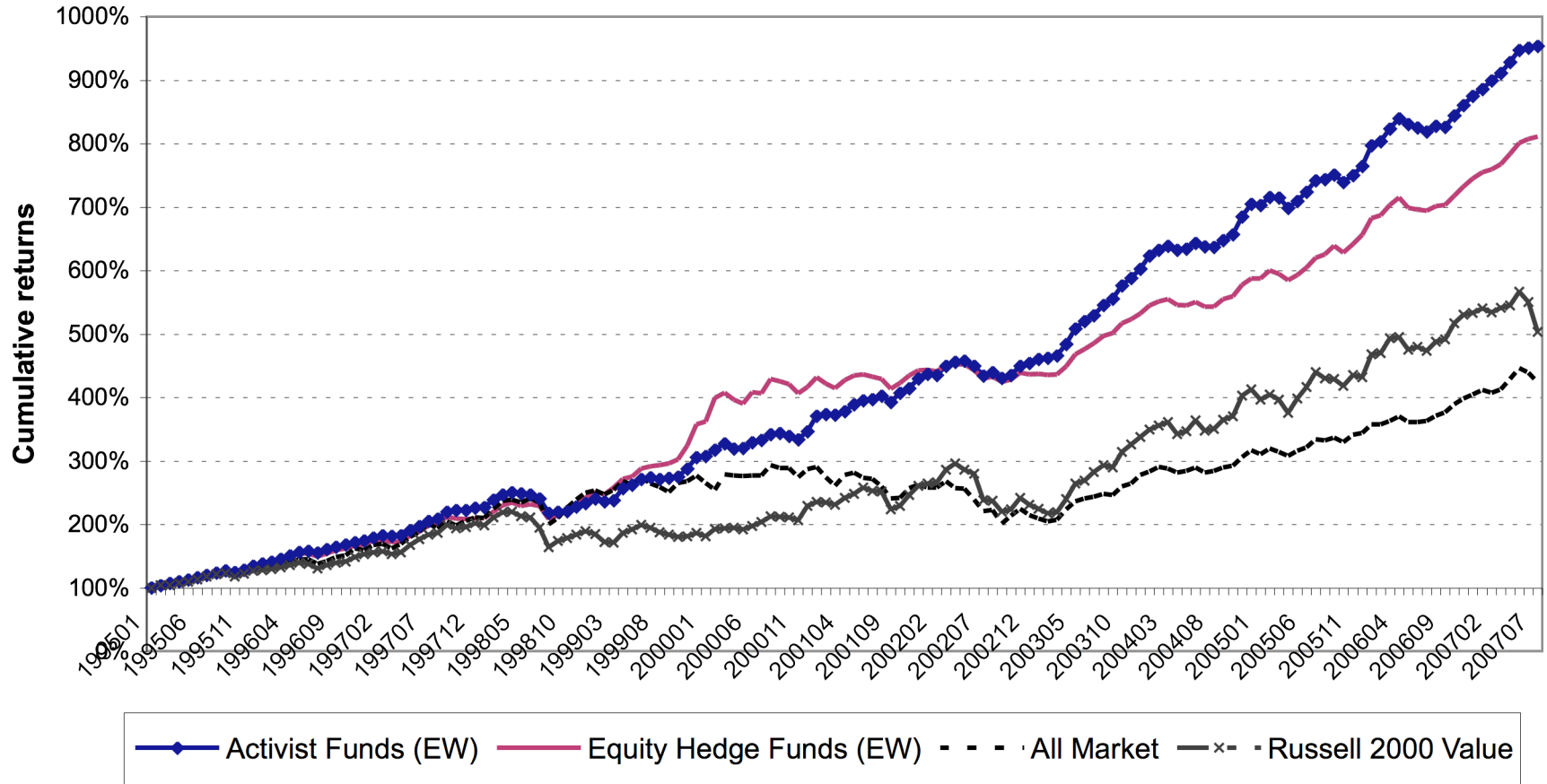
Notes: The dependent variables are four- and one-factor alphas, as well as the average announcement window excess returns (the average of which across all funds is plotted in Figure 1). All variables are constructed at the fund level. * and ** indicate statistical significance at the 10% and 5% levels.

Figure 1. Buy-and-Hold Abnormal Return Around The Filing of Schedule 13Ds



Notes: The solid line (left axis) plots the average buy-and-hold return around the Schedule 13D filing, in excess of the buy-and-hold return of the value-weight market, from 20 days prior the 13D file date to 20 days afterwards. The bars (right axis) plot the increase (in percentage points) in the share trading turnover during the same time window compared to the average turnover rate during the preceding (-100, -40) event window.

Figure 2. Returns to Activism Indices, January 1995- June 2007 (Beginning from 100% in January 1995)



Notes: This figure plots the Activist Fund Index by aggregating the returns of all activist funds on an equal-weight basis. As a comparison, also plotted are the Hedgefund.Net all hedge fund equal-weight index, the CRSP value weight market index, and the Russell 2000 Value index.