

Hedge Fund Activism, Corporate Governance, and Firm Performance

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Abstract

Using a large hand-collected dataset of hedge fund activism in the U.S. over the period 2001 through 2005, we find that activist hedge funds act both as value investors and shareholder advocates. They target undervalued firms, and propose an array of strategic, operational, and financial remedies. Most tactics are non-confrontational, and attain success or partial success in two-thirds of the cases. However, hedge funds seldom seek control of target companies. The market reacts favorably to hedge fund activism, as the abnormal return upon announcement of potential activism is in the range of 5-7 percent, with no apparent reversal in the subsequent year. We show that this positive market reaction does not reflect anticipated wealth transfers from creditors to shareholders, but instead reflects anticipated improvement in performance. Indeed, target firms see moderate improvement in operational performance and considerably higher CEO turnover after activism. Our analysis provides important new evidence on the mechanisms and effects of informed shareholder monitoring.

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Although hedge fund activism is a topic of widespread interest, there is a dearth of large sample empirical evidence and analysis of this new phenomenon. To date, little is known about the characteristics of firms that hedge funds target, the determinants and extent of successful activism, as well as the short- and long-term value implications of such activism. We attempt to bridge this gap by constructing a broad database of 888 events launched by 131 activist hedge funds, including both hostile and non-hostile interactions between funds and targets. Our sample, the most complete set of hedge fund activism to date, extends from the beginning of 2001 through the end of 2005.¹

We find that a large majority of activist hedge funds resemble value investors, targeting companies they believe are undervalued based on financial statement analysis. They tend to target general (e.g., payout policy, excess diversification), rather than firm-specific issues (e.g., operational difficulty, sales slump). Target companies have low market value relative to book value, are profitable with sound operating cash flows and returns on assets, and tend not to be technology companies (as proxied by R&D expenditure). However, the payout at these companies is lower than that of a matched sample, indicating potential agency problems associated with free cash flows. Target companies have more takeover defenses and offer higher CEO pay than companies of comparable size and book-to-market ratios. Finally, relatively few targeted companies are in the top twenty percent of firms by market capitalization, which is not surprising given the much higher cost of amassing a five percent stake in a firm in the top size quintile (an average of \$760 million).

We also find that hedge fund activism differs markedly from shareholder activism by other institutions. Previous papers have shown that activism by institutional investors such as mutual funds and pension funds does not generate substantial positive abnormal returns or long-

¹ Although hedge funds are largely unregulated, the Securities Exchange Act of 1934 requires anyone, including hedge funds, to file a Schedule 13D if they directly or indirectly acquire beneficial ownership of more than 5 percent of a company's shares. Our sample is based on these Schedule 13D filings with additional news-based searches for activist events that do not meet the above filing criteria. Our sample construction methodology is discussed in detail in Section II.

term benefits for shareholders (Karpoff, 2001; Barber, 2006). In contrast, we document that hedge fund activism achieves both. First, we find evidence that market participants, on average, believe that hedge fund activism creates value. The announcement of hedge fund activism, which often occurs when the fund files a Schedule 13D, results in large positive average abnormal return, in the range of 5-7 percent, during the announcement window. These returns are not reversed one year after the filing date.

Contrary to media reports that investors welcome changes in target capital structure and governance, we find that the market response to capital-structure related activism – including debt restructuring, recapitalization, dividends, and share repurchases – is statistically insignificant. We find a similar lack of reaction for governance-related activism, including attempts to rescind take-over defenses, to oust CEOs, to enhance board independence, and to curtail CEO compensation. Instead, events that are associated with positive abnormal returns involve more dramatic proceedings, such as changes in business strategy (for example, refocusing and spinning-off non-core assets), and the sale of the company. The event-window abnormal returns for these two categories of events are 4.4 percent and 10.9 percent, respectively. Activism that specifies particular objectives generates higher returns than activism that is general. Activism that is hostile generates higher returns than activism that is non-hostile.

We find that the positive market reaction is consistent with ex-post evidence of improved operating performance at target firms. Average return on equity, in excess of that of matched companies, increases from four percentage points at the time of announcement to about ten percentage points after one year. Average return on assets also increases. Target firm leverage increases modestly during the year after announcement, reversing some of the de-leveraging that occurred at these firms during the three years prior to intervention. Although hedge fund activism generally appears to generate value for shareholders, it is not as kind to CEOs at target firms. During the year after the announcement of activism, average CEO pay declines significantly, and CEO turnover rate increases by nine percentage points, controlling for the normal turnover rates in the same industry, and for firms of similar size and stock valuation. Moreover, there is no evidence that the shareholder gain comes at the expense of debt holders.

In addition to evidence of positive returns and performance, we document a large cross-sectional variation in hedge fund tactics and target responses, confirming the importance of using

the most complete data set possible in evaluating hedge fund activism. For example, we find that only about 26 percent of all events are hostile, in that they involve a threatened or actual proxy contest, takeover, lawsuit, or public campaign to remove the management. These findings are consistent with statements by many hedge fund activists (in their Schedule 13D filings and in the media) that they intend to work with or support management. When hedge funds launch public activism targeting specific issues, the modal target response is to fight (about half of the time, and the rest are to accommodate and to negotiate). Nevertheless, hedge funds' success rates are respectable: in about 41 percent of the cases, hedge funds attain their main stated goals and in another 26 percent obtain partial success, where hedge funds gain significant concessions from the target.

Despite their aggressive behavior, activist hedge funds do not typically seek control in target companies. The median ownership stake is about 10 percent, and even at the 95th percentile in our sample, the stake is below 50 percent. These relatively small stakes distinguish activist hedge funds from 1980s corporate raiders. Activists rely on cooperation from management or, in its absence, on support from fellow shareholders to implement their value-improving agendas. This explains why they tend to target companies with higher institutional holdings and analyst coverage, both of which suggest a more sophisticated shareholder base. It is also common that multiple hedge funds coordinate in pressing one target: they either co-file Schedule 13Ds (about 21 percent of the sample) or act in tandem without being a formal block. Such block behavior can facilitate activism by reducing the cost to an individual hedge fund and by increasing the percentage of shareholders that will be hospitable to activism.

We provide evidence that the recent abnormal positive returns to hedge fund activism are consistent with the early arbitrage profits that hedge funds have previously captured using other strategies. Early in our sample period we observe several hedge funds exploiting profit opportunities by agitating for corporate change, perhaps because of the failure of other institutional investors to monitor managers. Other hedge funds quickly follow, and today a large number of funds engage in activism. It is therefore uncertain whether the abnormal profits that we find during our five-year sample period can persist. The number of hedge fund activist events surged during this period, and their activity continues to grow in 2006 as they attract substantial additional capital. Incidents of aggressive activism (where hedge funds resort to public shareholder proposals, launch proxy contests, or seek control of the company) have also

increased. Importantly, we find that the median (average) abnormal return to hedge fund activism in our sample steadily declines during the 2001 to 2005 time period from 9.0 percent (10.6 percent) in 2001 to 3.1 percent (4.8 percent) in 2005. Although it is too early in the cycle to predict the fate of hedge fund activism with any certainty, if activism can be viewed as another form of arbitrage,² then it is likely that the abnormal returns associated with it will decline, or even disappear, as more funds chase after fewer attractive targets, and as the market incorporates the potential for investor intervention and improvement into security prices. Hedge fund activism might nevertheless remain a staple of corporate governance, but at a lower equilibrium level of profitability.

There have been a few attempts at studying hedge fund activism targeting general corporations based on limited samples. Bradley, Brav, Goldstein, and Jiang (2006) collect a comprehensive sample of hedge fund activism targeted against discounted closed-end funds, and analyze its impact on closed-end fund governance and discount dynamics. A few recent papers have studied hedge fund activism in the U.S.³ Generally, these papers do not provide a complete explanation of the role of hedge fund activism due to the size and selection of the sample. For example, Bratton (2006) and Kahan and Rock (2006) assemble useful anecdotal evidence of hedge fund activism, but cover only a small percentage of the events in our sample and do not examine returns, performance, or cross-sectional variation in any detail. Klein and Zur (2006) use a somewhat larger sample of 194 Schedule 13D filings from 2003 to 2005, but omit activism below the 5 percent threshold (such as Carl Icahn's intervention at Time Warner or Pershing Square's intervention at McDonald's), and virtually all non-confrontational hedge fund activism, where hedge fund managers worked collaboratively with portfolio firm management.

In direct contrast to our main findings on positive post-intervention operating performance, Klein and Zur (2006) report that accounting performance does not improve in the year after the Schedule 13D filing. Klein and Zur examine only confrontational events, however,

² In contrast to the conventional *pure trading arbitrage* where arbitrageurs take positions and passively wait for the convergence of the presumably mispriced securities to fundamental value, *activist arbitrage* entails actions that change the value of the underlying securities through intervention aimed at improvement. The trade off between the two types of strategies was theoretically studied by Bolton and von Thadden (1998), Kahn and Winton (1998), Maug (1998) and Noe (2002).

³ Becht, Franks, Mayer, and Rossi (2006) gather data on activism by Hermes U.K., the pension fund of British Telecom. They do not find positive market reaction to public notification of Hermes's stake, although there is a significant three percent market reaction to governance outcomes of Hermes's activism.

while our sample includes both confrontational and non-confrontational activism. This difference may well explain our divergent findings.

Finally, we present important new findings for the policy debate about hedge fund regulation. For example, our evidence suggests that activist hedge funds are not excessively short term in focus, as some prominent U.S. lawyers have written. Nor are hedge funds as disruptive to corporate managers as many regulators have asserted. Instead, our evidence of the market's positive response to hedge fund activism, and the subsequent success of activists, challenges the premises of proposals requiring hedge fund registration. Importantly, we were able to obtain the data described in this paper even in the absence of a hedge fund registration requirement. On the other hand, we were not able to obtain other information, such as details about hedge fund derivative positions, which would tend to support a requirement of improved disclosure.

In terms of corporate governance, the new evidence presented here suggests that activist hedge funds occupy an important middle ground between internal monitoring by large shareholders and external monitoring by corporate raiders. Activist hedge funds are more flexible, incentivized, and independent than internal monitors, and can generate multiple gains from multiple targets. Conversely, activist hedge funds have advantages over external corporate raiders, because they take smaller stakes, benefit from cooperation with management, and have support from other shareholders. This hybrid internal-external role puts activist hedge funds in a potentially unique position to reduce the agency costs associated with the separation of ownership and control.

The rest of the paper proceeds as follows. Section I provides the institutional background and literature review. Section II describes the sample. Section III discusses the characteristics of target companies. Section IV looks at stock price returns to hedge fund activism. Section V analyzes firm performance before and after activism. We present our conclusions in Section VI.

I. Institutional Background and Literature Review

Hedge fund activism is a controversial but little studied phenomenon. One barrier to research is that there is not even a generally agreed-upon definition of a hedge fund. For

example, the term “hedge fund” does not appear in the federal securities laws.⁴ Likewise, there is no clear definition of an activist hedge fund.

Hedge funds generally have four characteristics: (1) they are pooled, privately organized investment vehicles; (2) they are administered by professional investment managers; (3) they are not widely available to the public; and (4) they operate outside of securities regulation and registration requirements.⁵ Hedge funds avoid regulations imposed on mutual funds by having a relatively small number of sophisticated institutional or wealthy individual investors. Most hedge funds are exempt from the Investment Company Act of 1940, either because (1) they have 100 or fewer beneficial owners and do not offer their securities to the public, or (2) all of their investors are “qualified” high net-worth individuals or institutions.⁶ Although many private equity or venture capital funds also have many of these characteristics, those funds are distinguished from hedge funds because of their focus on particular private capital markets.

Caldwell (1995) attributes the development of the first hedge fund to Alfred Winslow Jones, a sociologist and journalist who in 1949 established a private investment partnership that reduced risk by buying one stock while shorting another in the same industry. The President’s Working Group (1999) estimates that there were 140 hedge funds operating in the late 1960s and roughly 3,000 by 1998. There is no definitive count of hedge funds today, although recent estimates are in the range of 8,000 funds with more than \$1 trillion under management.⁷ Established hedge funds tend to charge both incentive fees (generally twenty percent of profits) and fixed fees (typically in the range of two percent of assets under management).

Hedge funds are not the only investors to engage in monitoring of corporate management. Institutional investors, religious organizations, labor unions, individuals, and other groups also engage in shareholder activism. Beginning in the mid-1980s, public pension funds and other

⁴ Indeed, when the Securities and Exchange Commission held a roundtable discussion on hedge funds in 2003, one participant cited fourteen different definitions found in government and industry publications. See SEC Roundtable on Hedge Funds (May 13, 2003) (comments of David A. Vaughan), available at <http://www.sec.gov/spotlight/hedgefunds/hedge-vaughn.htm>.

⁵ Partnoy and Thomas (2006). See 15 U.S.C. § 77d(2) (Securities Act of 1933 registration requirements); 15 U.S.C. § 80a-2(a)(51)(A) (Investment Company Act of 1940 registration requirements); 15 U.S.C. § 80a-3(c)(7) (Securities Exchange Act of 1934 reporting obligations); 15 U.S.C. § 80b-3(b) (Investment Advisers Act of 1940 registration requirements).

⁶ See 15 U.S.C. § 80a-3c(1), (7).

⁷ As of July 2006, the Securities and Exchange Commission estimated that there were 8,800 hedge funds, with approximately \$1.2 trillion of assets. See SEC Chairman Christopher Cox, Testimony Concerning Hedge Funds (July 25, 2006), available at <http://www.sec.gov/news/testimony/2006/ts072506cc.htm>.

activist investors began engaging in shareholder activism using Rule 14a-8, which permits shareholder proposals on a variety of topics, but their efforts had little effect on firm value or performance (Karpoff, Malatesta and Walking, 1996). Larger public pension funds tried a variety of other techniques to influence corporate management, but these also had little impact on operating performance or stock price (Wahal, 1996; Smith, 1996; Del Guercio and Hawkins, 1999; Carleton, Nelson and Weisbach, 1998).⁸ As several surveys have shown, the results of this type of activism by non-hedge fund institutions have been disappointing: they caused small changes to firms' corporate governance structures but no measurable effects on stock prices or earnings (Karpoff, 2001; Romano, 2001; Black, 1998).

Institutional investor monitoring had seemed particularly promising, because as a group these investors often held a majority of many publicly traded firms' equity securities. However, various regulatory and structural barriers have plagued their efforts. Many institutions face collective action problems, because they generally hold a small percentage of shares outstanding and prefer to free ride on the efforts of others (Kahan and Rock, 2006; Partnoy and Thomas, 2006). In addition, some institutions face significant conflicts of interest: for example, mutual funds have been reluctant to engage in activism at firms they might take on as future clients. Other institutions face regulatory constraints that prevent intervention, including prohibitions on accumulating large block positions in one firm, insider trading regulations, and requirements to maintain liquidity, which compromise their trading flexibility (Black, 1990). Funds run by political appointees are constrained by local and state politics from engaging in shareholder wealth maximizing activism as well (Romano, 1993). Finally, institutions' managers have weak financial incentives to engage in intervention, as they realize little or no personal gain from increasing portfolio firm value (Rock, 1992). Due to these limitations, the "Wall Street Walk" often becomes the default form of institutional shareholder activism (Admati and Pfleiderer, 2005).

Hedge funds are different. They employ highly incentivized managers, the bulk of whose compensation is derived from their twenty percent stake in the portfolio firm's share price appreciation. These managers can take much larger relative positions because they are not required by law to maintain diversified portfolios (Partnoy and Thomas, 2006). Hedge fund

⁸ One recent exception is Barber (2006) who finds a market adjusted announcement day return of 23 basis points for a later and larger sample of targets of CalPERS activism.

managers suffer fewer conflicts of interest because they are not run by politicians and do not attempt to sell other products to the firms whose shares they hold. They are largely unregulated:⁹ in contrast to mutual funds, which must have independent boards and permit shareholders to approve certain actions, hedge funds can, if they choose, more completely separate ownership and control.

The typical hedge fund is a partnership entity managed by a general partner; the investors are limited partners who are passive and have little or no say in the hedge fund's business. Because hedge funds do not fall under Investment Company Act regulation, they are permitted to trade on margin and engage in short sales, strategies that are not available to other institutions, such as mutual and pension funds.¹⁰ Hedge funds also have some power to lock in their investors' capital, albeit for relatively short horizons of six months to a few years. By comparison, other institutional investors, particularly mutual funds, are subject to much more rapid investor redemptions. Because of these differences, hedge fund managers typically are more independent of their investors than are managers of other institutions. In sum, the unique structure and status of hedge funds suggest they have the potential to fill some of the gaps left by institutional investors.

Finally, many activist hedge funds resemble block holders as actors in the internal governance of portfolio firms. They work collaboratively with management, and provide valuable strategic and operational advice that benefits all shareholders (Holderness, 2003). One difference is that the activist hedge funds seldom seek controlling positions. Further, these funds can also play an external governance role by bringing market discipline if portfolio firms reject their advice, sometimes seeking change of control transactions or to dislodge recalcitrant managers. Hedge funds thus play a hybrid internal-external governance role. Moreover, activist hedge funds are likely to be less patient than control shareholders. Although many hedge funds require that investors "lock in" their investments, the lock in period is shorter than the investment horizon of a typical control shareholder. This potential exit threat pressures fund managers to

⁹ Hedge funds are exempt from rules requiring registration with the Securities and Exchange Commission. Although in late 2004 the SEC responded to criticism about the unregulated status of hedge funds by adopting new rules limiting the exemptions for hedge funds, effectively requiring that most hedge funds register with the agency, an appeals court struck down these new rules in 2006. See *Registration Under the Advisers Act of Certain Hedge Fund Advisers*, 69 Fed. Reg. 72,054 (Dec. 10, 2004); *Goldstein v. SEC*, 451 F.3d 873 (2006).

¹⁰ See 15 U.S.C. § 80a-12(a)(1), (3).

generate higher share values at their portfolio firms in a relatively short period of time, and can make their holdings more volatile than those of inside block holders.

II. Data and Overview

A. The Activism Sample

There is no central database of activist hedge funds. For purposes of studying activism, the few publicly available hedge fund databases (such as TASS, CISDM) do not include a large number of funds engaged in activism.¹¹ Moreover, there is widespread criticism of available data regarding hedge funds in general as data vendors rely mostly on voluntary reporting by hedge funds. As a result, we decided to construct an independent sample.

We used a two-step procedure. We first focused on assembling the broadest possible list of hedge funds engaged in activism. To this end, we performed searches in both the Factiva and Lexis-Nexis news databases for stories during 2001 and 2005 mentioning both the terms “activism” and “hedge fund.” From those stories, we were able to gather the names of approximately 100 hedge funds. We then performed searches in the SEC Edgar database for securities filings by institutions with those names (or under other affiliated names). As a result of these searches, we were able to add additional funds to our initial list. Our second step was to collect information on the companies targeted by these funds. Again, we took a two-pronged approach. For each fund, we performed searches in the SEC Edgar database for all Schedule 13D filings by that fund during 2001 and 2005. We supplemented the information culled from these filings with Factiva-based news searches.

Section 13D of the Exchange Act of 1934¹² is one of the key provisions of the Williams Act, passed by Congress in 1968 to regulate the method and timing of tender offers. This statute requires anyone who directly, or indirectly, acquires beneficial ownership of more than five percent of a public company’s shares to file a disclosure document, the Schedule 13D, with the SEC within ten days of crossing over this ownership threshold. Item 4 of Schedule 13D requires the filer to declare the 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

¹¹ Using our activist hedge fund list we find that only 20-25 percent of our sample funds are listed on the TASS or CISDM databases.

¹² 17 C.F.R. §240.13d-1 (2005).

a change in its capitalization or dividend policy, or propose other types of corporate changes. Congress intended that the filing of a Schedule 13D would notify the market that the filer might seek to force corporate changes.¹³

Schedule 13D filings (and amendments thereto) are publicly available through the SEC's EDGAR filing system and the various private databases that also disclose these filings. It is the best source of publicly available data concerning the holdings of hedge funds, although it does not require disclosure of certain types of derivative transactions in an issuer's securities.¹⁴ While institutional money managers might also have filing obligations for less than five percent positions under Form 13F, these obligations are much more limited in their scope and Form 13F filings are made only on a quarterly basis with an additional 45 day delay permitted after the end of the quarter.¹⁵ Therefore, for our purposes, Schedule 13D filings are the best indicator of hedge fund shareholder activism.

We compile a list of hedge funds, the size of their positions, and their intentions, as well as their targets, based on the Schedule 13D filings and additional extensive news searches with respect to each hedge fund-target pair. We exclude targets that are closed-end funds. During these searches, we were able to find additional hedge funds that had participated in the activism event but were not found during our first search of media stories.¹⁶ We add these names to our list, and perform the same SEC Edgar database searches described above with respect to those names. To further increase the inclusiveness of our sample, at various stages during this process, we have shown our list of hedge funds to participants in the hedge fund industry and obtained comments and suggestions for additions or deletions. Although mutual funds are not technically hedge funds because they are required to register under the Investment Company Act of 1940, we made one exception, Franklin Mutual Advisers, because it behaves like the other activist funds in our sample.

¹³ In contrast, passive institutional investors that acquire more than five percent of the company's stock and do not intend to seek to influence control at the target company, but are merely investing in the ordinary course of business, file a Schedule 13G within 45 days of crossing this ownership threshold. Typically, the filing of a Schedule 13G does not foreshadow an activist event. However, if an institutional investor changes its initial passive purpose and decides to become active, it would need to file a Schedule 13D to announce this shift to the market.

¹⁴ Hu and Black (2006) contains an extensive discussion of these limitations.

¹⁵ Form 13F is limited to the publicly traded U.S. equity securities that are listed in the SEC's official list of Section 13F securities; it does not cover privately traded securities. For further discussion of these limitations, see Hu and Black (2006).

¹⁶ The fact that several activist hedge funds were not uncovered in the initial search reveals some of the limitations of computational linguistics.

Some hedge funds have engaged in activism with less than five percent stake in the target company, a notable example being Carl Icahn's investment in Time Warner, where Icahn was a 2.6 percent shareholder of Time Warner when he launched activism against the firm. Given the amount of capital required to acquire five percent in a large-cap company, the Schedule 13D-based search could bias the sample toward smaller targets. While some of the below five percent ownership cases are already in our sample through our news search, we further cross-checked potential additional events using the Thomson Financial Form 13F database. More specifically, we retrieved all companies from the Form 13F files whose shares were held by our sample hedge funds during the 2001-2005 period, and conducted individual targeted news searches if (i) the company's market value was more than \$1 billion,¹⁷ and (ii) the ownership by the hedge fund was greater than two percent.

Though our sample might not be exhaustive of all potential hedge fund activist events that occurred in the 2001-2005 time period, we believe it includes all the important events because any events we missed must also have failed to catch the attention of the media and are unlikely to be economically meaningful. Ultimately, we generate a list of 131 activist hedge funds and 888 hedge fund-target pairs for the period 2001-2005, involving 775 unique target companies. The target companies span 182 (respectively, 62) three-digit (respectively, two-digit) SIC code industries. By compiling our own database, we avoid some problems associated with survivorship bias, selection bias, and backfill, which are prevalent among other databases, such as those provided by Hedge Fund Research, Inc., TASS/Tremont, Managed Accounts Reports, and Zurich Capital Markets.¹⁸

B. Three Examples of Activist Events

To give the reader a flavor of the boundaries of the activism that we focus on in this paper, we provide a description of three such cases. The first event illustrates a non-

¹⁷ This restriction is necessary to make the search tractable. Given that the data selection issue of activism ownership below five percent is likely to be more serious among the top quintile sized firms, we restrict the individual search among firms that have market capitalization above \$1 billion (about the 70th percentile of all public firms covered by CRSP in 2005).

¹⁸ See Malkiel and Saha (2006). Survivorship bias occurs because unsuccessful hedge funds – and their unsuccessful performance history – are removed from the databases. Backfill bias occurs because hedge funds start reporting performance only after a period of positive returns. Selection bias also is a problem, although there are dual incentives and it is unclear whether the firms that opt to be included in private databases under-perform or over-perform the mean.

confrontational approach that ultimately management embraced and executed. The second event illustrates an initially hostile approach that management ultimately accommodated. The third event describes an event that remained hostile throughout. Our data includes all three categories of activist events, as well as events below the 5 percent Schedule 13D ownership threshold.

B.1. MLF Investments and Alloy, Inc.

On November 19, 2003, MLF Investments LLC filed a Schedule 13D indicating that it owned 5.8 percent of Alloy, Inc., a direct marketing and retail company. MLF Investments had purchased those shares at an average cost of approximately \$5.17 per share. In the Schedule 13D, MLF Investments and its affiliates (the “Reporting Persons”) stated that:

“The Reporting Persons support management’s restructuring efforts to the extent they are focused on maximizing shareholder value. In that regard, the Reporting Persons believe that a spin-off of the Company’s “merchandise business” into a separate publicly traded entity should enable the businesses to focus on their core competencies and perform better. In our experience this increased focus should lead to an increase in the valuation of each of the two businesses. The Reporting Persons plan to talk to management and the Board of Directors of the Company regarding its plan to maximize shareholder value and assist them if wanted or needed.”

During the (-20,+20) event window surrounding the announcement of Schedule 13D filing date, Alloy’s share price increased in value by approximately 11 percent.

As stated in the Schedule 13D, representatives of MLF Investments initiated discussions with management and the board. After one year, Alloy appointed Matthew Feshbach, the founder and managing partner of MLF Investments, to its board. After several additional months of discussions, on May 31, 2005, Alloy announced plans to spin off its “merchandise business,” and its shares closed on a split adjusted basis at \$8.39. MLF Investments had continuously increased its stake in Alloy since its initial Schedule 13D filing, and as of September 7, 2005, MLF Investments owned 16.1 percent of the company.

B.2. Pirate Capital and James River Coal

On November 17, 2005, Pirate Capital filed a Schedule 13D file with the SEC indicating a 7.9 percent stake in James River Coal Co. Pirate purchased its stake at an average price of about \$33.45. On February 10, 2006, Pirate Capital sent a letter to the target stating that:

“We have become increasingly concerned that James River's valuation is being discounted relative to its peers - a discrepancy we attribute to management's failure to articulate to the investment community a cohesive operational and financial strategy, together with its demonstrated inability to meet earnings consensus...We attribute these missteps to CEO Peter Socha's lack of operating experience within the coal industry and to the Company's lack of a CFO...We are now convinced that the Company's senior management team is simply not up to the task of achieving such goals. As a result, we demand that (i) the Board immediately retain an investment banking firm to pursue strategic alternatives, including the potential sale of the Company and (ii) immediately redeem the shareholder rights plan effective no later than March 15, 2006.”

On March 10, 2006, management announced that they had hired Morgan Stanley to “look at alternatives and potential bidders.” James River Coal’s stock price rose more than 10 percent to \$39.77 on that day. From late April to July, Pirate demanded that its representatives be placed on James River’s board and the repeal of several anti-takeover by-laws. On August 22, 2006, Pirate and James River Coal announced that they entered into settlement agreement whereby three representatives from Pirate were elected to James River Coal’s board, and in turn, Pirate dropped the proposals it had submitted to shareholders for the upcoming annual shareholder meeting.

B.3. Newcastle Partners and Pizza Inn

Not all activism is settled by negotiations as in the Pirate Capital-James River case. In some cases, hedge funds persist in using hostile tactics while target management continues to resist their actions. Newcastle Partners, L.P.’s acquisition of Pizza Inn is one such case. It began when Newcastle acquired an option to purchase 32.5 percent of the shares of Pizza Inn on December 11, 2002 from the CEO of Pizza Inn, who had resigned from the company several months earlier. The new management at Pizza Inn responded by adopting a broad variety of defensive measures, including golden parachutes for its top executives and restrictive bylaw provisions, in addition to its earlier enacted classified board. Newcastle subsequently exercised its option and negotiated with Pizza Inn to obtain two seats on the Pizza Inn board of directors in late 2002.

One year later, Newcastle was dissatisfied with management’s progress in turning around the company. It lambasted the top managements’ performance and then a few months before the 2003 annual meeting launched a full scale proxy solicitation seeking to elect three of its

nominees to the Pizza Inn board and to remove certain of Pizza Inn's anti-takeover defenses. Pizza Inn management resisted these initiatives and a full blown proxy contest for corporate control developed. Eventually, Newcastle prevailed as the company's shareholders overwhelmingly voted for their slate of candidates to be elected to the board and to reimburse Newcastle's expenses for the proxy contest. Ultimately, the new board of directors fired the CEO that had been in place at the time that Newcastle came on the scene and rescinded all of the company's newly enacted takeover defenses.

C. Summary of Events

C.1. Hedge Fund Tactics and Target Responses

We sort our sample of 888 events along several dimensions, first by the approach that hedge funds adopt to launch activism. Such information is often available from the "Purpose of Transaction" section of the initial Schedule 13D, but this source is not complete and is thus supplemented by the news search. These categories are ordered from the least to most aggressive:

Category (1): The hedge fund states that it intends to communicate with the board/management on a regular basis with the goal of enhancing shareholder value (64.4 percent of the sample).

Category (2): The hedge fund seeks board representation without a proxy contest or confrontation with the existing management/board (12.5 percent of the sample).

Category (3): The hedge fund makes formal shareholder proposals, or publicly criticizes the company and demands change (23.8 percent of the sample).

Category (4): The hedge fund threatens to wage a proxy fight in order to gain board representation, or to sue the company for breach of duty, etc. (5.18 percent of the sample).

Category (5): The hedge fund launches a proxy contest in order to replace the board (11.5 percent of the sample).

Category (6): The hedge fund sues the company (5.4 percent of the sample).

Category (7): The hedge fund intends to take control of the company, e.g., with a take-over bid (4.5 percent of the sample).

Since activist events can fall within more than one of these categories the percentages in categories (2) to (7) sum to more than 35.6 percent (the remaining 64.4 percent fall into category

(1)). For example, if a fund launches a proxy contest to replace the board, and files suit against them as well, we would place the event within both categories 5 and 6. In the Category (1) events, the hedge funds tend to state that they view the target as an attractive investment opportunity and that they intend to communicate with management in order to maximize shareholder value. Most filings in this category do not reveal (to the public) any specific agenda by the hedge fund, with the exception of 13 events (out of 572) where the hedge funds do target specific issues, such as payout or capital structure.

To refine our classifications, we say that a case involves activism with a specific issue (or, specific-issue targeting) if the hedge fund puts forward a specific proposal for change rather than merely making a general statement of its intention to communicate with the managers to maximize shareholder value. There are a total of 329 such cases (37.0 percent of the sample). We create a further subcategory of these activism events by classifying cases as “hostile” if these involve tactics in categories (4) to (7), or they fall in category (3) but involve a stated hostile intention (such as to oust the CEO). There are a total of 214 such hostile cases (24.1 percent of the total sample).

Finally, we note that hedge funds frequently work together. In approximately 21.4 percent of the events, we see multiple hedge funds that are not directly affiliated reported as one group in their Schedule 13D filing.¹⁹ This does not include cases where multiple funds follow one another in investing in targeted companies, forming a so-called “wolf pack,” that acts in a consciously parallel fashion to force the target to address their demands, but which does not require filing a Schedule 13D together. Nor does it include other hedge funds or investors that “cascade” into the target firm’s stock after the lead hedge fund’s Schedule 13D filing to free ride on the lead hedge funds’ intervention efforts.

In the 329 activist cases with a specific agenda, target companies choose to accommodate the activists 32.8 percent of the time, to negotiate 17.0 percent of the time, to fight 43.2 percent of the time, and to ignore the hedge fund about 7.0 percent of the time. As for outcomes, in 41.0 percent of the cases hedge funds achieve complete or near complete success, which we define as achieving their main stated goals; in 26.1 percent of the cases, we observe a partial success

¹⁹ It is common for multiple funds under the same controlling person/general partner to file together. Such direct affiliation is disclosed in the schedule 13D.

where hedge funds gain major concessions from their targets; in 24.9 percent of the cases the fund failed its mission, or withdrew the case. The remainder 7.9 percent of the cases in our sample are either still ongoing toward the end of the sample collection (October 2006), or we cannot find any mention of their outcome by any news service or securities law filings. Given that hedge funds achieve success, or partial success, in about two-thirds of the activist cases, despite the targets' strong tendency to resist and to fight, the success rate is impressive.²⁰ Interestingly, Institutional Shareholder Services (ISS), a third party voting advisory service catering to institutional investors, was reported in the press as having recommended a vote in favor of hedge funds in 23 of the 32 media reported cases.

C.2. Hedge Funds' Stated Objectives

Next, we turn to the stated goals that the activist funds give when they invests in the target firms. The motives behind hedge fund activism can be summarized into seven major categories, each containing multiple sub-categories. Table 1 illustrates these groupings as well as the associated success (and partial success) rates. The categories, except Category (1), are not mutually exclusive as one activist event could target multiple issues. An event is classified as a success if the hedge fund achieves its main stated goals, a partial success if the hedge fund reaches a settlement with the company that meets some of the fund's original goals. The remainder (failed or on-going) is unclassified.

[Insert Table 1 here.]

Category (1): The hedge fund believes that the company is undervalued and/or that the fund can help the manager maximize shareholder value. No further activism to achieve specific goals (beyond communicating with the management) has been launched before the end of 2005. This category includes 450 events, or 50.7 percent of the full sample. All events in Category (1) involve only communication with the management without more aggressive tactics.

Category (2): Activism targeting operational efficiency. These include 94 events regarding general operational efficiency and cost cutting (36.2 percent success, 20.2 percent partial

²⁰ By way of comparison, Ikenberry and Lakonishok (1993) examine proxy contests for corporate control from 1968 to 1988 and find that dissidents acquire majority control of the board in about 28.4 percent of the contests, a minority of the seats in another 23.2 percent of the contests, and a favorable settlement not involving board representation in 26.3 percent of the contests.

success), and 5 events proposing tax efficiency-gaining changes (60 percent success, 40 percent partial success).

Category (3): Activism targeting firm's payout policy and capital structure. In the first subcategory (94 events, 10.6 percent of the sample, 40.1 percent success, 29.8 percent partial success), the hedge fund proposes changes geared towards the reduction of excess cash, increase in firm leverage, or higher payouts to shareholders using either dividends or stock repurchase. The second subcategory (34 events, 3.8 percent of the sample, 44.1 percent success, 29.4 percent partial success) involves suggested equity issuance, such as stopping or reducing seasoned equity offerings by the target company and proposed debt restructuring.

Category (4): Activism targeting business strategy. There are four subcategories that fall within this group. First, hedge funds target companies they believe lack business focus or exhibit excess diversification, and propose spinning-off some divisions or refocusing the business strategy (57 cases, 6.4 percent of the sample, 33.3 percent success rate, and 31.6 percent partial success). Second, hedge funds attempt to play a role in a pending merger or acquisition, perhaps by asking for a better price where the firm is the target of the acquisition (54 cases, 6.1 percent of the sample, 40.7 percent success rate, and 22.2 percent partial success) or by trying to stop the pending acquisition (22 cases, 2.5 percent of the sample, 31.8 percent success rate, and 45.5 percent partial success). Finally, there are 108 cases (12.2 percent of the sample, 91.7 percent success rate, and 0.9 percent partial success) where a hedge fund acquires a stake in the potential target of a pending merger and acquisition in order to facilitate the acquisition. The hedge funds' presence helps the deal go through because of their voting power and their ability to communicate with the management of the target company. According to Cornelli and Li (2002), this type of arbitrage is in-between pure trading as a passive shareholder and activism.²¹ Given that it is quite different from the other activism we discuss, and this subcategory often involves obtaining parallel positions in acquiring companies and derivative positions in the target companies that could offset the hedge funds' economic interest in the target (Martin and Partnoy, 2005), we exclude this subsample from some of our later analyses.

²¹ M&A arbitrage is similar to an activist arbitrage in that the arbitrageur's action can potentially improve the value of the stock, and the arbitrageur profits from the information about his own action. It is dissimilar to the activism we focus on in that it does not involve monitoring of management or intervention in order to facilitate value-improving changes in the firm.

Category (5): Activism urging the sale of the target. In this category, hedge funds attempt to force a sale of the target company, either to a third party (98 cases, 11.0 percent of the sample, 46.9 percent success, 19.4 percent partial success), or they attempt to takeover the company themselves (35 cases, 3.9 percent of the sample. 37.1 percent success, 27.2 percent partial success). Partial success in this category means that the firm remains independent, but agrees to undergo major changes.

Category (6): Activism targeting firm governance. There are multiple subcategories, including efforts to: rescind takeover defenses (most often to declassify the boards or to revoke poison pills, 49 cases, 5.5 percent of the sample); to oust the CEO or chairman (45 cases, 5.1 percent of the sample); to challenge board independence and fair representation (95 cases, or 10.7 percent of the sample); to demand more information disclosure and question potential fraud (36 cases, 4.1 percent of the sample); and to challenge the level or the pay-for-performance sensitivity of executive compensation (30 cases, 3.4 percent of the sample). The success rate for this type of activism varies widely. For example, hedge funds succeed in attaining their goal of removing a CEO 57.8 percent of the times, with partial successes involving the CEO staying on but agreeing to adopt policies along the lines proposed by the fund an additional 22.2 percent of the time. In comparison, hedge funds only succeed in rescinding takeover defenses 20.4 percent of the times, albeit with partial success in another 38.8 percent of events.

Category (7): Activism in the form of providing finance. In this category, the hedge funds are financing either business growth (41 cases, 4.6 percent of the sample) or corporate restructuring arising out of bankruptcy or financial distress (46 cases, 5.2 percent of the sample). In most of these cases, hedge funds also seek friendly board representation, and are accommodated by the firm.

C.3. Hedge Funds' Investment in Target Companies

How big are hedge fund investments in target companies? Table 2 reports the size of the activists' stakes in their target firms, both in dollar value, and as percentage of the outstanding shares of the target.²² This information is gathered from the "Initial Filing" columns of the first

²² We exclude from this analysis cases where the primary motive of the hedge funds is to provide financing to the company, mostly for reorganization after financial distress, because these investments are unlikely to be primarily used to exert pressure on target firm management.

Schedule 13D filing, or for the non-Schedule 13D events, the initial holdings as reported in the news media or Form 13F. The columns labeled “Max. Ownership” provide the maximum stake that the funds accumulated in the targets.²³

There is no systematic difference between the cases involving activism targeting specific issues and those events with only generally stated goals such as “maximizing shareholder value.” The median percentage ownership stake is about 6 percent of the shares of the target firm, involving about \$9.5 million capital (at cost) at the initial filings, and rising to 9-10 percent and \$12-13 million at the maximum. We note that the specific-issue targeting cases exhibit larger ownership stakes in the target firm and greater capital commitments by the hedge fund at the higher percentiles of the sample. For example, at the 95th percentile, hedge funds invested \$326 million in the target firm when they targeted specific issues, but only \$175 million in general targeting cases.

[Insert Table 2 here.]

Table 2 illustrates that the activism that we analyze does not generally involve control blocks of stock. If we examine the 75th percentile of the sample, we see that hedge funds’ initial stakes are between 7 and 8 percent, and even at their maximum levels fall below 15 percent. Even at the 95th percentile of the sample, hedge funds’ stakes in the companies fall short of 50 percent with the all sample 95th percentile maximum ownership stake being 29.3 percent. It would appear that the activist hedge funds are generally not interested in taking control of the company. Rather, they hope to facilitate value-enhancing changes in the company as minority shareholders, and they often need coordination with and support from other shareholders, especially on issues that require shareholder voting. This feature distinguishes the activist hedge funds from the corporate raiders in 1980s who sought to obtain full control to internalize all the benefits from their intervention.

Holdings reported are confined to disclosure in the Schedule 13D or news reporting. As Hu and Black (2006) note, certain types of derivative investments might not need to be reported publicly. In approximately 14.5 percent of the cases, sample hedge funds have reported

²³ After the initial Schedule 13D filing, the fund is required to file an amended Schedule 13D/A if there is change in the position. The maximum investment is retrieved from the Schedule 13D/A that reports the highest holdings by the filing party in the target.

derivative positions in the target companies. The most common are option/warrants, which appear in 6.5 percent of the cases, followed by convertible debt (3.6 percent), and convertible preferred (2.7 percent). There are a total of ten cases where the hedge funds report put option/short selling positions. We believe, however, that this information is likely incomplete given that its disclosure is not mandatory. Derivative positions can facilitate activism by reducing the up front cost of acquiring a position. Some activist hedge funds might also have used derivatives to take countervailing short positions, in part to acquire votes at low cost (Martin and Partnoy (2005)). Our data set includes these events when they are reported.

Finally, activist hedge funds' investment horizons have been an issue of contention. Critics accuse activist funds of aiming for short-term gains at the expense of long-term shareholder value (Kahan and Rock, 2006). Using information from the amendments to the initial Schedule 13D (Schedule 13D/A), we are able to determine how long hedge funds hold their stakes before it drops below the five-percent disclosure threshold.²⁴ If we treat divesting to below 5 percent as a proxy for exit, we can get conservative estimates of the hedge funds' investment duration after the filing of the initial Schedule 13D. Our sample period is from 2001-2005 with many recent events still unresolved as of the close of data collection in September 2006. Because of this, we find that in 52.6 percent of the cases hedge funds still maintain significant (more than 5 percent) stakes in the target. If we focus solely on the sub-sample of events where the fund has dropped below the five-percent reporting level, the median duration from the first Schedule 13D filing to divestment is 328 days for general-targeting events, and 372 days for activist events with specific agenda. The 25th and 75th percentile figures for the full sample are 153 days and 689 days. These numbers indicate that the hedge funds' investment horizon is not as short as critics of hedge fund activism imply.

III. Characteristics of Target Companies

The next question that we ask is: what type of companies do activist hedge funds target? We adopt two different approaches to address this question. First, we compare the characteristics of the target firms (during the year before they are targeted) with a set of matching

²⁴ If the hedge fund's stake falls below 5 percent after the first Schedule 13D filing, the last Schedule 13D/A would reveal the date, remaining stake, and sometimes sale prices of the transactions that free the hedge fund from future reporting obligations associated with the 5 percent or more investment.

firms, defined as firms from the same SIC 2-digit industry and the same Fama-French 25 size and book-to-market matched portfolios.²⁵ Second, we run probit regressions to identify the partial effects of all covariates.

Table 3 reports the comparison of targeted firms and the matched sample. In Panel A, we focus on the full sample, while in Panel B we report results for the sub-sample of activism events with a specific agenda (those events where hedge funds specify goals other than the general objective to maximize shareholder value). The first two columns report the summary statistics of the target companies in terms of sample mean and standard deviation values. The third column reports the average difference between the sample and matched firms. That is, for each firm i , we calculate:

$$Dif_i = X_i - \frac{1}{m} \sum_{j=1}^m X_j,$$

Where X is a characteristic variable, and firms $j=1, \dots, m$ are from the same SIC 2-digit industry and the same Fama-French 25 size and book-to-market matched portfolios as firm i . Then, reported in column (3) of Table 3 is $\frac{1}{n} \sum_{i=1}^n Dif_i$, where $i=1, \dots, n$ is index for our sample target firms. Column (4) reports the t-statistics associated with the difference statistics.

[Insert Table 3 here.]

Given that the distributions of many of the variables display fat tails and skewness, we supplement the difference statistic with a ranking (percentile) statistic. We first rank a sample firm among all matching firms along the dimension of a characteristic variable, obtain a rank between 0 and 1, and then average over all target firms. The null distribution of the ranking variable is a uniform distribution between 0 and 1, regardless of the distribution of the underlying variables. Therefore, the percentile statistic reported in column (5) of Table 3 should be robust to distributional irregularities. We state that target firms are significantly different from matching firms along the variable of interest if both of the following two criteria are satisfied: if the difference statistic is significantly different from zero at less than the 5 percent

²⁵ When we describe target firms by size (market capitalization), the size matching criterion is dropped. When we describe target firms by book-to-market and Q, the book-to-market matching is dropped.

level; and if the average percentile is at least 5 percentage points away from the neutral value 0.5 (that is, below 0.45 or above 0.55).

Finally, the last five columns list the proportion of the target firms that fall into each of the quintile groups formed by the CRSP/Compustat firms. This sorting is unconditional and is meant to offer an overview of where the target firms populate in the universe of U.S. public firms. Our discussion will focus on Panel A since results from both panels are quite similar.

The summary statistics on market value (MV) indicate that the target firms are under-represented in the top size quintile, but are otherwise roughly equally distributed among the other four quintiles. This is consistent with the largest firms being less likely to be targeted because of the large amount of capital a hedge fund would need to invest in order to amass a meaningful stake. Acquiring a sizeable stake in a top size-quintile firm might introduce too much idiosyncratic risk even for an activist hedge fund. In order to support this hypothesis, we collected fund size information from WRDS CISDM hedge fund data base, news articles, and hedge fund web sites, and were able to assemble it for about 52 percent of our sample. The median size of the hedge funds in our sample is \$793 million, and the 25th and 75th percentile values are \$278 and \$4,446 million. The top quintile CRSP target firms is an average (median) market value of \$15.2 (\$5.7) billion. A five percent stake in the average (median) top quintile target firm implies an investment of \$760 (\$285) million dollars, a considerable amount relative to the size of the typical sample funds.

The valuation variables, book-to-market (BM, defined as (book value of equity/market value of equity)), and Q (defined as (book value of debt + market value of equity)/(book value of debt + book value of equity)), indicate that the activist hedge funds are “value investors.” The targeted firms are, on average, at the 39th percentile in terms of Q and the 60th in terms of BM among firms in the same industry and of similar size. In fact, in about two-thirds of our cases, the hedge fund explicitly states that it believes the target is undervalued. To the extent that activist hedge funds profit from the improvement of the companies’ operations and strategies, it is also important that hedge funds target companies whose stock prices have yet to reflect the potential for improvement.

In terms of operational performance, measured by sales growth (Growth) and return on assets (ROA, defined as the ratio of EBITDA to lagged Assets), target firms fare no worse than

their comparable firms. In fact, target firms are significantly more profitable, both in terms of return on assets (2.3 percent higher than the matched peers), and of the cash flows generated (CF, defined as (net income + depreciation and amortization), scaled by lagged assets; 3.9 percent higher than the peers). The stock performance of the target firms is almost identical to that of the comparable firms.

The next set of variables relate to targets' capital structure. Target firms have slightly higher leverage: the average book value debt-to-capital ratio (LEVB) is 0.354, about 0.032 higher than that of the matching firms. The cash-to-asset ratio (CASH) is slightly lower than that of the peers. Target firms' dividend payout is slightly lower relative to peers, measured both by the dividend yield (DIVYLD, defined as (common dividend + preferred dividends)/(market value of common stocks + book value of preferred)) and payout ratio (PAYOUT, defined as the total dividend payments divided by net income before extraordinary items).

On the investment side, target firms spend significantly less than their peers on research and development (RND). Target firms also have slightly lower Herfindahl indices (HERFINDAHL, measured as the Herfindahl index of sales in different business segments as reported by the Compustat), that is, they are more diversified.

Next, we turn to governance characteristics. Measured by the Gompers, Ishii, and Metric governance index (GINDEX), target firms tend to have more takeover defenses. The GINDEX tracks 24 takeover defenses that firms could adopt, as well as the laws of the state in which the targets are incorporated. Our target firms have on average 0.7 more defenses than comparable firms. In the GIM data set that covers about 2,000 firms in 2004, 8.8 percent of the firms have 13 or more takeover defenses; in our sample of target firms, the same proportion is 14.9 percent. Targets also have significantly higher institutional ownership of shares outstanding: an average of 45.3 percent, which is 10.6 percent higher than comparable firms. The target firms have about average analyst coverage compared to the Compustat firm universe, but have 0.6 more analyst following, and rank at the 57th percentile, compared to matched firms. Institutional ownership and analyst coverage could also proxy for trading liquidity. Using direct trading liquidity measures, such as the Amihud (2002) liquidity measure, we indeed find that target companies have higher trading liquidity than otherwise comparable firms. High liquidity makes it easier for the activists to accumulate a stake within a short period of time.

Finally, an alternative method to analyze the characteristics of the target companies is to run probit regressions. Reported in Table 4 are probit coefficients, their t-statistics, and the marginal probability change for one unit change in the covariates from the sample averages. The unconditional probability for a firm being targeted is 1.6 percent during our sample period. Because the GINDEX (retrieved from the WRDS IRRC data base) variable is only available for about one-third of the Compustat firms, the regressions with GINDEX are reported separately.

[Insert Table 4 here.]

In multivariate analysis where all major variables (except GINDEX) are included as in Column (1) of Table 5 Panel A, the following variables are significant at less than the 5 percent level: MV (-), BM (+), ROA (+), DIV (-), Herfindahl (-), and INST (+). When GINDEX is included, it is significantly positive. We do not attempt to interpret the effect of other covariates in this regression because of its low statistical power due to the reduced sample and the potential selection bias of firms covered by the IRRC.²⁶ Panel B of Table 4 alternates B/M with Q, ROA with CF, LEV with CASH, and DIV with PAYOUT. The results are qualitatively similar.

In sum, two patterns emerge from the analysis in this section. First, activist hedge funds resemble value investors. The key characteristics of the target companies in our sample, including valuation, suggest that activist hedge funds are seeking to identify undervalued companies where the potential for improvement is high. The hedge funds' stated goals, as reflected in their Schedule 13D filings, are consistent with this conclusion. Indeed, even the names of activist hedge funds suggest that the funds and their investors believe they are value investors. A large fraction of the hedge fund names in our sample include words or phrases that connote value investing, such as "value," "contrarian," "distressed."

Second, the potential problems that hedge funds identify at targeted firms are usually general issues (such as governance, payout), rather than firm-specific operational problems. Targeted firms do not seem to suffer from serious operational difficulties. 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 payouts, and

²⁶ The IRRC's universe of firms start with the Standard & Poor's (S&P) 500 as well as the annual lists of the largest corporations in the publications of *Fortune*, *Forbes*, and *Business Week*. In recent years the samples expands to smaller firms, but tilt toward firms with high institutional-ownership levels.

diversifying investments that might not be in the best interest of shareholders. For example, as we saw in Table 2, in 94 cases hedge funds demanded higher payouts; in 34 cases they sought to have the target assume more debt; in 57 cases they asked for a refocusing of the business and attempted to stop diversifying endeavors by management; and in 22 cases funds tried to stop the target firm from making acquisitions. Governance issues, including rescinding takeover defenses, ousting CEOs, promoting board independence, and curtailing executive compensation, are also commonly cited as reasons for activism.

These targeting patterns seem sensible given that hedge funds are, in general, not experts in the specific business of their target firms, but instead focus on common issues (such as payouts and governance) that help lower the marginal cost of launching activism on a new company (Black, 1991). The fact that hedge funds tend to avoid high-tech firms (as proxied by *RND*, the ratio of R&D to assets) provides additional support for the pattern discussed above. Kahn and Winton's (1998) theory predicts that investors are more likely to intervene in well-understood firms or industries so that the market can appreciate the effects of intervention. And they should avoid "opaque" and complicated business, such as those involved with high R&D, in order to avoid delay in the resolution (in the market price) of the intervention's impact. This prediction is strongly supported by our data.

IV. Stock Return and Hedge Fund Activism

We measure abnormal stock returns at the time that hedge fund activism is announced to the market to answer two related questions: First, how does the market perceive the effect of hedge fund activism on shareholder value? Second, are long-run measures consistent with the market's perceptions?

A. Overview

We adopt both short and long event windows around the filing of Schedule 13Ds. Figure 1(a) plots the average buy-and-hold return, in excess of the buy-and-hold return on the value weight NYSE/AMEX/NASDAQ index from CRSP, from 20 days before the Schedule 13D filing

date to 20 days afterwards, of the full sample excluding the 108 M&A arbitrage events.²⁷ The average abnormal return in the (-20,20) window around the Schedule 13D filing date is 7.2 percent. There is a spike in abnormal trading volume on the event day, defined as the percentage increase in the share turnover rate. “Normal” turnover is measured over the (-100, -40) window relative to the Schedule 13D filing date. The abnormal return, however, is not concentrated on the filing date. There is a run up of about 3.2 percent between 10 days to one day prior to filing.²⁸ The filing day and the following day see a jump of about 2 percent. Afterwards the abnormal return keeps trending up to a total 7.2 percent in twenty days.²⁹ In the full sample, 64 percent of the events see positive abnormal return in the (-20, 20) window, the 25th, 50th, and 75th percentile values are -5.4 percent, 5.1 percent, and 17.4 percent, respectively.

[Insert Figure 1 here.]

Some hedge funds might file a Schedule 13D after publicly announcing their activist intent (at a lower ownership stake), while other hedge funds might launch aggressive activism only after they filed a Schedule 13D. In such cases, the Schedule 13D file date might not be an accurate proxy for the activism event date. As a comparison, we also plot the average buy and hold abnormal return for the 229 events (25.8 percent of the sample) in which hedge funds describe a specific agenda in the Schedule 13D (that is, activism beyond a general statement of maximizing shareholder value). We observe a run-up of about 5.3 percent abnormal return from 10 days prior to the filing up to the date right before the initial Schedule 13D filing and a 3.3 percent jump in the two following days. The average abnormal buy-and-hold return rises to slightly above 10 percent twenty days after the filing.

The large cross-sectional variation in abnormal returns reflects the heterogeneity in the market perception regarding the expected value generated by activism. It is important, however, to note that these market reactions are *not* an unbiased estimate of expected activism. Were prices to adjust fully to the ex-post effect of hedge fund activism, hedge funds, in the absence of reputation concerns, would have no incentive to continue with costly intervention. Rather,

²⁷ As mentioned in Section C.2, this group of events is quite different from the activism we focus on in this paper. Furthermore, the abnormal returns of this subsample could be due to the announcement of acquisition deals, rather than to the hedge funds’ Schedule 13D filing.

²⁸ Note that investors are required to file Schedule 13D no later than 10 days after the transaction that causes them to go over the 5 percent level.

²⁹ It eventually stabilizes at about 8 percent after 40 days post filing.

market prices adjust to a level reflecting the benefit of intervention adjusted for the equilibrium probability that the hedge fund continues with activism. Hence, market reactions necessarily underestimate the value of ex-post activism (Kahn and Winton, 1998; Maug, 1998).

B. Cross-sectional variation of the abnormal return

Table 5 reports 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 Schedule 13D filing. All of the regressions control for the size of the target firm (using the logarithm of market capitalization). Most of the independent variables are dummy variables. In order to make the interpretation of the coefficients on the dummy variables easier, the size covariate is expressed as the deviation from the median, and the intercept of the regression is suppressed. As a result, all the coefficients can be interpreted as the average abnormal return of one particular group of events (as captured by all event observations that assume value one for a given dummy variable), assuming that the target firms are of typical size (close to the median size of the sample).

[Insert Table 5 here.]

Column (1) shows how event-window abnormal returns vary with the stated goals of the hedge funds. Remember that there are seven categories that are not mutually exclusive (see Table 1). The “General” category includes all events where the hedge funds do not specify any specific goal or motive; rather, they state a general goal of improving shareholder value/efficiency or a general motive that the stock is undervalued. The capital structure category includes activism targeting excess cash, leverage (equity issuance, debt restructuring, and recapitalization) and payouts (dividends and repurchases). The business strategy category includes activism related to diversification, spin-off of assets, and pending merger and acquisition deals. We exclude the M&A arbitrage-type events from this analysis. The sale category includes events where hedge funds request the sales of the target companies, either to the hedge funds, or in most cases to a third party. The governance category include events related to rescinding takeover defenses (staggered board and poison pill are the two most common ones), firing CEOs or curtailing executive compensation, changing board composition, and requesting disclosure of more information. Finally, the financing category takes all events

where the main motive of the hedge funds is to provide financing to the firm, either for business growth or for reorganization of financial distress.

We find that activism that aims at the sale of the target generates the highest abnormal return, with average abnormal return of 10.94 percent ($t = 4.65$). Business strategy related activism also generates a significant abnormal return of 4.37 percent ($t = 2.06$). A revelation of a hedge fund's intention to intervene without any specific goals generates a return of 4.99 percent ($t = 4.15$). Surprisingly, activism targeting capital structure and governance issues exhibits near zero abnormal return. Finally, financing related activism generates large returns (6.11 percent on average), but the effect is not statistically significant.

Columns (2) to (3) of Table 5 separate events by the timing strategy that hedge funds adopt. One strategy is for a hedge fund to accumulate stakes and file a Schedule 13D when it explicitly intends to intervene, while the alternative is to accumulate the stake and keep open the option to intervene on specific issues later. We classify the two strategies by whether the hedge fund launches activism with a specific agenda with the Schedule 13D filing ("Specific-on-13D"). The file-and-intervene strategy sees significantly higher market response than the file-and-wait-to-intervene strategy (10.2 percent vs. 5.8 percent, the difference is significant at less than the 5 percent level).

Next, column (4) shows that *ex post* confrontational events ("Hostile") generate higher returns than relatively friendly ones (11.8 percent vs. 5.3 percent). We define an event as being "hostile" if the hedge funds use at least one of the following: proxy contest, law suits, hostile takeover bid, threat to launch proxy fight or to sue, or public campaign to criticize or even to replace the management. The market responds more strongly to hostile events than to friendly ones. Given that hostile activism is more costly, hedge funds should only resort to it when the perceived benefits (improvement in firm performance) are higher. This is consistent with the market perception as manifested in the abnormal return.

Finally, we examine in column (5) the relation between market response to activism and the *ex ante* characteristics of the target firm (measured one year earlier). The overall relation is weak, except for size and dividend yield. The market seems to believe that hedge fund activism is more effective with smaller firms. And plausibly higher dividend-paying firms have less serious agency problems with free cash flows, hence less potential for improvement.

C. Alternative Hypotheses

The large abnormal stock return around the Schedule 13D filing dates is consistent with the view that hedge funds activism results in actual value improvement, as the market initially perceived. However, it is possible the reactions that we document are explained by alternative causes, which we now explore in detail.

C.1. Market Over-Reaction and Temporary Price Impact

One potential explanation for the high abnormal return is a temporary price impact caused by buying pressure from the filing hedge fund or other hedge funds. If the price impact is purely temporary and reflects trading friction rather than information about prospective value changes, we should observe negative abnormal returns shortly after the event. This turns out not to be the case. Figure 1 shows no reversal after 20 days (when the abnormal turnover falls down to close to normal levels), and the pattern persists if we extend the window for another 20 days.

We conduct a more formal long-term return analysis by using calendar-time portfolio regressions around the Schedule 13D filing date. For example, a (-3,-1) portfolio is formed by buying all firms that will be targeted by hedge funds three months later, and the firms are held for three months before selling; and a (1,3) portfolio is formed by buying all firms that were targeted by hedge funds one month earlier, and held for three months before selling. Clearly, all portfolios in the pre-event windows do not represent a tradable strategy. They are listed for an ex post analysis of the stock return patterns of the companies in the pre-targeting period. The results are reported in Table 6, using the CAPM and four-factor models with equal and value-weighting of firms' returns.³⁰

[Insert Table 6 here.]

Overall, Table 6 shows that targeted companies have slightly sub-par pre-event stock performance, but the negative alphas are only marginally significant in some specifications. The event (Schedule 13D filing) month and the three months afterwards see quite robust positive

³⁰ The four-factor model includes the Fama and French RMRF, SMB, and HML factors and the momentum factor, MOM. We obtain these factor returns and monthly risk-free rates from Ken French's web site at Dartmouth University, http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html.

abnormal returns. Using the four-factor model, the event month and (1,3) window alpha is 3.04 percent ($t = 4.89$) and 1.50 percent ($t = 2.26$) using equal weights; and 1.82 percent ($t = 1.72$) and 1.49 percent ($t = 2.34$) using value weights. Abnormal returns are higher using the CAPM. More importantly, there is no evidence that the alphas revert to negative values after the event (up to 12 months). This evidence clearly refutes the market over-reaction hypothesis.

C.2. Stock Picking versus Value Improvement

It is also possible that hedge fund activists simply identify undervalued companies, but do not add value. According to this hypothesis, the positive market reaction is due to the announcement of new information that a hedge fund has identified an undervalued company, not to the announcement that a hedge fund has committed to intervene to add value to the company. Given the strong evidence in Tables 3 and 4 that hedge funds target “value” firms (i.e., firms with high book-to-market, or low Q), and the return of event-firm portfolios do load positively on the HML factor (Table 6), we believe that obtaining the value return is indeed part of the activist hedge funds’ strategy.

However, the market response to activist hedge funds’ targeting goes beyond the information effect of stock picking. Several pieces of evidence speak to this conclusion. First, Column 3 of Table 5 shows that hostile targeting generates 6.6 percent ($t = 3.28$) higher event-window returns than non-hostile targeting, controlling for the size of the targeting firm (the unconditional difference is 5.2 percent). Given that hostile activism is more costly, hedge funds should only resort to it when the perceived benefits (improvement in the targeted firms) are higher. Similar conclusions follow from the fact that there are higher returns from “Specific-on-13D” filings than from “Non-Specific-on-13D” filings. Indeed, the overall variation in cross-sectional returns presented in Table 5 suggests that the market reacts much more positively to a hedge fund’s announcement of new plans for the company (Business Strategy and Sale) than to the hedge fund’s statement of belief that the company’s shares are undervalued (General). If hedge funds were merely stock pickers, we would not expect such significant variation.

Second, we find that abnormal returns are large and positive at the time a hedge fund exits, once its stated goal is achieved and the proposed changes have been implemented. Figure 2 plots the average abnormal buy-and-hold return around the last Schedule 13D/A file date

(indicating divestment by the hedge funds to below the five percent ownership level), which serves as a proxy for the exit time. We plot three event-time return series. The full sample series indicates positive returns leading up to the file date, and roughly flat afterwards. Trading volume tends to spike during the ten-day window leading to the filing. This pattern indicates that hedge funds tend to exit after positive stock returns, and their exit overall does not have positive or negative impact on the stock price. A breaking down of the sample shows that exit after successful activism is associated with significantly higher returns, both before and after the exit filing. The total (-20, 20) window abnormal return amounts to about 12 percent. On the other hand, if a hedge fund withdraws from ongoing activism (because the prospect of success is poor) and exits, the market response tends to be quite negative. The average (-20, 20) window abnormal return is about -6 percent. These patterns are inconsistent with a simple stock picking story as it does not predict these varying abnormal return patterns.

Third, if activist hedge funds were merely picking stocks, they should sell immediately after the market price reflects their finding that a company's shares were undervalued. A "pure" stock picker would capture this incremental value, and then employ its capital in other undervalued stock trades. However, we do not observe activist hedge funds selling immediately after the filing of a Schedule 13D. To the contrary, funds continue to hold for relatively long periods of time. It is possible that activist hedge funds are merely stock pickers, but use long holding periods to sustain an (unwarranted) reputation for activism. Alternatively, it is possible that activist hedge funds are merely stock pickers, but believe they are activists and can add additional value after the filing of a Schedule 13D. We cannot rule out these possibilities, although we believe that a more plausible interpretation is that only a small portion of the positive abnormal return might be due to stock picking.

C.3. Value Expropriation from Other Stakeholders

Shareholders are by no means the only party affected by hedge fund activism. Other stakeholders might be affected, and if so, some of the positive stock market reaction to activism might reflect wealth redistribution from other stakeholders. We consider two key stakeholders for our analysis: creditors and executives. (This selection is mostly due to data availability and

testability.) We find no evidence that activist hedge funds redistribute wealth from creditors to shareholders, but we do find evidence of redistribution from managers to shareholders.

If shareholders of the target company gain at the expense of the creditors, then the gain should be lower in companies with no debt. Column 4 of Table 5 shows that stock market response to activism launched in companies with no debt is almost identical to that in levered companies (7.33 percent vs. 7.39 percent). If we use the book leverage ratio ($\text{Debt}/(\text{Debt}+\text{Equity})$) as a continuous-variable regressor, the coefficient is 0.06 percent ($t = 0.09$). This lack of effect is consistent with the first column of Table 5: capital structure based activism does not seem to generate significant market response. Overall, we find no evidence that hedge fund activism redistributes wealth from creditors to shareholders.

To examine the effect of hedge fund activism on executives, we retrieve various variables from the Compustat Executive Compensation database. Results are reported in Table 7. It shows the average differences of the listed variables between the targeted companies and their matched companies (by the same matching criteria as in Table 3), and the associated t-statistics. In the first column of Panel A, the variable is total CEO compensation including option grants (“TDC1” by ExecuComp), which is an ex ante measure of total CEO compensation. In the event year, the target companies’ CEO compensation is on average \$862,000 higher ($t = 2.17$) than CEO compensation at peer companies in the same industry and of similar size and stock valuation. We note that the compensation award levels are fixed in the year prior to the year in which they are paid. One year after hedge fund targeting, CEO pay is not distinguishable from peer levels. A similar pattern is manifest when we use total compensation including options exercises (“TDC2” by ExecuComp, or the ex post measure of compensation) with even stronger contrasts: the CEOs of the targeted companies are paid a premium of \$1.26 million ($t = 2.83$) during the event year, but the premium becomes statistically indistinguishable from zero a year later.

[Insert Table 7 here.]

Accompanying the downsizing of CEO pay is an increased in CEO turnover rate. We classify an event of CEO turnover if the name of the CEO of a company is different from that in the last year. In the entire ExecuComp database, the CEO turnover rate for the 2001-2005 time

period is 11.2 percent. Our sample companies have a slightly higher CEO turnover rate than peer companies during the year before targeting, although the difference is not statistically significant. One year after targeting, however, the turnover rate at sample companies is 13.55 percent higher than that of peers ($t = 2.80$). We note that the estimates used here still underestimate CEO turnover because they do not include CEO departures as a result of liquidation or sale of the company.

Overall, hedge funds seem to have been successful in curtailing executive compensation and ousting CEOs. The direct impact of these actions on shareholder gains could be considerable. Panel A of Table 7 shows that CEO pay drops by about \$0.8-\$1 million annually after activism. Suppose all of the top executives combined are paid \$4-\$5 million less a year due to activism, and that this value goes to shareholders (assuming away tax issues, etc.), then the present value of such an income stream is on the order of magnitude of \$50 million, which is a significant portion of the market capitalization of a typical targeted company (the average market capitalization of our sample firms is \$706 million).

We have so far identified several potential explanations concerning the stock market reaction to hedge fund activism. We turn next to an analysis on the ex post performance of the targeted companies to further address the question.

V. Ex Post Performance Analysis

Panel B of Table 7 reports targeted companies' operational performance, in excess of that of the matched companies, from three years before the activism, to one year later. Column (1) shows that the targeted companies, overall, have higher ROA (return on assets, defined as EBITDA/lagged Assets), and, though post-event ROA is even higher, the difference is quite small. Column (2), on the other hand, shows quite a dramatic improvement in ROE (return on equity, defined as the ratio net income before extraordinary items to lagged book value of equity). The average ROE is 6.1 percent (3.5 percent) above matched peers in the year prior to (during) activism, and the difference increases to 10.1 percent the year after.

Significant improvement of ROE with only moderate improvement in ROA could result from higher leverage or reduction in capital expenditure (that results in higher depreciation). The next column in Panel B examines the change in CAPEX (capital expenditure scaled by

lagged assets). We find that targeted companies invest less in fixed assets than matched peers, and this difference becomes more pronounced one year after the commencement of activism.

Next, Panel C of Table 7 traces out the change in leverage and payout policy before and after activism. The first column looks at the dividend payment (scaled by the book value of equity). During the year before activism, dividend payment is on average 42 basis points lower than that of peers ($t = -2.82$). The difference reverts to a small positive level (13 basis points, not statistically different from zero) a year after activism. There is a more remarkable change in total payout (defined as dividends plus share repurchase, scaled by the book value of equity). While the total payout of the target companies is not different from their peers on average before activism, the difference becomes larger and statistically different one year after activism (1.66 percentage points, $t = 2.15$). The leverage ratio also shows a slight reversal after activism. The difference from peer companies decreases from 3.20 percent to 2.34 percent from the year prior to activism through the year of activism, and then increases to 3.55 percent the year afterwards.

Finally, we attempt to predict ex post performance improvement using hedge fund tactics and target firm characteristics. In Panel D of Table 7, the dependent variable is $ROA(t+1) - ROA(t-1)$, where t is the year of activism, and ROA is return on assets in excess of that of the matching firms (same as in Table 3). All specifications control for target company market capitalization and the lagged ROA in year $(t-1)$. Column (1) indicates that the only stated objective that bears a significant correlation with ex post ROA change is “Sale,” the most aggressive goal by the hedge funds, which also tends to be the most confrontational. Not surprisingly, Column (2) indicates that hostile deals lead to declining ROA compared to non-confrontational ones (among firms that remain in the sample post-event).

There are two effects potentially at play. First, hostile deals might be disruptive to target companies’ operation, and cause operational deterioration in the short-run. Second, the negative effect could be mostly due to a sample selection problem. For the hostile deals, including those pushing for the sale of the company, successful activism is more likely to result in the disappearance of the firm (through liquidation, being taken private, or being sold to other companies). Clearly, these firms are not observable for ex post performance comparison. The surviving firms, on the other hand, might manage to remain in the sample since they fight

aggressively (at the expense of corporate resources), or because the management is entrenched, and such traits are correlated with bad performance.

As supporting evidence for the sample selection effect, we use the probit model to predict the sale of a firm post activism (the dependent variable is a dummy variable for outcomes including liquidation; being taken private; or being sold to other companies) using the same set of covariates as in Panel D. The results are reported in Panel E. We find the targets of hostile activism are 10.2 percent more likely to be liquidated, taken private, or sold ($t = 3.16$), and therefore disappear, where the unconditional probability of company sale is 14.5 percent in our sample. Activism targeting company sale is the most powerful predictor, among all stated goals, for the actual sale as the outcome. These results point to the importance of having a balanced sample of both friendly and hostile events.

Finally, using target firm ex ante characteristics, we find weak predictability of ex post performance improvement or the outcome of company sale. The only exception is R&D. Relatively high R&D firms see weaker performance improvement post activism ($t = -1.75$). This is consistent with the fact that hedge funds seem to avoid high-tech firms (Tables 3 and 4), knowing that they are no experts in firm-specific technologies.

To summarize, we find that hedge fund activism is associated with an improvement in return on equity and increased payout. The effect is not large, and could be biased due to both company attrition and the newness of the sample. For example, if one views the 14.5 percent of our sample that result in the targets' being liquidated, sold, or taken private as a complete payout to existing shareholders, then the post-activism payout ratio is much higher than the conventional payout measures indicate. Future research, based on longer time periods, can better address the question of long-term performance of companies targeted by hedge fund activism.

VI. Conclusion

This paper is the first to examine hedge fund activism using a large-scale sample based on a reasonably complete database. We collect data for both friendly and hostile interventions. By hand collecting data from fund filings, and supplementing them with information from other public sources, we generate a database that is mostly free of many of the biases found in other hedge fund research.

Our findings are consistent with the view that informed shareholder monitoring can reduce the agency costs of equity by focusing managers on creating shareholder value instead of pursuing other agendas. In theory, shareholders can pressure corporate directors to remove underperforming managers, stop value destroying mergers and acquisitions, disgorge excess cash and optimize capital structure, or press for a sale of the company, all of which are designed to increase shareholder value. We argue that hedge funds are better positioned to act as informed monitors than most other investors, and their activism has been well-perceived by the market.

Hedge fund activism can be viewed as a new middle ground between internal monitoring by large shareholders and external monitoring by corporate raiders. Hedge fund activists are nimble, like corporate raiders, but achieve their goals with relatively small stakes. They benefit from friendly interaction with management, like large block holders, but they have stronger incentives to add value and can capture the benefits of multiple stakes. Although there is enormous cross-sectional variation, hedge fund activism generates value on average, not merely because activists are good stock pickers, but because they credibly commit upfront to intervene at undervalued firms on behalf of shareholders, and then follow through on their commitments. Thus, activist hedge funds have the potential to fill some of the governance gap left by other large institutional investors during recent decades.

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Table 1. Summary of Events by Hedge Funds' Stated Goals

The full sample includes 888 events. Columns (1) and (2) report the number of events, and the percentage among all events, of each category. Percentages sum up to more than 100% since one event can have multiple missions (Category (1) and the other six categories are mutually exclusive). Columns (3) and (4) track the success and partial success rates in each category. An event is classified as successful if the hedge fund achieves its main stated goal; a partial success if the hedge fund and the company reach some settlement through negotiation that partially meets the fund's original goal.

	(1) # of Events	(2) % Of Total	(3) Success Rate	(4) Partial Success Rate
<u>(1) General statement of undervaluation/maximize shareholder value</u>	451	50.7%	--	--
<u>(2) Efficiency</u>				
Operation	94	10.6%	36.2%	20.2%
Tax	5	0.6%	60.0%	40.0%
<u>(3) Capital Structure</u>				
Excess cash, under-leverage, more dividends/repurchases	94	10.6%	40.4%	29.8%
Equity issuance, restructure debt, recapitalization	34	3.8%	44.1%	29.4%
<u>(4) Business Strategy</u>				
Lack of business focus, restructuring including spinning off	57	6.4%	33.3%	31.6%
M&A: as target (against the deal or demanding better terms)	54	6.1%	40.7%	22.2%
M&A: as acquirer (against the deal or demanding better terms)	22	2.5%	31.8%	45.5%
M&A: as target (for the deal) ("M&A arbitrage")	108	12.2%	91.7%	0.9%
<u>(5) Sale of Target Company</u>				
Sell company or main assets to a third party	98	11.0%	46.9%	19.4%
Take control/buyout company and/or take it private	35	3.9%	37.1%	27.2%
<u>(6) Governance</u>				
Rescind takeover defenses	49	5.5%	20.4%	38.8%
Oust CEO, chairman	45	5.1%	57.8%	22.2%
Board independence and fair representation	95	10.7%	37.9%	29.5%
More information disclosure/potential fraud	36	4.1%	44.4%	22.2%
Excess executive compensation/pay for performance	30	3.4%	26.7%	33.3%
<u>(7) Financing/Turnaround</u>				
Provide financing for business growth	41	4.6%	75.6%	0.0%
Bankruptcy reorganization	46	5.2%	71.7%	6.5%

Table 2. Capital Commitment of Activist Investment by Hedge Funds

This table provides the size of the stakes (both in terms of dollar values and as percentage of the outstanding shares of the targets) that hedge funds have in the targets at the 5th, 25th, 50th (median), 75th, and 95th percentiles of the sample. The “Initial Filing” columns report the stakes that hedge funds take at their initial 13D filings. The “Max. Ownership” columns report the maximum reported stakes that the funds accumulate in the targets. The “General Targeting” columns report the statistics for the subsample of events where the hedge funds only state general objectives to maximize shareholder value without specific agenda. The “Specific Issues Targeting” columns report the complement, that is, the subsample where the hedge funds state specific goals as outlined in categories (2) to (7) in Table 1.

Percentile	Invested Capital (\$ million)				% Ownership			
	General Targeting		Specific Issues Targeting		General Targeting		Specific Issues Targeting	
	Initial Filing	Max. Ownership	Initial Filing	Max. Ownership	Initial Filing	Max. Ownership	Initial Filing	Max. Ownership
5%	0.4	0.8	0.7	1.2	5.0%	6.1%	3.3%	5.7%
25%	2.8	3.8	2.8	4.1	5.3%	7.5%	5.5%	8.5%
50%	9.9	13.2	9.3	12.1	5.9%	9.4%	6.4%	9.9%
75%	27.9	36.4	29.7	46.7	7.4%	12.7%	8.7%	14.9%
95%	131.6	174.9	266.5	362.3	13.5%	21.9%	20.5%	44.4%

Table 3. Characteristics of Target Companies

Panel A (B) summarizes the characteristics of the target companies and their comparison to matched companies for the full sample (subsample of events where hedge funds target specific issues, i.e., categories (2) to (7) of Table 1). The first two columns report the mean and standard deviation of the characteristic for the target companies. The third column reports the average difference between the sample firms and the matching firms (from the same SIC two-digit industry and the same Fama-French 5x5 size and book-to-market portfolio). Column (4) reports the t-statistics associated with the difference statistics. Column (5) reports the average percentile ranking of the sample firms among the matching firms (from 0 to 1). The last five columns list the proportion of the target firms that fall into each of the quintile groups formed by the CRSP/Compustat firms. All variables are retrieved from the year before the event year. MV is market capitalization in millions of dollars; SALES is annual sales in millions of dollars; Q is defined as (book value of debt + market value of equity)/(book value of debt + book value of equity); BM is the book to market ratio defined as (book value of equity/market value of equity); GROWTH is the growth rate of sales over the previous year; ROA is return on assets, defined as EBITDA/assets (lagged); CF is cash flow, defined as (net income + depreciation and amortization)/assets (lagged); STKRET is the stock return during the year; LEV is the book leverage ratio defined as debt/(debt + book value of equity); CASH is defined as (cash + cash equivalent)/assets; DIVYLD is dividend yield, defined as (common dividend + preferred dividends)/(market value of common stocks + book value of preferred); PAYOUT is the payout ratio, defined as the total dividend payments divided by net income before extraordinary items; RND is R&D scaled by lagged assets; HERFINDAHL, is the Herfindahl index of sales in different business segments as reported by Compustat; GINDEX is the Gompers, Ishii, and Metrick (2003) governance index where high index values represent fewer shareholder rights or higher management entrenchment; INST is the proportion of shares held by institutions; ANALYST is the number of analysts covering the company from I/B/E/S. Bold fonts indicate statistical significance at less than the 5% level.

Panel A: Full Sample

-	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Sample Mean	Std Dev	Dif w/ Match Firm	t-stat of Dif	Avg Percentile	% in Q1	% in Q2	% in Q3	% in Q4	% in Q5
MV	706	1757	-704	-9.58	0.51	0.22	0.25	0.23	0.19	0.12
SALES	770	1848	-425	-5.71	0.55	0.12	0.22	0.27	0.26	0.13
BM	0.817	0.628	0.146	6.75	0.60	0.14	0.14	0.18	0.21	0.33
Q	1.540	1.112	-0.532	-11.86	0.39	0.32	0.22	0.19	0.18	0.09
GROWTH	0.104	0.315	-0.015	-1.24	0.49	0.23	0.22	0.22	0.18	0.14
ROA	0.077	0.155	0.023	3.98	0.60	0.17	0.18	0.25	0.21	0.19
CF	0.027	0.166	0.039	6.10	0.55	0.17	0.22	0.22	0.21	0.18
STKRET	-0.007	0.055	-0.001	-0.39	0.49	0.25	0.23	0.16	0.19	0.16
LEV	0.354	0.305	0.032	2.97	0.53	0.21	0.17	0.19	0.22	0.21
CASH	0.175	0.208	-0.029	-3.76	0.48	0.21	0.19	0.22	0.21	0.18
DIVYLD	0.008	0.018	-0.003	-4.99	0.46		0.67		0.20	0.13
PAYOUT	0.203	0.370	-0.044	-3.16	0.47		0.69		0.14	0.17
RND	0.065	0.095	-0.028	-5.73	0.39	0.27	0.26	0.16	0.18	0.13

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Sample Mean	Std Dev	Dif w/ Match Firm	t-stat of Dif	Avg Percentile	% in Q1	% in Q2	% in Q3	% in Q4	% in Q5
HERFINDAHL	0.790	0.251	-0.035	-3.46	0.47	0.23	0.23		0.54	
GINDEX	9.298	2.667	0.690	4.23	0.57	0.25	0.15	0.23	0.16	0.22
ANALYST	4.823	6.424	0.623	3.57	0.57		0.37	0.24	0.19	0.20
INST	0.453	0.276	0.106	10.19	0.64	0.09	0.18	0.26	0.26	0.22

Panel B: Subsample of Specific Issue Targeting

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Sample Mean	Std Dev	Dif w/ Match Firm	t-stat of Dif	Avg Percentile	% in Q1	% in Q2	% in Q3	% in Q4	% in Q5
MV	874	2281	-432	-3.30	0.53	0.20	0.28	0.23	0.15	0.14
SALES	956	2131	-127	-1.03	0.57	0.14	0.21	0.25	0.23	0.18
BM	0.826	0.616	0.168	5.13	0.62	0.14	0.11	0.17	0.22	0.36
Q	1.460	0.849	-0.656	-11.33	0.37	0.33	0.23	0.21	0.13	0.09
GROWTH	0.102	0.301	-0.013	-0.73	0.50	0.22	0.20	0.25	0.19	0.15
ROA	0.074	0.140	0.046	5.44	0.57	0.17	0.20	0.27	0.18	0.17
CF	0.019	0.154	0.033	3.44	0.54	0.18	0.23	0.25	0.21	0.13
STKRET	-0.005	0.053	-0.001	-0.31	0.48	0.27	0.21	0.15	0.22	0.14
LEV	0.373	0.308	0.035	2.11	0.54	0.19	0.15	0.21	0.20	0.24
CASH	0.158	0.198	-0.037	-3.39	0.46	0.21	0.22	0.22	0.21	0.15
DIVYLD	0.008	0.016	-0.005	-4.98	0.46		0.64		0.23	0.13
PAYOUT	0.217	0.375	-0.049	-2.24	0.48		0.65		0.17	0.18
RND	0.053	0.084	-0.034	-4.82	0.38	0.29	0.30	0.15	0.15	0.10
HERFINDAHL	0.775	0.256	-0.050	-3.18	0.45	0.26	0.24		0.50	
GINDEX	9.672	2.747	0.994	4.08	0.61	0.22	0.09	0.27	0.15	0.28
ANALYST	5.168	7.218	0.996	3.49	0.56		0.39	0.23	0.14	0.23
INST	0.456	0.276	0.122	7.66	0.64	0.09	0.18	0.27	0.23	0.22

Table 4. Probit Analysis of Targeting

This table reports the effects of covariates on the probability of being targeted by activist hedge funds. The dependent variable is a dummy variable equal to 1 if there is hedge fund activism targeted at the company during the following year (that is, all covariates are lagged by one year). All independent variables are as defined in Table 3. “Basic Specification” uses the default set of covariates, and “Alternative Specification” adopts alternative covariates as listed in the parenthesis (that is, using Q, CF, CASH, and PAYOUT in place of B/M, ROA, LEV, and DIVYLD). Columns (1) and (3) exclude the variable GINDEX, while Columns (2) and (4) include it, to reflect the significant loss of observations due to the GINDEX data availability. In each column, reported are probit coefficients, their t-statistics, and the marginal probability change induced by one unit of change in the values of the covariates from their respective sample averages. Bold fonts indicate statistical significance at less than the 5% level.

	Basic Specification						Alternative Specification					
	(1)			(2)			(3)			(4)		
	COEF	t-stat	Marg. Pr.	COEF	t-stat	Marg. Pr.	COEF	t-stat	Marg. Pr.	COEF	t-stat	Marg. Pr.
MV	-0.07	-4.67	-0.26%	-0.13	-4.86	-0.52%	-0.06	-4.27	-0.24%	-0.12	-4.21	-0.50%
B/M (or Q)	0.08	2.52	0.30%	0.04	0.60	0.14%	-0.07	-3.85	-0.26%	-0.03	-0.81	-0.11%
GROWTH	-0.10	-1.68	-0.38%	-0.22	-1.60	-0.84%	-0.11	-1.78	-0.42%	-0.21	-1.46	-0.87%
ROA (or CF)	0.33	2.80	1.27%	0.07	0.25	0.26%	0.33	2.84	1.26%	0.05	0.20	0.21%
LEV (or CASH)	0.04	0.71	0.17%	0.06	0.59	0.25%	0.13	1.30	0.51%	0.10	0.50	0.40%
DIVYLD (or PAYOUT)	-2.85	-2.85	-11.02%	-4.52	-2.36	-17.52%	-0.07	-1.38	-0.28%	-0.08	-0.91	-0.32%
RND	-0.31	-1.09	-1.20%	-1.26	-2.10	-4.89%	-0.58	-1.82	-2.21%	-1.36	-2.01	-5.66%
HERFINDAHL	-0.22	-3.13	-0.85%	-0.06	-0.55	-0.23%	-0.17	-2.28	-0.66%	-0.04	-0.30	-0.15%
ANALYST	0.04	1.54	0.15%	-0.04	-1.01	-0.17%	0.07	2.72	0.27%	-0.04	-0.95	-0.17%
INST	0.23	12.70	0.90%	0.24	1.96	0.91%	0.06	3.19	0.25%	0.21	1.67	0.87%
GINDEX				0.03	2.79	0.12%				0.03	2.89	0.14%
CNST	-1.75	-16.52		-1.37	-6.11		-1.62	-18.19		-1.46	-7.28	
# Obs and Pseudo R-sqr	34,472	0.016		11,965	0.043		29,515	0.019		10,331	0.040	
Prob(Activism)	0.016			0.019			0.017			0.020		

Table 5. Relation between Abnormal Return and Type of Activism

The dependent variable is the abnormal return during the (-20,+20)-day window around the Schedule 13D filing date. Column (1) shows how abnormal returns vary with the stated goals of the hedge funds. Here there are six categories that are not mutually exclusive. The “General” category includes all events where hedge funds do not list any specific goal or motive other than a general objective to maximize shareholder value and to improve operational efficiency. The capital structure category includes activism targeting excess cash, leverage (equity issuance, debt restructuring, and recapitalization), and payout (dividends and repurchases). The business strategy category includes activism on diversification, spinning off of assets, and pending merger and acquisition deals. The sale category includes events where the hedge fund requests the sale of the target company, either to the hedge fund, or (in most cases) to a third party. The governance category include events related to rescinding takeover defenses, firing CEOs or curtailing executive compensation, changing board composition, and requesting more information disclosure. Finally, the financing category takes all events where the main motive of the hedge funds is to provide financing to the firm, either for business growth or for reorganization due to financial distress. Column (2) classifies all events by whether the hedge funds state any specific goals (beyond a general objective to maximize shareholder value) on their Schedule 13D filings (or during the filing period) (“Specific-on-13D” and its complement). Column (3) classifies all events by whether they are “hostile,” where the hedge funds use at least one of the following: proxy contest, lawsuit, hostile takeover bid, threat to launch proxy fight or to sue, and public campaign with hostile intention, such as to replace the management. Column (4) divides all target companies into those that have debt (“Levered”) and those that do not (“No-Debt”). Column (5) uses target firm characteristics (as defined in Table 3) in the year prior to activism as covariates. All regressions control for the size of the target firms (log market capitalization, expressed as the deviation from the median firm size in the sample). Intercepts are suppressed in columns (1) to (4) because of the full span of the dummy variables. Bold fonts indicate statistical significance at less than the 5% level.

	(1)		(2)		(3)		(4)		(5)		
	COEF	t-stat	COEF	t-stat	COEF	t-stat	COEF	t-stat	COEF	t-stat	
ln(MV)	-2.16%	-3.57	-2.31%	-3.89	-2.32%	-3.96	-2.20%	-3.61	ln(MV)	-0.03	-2.43
General	4.99%	4.15	--	--	--	--	--	--	BM	0.02	0.60
Capital Structure	1.28%	0.63	--	--	--	--	--	--	GROWTH	-0.06	-1.44
Business Strategy	4.37%	2.06	--	--	--	--	--	--	ROA	0.09	0.87
Sale	10.94%	4.65	--	--	--	--	--	--	LEV	0.04	1.10
Gov	-0.53%	-0.24	--	--	--	--	--	--	DIVYLD	-1.41	-2.10
Finance	6.11%	1.14	--	--	--	--	--	--	RND	0.26	1.09
Specific-on-13D	--	--	10.24%	5.62	--	--	--	--	HERFINDAHL	0.05	1.32
Non-Specific-on-13D	--	--	5.84%	5.41	--	--	--	--	ANALYST	0.02	1.24
Hostile	--	--	--	--	11.85%	6.99	--	--	INST	-0.01	-0.15
Non-Hostile	--	--	--	--	5.27%	4.75	--	--	CNST	0.14	1.76
Levered	--	--	--	--	--	--	7.39%	5.27	--	--	--
No-Debt	--	--	--	--	--	--	7.33%	3.76	--	--	--
Nob & R-sqr	545	0.037	545	0.04	545	0.05	545	0.03	420	0.068	

Table 6. Long-Term Abnormal Returns Analysis

This table reports the estimates and t-statistics from 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 alpha estimates from factor models. “beta(-1)” and “beta” are the loading coefficients on the lagged and concurrent market excess return (the Fama and French RMRF). “SMB,” “HML,” and “MOM” are loading coefficients on the Fama-French size and book-to-market factors, and the Carhart momentum factor. “R2” is the R-squared of the regressions. “# Firms” is the number of firms in each portfolio. Panels A and B apply the CAPM and four-factor models respectively, using equal-weighted portfolio returns. Panels C and D conduct the same exercise using value-weighted portfolio returns. Bold fonts indicate statistical significance at less than the 5% level.

Panel A. Equal-weight one-factor model

Window (months)	Alpha		beta(-1)		beta		R2	#Firms
	Estimate	t-statistic	Estimate	t-statistic	Estimate	t-statistic		
(-12,-10)	-0.52	-0.81	0.31	2.40	1.02	7.73	0.49	71
(-9,-7)	0.78	1.23	0.38	2.80	1.08	8.18	0.51	72
(-6,-4)	1.14	1.91	0.51	4.00	0.99	7.70	0.51	74
(-3,-1)	1.71	2.86	0.35	2.66	0.98	8.17	0.50	75
Event	3.74	6.08	0.40	2.77	0.91	6.88	0.50	59
(1,3)	1.42	2.10	0.41	2.73	0.90	5.86	0.36	73
(4,6)	1.05	2.16	0.35	3.13	0.98	8.64	0.55	72
(7,9)	0.34	0.78	0.32	2.92	1.15	10.72	0.65	67
(10,12)	1.12	2.18	0.28	2.32	0.96	7.77	0.52	62

Panel B. 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)	-0.95	-1.61	0.20	1.72	0.92	6.18	0.68	4.49	0.34	1.93	-0.32	-3.67	0.61
(-9,-7)	0.41	0.74	0.22	1.88	0.88	6.25	0.72	5.28	0.26	1.58	-0.32	-3.78	0.66
(-6,-4)	0.44	0.72	0.35	2.77	0.88	5.96	0.63	4.05	0.30	1.57	-0.19	-2.08	0.59
(-3,-1)	1.11	1.89	0.18	1.39	0.98	7.18	0.65	4.01	0.39	2.06	-0.05	-0.49	0.57
Event	3.04	4.89	0.19	1.26	0.72	4.36	0.62	2.92	0.34	1.53	-0.26	-2.18	0.57
(1,3)	1.50	2.26	0.26	1.78	0.58	3.39	0.46	2.59	0.08	0.37	-0.41	-3.72	0.46
(4,6)	0.42	0.84	0.22	1.93	0.94	7.03	0.53	3.66	0.35	1.95	-0.07	-0.66	0.61
(7,9)	-0.16	-0.37	0.11	0.86	0.95	7.85	0.69	4.40	0.33	1.76	-0.14	-1.60	0.72
(10,12)	0.85	1.62	0.13	1.04	0.75	5.06	0.60	3.10	0.14	0.74	-0.18	-1.46	0.57

Panel C. Value-weight one-factor model

Window (months)	alpha		beta(-1)		beta		R2	#Firms
	Estimate	t-statistic	Estimate	t-statistic	Estimate	t-statistic		
(-12,-10)	-1.65	-2.33	0.15	1.03	1.10	7.51	0.45	71
(-9,-7)	-0.54	-0.92	0.31	2.53	1.15	9.51	0.58	72
(-6,-4)	-0.10	-0.10	0.54	2.59	0.85	4.10	0.23	74
(-3,-1)	0.49	0.42	0.35	1.36	1.02	4.38	0.21	75
Event	2.20	2.21	0.64	2.77	0.94	4.37	0.33	59
(1,3)	1.25	1.94	0.29	2.09	0.76	5.23	0.29	73
(4,6)	1.00	1.21	0.39	2.06	1.29	6.72	0.41	72
(7,9)	0.55	0.85	0.57	3.60	1.06	6.69	0.46	67
(10,12)	0.17	0.29	-0.08	-0.57	1.13	8.13	0.50	62

Panel D. 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)	-1.79	-2.50	0.06	0.41	1.09	6.05	0.29	1.57	0.33	1.52	-0.29	-2.66	0.49
(-9,-7)	-0.77	-1.37	0.18	1.50	1.16	8.21	0.22	1.61	0.37	2.19	-0.29	-3.43	0.65
(-6,-4)	-1.18	-1.17	0.34	1.64	1.36	5.62	0.01	0.06	1.01	3.23	0.06	0.40	0.34
(-3,-1)	-0.11	-0.09	0.25	0.94	1.37	4.94	-0.29	-0.88	0.75	1.97	-0.07	-0.34	0.26
Event	1.82	1.72	0.55	2.19	0.96	3.41	0.70	1.96	-0.20	-0.53	0.29	1.40	0.36
(1,3)	1.49	2.34	0.18	1.29	0.67	4.06	-0.03	-0.17	0.24	1.16	-0.33	-3.07	0.38
(4,6)	0.84	0.94	0.31	1.46	1.50	6.18	-0.21	-0.81	0.33	1.01	0.02	0.11	0.42
(7,9)	0.12	0.18	0.31	1.63	0.75	3.96	0.79	3.22	0.35	1.21	-0.34	-2.44	0.52
(10,12)	-0.74	-1.34	-0.31	-2.34	1.08	6.92	0.77	3.77	0.60	2.93	-0.05	-0.37	0.61

Table 7. Target Firm Performance Before and After Activism

Panels A, B, and C report various average statistics of target companies in excess of those of matching companies in years before and after being targeted by activist hedge funds. For each target company, a matching group is formed by other companies in the same SIC two-digit industry, and in the same Fama-French 5 x 5 size and book-to-market portfolio. Difference is taken between the target company and the average of the matching firms; and then averaged over all target companies (“Dif w/ Match”). Also reported are the associated t-statistics. “CEO Pay Ex Ante” is the total CEO pay including options grants. “CEO Pay Ex Post” is the total CEO pay including option exercise. “%CEO Turnover” is the rate of CEO turnover. “ROA,” “ROE,” and “CAPEX” represent EBITDA, net income before extraordinary items, and capital expenditure, all scaled by lagged assets. “Dividend” and “Total Payout” represent dividend payment, and the sum of dividend and share-repurchase, all scaled by the book value of equity. “Leverage” is the ratio of debt to the sum of debt and book value of equity. Panel D explores the relation between operational performance improvement and hedge fund strategy/target firm characteristics. The dependent variable is ROA(t+1) – ROA(t-1) (in excess of that of the matching firms), where t is the year of activism. Columns (1) and (2) show the predictability of ex post operational improvement by hedge fund strategy; and column (3) shows that by target firm characteristics. Panel E conducts the same predictions with the dependent variable being the dummy variable equal to one if the target firm is liquidated, taken private, or sold/merged to another firm. The estimation uses the probit method. Bold fonts indicate statistical significance at less than the 5% level.

Panel A: Executive compensation and turnover

	CEO Pay Ex Ante (\$1,000)		CEO Pay Ex Post (\$1,000)		%CEO Turnover	
	Dif w/ Match	t-stat	Dif w/ Match	t-stat	Dif w/ Match	t-stat
t-3	78	0.31	-414	-1.85	-1.81%	-0.72
t-2	-169	-0.68	317	1.03	3.38%	1.27
t-1	472	1.50	858	2.48	2.77%	0.99
Event	862	2.17	1260	2.83	4.49%	1.42
t+1	-122	-0.33	541	1.21	13.55%	2.80

Panel B: Operational performance

	ROA		ROE		CAPEX	
	Dif w/ Match	t-stat	Dif w/ Match	t-stat	Dif w/ Match	t-stat
t-3	2.01%	3.27	0.63%	0.32	-0.30%	-1.10
t-2	2.19%	3.65	1.14%	0.59	-0.63%	-2.47
t-1	2.35%	3.98	6.12%	3.19	-1.17%	-5.00
Event	2.17%	3.71	3.49%	1.67	-1.49%	-6.14
T+1	2.68%	3.43	10.12%	4.59	-2.31%	-8.93

Panel C. Capital structure

	Dividend		Total Payout		Leverage	
	Dif w/ Match	t-stat	Dif w/ Match	t-stat	Dif w/ Match	t-stat
t-3	-0.31%	-1.96	0.12%	0.27	4.34%	3.91
t-2	-0.26%	-1.53	0.22%	0.47	4.16%	3.81
t-1	-0.42%	-2.82	0.79%	1.55	3.20%	2.97
Event	-0.20%	-1.16	0.85%	1.69	2.34%	2.14
T+1	0.13%	0.47	1.66%	2.15	3.55%	2.51

Panel D. Predictions of Operational Improvement

	(1)		(2)		(3)		
	COEF	t-stat	COEF	t-stat	COEF	t-stat	
ln(MV)	0.78%	0.97	0.68%	0.86	ln(MV)	-0.99%	-0.61
ROA	-52.66%	-3.26	-51.90%	-3.19	BM	-2.03%	-0.67
Capital Structure	-0.87%	-0.28	--	--	GROWTH	-1.35%	-0.27
Business Strategy	4.61%	1.14	--	--	ROA	-53.89%	-3.50
Sale	-5.90%	-2.40	--	--	LEV	0.03%	0.01
Gov	-0.68%	-0.24	--	--	DIVYLD	-7.95%	-0.10
Finance	0.05%	0.01	--	--	RND	-68.51%	-1.75
Hostile	--	--	-4.61%	-1.93	HERFINDAHL	5.78%	1.23
CNST	3.77%	0.82	4.67%	1.07	ANALYST	2.06%	0.98
					INST	3.29%	0.49
					CNST	6.82%	0.66
# Obs & R-sqr	276	0.037	276	0.13		226	0.068

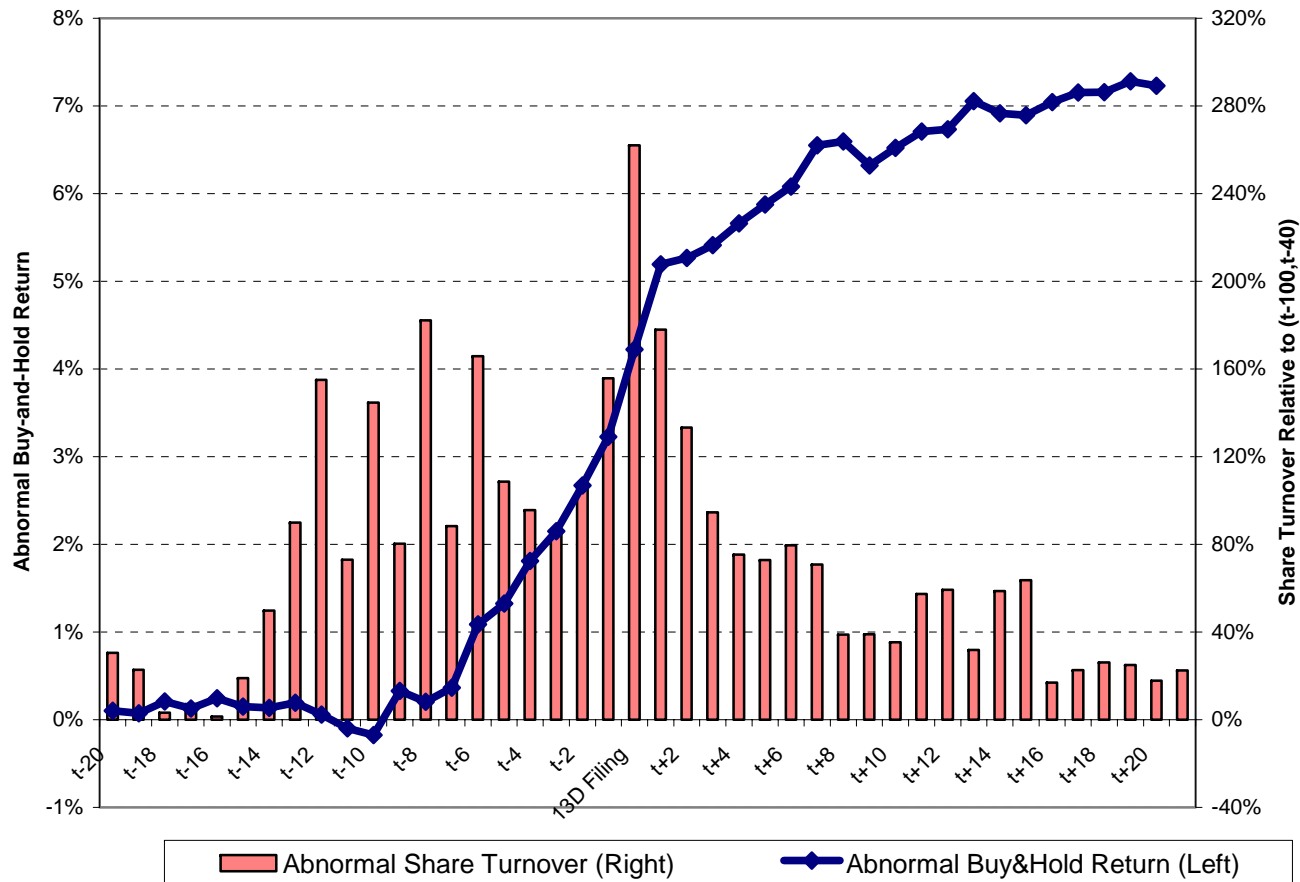
Panel E. Predictions of Company Sale

	(1)		(2)		(3)		
	Marginal Pr	t-stat	Marginal Pr	t-stat	Marginal Pr	t-stat	
ln(MV)	-1.16%	-1.47	0.68%	0.86	ln(MV)	-0.02%	-0.94
ROA	-2.15%	-0.24	-4.11%	-0.45	BM	2.21%	0.70
Capital Structure	-6.01%	-1.63	--	--	GROWTH	1.21%	0.23
Business Strategy	11.38%	2.79	--	--	ROA	3.88%	0.29
Sale	25.94%	5.91	--	--	LEV	-6.01%	-1.03
Gov	-5.36%	-1.71	--	--	DIVYLD	33.41%	0.31
Finance	-1.32%	-0.24	--	--	RND	8.78%	0.30
Hostile	--	--	10.24%	3.16	HERFINDAHL	0.10%	1.45
					ANALYST	2.62%	1.08
					INST	-3.14%	0.08
# Obs & R-sqr	587	0.037	587	0.13		449	0.068

Figure 1. Abnormal Buy-and-Hold Return around Schedule 13D Filing

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 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 1(a) plots the full sample excluding the 108 M&A arbitrage cases; Figure 1(b) plots the subsample of events where hedge funds launch activism with specific objectives together with the Schedule 13D filing.

A. Full sample



B. Subsample of specific-targeting on the Schedule 13D filing date

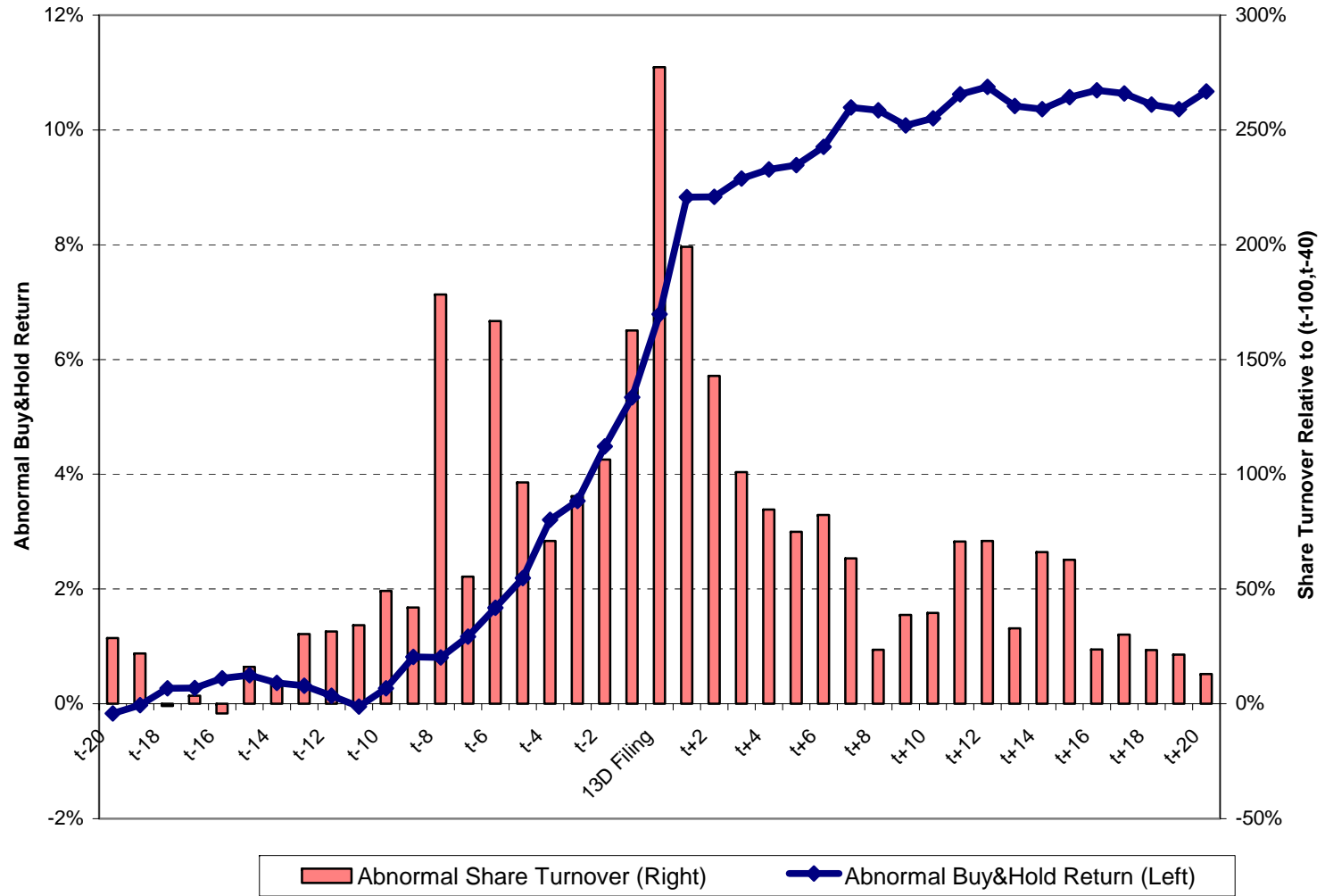


Figure 2. Abnormal Buy-and-Hold Return and Volume around Hedge Fund Exit

The lines (left axis) plots the average buy-and-hold return around the 13D/A file date indicating reduction of hedge fund position to below five percent, in excess of the buy-and-hold return on the market, from 20 days prior the 13D/A file date to 20 days afterwards. The three lines represent the full sample, the subsample of hedge fund exit after successful activism, and the subsample of hedge fund exit as withdrawal from unsuccessful activism. 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.

